BURNESS COMMUNICATIONS;
**New report on deforestation reveals problems of forest carbon payment schemes**
SECTION: EXPANDED REPORTING; Pg. 37
LENGTH: 1174 words

A new study by one of the world 's leading forestry research institutes warns
that the new push to "reduce emissions from deforestation and degradation,"
known by the acronym REDD, is imperiled by a routine failure to grasp the root
causes of deforestation. The study sought to link what is known about the
underlying causes of the loss of 13 million hectares of forest each year to the
promise -and potential pitfalls -of REDD schemes (see also Burness
Communications).

Based on more than a decade of in-depth research on the forces driving
deforestation worldwide, the report by researchers at the Center for
International Forestry Research (CIFOR) found that there is ample opportunity to
reduce carbon emissions if financial incentives will be sufficient enough to
flip political and economic realities that cause deforestation.

The report was released at the United Nations Conference of the Parties (COP-13)
in Bali, where environment ministers from 190 countries are meeting to plot a
long-term strategy for combating global warming. High on the agenda is reducing
the 1.6 billion tons of carbon emissions caused each year by deforestation,
which amounts to one-fifth of global carbon emissions and more than the combined
total contributed by the world 's energy-intensive transport sectors.

"After being left out of the Kyoto agreement, it 's promising that deforestation
is commanding center-stage at the Bali climate talks," said CIFOR 's Director
General, Frances Seymour. "But the danger is that policy-makers will fail to
appreciate that forest destruction is caused by an incredibly wide variety of
political, economic, and other factors that originate outside the forestry
sector, and require different solutions."

In other words, Seymour said, stopping deforestation in Indonesia caused by
overcapacity in the wood processing industry is a completely different challenge
from dealing with deforestation stemming from a road project in the Amazon or
forest degradation caused by charcoal production in sub-Saharan Africa.

According to CIFOR, careful examination reveals that complex, indirect forces
are often more important than the logging and slash and burn activities
popularly understood as the main causes of deforestation. Forces such as
fluctuations in international commodity prices; agricultural and, more recently,
biofuel subsidies; and roads and other infrastructure projects can encourage
forest clearing. Deeply ingrained and routinely corrupt government practices
often favor large corporate interests over community rights to forest resources.

Seymour said the CIFOR analysis, which draws on a range of studies of the
economic, social and political conditions affecting the world 's most vulnerable
forests, seeks to ensure that any initiatives to stem deforestation that might
emerge in future climate change agreements are firmly grounded in reality.

Most importantly, CIFOR advises decision makers to learn from the past and look
beyond the confines of the forestry sector to the array of market failures and
governance failures that spark a chain of events culminating in deforestation.

For example, according to the study, Indonesia, which is estimated to lose 1.9
million hectares of forest each year, has emerged as one of the world 's leading
sources of carbon emissions in part due to a global spike in prices for palm oil
and a surge in China 's demand for wood pulp. Together, these forces have pushed
deforestation into carbon-rich peatlands that are being cleared and drained to
make way for oil palm and pulpwood plantations. Limiting deforestation in
Indonesia 's peatlands should be a high priority because the carbon losses per
hectare are substantial.

Meanwhile, CIFOR notes that in South America, the loss of 4.3 million hectares a
year is driven in part by meat consumption that encourages conversion of forests
to pasture lands throughout the region. In Ecuador, road building has been a
major cause of deforestation. In sub-Saharan Africa, fuelwood extraction and
charcoal production are factors behind the continent 's loss of 4 million
hectares a year.

Markku Kanninen, one of the authors of the report, said that "Policies that seek
to halt deforestation will need to be crafted to address diverse local
situations and target activities in areas such as agriculture, transportation
and finance that lie well beyond the boundaries of the forest sector."

"The perverse subsidies that provide incentives for clearing forest must be
removed and efforts to secure property rights for local forest communities
should be encouraged," Kanninen said.

The report also sees promise in the increasingly popular notion that
deforestation can be addressed with financial incentives that compensate
landowners for "environmental services." Seymour said discussions in Bali to
fight deforestation by compensating forest stewards for protecting the carbon
-storage capacity of forests through what is now a multi-billion dollar global
market for carbon credit are potentially powerful.

"Such payments to individual land-users have the potential to "flip" financial
incentives from favoring forest destruction, as they now do, to favoring
conservation," Seymour said. "But the key question is whether or not REDD
incentives will be sufficient to flip political and economic decisions at the
national level that drive deforestation."

Appealing as they are, Seymour said it 's critical to understand that, due to
decades of inattention to the rights of forest dwellers, new payment streams
tied to conservation could intensify the severe poverty that now afflicts the
majority of rural forest communities in the developing world.

"Since forest property rights are often very unclear, payment for carbon
services could end up providing incentives for corrupt officials or local elites
to appropriate this new forest value from local communities," she said. "We 've
seen this happen before in similar situations, and there 's every reason to
believe, given the kind of money now being paid for carbon credits, that it
could happen again."

Seymour said such problems can be avoided if policy makers enter the process of
designing REDD strategies with a clear understanding of potential pitfalls and
what can be done to avoid them. The report advises that reducing carbon
emissions from forests will require strengthening the weak governance mechanisms
that have long proven unable to enforce many existing prohibitions on forest
clearing.

Finally, the report calls for ensuring that the REDD process is fair to poor
forest communities.

"We need to temper the desire for maximum reduction in forest-based carbon
emissions with regard for the legitimate rights of forest communities to realize
the income potential of their forestlands," Seymour said. "At times there will
be trade-offs between reducing carbon emissions and reducing poverty."

 Project Finance

                                December 2007

[Renewableenergy.com](http://Renewableenergy.com)

SECTION: FEATURES

LENGTH: 1974 words

HIGHLIGHT: Spiraling commodities and energy pricing is making the economic
argument for renewable energy more persuasive. But are the relatively high asset
valuations being achieved in the renewables sector a fair reflection of the
risks? By Shane Bush, Head of Renewable Energy, Standard Chartered Bank

In all markets, government commitment through the medium of stable policy
provides the market structure and economic incentive required for renewable
energy market growth. Globally approximately 2% of energy is derived from
renewable sources. The potential is thought to be at least 20%. Demand for
energy is soaring, commodities prices are rising and the climate change
arguments appear to be getting through. But is this creating a dotcom-type
bubble in the renewable energy markets or do the economic fundamentals support
it?

In 2007, climate change is not the only reason for increasing support for
renewable energy. Issues such as security of supply and that portfolios of
diverse power generation assets provide long term power price stability,
continue to gain momentum in decision makers minds. Renewable energy is
indigenous and therefore reduces the need for energy imports. While current
renewable energy technologies are probably not going to save the planet, or
deliver a total solution to energy price stability, a 20% contribution to the
portfolio goes some way to achieving this goal. It helps flatten out the rising
curve of emissions and fossil fuel prices over the medium term and demand for
energy continues to grow. It buys time until the development of technology to
meet the goal occurs. Therefore it is expected that renewable energy is going to
rapidly grow in its current form for at least a generation or two.

Standard Chartered Bank (SCB) is one of only a few financial institutions to
have created a specialist team covering the sector. Given the varied regulatory
frameworks across the globe, the unique characteristics of the various
technologies, and the diverse markets in which renewable energy projects
operate, a team of specialists is thought to be essential in order to manage the
banks exposure to the sector and to advise our clients. Renewable energy means
many things to many people. For SCB it means power generation for renewable
sources (wind, solar, run of river hydro etc), bio-fuels and larger scale carbon
dioxide equivalent abatement (Carbon) projects.

Wind

Wind is dominated by Europe and the United States with India and China
contributing significantly in Asia. India is the fourth largest market in the
world in terms of installed capacity. China is Asia's fastest growing market,
having doubled it's installed capacity during 2006. The United States added
2500MW of new capacity in 2006 and Europe 7500MW. India and China totaled
3000MW. Of note also are two new markets; South Korea and Pakistan.

The government in South Korea is one of the most progressive in terms of
regulation with the introduction of feed-in tariffs for both wind and solar at
the levels required to induce investment. The largest solar photovoltaic project
in the world is currently under construction there. The 20MW project was
financed by SCB through a senior / subordinated structure which was successfully
syndicated to a group of local institutions. Pakistan is also promoting wind
power projects, but through a government backed power purchase agreement at a
tariff to provide the required return for investors. Progress has been slower in
this market but the structure is still one which should be able to attract
project financing. This is evidence of the momentum being gained in the global
market.

The United States, Germany, Japan and Southern Europe dominate the solar project
market. China and Japan dominates the solar market in terms of module
manufacturing. Japan represents the largest market in terms of installed
capacity. Technology innovation is also being provided by the United States such
as in the area of thin film photovoltaic manufacturing. Much of the solar
product is sold to Europe and the United States. Japanese and manufacturers are
typically selling both in their home market and to Europe and North America.
Solar is very expensive in terms of capital required to implement a project. The
subsequent operating margin is very high, and given the 30-year-plus lifetime
for modules, when the debt is repaid the marginal cost makes it very
competitive. Given the expense, this sector is most sensitive to regulation.
Hence, in the region, Japan and South Korea are seeing capacity grow, reflecting
their governments support.

Bio-fuels

Bio-fuels in Asia consist mainly of bio-diesel from palm oil, for which a market
has developed for the feedstock where SCB can provide hedging. Indonesia and
Malaysia lead the way. Palm oil is a competitive source of bio-diesel, although
there is concern over land use and the deforestation of natural forests.
Bio-fuels is rapidly becoming a global business, and Asia reflects this with
China, Thailand, Singapore and other countries all witnessing investment
opportunities.

Bio-fuels are less straightforward than Carbon and power generation because the
feedstock market for bio-fuels refining is often not correlated with the
product. Where the feedstock is an edible product, such as wheat and corn, food
price increases have been observed as bio-fuel production and demand increased.
China has publicly noted its concern here, and in the United States the impacts
of higher corn prices has been felt in some of the export markets such as
Mexico.

Unless organic feed stocks such as jatropha are used, the so called
"non-edibles", there is therefore a potential impact on food prices which in
Asia and Africa could be particularly damaging due to the lower average income
per head of population and the higher dependency on agriculture. Therefore the
required regulatory support may not be forthcoming and the regulatory risk
should be perceived to be higher. Again the United States and Europe dominate
the global market. The product in Europe is mainly bio-diesel and in the United
States it is ethanol (from corn). This is directly related to regulation that
supports the regional agricultural industries.

Carbon

The Clean Development Mechanism (CDM), part of the Kyoto Protocol, is also a
significant regulation creating incentives for investors to develop Carbon
projects throughout the region. China and India lead the way in this market with
the lion's share of projects. This market is expected to develop into a $10
billion to $20 billion market in time during the Phase 2 period of 2008 to 2012.

The market is very varied with Carbon generated from power projects such as wind
and solar, and from gas storage projects and methane-capture projects including
coal mines. Wind projects are attractive because approximately 10% of the value
of a coal-displacing project is Carbon. Solar is less attractive due to the low
capacity factors resulting in a Carbon value of approximately 2 or 3%. Methane
capture and gas storage facilities are very attractive to investors because they
are simple and the gases typically are significant contributors to the
greenhouse effect, and therefore one ton typically equals multiple tons of
Carbon. The main recipients of Carbon pursuant to the CDM is Europe and during
2007 Japan. It is estimated that approximately 10% of Carbon in Europe will be
sourced from CDM. The United States did not ratify the Kyoto Protocol, but
individual states are starting to be progressive in the area of Carbon targets.

The Middle East has not embraced the renewable energy markets to any material
scale to date. However, certain states such as the UAE have seen the
establishment of clean energy funds that are essentially channeling
petro-dollars into developing future energy solutions. The focus is less on the
next generation of renewable energy technology, but R&D and education to produce
the energy solutions further out, the alternative to current technologies such
as wind turbines. Energy conservation is also an area of focus. Abu Dhabi has
created the MASDAR initiative which aims to bring about the worlds first "zero
Carbon" city.

Renewables dotcom?

Activity in the global market for renewable energy has increased significantly
during 2006 and 2007. The main activity has been in Europe and North America -
for example the IPO of the French firm EdF Energies Nouvelles; the acquisition
of wind turbine manufacturer REpower, by Suzlon, and the acquisition of wind
power project developer Horizon by a Portuguese utility, EdP.

The valuations on man of these deals, by historical comparison, are high. For
the first time renewable energy companies are achieving valuations reflecting
"blue sky" rather than the traditional cash flow methodology. The reason for
this is that regulation introduced some years ago is now considered less risky,
and new markets are joining what is considered an inevitable growth in the
market through further support for the sector from the all important government
policy makers. High fossil fuel prices are also contributing, but the economics
of a renewable energy project in many countries is not impacted by fossil fuel
prices.

As mentioned, high fossil fuel prices do influence government decision-making.
Currently investors appear to be valuing regulatory risk favorably, and
therefore historical valuations are not good comparables for current valuations.
Structured finance banks have provided unprecedented levels of liquidity and
pricing and quality of structures have been eroded. Acquisitions, while
relatively limited in numbers, provide value data points, and have occurred
partly on the back of debt capital liquidity but, as mentioned, also on the back
of significant equity liquidity. Classis dot com territory.

In terms of where the high valuations are found, wind project developers with
pipelines in the United States are leading the way and step changes in prices
are due to the government there finally recognizing the need for an adequate
time horizon on regulation, something that federal Production Tax Credit
legislation has never provided for before.

Technology manufacturers in wind and solar are also enjoying very high
valuations. Both are seeing a perfect storm of supply chain constraints
combining with the favorable regulatory environment resulting in their inability
to meet demand. Full order books means high valuations.

Conversely, bio-fuels valuations are suffering due to increased feedstock prices
causing margins to fall in large markets such as the Untied States. To gain
exposure to this market, project developers are providing this. There are no
niche technology suppliers so there is not a pure play there.

Carbon prices are at highs of Eu30/ton in Europe at the time writing. Valuations
for carbon funds are mixed, primarily due to lack of transparency post 2012 when
the current regulation governed by Kyoto expire. Again we can see that
regulatory risk drives valuations.

To conclude, while the author does believe valuations are high in some areas of
the global renewable energy market, it is considered that reason is a shift in
view of regulatory risk. Both the debt and the equity markets are applying lower
discount factors to this. It is mainly due to actions by governments in markets
such as the United States, Europe, India and China, but it also considers new
markets contributing to a ground swell of optimism. At this stage therefore, the
author does not believe valuations are reflective of a dotcom scenario. Much
future cash flow however is valued and regulatory risk more than ever is the
critical variable. This is the reason that India and China, with their stated
goals and their beginnings of sound regulations, are leading the Asia region.
And the reason Africa is only seeing limited growth. The Middle East remains an
area of untapped potential.

Policy support for renewable energy has definitely gained momentum globally. How
long can it be relied upon? A couple of decades - at least in the view of the
author.
Contact: Shane Bush, Global Head of Renewable Energy
Shane.bush@uk.standardchartered.com

The Straits Times (Singapore)

                          December 29, 2007 Saturday

**Bali climate talks: Not just all hot air;
Critics slam the final agreement as weak, but the talks did deal with some key
issues**
BYLINE: Arti Mulchand

SECTION: REVIEW - TECH & SCIENCE
LENGTH: 1139 words

WHEN the dust - haze, more appropriately - finally settles on the recently
concluded Bali climate change talks, the sober assessment will be that a weak
agreement is better than none.

To use the bureaucrat's catchword, there were 'deliverables' - an agenda, and
negotiations with an end-date, effectively laying down a two-year road map to a
new climate treaty.

Sure, the final days of the 13-day conference in Bali had movie-like cliffhanger
moments, as when the United States seemed to throw a spanner in the works.

But it made a dramatic turnaround and agreed to join the consensus, to the
relief of many.

Earlier, former American vice-president Al Gore, who won the Nobel Peace Prize
for his work on climate change, had declared over the microphones pushed in his
direction: 'My country has been responsible for obstructing the process here in
Bali.'

Canada, Japan, Australia and the US found themselves pitted against not just the
developing countries, but also the European Union and its demand for urgent
action against climate change.

But, verbal fireworks aside, the United Nations-backed talks earlier this month
did stay on course. The 'Bali Action Plan', the agreement reached by all 190
countries there, including mega-polluter America, launched negotiations for a
2009 global climate change pact.

It had not become 'Emission Impossible' - as coined by one journal - simply
because the assembled delegates agreed not to disagree on the need to save the
planet, and to move forward.

Critics maintained that the US got its way: No one has actually committed to
anything at all in Bali. The final action plan is void of any hard figures
guiding the kinds of emission cuts needed, and even the Nobel Peace
Prize-winning science behind climate change was relegated to a footnote.

But then, the action plan was not Bali's only aim.

Bali actually did address some shortfalls in the Kyoto Protocol, the current
global treaty which compels 36 developed countries to cut their emissions by 5
per cent below 1990 levels by 2012.

The impact of Bali's deliverables may be felt even before Copenhagen 2009, when
a new deal is finally inked to replace Kyoto.

Perhaps of greatest impact - and of greatest interest to Singapore - is that,
for the first time, carbon dioxide emissions through deforestation were
addressed.

The nod was given to early action on programmes that could see developing
countries like Indonesia being paid billions a year to protect their forests.

Deforestation, through burning gases released from deforested soil and
smouldering peat, accounts for 20 per cent of global emissions. It accounts for
80 per cent of Indonesia emissions, making it the world's third-largest emitter
of greenhouse gases.

The regional consequence has been the annual crippling smoke haze, with
land-clearing fires contributing to it.

Deforestation also erodes forest cover and could have led to the floods and
landslides that killed more than 130 people in Java this week.

With the agreement that was reached in Bali, pilot programmes kicked off. They
promise to turn forest conservation into a tradable commodity with the potential
to earn billions of dollars selling carbon credits to developed countries
through the carbon market.

Also in the works: national strategies to protect rainforests and the
establishment of monitoring systems to, for example, set baseline deforestation
rates against which reductions in forest loss can be measured.

This lays the groundwork for any future climate change deal to include them
formally.

The current climate change deal, the Kyoto Protocol, makes no mention of
deforestation, though it does address reforestation and afforestation, or the
planting of trees.

At the conference, World Bank president Robert Zoellick announced a $160US
million ($231S million) plan to put the programmes into action, with
contributions already coming in from nine developed countries and one
non-governmental organisation.

Indonesia has already said it will earmark four forests in South Kalimantan,
South and south-east Sulawesi, and North Sumatra for pilot programmes.

Concerns have been raised over the programmes, dubbed Reduced Emissions from
Deforestation in Developing countries, or Redd, particularly on policing,
putting a price on the emissions not released, and ensuring that indigenous
communities do not end up holding the short end of the stick.

But really, addressing deforestation is a matter of urgency.

As Papua New Guinea's Prime Minister Michael Somber put it: 'If we lose the
world's forests, we lose the fight against climate change...Action to reduce
emission from deforestation is too important to wait.'

Even if it may be some years yet for such projects to lead to cleaner skies over
the region, it is a hopeful start.

Bali's achievements also go beyond deforestation.

A tick in the box also goes to the need to operate a fund to help developing
countries adapt to the effects of global warming, such as flooding and drought.

It will be financed from the carbon trading markets that kick off in Kyoto's
first commitment period from next year to 2013.

A 2 per cent levy on money going into the Clean Development Mechanism, which
allows developed countries to meet their emission reduction targets by investing
in projects in developing countries that do so, goes into the fund.

The Adaptation Fund now comprises only about $36US million but might rise to
between $1US billion and $5US billion a year by 2030 if investments in green
technology in developing nations surge.

Oxfam International aid group estimates that a minimum of $50US billion a year
will be needed to assist all developing countries adapt to climate change.

So whether the money in the kitty will be enough is a big question mark, but at
least the fund does not remain a paper tiger.

Negotiators also agreed to transfer more clean energy technologies from
developed countries to other nations, as well as to look deeper into the
technical, legal and financial issues surrounding controversial technologies
such as Carbon Capture and Storage, which buries carbon dioxide.

True, these may seem pointless if no significant global pact that includes the
US is found at the end of the Bali road map in 2009.

And up until the end, the US, the cowboy of the Bali talks, put even the smaller
issues such as Redd in jeopardy by nit-picking over the choice of words, or
through last-minute insertions of phrases that threatened to topple what UN
climate chief Yvo de Boer called a 'house of cards'.

But developing countries stuck to their guns and finally managed to push them
through.

Because such projects do address existing problems, and are crucial lessons for
any future deal that could be struck, making these small steps were very
significant.

arti@sph.com.sg

    [Salon.com](http://Salon.com)

                          December 29, 2007 Saturday

**The year in the environment**
BYLINE: Katharine Mieszkowski

SECTION: FEATURE

LENGTH: 1604 words

HIGHLIGHT: One step up, one step back was the refrain in news about global
warming, automobiles and biodiversity in 2007.

NOBEL WARNING

This year, Al Gore, the Man Who Was Almost President, received a stunning
vindication from the Nobel Committee for his Paul Revere campaign about global
warming. "The Earth has a fever, and the fever is rising," Gore said in his
Nobel lecture in Oslo, Norway, in December as he accepted the Peace Prize, which
he shared with the scientists of the Intergovernmental Panel on Climate Change.
"The experts have told us it is not a passing affliction that will heal by
itself. We asked for a second opinion -- and a third -- and a fourth -- and the
consistent conclusion, restated with increasing distress, is that something
basic is wrong. We are what is wrong, and we must make it right."

In 2007, even the United States stopped asking for a second opinion. The Bush
administration now agrees that global warming is a threat. But all the plaudits
heaped on Gore couldn't move the United States to, in Gore's words, "make it
right." The United States remains the only industrialized nation not to endorse
the goals of the Kyoto Protocol; Australia, the other big holdout, belatedly
ratified the treaty's goals in December. Not coincidentally, Australia has
recently been plagued by serious drought. But the United States, where the
governor of drought-ridden Georgia held a prayer vigil in November in hopes of
inspiring rain, was still not swayed. At the international climate talks in
Bali, Indonesia, this December, the Bush administration refused to agree to any
mandatory limits on greenhouse gas emissions, giving developing giant China
cover to avoid any such restrictions itself.

Yet there are tantalizing signs that the American people are not waiting for the
Bush administration to leave power to start taking steps to address the
"planetary emergency" that Gore warns about. A Senate committee passed the first
legislation that would impose mandatory limits on greenhouse gases. Although the
bill may not make it to the president's desk, it's a sign that meaningful
climate legislation is on the horizon. In the meantime, action is occurring at
state and local levels. To date, some 725 U.S. mayors, representing 25 percent
of the U.S. population, have signed a pledge to reduce greenhouse gases by 2012.
In August, Illinois became the 26th state to require that some of the state's
electricity come from renewable sources. And in October, Kansas became the first
state to refuse a permit for a new coal-fired power plant because of the threat
it would pose to public health and the atmosphere.

Frustration abounds in the scientific community. The IPCC's latest dire report,
released in November, made bleaker projections than ever, yet climate scientists
fear that the world's simply not heeding their alarm. More than 200 scientists
were so fed up that in December they signed a petition calling for the world to
take drastic action to reduce greenhouse gas emissions in half by 2050. In his
Nobel lecture in Oslo, Rajendra Pachauri, chairman of the IPCC, warned that
unchecked warming could bring massive ice melting in Greenland and disappearing
rainfall in many tropical areas. Yet he reminded the world that the worst
threats can still be ameliorated: "The implications of these changes, if they
were to occur, would be grave and disastrous," he said. "However, it is within
the reach of human society to meet these threats." It looks like the United
States -- and the world -- will have to wait for the next American president to
begin to meet them. PLUG IN, DRIVE ON

With the price of oil inching near $100 a barrel, Americans searched for new
ways to save gas and the atmosphere. Many drivers kicked the SUV habit and
switched to smaller cars. As of September 2007, 16 percent of cars sold this
year were diminutive compacts, including the likes of the Honda Fit and the Mini
Cooper, up from 13.8 percent in 2002, according to the National Automobile
Dealers Association.

While hybrids remain a fraction of the overall car market, this year they
continued to gain popularity. Automakers reported an 82 percent increase in
hybrid sales this year, compared with last. (That's not counting General Motors,
which doesn't break out hybrid sales from others.) Toyota, makers of the popular
Prius, saw a 109 percent increase in hybrid sales this November, compared with
last. Finally, the Bush administration got in on the act, signing a new energy
bill that raises the fuel-efficiency standard for car fleets from today's 25 mpg
to 35 mpg by 2020.

Those who dream of driving without guilt -- or at least with less guilt -- are
tricking out their hybrids to go farther with even less gas. This year, the
number of so-called "plug-in hybrids" on the road, which get over 100 miles per
gallon, quadrupled as corporate fleets and utilities, and even some individuals,
experimented with enhancing their hybrids. Plug-ins are hybrid cars that have
been converted, at a cost of some $10,000, to plug into a conventional electric
socket and gather juice from the grid.

"The plug-in car is the only car that gets cleaner as it gets older, because the
grid is getting cleaner," says Felix Kramer, founder of CalCars.org, a nonprofit
that promotes the vehicles. Advocates believe that Toyota could sell a plug-in
version of the Toyota Prius for just $3,000 extra, although the leading hybrid
automaker currently has no plans to do so. General Motors plans to release a
plug-in hybrid Saturn Vue in 2009 and the plug-in hybrid Chevy Volt in 2010.

The race is on to build cars that sip even less fuel. A group of engineering
students at the Massachusetts Institute of Technology have launched a
competition with hundreds of other engineering students at colleges around the
globe, including India and China, to produce the first plug-in electric hybrid
that gets 200 miles per gallon within three years. And Silicon Valley upstart
Tesla Motors has plans to start selling its fully electric, $95,000 roadster
early next year. Actors George Clooney and Matt Damon have each already reserved
one.

But what of those who foresee no future in driving at any miles per gallon?
These are the stalwart bike activists who pedal to work or the store or school,
and this August, the Bush administration gave them a swift quick in the spokes.
The secretary of transportation declared that bike paths and trails are not
legitimate forms of transportation, as she attempted to blame the tragic
Minneapolis bridge collapse, which killed 13 people and injured 100 more, on
money being diverted from shoring up the nation's bridges to building paths and
trails. That's right. According to Mary Peters, bike paths kill.

ANIMAL-LESS PLANET

This year, the drumbeat of extinction grew louder, as traditional threats like
habitat loss and poaching met the newfangled menace of global warming, putting
stress on many critters already under pressure. "We previously assumed that if
the land is protected, then the plants and animals living there will persist,"
said Sandy Andelman, an ecologist with Conservation International. "That may be
wishful thinking."

No nature preserve, however well protected, can reliably shelter its resident
plants, insects, birds and primates from the vagaries of changes to the Earth's
atmosphere. More than half of the world's protected areas, such as national
parks and forest reserves, are likely to be negatively impacted by global
warming, even in a best-case scenario, according to a new study from scientists
with Conservation International, the University of Maryland and the University
of Wisconsin.

Already, almost a third of bird species in the U.S. need help to avoid going the
way of the dodo, according to a new report from the Audubon Society and the
American Bird Conservancy released in November. That followed the news that
16,306 species are now on the brink of extinction around the globe, according to
the latest IUCN Red List. And a third of primate species, humans' closest living
relatives, are also staring down extinction, with the 25 most endangered species
barely able to fill a ballpark. "If you took all of the remaining individuals of
those 25 species that are on the list, and you gave each one a seat in a
football stadium, you probably couldn't fill the stadium," says Russell
Mittermeier, president of Conservation International, who is chairman of the
IUCN's Species Survival Commission's Primate Specialist Group.

Yet, efforts to curb global warming could save tropical rain forest habitat,
home to many of the world's threatened flora and fauna. Forests are like giant
carbon sinks, as the leaves of trees and plants suck up carbon dioxide in the
atmosphere through photosynthesis, converting it into wood and other biomass.
When a forest is cleared or burned for agriculture or ranching, much of that
carbon dioxide is released back into the atmosphere. That's why deforestation
accounts for some 20 percent of human-induced greenhouse gas emissions.

"We'll never solve the climate challenge unless we address the loss of tropical
forests, which puts out as much carbon dioxide as all the planes, trains and
cars worldwide," said Stephanie Meeks, acting CEO and president of the Nature
Conservancy, at a news conference at the Bali climate talks.

The Nature Conservancy is helping the World Bank create incentives to preserve
rain forests. An effort called Cool Earth, which has won the support of former
British prime minister Tony Blair, among others, is also raising money to
preserve forests in the name of climate protection. At the Bali conference,
saving rain forests in developing countries became a priority for the next
international climate treaty. It's a good start to 2008.

The Jakarta Post

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**SEARCHING FOR A BETTER LIFE FROM BOTTLING WATER TO CURING CANCER**

LENGTH: 1057 words

from THE JAKARTA POST -- SATURDAY, DECEMBER 29, 2007 -- PAGE 14 People are
clearly scared by the prospect of having to live through severe and accelerated
climate change, especially global warming caused by humans

That was why all eyes were on the UN Climate Change Conference in Bali

Obviously, no quick fix is likely to be found for the impact of decades of
neglect. All we can pray for is the commitment of the world community, and that
everybody will do whatever they can do to reverse - or at least haltthe trend

Whatever the eventual impact of the conference, it is clear that we are faced
with a number of challenges

Modern life is synonymous with electricity, and as upward mobility continues,
more energy will be needed to meet the demand for comfort and convenience

So, to start with, we need alternative energy sources that will reduce our
dependence on pollution-creating fossil fuels

Research on solar energy, wind energy and other sources that will not produce
carbon dioxide will continue to intensify in the coming years. At the same time,
reducing power consumption is becoming increasingly pivotal. A good example
would be the use of Light Emitting Diode (LED)- based lighting systems in
various applications, including for interior lighting in buildings

Too bad the environment is often used more as a catchy ingredient for marketing
mottoes than for real change. It sells. We have seen a lot of technologies and
products labeled "Environmentally Friendly", "Environmentally Responsible",
"Organic","Eco-product", "Eco-friendly",- the list is as long as the Eurostar
rail track

The Green movement appears to be gaining traction. When we look around us,
however, the environmental disasters are unfortunately caused by our own deeds.
For example, we still use non-biodegradable plastic bags to carry our groceries.
We still throw Styrofoam containers and cups anywhere we like. We still pour
harmful detergents down the drain. It's an uphill battle to educate billions of
ignorant or indifferent people around the world

The search for a better life isn't just about creature comforts; it also
involves health and well-being. The competition between traditional - or
so-called- medicines and clinically-tested drugs continues. In the past, people
chose traditional medication because of the perceived chemical contents of the
products of modern pharmaceutical companies

The preferred alternative therapy in Indonesia is Chinese Traditional Medicine,
while other methods such as aromatherapy and homeopathy are also booming

Today, if you search the Web,find conflicting information on the safety of
traditional medicines as well as newly found benefits of certain plants. Some
claim that herbal medicines can heal the world's most feared health problems,
such as HIV/AIDS, malaria and cancer

At the very least, efforts are being intensified to minimize the impact of
illnesses so that the patient's quality of life is as good as possible

In the next few years, research on health and diseases will enjoy more priority.
Recently a group of researchers used a consensus-building technique involving
155 scientists in 50 countries around the world to define a roadmap toward
tackling 20 of the world's deadliest diseases. Those include heart disease,
diabetes and certain cancers

Information technology is also directed toward supporting the green revolution.
Computer components are being designed to work with less power, which also means
less heat. Their parts have to be made from materials that will not create time
bombs in landfills

In the area of energy-efficient wireless communications, solar powered Base
Transceiver Stations have been deployed in rural Sumatra thanks to a cooperative
effort between Telkomsel and Ericsson. Low operating costs will help bring
affordable wireless communication to remote areas without polluting the
environment

What else will get top priority in the science and technology field? Human greed
and carelessness, combined with the havoc wreaked by natural disasters, have
left human beings with a lot of new problems

Fresh water is one. It is getting harder and harder to get clean water,
especially in the poorly-managed urban areas of developing nations (Jakarta not
excluded)

The need for potable water is even more urgent because of its direct
relationship with human health

The bottled drinking water business was quite small 30 years ago. Today,
packaged water is a staple of our diets and a significant expense

According to one published report, one out of six people in the world do not
have access to safe and dependable drinking water. Living in a developing
country like Indonesia, we know that this figure is very likely to be overly
optimistic. One thing is clear: Research and development efforts will be
reoriented toward finding cost-effective ways to recycle the water we use
without creating yet another set of problems

Individual safety and security technology are in increasing demand. Terrorist
attacks on civilians have turned Hollywood movies into reality, and travel,
especially air travel, has become very inconvenient due to added restrictions
and security checks. People will want experience the joy of traveling without
the current hassles, and technology will help

Surveillance on properties - including our own homes - will enjoy a larger
market. In the past we have seen technologies such as motion tracking, face
recognition and video compression advancing rapidly, and research in this area
will continue to flourish

As more and more devices rely on radio frequencies for connectivity, there will
be increased concern about their impact on our health

In the mobile communication field, for example, we have GSM, 3G, Bluetooth,
Wi-Fi and soon WiMAX, all sending electromagnetic radiation bouncing around us.
The December 2007 issue of Science & Technology Review highlights the use of
simulation to determine the health impacts of electromagnetic waves

Where else will R&D programs be focused? Judging from the many publications we
can get on the Internet, it is hard to pinpoint. Citing a list on [Economist.com](http://Economist.com),
we can probably safely say that DNA and genetic engineering, nanotechnology,
nuclear for peaceful and non-peaceful purposes, stem cells, cancer, robotics and
green cars will continue to be in vogue

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Western Daily Press

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Country diary with Michael woods

SECTION: Pg. 18

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Looking back over the news during the past year it becomes less and less easy to
be optimistic about the future of the environment.

Global climate change is proving to be more severe than was originally thought.

An article in National Geographic magazine in the summer showed how polar bears
are now having to swim upwards of 150 miles to find solid ice, while the bodies
of those which have starved to death are becoming a more commonplace find in the
Arctic.

Polar bears are not the only doomed species. India has counted its tigers this
year and discovered only 1,500 remain - about half the number expected and
equivalent to the population of a small West Country village.

Meanwhile, the speed with which the economies of India, China, Indonesia, Brazil
and Mexico are growing is almost incomprehensible and at considerable
environmental cost.

There are reasons to be hopeful though.

A remarkable amount of material from demolished buildings is being carted over
to China to be recycled and made into new products.

And Australia, one of the world's worst carbon dioxide polluters in per capita
terms, has a new premier, Kevin Rudd, who has signed up to the Kyoto Protocol,
leaving the US as the only developed nation which has failed to agree to its
terms.

There is also greater awareness in the UK of the problems of emissions.

Examining your carbon footprint may not be taken terribly seriously by some, but
the very fact that it is being considered at all, is a major step forward.

And various industries, especially construction, are having to consider the way
they do things, not just in terms of building more environmentally friendly
houses, but also factors such as the number of deliveries by trucks and the
protection of natural features on sites.

Another cause for celebration has been the opening of St Pancras station and the
high- speed rail link to the continent.

It would be a nice to think that this new rail link would encourage more
high-speed lines throughout the country but I suspect that is pie in the sky and
certainly not at fares that would compare with those currently charged by the
budget airlines.

Things are happening - but probably not fast enough.

Happy New Year.