

Respond

COP18 Doha



AL ATTIYAH:
COP18 CALLS
FOR FLEXIBILITY &
COMPROMISE

FIGUERES: "WE
ARE IN A RACE
AGAINST TIME"

PACHAURI: LET
SCIENCE DRIVE
DECISIONS

**HOW TO
ARGUE WITH
A CLIMATE
SCEPTIC**

**THE WORLD'S
CARBON
MARKETS:
MAPPED**

**WHERE'S
ALL THE
ICE GONE?**



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**PLUS: LATEST BUSINESS,
INNOVATION & LOW-CARBON
TECHNOLOGY**



MOMENTUM FOR CHANGE

**Inspiring action and passion for positive change.
Building Momentum for Change. Change for Good.**

An initiative of the United Nations Climate Change secretariat, Momentum for Change provides a public platform to showcase broad-ranging climate change actions that are already achieving tangible results on the ground. By shining light on inspiring and transformational mitigation and adaptation activities, Momentum for Change aims to strengthen motivation, spur innovation and catalyse further change towards a low-carbon, high resilient future.

The first pillar of Momentum for Change, launched at the United Nations Climate Change Conference in Durban last year, focuses on climate change mitigation and adaptation activities that are a result of collaborative efforts between the public and private sectors and benefit the urban poor in developing countries. This pillar is graciously funded by the Bill & Melinda Gates Foundation. At the United Nations Climate Change Conference in Doha, a special event on the 4 December will showcase nine Lighthouse Activities that have delivered social and environmental benefits to the urban poor, while also demonstrating potential for long-term transformational change. The showcase event will be addressed by the UN Secretary-General Ban Ki-moon and other dignitaries.

Two new pillars will also be launched in Doha. In collaboration with the Rockefeller Foundation, Momentum for Change: Women for Results, will be launched on 5 December 2012. This pillar will provide recognition to the important role played by women in mitigation and adaptation to climate change.

In collaboration with the World Economic Forum, the United Nations Climate Change secretariat will launch Momentum for Change: Innovative Finance on 6 December 2012. This pillar will showcase innovative and proven financing examples to support adaptation and mitigation activities in developing countries.

- [More information on Momentum for Change and the 2012 Lighthouse Activities can be found at: **unfccc.int**.](#)
- [Next year, watch out for the Momentum for Change 2013 call for applications for each of the three pillars: urban poor, women for results, and innovative finance.](#)

Get involved:



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United Nations Climate Change Secretariat

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NTUM HANGE

4 – 6 December 2012

Momentum for Change Special Events

Urban Poor – Showcasing Event

4 December 2012, 18:00 - 20:00 hrs

Women for Results – Launch Event

5 December 2012, 17:00 - 19:00 hrs

Innovative Finance – Launch Event

6 December 2012, 13:00 - 15:00 hrs

Qatar National Convention Center



United Nations
Climate Change Secretariat

Al-Dhow activities are designed with a clear focus on saving the environment in Kuwait and the Middle East region with integrated solutions to Air, Water, Solid, and Hazardous Waste Management.

The company provides solutions and programs using local and international partner's knowledge and capabilities.

Services

Al-Dhow for environmental projects offers a wide variety of services in the field of environmental management including consulting, contracting, design in addition to business development. Al-Dhow's services cover almost every aspect of the environmental arena and exceed what most local companies can offer, our services include:

- Site Investigation and Remediation .
- Oil Spill Clean Up .
- Treatment of Oil Sludge & Effluent Water .
- Soil Remediation .
- Wastewater Management .
- Marine Wastewater Management .
- Brine Water Treatment " ZLD " .
- Construction Waste Recycling .
- Windmill Technologies .
- HSE Training .
- Concentrated Solar Power "CSP"
- Thermo-system-designed for treating and drying municipal.
- OHxyphogg™ odour control technology – designed for H2S removal, grease removal in confined space.

We are welcome to provide all of our consultation services in a great professional way .



LET'S SAVE OUR
Environment
► **Lives**
► **Future**
► **World**



الدَّهْو
للمشاريع البيئية



Al-Dhow
For Environmental Projects

Innovative Environmental **Vision**
Better Life

رؤية بيئية مبتكرة
لحياة أفضل



Ed King, RTCC Editor

Leadership is not about who you are, where you are from or how much money you have. It's about where you want to go, and what you want to achieve. Politicians would do well to take that mantra on board, because they are in danger of being left behind. The Rio+20 summit in June demonstrated that progressive business has tired of waiting for governments to present a compelling vision of 'sustainable development'. The time for talking has passed – they need action.

That's not to say COP18 in Doha will be ignored. Far from it. We have two years until world leaders are expected to agree on a binding deal for the climate, and it is essential the foundations are laid now. We need a growth model that can adapt to shocks and reduces the stress our ever-increasing use of natural resources places on the planet. An effective climate deal can deliver those goals.

Above all, we need political will and a radical new mindset. The signals are there for all to see. Arctic summer sea ice levels collapsed in 2012, the USA experienced a savage drought, followed by Hurricane Sandy, which ripped through the Caribbean and submerged parts of New York. What would a world of 4-6C be like? The current economic turmoil is bad luck – but to ignore all those indicators and plough ahead with 'business as usual' is beyond foolish.

Ed King, Editor, November 2012

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Carbon Clear

Carbon Clear is a world-leading carbon management company that works with organisations to measure their carbon footprint, cut emissions, and source high quality carbon offsets.



We help our clients to develop carbon management strategies that save them money, strengthen their brand, help them comply with climate change legislation and win the support of their customers and staff.

All of the offset projects that Carbon Clear invests in are carefully selected to ensure they support activities that genuinely improve the environment and the lives of real people. All projects must meet the following criteria:

- Projects must make a real difference to climate change mitigation and would not have been possible without carbon funding.
- Projects must provide long-term benefits to the communities that undertake them, such as job creation and the conservation of natural resources.
- Projects must undergo third party validation and verification – to show that the carbon reductions are real and permanent.

Carbon Clear is proud to have offset the emissions associated with production and distribution of this project.

www.carbon-clear.com



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CONTENTS

JARGON BUSTING	6
Confusing your AWG-KP with your AWG-LCA? Let us take the strain with our A-Z of all the terms you'll need to survive a COP.	
QATAR WELCOMES THE WORLD	9
COP18 President His Excellency Abdullah Bin Hamad Al-Attiyah explains why he's determined this summit will be a success.	
FIGUERES ISSUES RALLYING CRY	11
UN climate chief Christiana Figueres calls on governments to step up and deliver change in Doha.	
PACHAURI ON SCIENCE	18
Head of the Intergovernmental Panel on Climate Change Dr Rajendra Pachauri calls for policy to be driven by science.	
WALKING WITH POLITICIANS	20
Executive Director of the GCCA Kelly Rigg wants world leaders to get back in touch with their natural side – and take a walk in the woods.	
AMAZON SNAPSHOT	22
Exclusive pictures from the heart of the Brazilian rainforest.	

JARGON BUSTER A-Z

The technical language and copious volume of acronyms can make following the climate change and sustainability agenda a tricky and sometimes intimidating process. We've put together this jargon buster covering all things climate change from A-Z to help you follow the story at COP18 and beyond.

A more comprehensive and interactive version of this A-Z can be found on RTCC.org. You can leave your suggestions for new entries on the website or tweet us @RTCCnewswire using the #jargonbuster hashtag.

ADAPTATION

The process of adjusting behaviour and/or infrastructure in response to "new normals" created by shifting climatic patterns. In reality it means survival. In politics, discussions tend to focus on who should pay for adaptation projects in the developing world.

BLACK CARBON

A greenhouse gas emitted during the burning of coal, diesel fuel, natural gas and biomass, it is part of the composition of soot. Black carbon has emerged as a major contributor to climate change, second only to carbon dioxide. Unlike CO₂, black carbon only remains in the atmosphere for two to three weeks and is part of the group terms short-live climate forcers (SLCFs), and is often seen as a quick win in the fight to combat climate change.

COMMON BUT DIFFERENTIATED RESPONSIBILITY (CBDR)

A key but hotly contested principle that underpins the UN climate change convention and negotiations. Effectively means we all have a duty to protect our planet, but those who have contributed more to global Greenhouse Gas Emissions (developed and industrialised states) have a greater role to play. The logic also follows that those who have developed more also have better capabilities to cut their own emissions and help fellow nations to adapt.



DESERTIFICATION

The degradation of land in arid, semi-arid and sub-humid areas – commonly referred to as drylands – by a change in climate or destructive land use, creating desert-like conditions. It is estimated that a third of the world's land surface is currently suffering from the effects of desertification.



Solar yurt. Photo: © UN Photo_Eskinder Debebe.

EMISSION INVENTORY

A list of air pollutants emitted into a community's, a state's, a nation's, or Earth's atmosphere in amounts per some unit time (e.g., day or year) by type of source. An emission inventory has both political and scientific applications.

FEEDBACK LOOP

Something that accelerates or decelerates a warming trend – a positive feedback accelerates a temperature rise, whereas a negative feedback decelerates it. For example melting ice reveals darker-coloured land or water beneath it, which absorbs more of the sun's energy, leading to more warming which in turn leads to more ice melting.

GLOBAL WARMING POTENTIAL (GWP)

Is the ability of a certain gas to warm the atmosphere during a given time period relative to the warming effect of CO₂. CO₂ is used as the baseline and so always has a global warming potential of one. If a greenhouse gas is 500 times more powerful than CO₂, it would have a global warming potential of 500. GWP is typically measured for time periods of 20, 50 and 500 years.

HYDROFLUOROCARBONS (HFCs)

The group of chemicals that were used largely as the replacements to CFCs. While they do not damage the ozone layer, they have huge global warming potential, hundreds of times greater than CO₂.

IPCC

The Intergovernmental Panel on Climate Change is a UN managed body that brings together climate science from around the world to inform policy makers. Its Assessment Reports are published (roughly) around every five years. While some recommendations such as the two degrees warming limit have become part of policy, not all do.

JOINT IMPLEMENTATION

A project under-taken through the Kyoto Protocol (see next page) between two countries with emissions limitation commitments. The donor party earns emission reductions units, eligible towards its Kyoto targets, by helping the other to cut carbon. The host country gains foreign investment and technology transfer.

KYOTO PROTOCOL

The first binding deal on emissions reductions named after the host city of the 1997 UNFCCC meeting where it was signed. Rich countries agreed to enter into a carbon cap and trade system with targets on greenhouse gas cuts written into international law. The fate of a second phase of cuts based on the Kyoto rules remains undecided.

LULUCF

A term used in the UNFCCC negotiations, it refers to the greenhouse gas inventory covering emissions and removals of greenhouse gases from direct human-induced land use, land use change and forestry activities. It is used in relation to the forestry and agriculture sector in the climate negotiations and covers emissions related to soils, trees, plants, biomass and timber.

MITIGATION

The process of limiting the effects of climate change and its severity by reducing emissions of greenhouse gases and attempting to draw down carbon held in the atmosphere into terrestrial-based storage such as vegetation or in the future, Carbon Capture and Storage (CCS) technologies. A big part of mitigation efforts is the transfer of funding and technologies that enable developing countries to leapfrog dirtier phases of development.



NATIONAL ADAPTATION PROGRAMMES OF ACTION (NAPAs)

Offers a process for the Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change. It highlights the activities which if delayed further would increase vulnerability and costs at a later stage.

OZONE LAYER

Something of a misnomer, since ozone does not occur in a flat "layer" in the atmosphere. This term refers to ozone in the stratosphere where it occurs in its highest concentrations – roughly from 1 to 10 parts per million. This atmospheric zone lies between 15 and 50 kilometres above Earth's surface, depending upon latitude, season, and other factors.

PLENARY

A formal meeting of all Parties of the UNFCCC's Conference of the parties (COP), or Meeting of Parties to the Kyoto Protocol (CMP) or one of the subsidiary bodies. Formal decisions or conclusions can only be made during these plenary sessions.

QUANTIFIED EMISSIONS LIMITATION AND REDUCTION COMMITMENTS (QELRO)

A binding schedule of emissions reductions or limitations made under the Kyoto Protocol by a particular country.



Vietnam making biomass briquettes.
Photo: © UN/Ba Trang

REDD

A UN programme which aims to reduce emissions from deforestation and forest degradation. It forms part of the UN's climate change process, through the UNFCCC.

SUBSIDIARY BODY FOR SCIENTIFIC & TECH. ADVICE (SBSTA)

A permanent body established by the UNFCCC that serves as a link between expert information sources such as the IPCC and the COP.

TARGETS AND TIMETABLES

The percent reduction from the 1990 emissions baseline that the country has agreed to. On average, developed countries agreed to reduce emissions by 5.2% below 1990 emissions during the period 2008-2012, the first commitment period of the Kyoto Protocol.

UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

A treaty signed at the 1992 Earth Summit in Rio de Janeiro that calls for the "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." It took effect in March 1994 upon ratification by more than 50 countries.

VECTOR-BORNE DISEASE

Result from an infection transmitted to humans and other animals by blood-feeding arthropods, such as mosquitoes, ticks, and fleas. Examples include dengue fever, viral encephalitis, Lyme disease, and malaria.

WEATHER

The short-term (i.e., hourly and daily) state of the atmosphere. Weather is not the same as climate.

X-RAY

A photographic or digital image of the internal composition of an object, produced by X-rays being passed through it and being absorbed to different degrees by different materials. Often used by researchers to gain a better understanding of corals.

YOUNGO

A group of young people. A very vocal constituency within the UNFCCC negotiations that generally includes people between the ages of 16 to 29.

ZERONAUTS

A concept devised by sustainability expert John Elkington whereby innovators and entrepreneurs lead the world towards zero population growth, emissions, poverty and pollution among others.

Invitation for Nominations

PSIPW 6th Award (2014)



Prince Sultan Bin Abdulaziz
International Prize for Water

Recognizing Innovation

Nominations open online until 31 December 2013

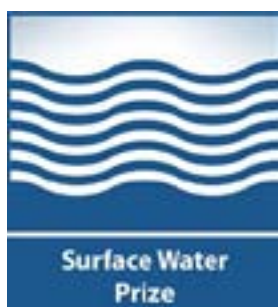


Inaugurated in 2002 in Riyadh, Saudi Arabia by HRH Crown Prince Sultan Bin Abdulaziz, PSIPW is a leading scientific award bestowing five distinctive prizes bi-annually to recognize water-related innovation all over the world.

The Prizes: First, there is the **Creativity Prize**. Worth US\$ 266,000 (1 million Saudi riyals), this prize is awarded to an innovator or pioneer for work that can rightly be considered a breakthrough in any water-related field. The work might be a

body of research, an invention, or a new patented technology. Universities, university departments, companies, and other organizations may nominate worthy individuals and teams of researchers for this prize.

Then there are four **Specialized Prizes**, each worth US\$ 133,000 (1/2 million Saudi riyals), covering all aspects of the water research landscape. Researchers and organizations may nominate themselves for any of these four prizes.





His Excellency Abdullah Bin Hamad Al-Attiyah,
COP18/CMP8 President

The State of Qatar is proud to host the 2012 round of this gathering of nations dedicated to working together to combat climate change. Since our selection last December, we have been working diligently to prepare for a productive chapter in this ongoing work. In our capacity as host of COP18/CMP8, we continue to do everything we can to ensure that the Conference is open, inclusive and transparent in our endeavor to reach a balanced, fair and credible outcome.

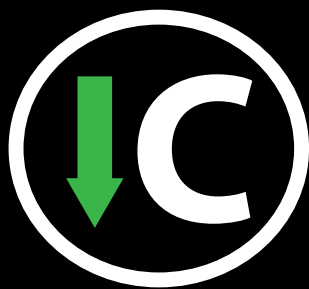
We are committed to building on the progress made at Durban and Cancun and look forward to welcoming the member states, observer organisations and representatives of the international media to Doha.

As a coastal dry land nation, Qatar understands the very real threat posed by the impacts of climate change. We are almost 100-percent dependent on the sea for our freshwater and nearly 95-percent dependent on technology and trade for our food. Our entire population lives at sea level. Climate change stands as one of our single largest long-term challenges and no amount of prosperity or social progress can get around this issue. This is why environmental sustainability is one of the four key pillars of our 2030 National Vision, and hosting COP18/CMP8 is an opportunity to invest directly in helping to move things forward. It is a challenge we must face together. Never before has there been a greater urgency to act collectively to meet this challenge. We come to this table to do just that.

And I believe we can. Qatar has a well-earned track record for credible and transparent mediation on tough issues, and we will continue to work tirelessly with the parties and observers to produce a meaningful outcome from COP18/CMP8. We continue to urge all parties to cooperate, in a spirit of flexibility, solidarity, and compromise.

In many ways, COP18/CMP8 is both a “transitional round” and an “implementation round”. These things never come easily, but they are critical to progress. For the past few years, this community of nations has been pushing ahead in spite of differences in interests, needs, history and opinion. That path of progress has brought us now to Doha, and I believe we can continue the tradition of working together to deliver on the challenge, reach agreement on key issues, and forge a meaningful plan of work for the road ahead. Qatar is committed to working with the Parties to deliver on this challenge.

**His Excellency Abdullah Bin Hamad Al-Attiyah,
COP18/CMP8 President**



China Low-Carbon Leadership Summit

19th - 20th March 2013, Beijing, China



Join 500+ participants in a high-level low-carbon conference to be held in Beijing.



The China Energy Conservation Association (CECA) and Entico Corporation present a unique opportunity for businesses, technology experts and innovators to meet and discuss how China can meet its future energy challenges over the coming decade.

At the low carbon leadership summit you can share ideas, network, and do business with leading Chinese clean tech companies. It's an opportunity to extend your business and keep up-to-date with developments in clean tech, renewables and energy efficiency developments in China.

Officials from leading Chinese industrial and development ministries will be attending at the request of CECA and are available for pre-arranged meetings.

#greenisworking

For more information contact Paul Cooper on
lowcarbon@entico.com or call +44 (0)20 7799 2222
www.lowcarbonsummit.com

UNFCCC Chief Christiana Figueres' Message to COP18 Delegates



Christiana Figueres,
Executive Secretary, UNFCCC



United Nations
Framework Convention on
Climate Change

As I look upon the Doha Conference, it strikes me that this is an event of immense opportunity. It represents the opportunity for you to make a global intervention that wedges itself between a scientific fact and a widely-held misperception.

The scientific fact is that global climate change is upon us, that we are experiencing increasing frequency and intensity of extreme weather events and that global greenhouse gases continue to rise.

The widely held misperception is that this process is stuck, that it is ineffective, that nothing is being done to address global climate change.

None of us will dispute the fact that we are in a race against time, but all of us know that the climate change process has advanced steadily over the past three years and in very concrete ways.

You have made mitigation pledges that cover 80% of global emissions.

You have also constructed a new global infrastructure to address the full gamut of the climate challenge; Green Climate Fund, work programme on Long-Term Finance, Standing Committee, CTCN, Adaptation Committee, and the registry are only some of the achievements, designed with purpose of supporting developing countries.

The opportunity of COP 18/CMP 8 is to move many of these constructs into firm implementation. In Doha, you can move the second commitment period of the Kyoto Protocol from lengthy negotiations to implementation as of January 1, 2013.

In Doha, you can move the broad infrastructure of support which you have been building under the AWG-LCA into firm implementation, while deciding where to handle still outstanding issues.

In Doha, you can decide how you will implement the commitment of financial support to developing countries.

In Doha, you can recognize that mobilization of cooperative action is being implemented today, on the ground, by your partners in the subnational governments, private sector and civil society and you can encourage them to do more.

Admittedly, significant political issues remain to be resolved and I do not underestimate the challenge. But COP 18/CMP 8 can become the COP that unequivocally launches immediate implementation of what you already have, while at the same time taking the first steps to design what you want for the future.

I thank all the Chairs, co-Chairs and Vice-Chairs of all bodies and work programmes for all their hard work during this year and in advance of even harder work in Doha. I thank all Ministers for their perseverance, dedication and willingness to find the way forward.

In Doha, you have the opportunity to show the world that the intergovernmental climate change process has built a firm response which now goes into implementation; continues to build further in order to keep with fairness; and increased ambition in order to keep within the two degree temperature limit.

You may even want to show the world that climate change conferences always start on time and sometimes even end on time.

**Christiana Figueres,
Executive Secretary, UNFCCC**

This speech was first delivered on October 22, 2012 at the Pre-COP18 Ministerial meeting in Seoul, South Korea.

CONTENTS



BUSINESS

28 KATARA HOSPITALITY

Qatar's leading hotel chain on why cutting its carbon footprint is welcomed by customers.

30 HOW TO ARGUE WITH A SCEPTIC

BusinessGreen editor James Murray says business must step up to the mark and push back against "climate reckless" arguments.

32 WHAT NEXT FOR THE CDM?

Helle Juhler-Verdoner, Vice President of Global Affairs at Alstom argues the Clean Development Mechanism is down – but not out.

34 DOES THE PRIVATE SECTOR HAVE ALL THE ANSWERS?

Karen Orenstein from Friends of the Earth US says focusing overly on private sources of climate finance ignores other more effective funds available.

36 NATIONAL BANK OF OMAN

Oman's banking leaders are determined to fund low carbon initiatives and develop a financially sound green ethos in the Middle East.

38 MOROCCO'S SWEET ENERGY

Sugar manufacturer Cosumar's five factories are all trying to apply new efficiency standards and use innovate forms of energy generation.

ENERGY EFFICIENCY

40 QATAR SCIENCE AND TECHNOLOGY

Respond magazine hears how QSTP is planning to become the Middle East's cleantech hub over the next decade.

42 CHINA'S ENERGY EFFICIENCY DRIVE

GEF's Ming Yang explains how they have financed a drive to improve China's industrial boilers.

44 CUTTING EMISSIONS IN BRAZIL

CPFL Renováveis explain how their investments in the latest wind technology are saving money and boosting power.

46 ZIMBABWE'S SUSTAINABLE ENERGY DREAMS

Rural Electrification Agency (REA) reveals how the roll-out of Biogas Digesters Technology is raising living standards across the country.

50 QATAR'S WIND AND SOLAR DREAMS

Jaidah Group on Qatar's drive to lose tag of being the world's highest per-capita source of carbon emissions.

52 STANDARDS SAVE ENERGY

The International Electrotechnical Commission outline how cooperation on smart grids and component standards can build a more resilient electricity sector.

54 A NEW MOMENTUM

ICC Secretary General Jean-Guy Carrier says an new climate agreement should allow business to play a crucial role in the financing, implementation, and scaling up of climate solutions.





INNOVATION

56 WHAT NEXT FOR THE GREEN CLIMATE FUND?

Nine recommendations to ensure finance aimed at stimulating investment and innovation does not go to waste.

58 FINANCE FOR THE FORESTS

REDD+ was proposed as an innovative source of funding to halt deforestation, but it's still stuck in the mud. Jessica Boyle from the IISD charts a path forwards.

60 WATER EFFICIENCY INNOVATIONS

Sanitary fittings manufacturer Grohe outlines its 'four pillars' of sustainable design and construction.

61 MEXICO'S POLICY LEADERSHIP

Education and skills are vital in the fight against climate change – and Instituto Politécnico Nacional (IPN) in Mexico City are rolling out courses to develop these in tomorrow's leaders.

62 SINGAPORE'S BUILDING REVOLUTION

City Developments explain how their retrofitting and insulation investments are saving S\$19.7 million in electricity annually.

64 INVESTING IN INNOVATION

Doha Bank's owners aim to fulfil the Emir's Qatar Vision 2030 by backing renewables and building an energy efficient new office space.

66 CITIES RAISING AMBITION

Yunus Arikan from ICLEI argues that for signs of true progress in mitigating emissions and building adaptation capabilities, you only have to look to cities and local governments around the world.

GLOBAL ACTION

68 THE WORLD'S CARBON MARKETS

Feeling depressed about the state of the negotiations? Our map of the world's expanding carbon markets is guaranteed to cheer you up.

70 BANKING ON NIGER'S FUTURE

Niger has been blighted by drought in recent years – so there's all the more need for the innovative financial facilities provided by the Agricultural Bank of Niger.

72 CLEANING UP LAGOS

Nigeria's financial capital has long had a reputation for waste and pollution. The Lagos Waste Management Authority how landfill gas capture technology can help clean the city's air.

74 EUROPE'S GREEN HEART

Abruzzo in Italy prides itself on being one of the most forward-thinking green regions in Europe – a policy that is driven by the public, not politicians.

76 BOGOTA'S CLIMATE PLAN

Gustavo Petro, Mayor of Colombian capital explains why he has decided to launch a full review of Bogota's climate adaptation plans.

78 MAKING WAVES IN MEXICO

Marine energy company Marersa is investing heavily in new wave technologies that it believes can meet soaring demand for electricity in the country.

80 UNFCCC CELEBRATES 20TH BIRTHDAY

Former Executive Secretary Michael Zammit Cutajar looks back at June 1992, when the world's leaders queued up to sign the Framework Convention on Climate Change.

SPORT AND THE ENVIRONMENT

The Qatar National Vision 2030, considers the human being as the main objective of development in all its social, economic and environmental dimensions.

Environmental issues have become a subject of increasing interest. This was understandable after many scientists and environment specialists called for a firm stand to be adopted towards protecting the environment, which is increasingly endangered and threatened by the scale of industrial and technological development, affecting severely the equilibrium of the ecological system.

The Qatar Olympic Committee is aware of its responsibilities in this domain as it deals basically with young people, so it gives great attention to the environment issue which constitutes the third pillar of the Olympic movement.

It gave environment top priority by establishing the Qatar's Olympic Council for Sport and the Environment, to be in charge of protecting the environment and promoting sustainable development. Likewise, the QOC prepares the necessary law drafts aimed at preserving the environment and holds an environmental database in addition to other environment related activities.

Communication

The QOC continuously works at promoting awareness about environment issues in all sport and National events that it stages or takes part into, through all types of media. As an example, it adopted the slogan "Sport and the Environment" as the official theme for the second edition of the Schools Olympic Program (SOP), while continuing to promote these values in all other editions of the SOP.

Among other activities held in this frame, could be mentioned the initiative of turning off lights for half an hour all around Qatar with the objective of underlining the importance of using wisely the available energy resources. Additionally the committee holds an annual winter camp where many activities are aimed at promoting the culture of protecting the environment.

The 9th World Conference on Sport and the Environment hosted in Doha in 2011 (April 30 – May 2) was one of the main events the QOC has organised with the UN. Over 650 delegates representing National Olympic Committees, London 2012, Sochi 2014, Rio 2016 and other institutions participated in this Conference.

Under the theme "Playing for a Greener Future," sessions were held and presentations made in plenary and dialogue sessions in which participants contributed in a spirit of cooperation, friendship and informed debate.

QOC Secretary General, H.E Sheikh Saoud Bin Abdulrahman Al Thani stressed that the hosting the WCSE was in line with the Qatar National Vision 2030 based on four major pillars including human, economic, environmental and social development. He affirmed that future sports facilities will be eco-friendly.

"Sustainability and environmental responsibility are crucial in shaping Qatar's own future. As a nation we are proud of our role as world leaders in sustainable technology and we are already transferring this knowledge and experience into the sporting arena through the use of zero carbon, solar technology that will be used to cool the 2022 FIFA World Cup stadiums and training sites," he said.

The QOC and the Gulf Organisation for Research Development (GORD) have also signed a Memorandum of Understanding that would see both organisations cooperate on establishing environmentally sustainable sporting venues using the Qatar Sustainability Assessment System (QSAS) standards.

In his message to the conference, the UN Secretary General Ban Ki-moon highlighted the commitment of the state of Qatar towards the UN and thanked the Qatari government on hosting the 9th conference on sport and environment organized by the QOC in cooperation the International Olympic Committee and the United Nation Environment Programme from 30 April to 02 May.

Qatar Olympic Committee
www.olympic.qa





Let's put our future in the right perspective.

We have set for ourselves the objective of achieving an ambitious integration of sport and the concepts of environmental sustainability that leads to the required balance. We have strived to develop human knowledge in the domain of sustainability assessment in sports facilities.

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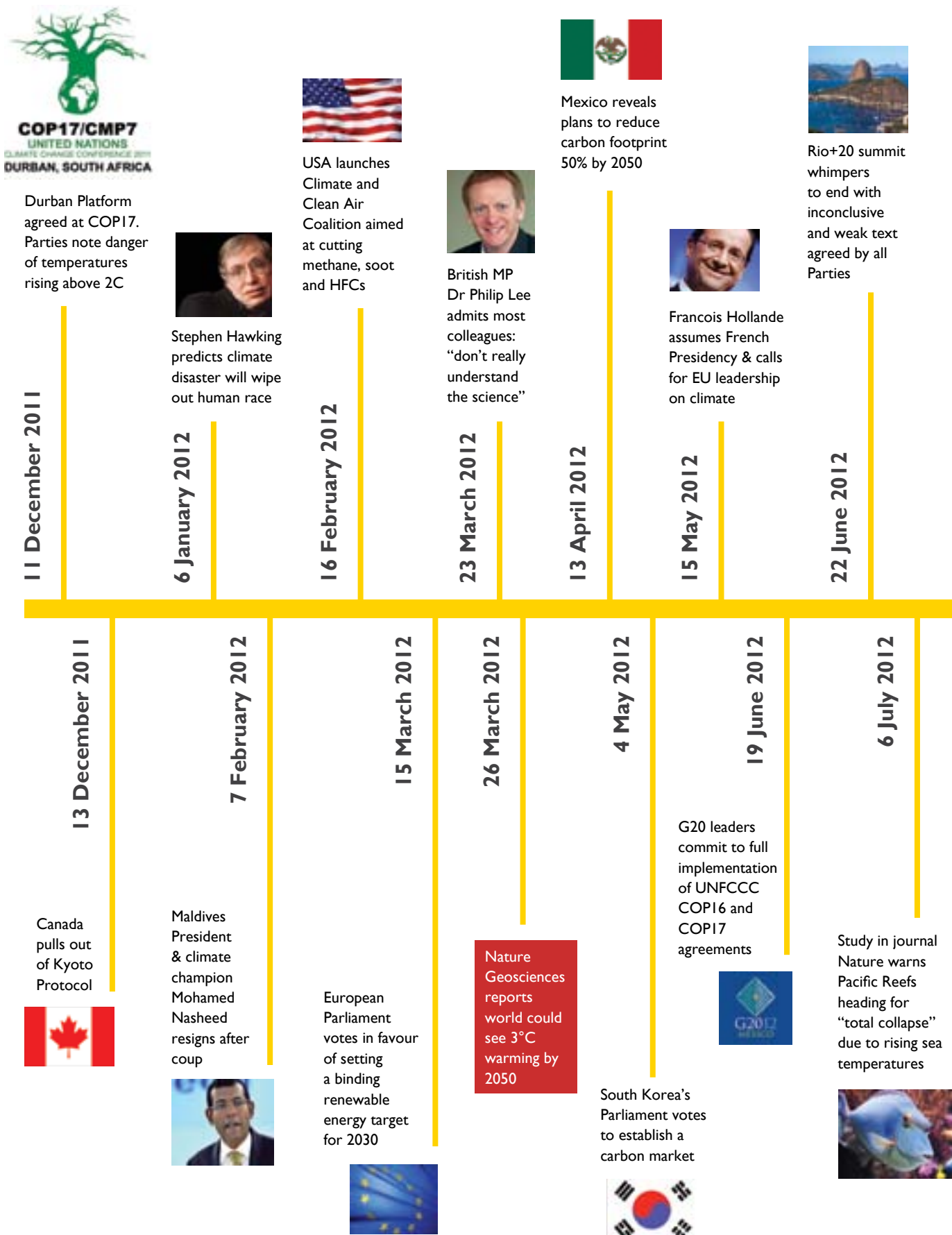
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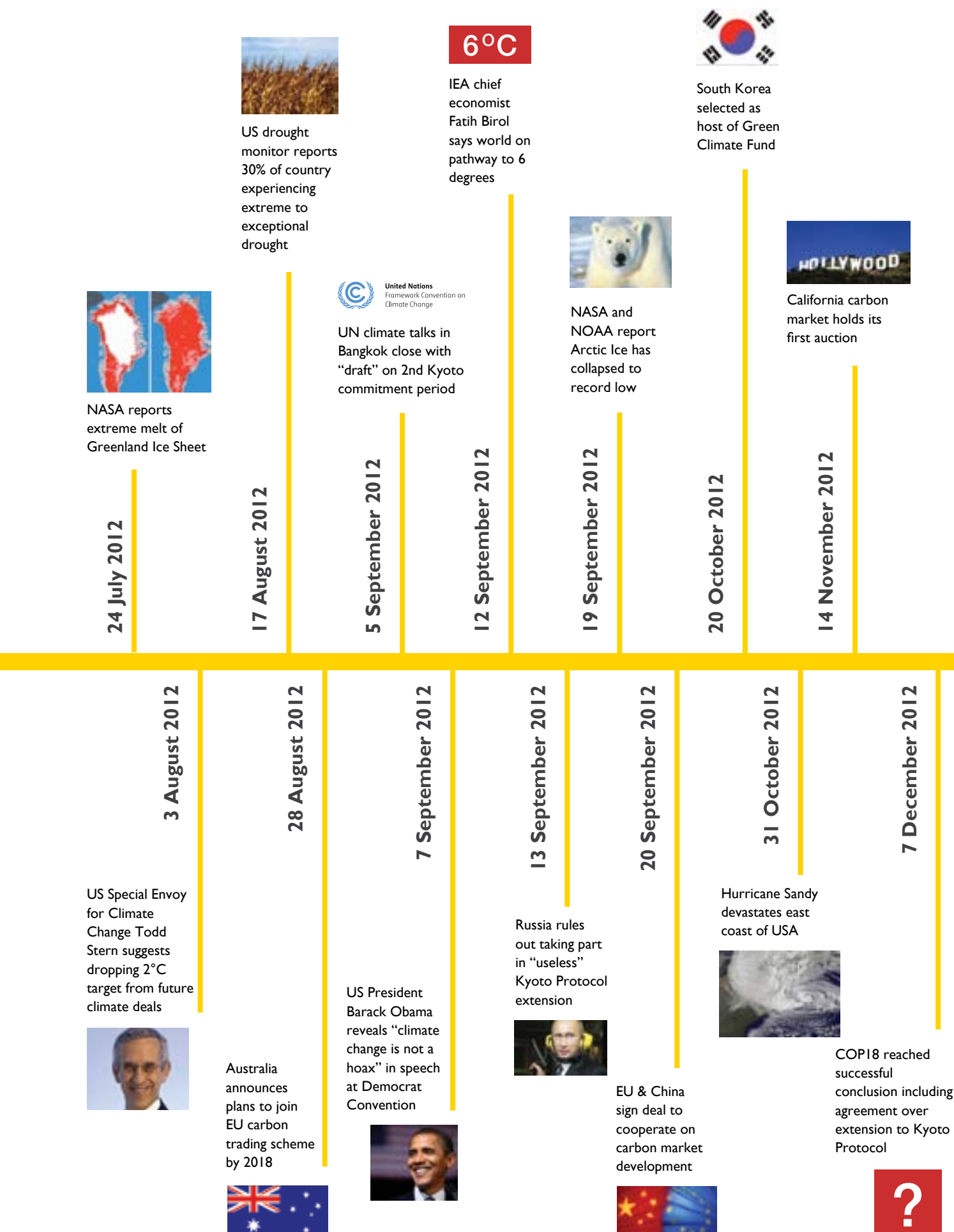


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THE PAST 12 MONTHS





SCIENCE MUST DRIVE AMBITION IN DOHA

The gap between government emission pledges and what climate scientists say is needed to address climate change appears to grow wider at every Conference of the Parties. But in an increasingly political arena, is there still space for a scientific voice?

The level of ambition at Doha, irrespective of how it is articulated has to be driven by scientific knowledge on anthropogenic climate change. One of the major advances that has taken place over the last ten years or so is the gradual spread of awareness and knowledge related to this subject in different parts of the world.

By Dr. R. K. Pachauri

Parties to the UNFCCC have decided on a review to be carried out during the period 2013-15 on its long-term global goal of limiting warming to below 2°C. The basis of the review would be largely IPCC's upcoming Fifth Assessment Report (AR5) and already observed impacts of climate change.

However, the IPCC has brought out three reports which already provide an adequate basis for initiating a review. These three reports are the 2007 Fourth Assessment Report



Hurricane Sandy passed to the west of Haiti on 25 October, causing heavy rains and strong winds, flooding homes and overflowing rivers. A woman walks through a flooded market in Port-au-Prince. Photo: © UN Photos.



Dr. R. K. Pachauri is the Chairman of the Intergovernmental Panel on Climate Change (IPCC) and Director-General of the Energy & Resources Institute (TERI).

(AR4), and the Special Report on Renewable Energy Sources and Climate Change Mitigation (SRREN) as well as the Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), both completed in 2011.

In the SREX it was clearly stated that economic losses from weather-and climate-related disasters have increased, but with large spatial and inter-annual variability. Estimates of annual losses have ranged since 1980 from a few \$ billion to above \$ 200 billion (in 2010 \$), with the highest value for 2005, which was the year of Hurricane Katrina.

However, loss estimates are lower bound estimates because many impacts such as loss of human lives, cultural heritage, and ecosystem services are difficult to value and monetize,

and thus they are poorly reflected in estimates of losses. The SREX clearly brought out the fact on the basis of certain scenarios, a 1-in-20 year hottest day is

likely to become a 1-in-2 year event by the end of the 21st century in most regions.

The SREX also stated that it is likely that the frequency of heavy precipitation or the proportion of total rainfall from heavy falls will increase in the 21st century over many areas of the globe.

Earlier the AR4 had projected major impacts of climate change, such as increased water stress due to climate change and yields from rain-fed agriculture reducing by up to 50 per cent by 2020 on account of climate variability and climate change.

At the same time, actions required to mitigate the emissions of greenhouse gases are now attractive in technological and economic terms. For instance, the SRREN found significant increases in the dissemination and use of renewable energy technologies in recent years.

It also examined 164 different scenarios of contributions from renewable energy to the total energy supply, with the highest share being close to 80 % of the total energy supplied by 2050. Overall, therefore, it is important for Doha to initiate the process of a review based on the robust and adequate scientific evidence already available. This can be fine-tuned on the basis of the findings brought out in the AR5, which will be completed in October 2014.

www.ipcc.ch
www.teriin.org



Superstorm Sandy could end up costing \$20 billion in property damages and \$10 billion to \$30 billion more in lost business, according to IHS Global Insight, a forecasting firm. Photo: © UN Photos.

TO SAVE THE CLIMATE, WORLD LEADERS SHOULD GO FOR A WALK IN THE WOODS

There's a sign hanging at Muir Woods, a gorgeous redwood forest not far from San Francisco, which reads:

"In 1945, delegates from all over the world met in San Francisco to establish the United Nations. On May 19, they traveled to Muir Woods to honor the memory of President Franklin Delano Roosevelt, whose death one month earlier had thrown the world into mourning... Organizers of the event hoped that the profound beauty and serenity of Muir Woods would inspire the delegates to pursue the president's program for world peace as they met to establish the United Nations."

The inspiration for the meeting came from Interior Secretary Harold L. Ickes, who said that by holding a session in the woods "Not only would this focus attention upon the nation's interest in preserving these mighty trees for posterity, but in such a 'temple of peace' the delegates would gain a perspective and sense of time that could be obtained nowhere better than in such a forest."

You see where I'm going with this...

Imagine the following scenario for the climate negotiations:

Heads of State gather in a beautiful and peaceful setting; the kind of place which serves to remind them what we stand to lose if climate change spirals out of control. They are fed soul-satisfying food and shown moving, inspirational examples of the causes, consequences and solutions to climate change. They are presented with expert scenarios showing how we can transition out of fossil fuels, preserve our ancient forests, and maintain good standards of living and meaningful work opportunities for their citizens. They get inspired. They get excited. They forget for a moment the pressures of the powerful interests that put them in office and they decide, there and then, simply to do it. Whatever it takes. They announce this to the world.

By Kelly Rigg



Ministers now have a mandate from their leaders. They gather in a beautiful setting as well. They roll up their sleeves and get down to the work of translating those top-line commitments into a set of fair and equitable agreements. In the new spirit of global cooperation, they shake hands on a deal.

They go home and assemble their civil servants - the legal and technical experts who will be tasked with negotiating the details amongst their counterparts in other countries. Civil servants are instructed by their ministers to balance

national interests against global needs and realities. To be strong, yet flexible. To be fair.

They too are given a mandate.

The next COP is buzzing with excitement. There are no procedural fights. Negotiating groups are established, with a format designed to ensure cooperation. They meet in "Vienna Setting" and hammer out the details of a fair, ambitious and binding agreement.


By the way, the Vienna Setting is no flight of fancy. Its brilliant use by former Colombian Environment Minister Juan Mayr is widely credited with having saved the Biosafety Protocol of the Convention on Biological Diversity from collapse: <http://www.twinside.org.sg/title/vienna.htm>

"Instead of sitting in their country seats by alphabetical order in the usual fashion, delegates sat as their respective Groups. The advisers sat behind the chief spokespersons... This arrangement enabled easy consultations amongst delegations... The order of speaking in plenary then followed a pattern. Minister Mayr used coloured balls, with each chief spokesperson picking one from a bag at the start of each plenary session. Each session had a different colour sequence... The atmosphere was significantly transformed. Delegates and observers alike felt that the result was exchanges that were more frank and less couched in obtuse diplomacy."

The scenario above may sound far-fetched. But is it any more far-fetched than what those leaders faced in 1945, following decades of war, when they set out to secure world peace by establishing a forum like the United Nations? When it comes to climate change, do we need to wait for things to get that bad before we finally address it? I say it's worth a try.

Kelly Rigg is the Executive Director of the GCCA, a global alliance of 300 organizations cooperating under the banner of the tcktcktck campaign. She has been leading international campaigns for nearly 30 years on climate, energy, oceans, Antarctica and other issues. Twitter: @kellyrigg





Insight into simple and humble everyday lives of the tribes simultaneously dispel and reinforce the mythical notions of these regions.

The Amazon's indigenous nations are struggling against the prevailing curiosity of a growing number of adventurers, explorers, and tourists. They are already competing with the forces of the contemporary world which is trying to exploit, export or otherwise brand their cultural uniqueness.



The jungle is their only home. The tribes sense the power of the surrounding nature and practice living in harmony with it.



Real people of the Earth inhabit these far lands, which still echo the raw call of the wild.



The majority of inhabitants of the Amazon are settlers, living on their hereditary lands. Although they are unaware of the battle the outside world fights with the issues of environmental protection versus economic development and tourism, they recognise that their survival entirely depends on its conservation.



Deep in the Amazon: where the world is all green

The sheer magnitude and vastness of the rainforest can both astonish and confuse. From within, it seems truly boundless, dense and thriving. But the acts and rates of deforestation, dam building, oil & gas refineries and tourism infrastructure are leaving it exposed and imperilled. Tribal chiefs are mobilising all indigenous unions to voice their concerns.

Photos © Goran Jovic. Words: Deja Dragovic.

The writer-photographer duo spent a month in the Amazon with indigenous people that have been largely unaffected by the outside world. The purpose of their expedition was to address the vulnerabilities of the region and the subjects of sustainability, climate change, and eco-tourism.

WILL WE MEET THE COPENHAGEN EMISSION TARGETS?

As the 18th Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) approaches, Ajay Gambhir from the Grantham Institute for Climate Change, Imperial College London, examines how emissions in the world's biggest countries have developed and asks if they are on track to meet their Copenhagen Accord pledges.

China, the USA, the European Union (EU) and India, are together responsible for about 60% of the world's energy-related CO₂ emissions today. If no new CO₂ reduction policies are introduced, that share could continue into the future (see Table 1).

Each of the four regions pledged emissions-related targets for 2020 at Copenhagen in 2009, albeit on different bases. Table 2 presents a summary of the pledges, recent developments in emissions (over the past five years), and the possible implications for 2020 emissions if that recent progress were to continue to 2020. According to this

analysis, the EU and USA would meet their pledges (the EU towards the higher end) whilst India and China would have some way to go.

By Ajay Gambhir

The analysis does not take into account a number of factors, most notably for India where non-CO₂ GHGs have not been consideredⁱⁱ. In addition, using the period 2005-2010 as a guide to what will happen by 2020 has obvious limitations, particularly given that it encompasses the start of the economic crisis which hit the EU and US economies in particular (and which saw annual average growth of 1.4% per year and 0.7% per year respectively, over the 2005-2010 period as a wholeⁱⁱⁱ). So in addition to this crude analysis, a more detailed consideration of policies is required to assess the prospects of these regions to 2020.

Current and additional policies

Current policies in the USA include a Passenger Light Duty Vehicle (PLDV) average fuel efficiency standard (of 35.5 miles per gallon) by 2016, renewables subsidies in the power sector and lifetime extensions for nuclear plants, as well as energy efficiency standards and support measures in the industry and buildings sectors. However, even if the US were to build on this with what the World Resources Institute^{iv} calls "go-getter" opportunities (including cap and trade programmes in the power sector, and more stringent vehicle emissions standards post-2016) it would only see GHG emissions reduce by 12% in 2020, compared to 2005. Although increased use of natural gas (largely from shale

Table 1: CO₂ from energy consumption in selected regions (millions of tons in year shown)

	2005	2006	2007	2008	2009	2010	2035
United States	5,992	5,915	6,016	5,835	5,427	5,610	5,162
China	5,513	5,817	6,184	6,721	7,205	8,321	12,897
EU-27	4,292	4,292	4,305	4,262	3,894	3,948	3,434
India	1,183	1,283	1,368	1,474	1,623	1,696	4,320
TOTAL	16,979	17,319	17,830	18,225	18,149	19,575	25,813
World	28,291	28,885	29,590	30,318	29,778	31,780	43,320
% World	60%	60%	60%	60%	61%	62%	60%

Notes:

2005-2010 data from US Energy Information Administration (EIA) online energy statistics including international aviation and marine fuel allocated on a bunkers basis.ⁱ

2035 projection from IEA World Energy Outlook 2011 ("Current Policies Scenario") not including international aviation and marine fuel.

Table 2: Copenhagen Accord pledges, recent performance and possible implications

Copenhagen Accord 2020 pledge*		Level in 2005	Level in 2010	% annual change 2005-2010	Level if projected to 2020	Implication for 2020
Emissions intensity		CO ₂ intensity expressed in tCO ₂ /\$1 000 (2005 \$US)				
India	Reduce GHG intensity of economic output (excluding agricultural sector) by 20-25% compared to 2005	1.408	1.381	-0.4%	1.329	CO ₂ intensity would be 6% below 2005
China	Reduce CO ₂ intensity of output by 40-45% compared to 2005 levels	2.442	2.175	-2.3%	1.725	CO ₂ intensity would be 29% below 2005
Absolute Emissions		GHG emissions expressed in MtCO ₂ e				
USA	In the range 17% (not specified whether GHG or CO ₂) lower than 2005 levels	6,118	5,747	-1.2%	5,071	GHG emissions would be 17% below 2005 levels
EU	Reduce GHG emissions by 20-30% compared to 1990 levels	5,149	4,721	-1.7%	3,969	GHG emissions would be 29% below 1990 levels

Notes:

Data for India and China from US Energy Information Administration (EIA), including international aviation and marine fuel allocated on a bunkers basis. Data for energy CO₂ only and excludes industrial process and land use, land use change and forestry emissions. CO₂ intensities use GDP on basis of \$US market exchange ratesⁱ.

EU and US GHG emissions data from respective inventories (EU excludes LULUCF, not currently in its pledge)^{iv}.

*Copenhagen Accord pledges as stated in submissions to UNFCCC^v.

sources) in power generation has had a downward impact on US emissions^{vii}, the 17% target remains challenging.

The EU Climate and Energy Package^{viii} targets are: to source 20% of energy consumption from renewables by 2020; to achieve a 20% reduction in energy usage (against 2020 projections) and to reduce overall 2020 GHG emissions by 20% compared to 1990 levels. Renewables subsidies (which have driven strong growth in solar and wind power over recent years) have decreased over the last year and it is by no means a given that the EU will meet its renewable energy target. Meanwhile, negotiations around the EU's Energy Efficiency Directive brought concessions in a number of areas which mean it is likely to deliver less than the planned 20% reduction in energy compared to 2020 projections^{ix}, so risks remain.

In China, analysis by the Grantham Institute (2011)^x suggests that realistic achievement of already announced policies would reduce carbon intensity by 38% in 2020 compared to 2005. A portfolio of "negative cost" efficiency measures (i.e. those whose energy savings more than pay back the initial investment in energy-saving equipment, including standards for buildings, lighting and appliances, and more efficient technologies in industry) would be sufficient to reach the lower end (40%) of the target range. China's 12th Five Year Plan (covering the period 2011-2015, and with a target to

reduce China's CO₂ intensity by 17% by 2015, compared to 2010 levels) keeps it heading in the right direction.

In India, according to Grantham Institute (2012)^x research, refurbishment and upgrading of the coal power fleet, reducing electricity transmission and distribution losses, and modernising parts of the steel industry could together help deliver the lower end of its Copenhagen Accord pledge. As such, India's Perform, Achieve and Trade (PAT) energy efficiency trading scheme, launched in July 2012^{xi} and encompassing power and industrial installations, is likely to be a central policy tool to achieve such changes.

The 2020 emissions gap, the 2 degrees C target and what happens next

The overall picture suggests that more needs to be done, even to meet the lower end of these regions' pledges. Moreover, the gap between all countries' lower-end pledges and what's needed to keep the world on track towards a "2 degrees C" pathway remains large – of the order of 10 billion tonnes of CO₂e in 2020 according to UNEP (2011)^{xii}. Hence discussions on the Durban Platform for Enhanced Action, to be continued at COP 18, must be mindful of the effort that should be embedded in any international deal that starts from 2020, given what the world is likely to do until then.

Notes and references:

ⁱ Available online at: <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=90&pid=44&aid=8>

ⁱⁱ In 2007 energy-related CO₂ emissions made up about 80% of total GHG emissions in India, based on data from India's 2007 GHG inventory at: http://moef.nic.in/downloads/public-information/Report_INCCA.pdf and EIA data for 2007 shown in Table 1.

ⁱⁱⁱ These growth rates (which do not account for inflation) are derived (for the US and EU respectively) from the World Bank World Development Indicators, available online at: <http://data.worldbank.org/> and Eurostat, available online at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

^{iv} EU inventory at: <http://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2012>

^v US inventory at: <http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2012-Main-Text.pdf>

^v Copenhagen Accord pledges available online at: http://unfccc.int/meetings/copenhagen_dec_2009/items/5264.php and http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php

^{vi} World Resources Institute analysis available online at: http://pdf.wri.org/reducing_ghgs_using_existing_federal_authorities_and_state_action_summary.pdf

^{vii} See for example: <http://www.ft.com/cms/s/013aa19200-a4eb-11e1-b421-00144feabdc0.htm#axzz1vaeSVRF5>

^{viii} EU Climate and Energy Package details available at: http://ec.europa.eu/clima/policies/package/index_en.htm

^{ix} See for example: <http://www.euractiv.com/energy-efficiency/european-parliament-gives-final-news-514732>

^x Grantham Institute for Climate Change at Imperial College London, analysis available online at: <http://www3.imperial.ac.uk/climatechange/publications/reports>

^{xi} See: <http://www.pib.nic.in/newsite/erelease.aspx?relid=85182> for details.

^{xii} UNEP (2011) report "Bridging the emissions gap" available online at: http://www.unep.org/pdf/UNEP_bridging_gap.pdf

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BUSINESS

28 **KATARA HOSPITALITY**

Qatar's leading hotel chain on why cutting its carbon footprint is welcomed by customers.

30 **HOW TO ARGUE WITH A SCEPTIC**

BusinessGreen editor James Murray says business must step up to the mark and push back against "climate reckless" arguments.

32 **WHAT NEXT FOR THE CDM?**

Helle Juhler-Verdoner, Vice President of Global Affairs at Alstom argues the Clean Development Mechanism is down – but not out.

34 **DOES THE PRIVATE SECTOR HAVE ALL THE ANSWERS?**

Karen Orenstein from Friends of the Earth US says focusing overly on private sources of climate finance ignores other more effective funds available.

36 **NATIONAL BANK OF OMAN**

Oman's banking leaders are determined to fund low carbon initiatives and develop a financially sound green ethos in the Middle East.



Find out more at: www.rtcc.org/business

LUXURIOUS LUSAIL'S GREEN HOSPITALITY

Katara Hospitality is the largest hotel owner and operator of luxury rooms in the State of Qatar, aiming to become one of the leading hospitality organisations in the world.

For over 40 years, Katara Hospitality has been at the forefront of the industry's development in Qatar and in the region, creating peerless hospitality environments. Having established a portfolio of hospitality jewels both in the country and abroad, Katara Hospitality will create in Qatar the hospitality icon of the 21st century.

Located in Lusail city, the meticulously planned urban development that symbolizes Qatar's thriving economy, Katara Hospitality's ambitious project in the Marina District is set to become the hospitality landmark recognizable beyond the regional borders. With an architectural design inspired from the seal of Qatar, the Twin Towers architecturally translate the crossed swords of the country seal into twin arched towers that rise

gracefully from the podium level, while the landscaped gardens and the sea promenade symbolise the ocean and palm trees.

The iconic development in Lusail Marina District has been designed as an attraction point where people want to be and proud to be associated with, by establishing an emblematic sustainable urban development and cultural centre of regional and national importance, as an anchor and platform for a thriving economy.

To reflect the organization's commitment to the highest standards of contemporary and modern living, special attention has been paid not only to creating an iconic building, but also a symbol of futuristic technology and advanced sustainability.

Balancing social, economic and environmental issues, the latest green technologies and approaches to create a sustainable community have been adopted. By controlling soil erosion, prevention of waterways sedimentation and limitation of airborne dust, the company aims at reducing the pollution from construction activities.

The project also provides large open garden areas which enhance the green structure and benefits the microclimate.

Taking advantage of Qatar's climate, the Twin Towers in Lusail Marina are designed to make the most of the all year-round shining sun to generate sustainable, clean electricity, using solar energy as an inexhaustible fuel source that is pollution and often noise free.

A luxurious five star hotel will cater to discerning business travellers, a lavish six star hotel will meet the needs of those seeking sophisticated luxury accommodation, while branded apartments will accommodate permanent residents looking for the utmost comfort. The complex will include a total of 614 units. State-of-the-art entertainment and recreational facilities, including specialist boutiques, VIP movie theaters, exquisite signature restaurants and a private Cigar Lounge are to be complemented by exquisite banqueting and conference spaces, as well as office dedicated areas.



Lusail Twin Towers



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With a name that mirrors our past, we have set out on a journey towards the future. Our aim is to build our reputation in the hospitality world and beyond by creating timeless masterpieces with our passion for perfection. We pride ourselves with decades of iconic achievements and we

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HOW TO ARGUE WITH “CLIMATE SCEPTICS”

BusinessGreen editor James Murray argues business leaders must step up to the mark and start pushing back against “climate reckless” arguments.

The first step is to leave climate science to the climate scientists. Admittedly this approach requires climate scientists to really up their game and start communicating their findings and answering their critics in a much more robust and visible fashion. But we have to get away from the current scenario where a non-scientist green campaigner argues with a non-scientist climate sceptic about complex scientific issues (please could conference and TV news producers take note). Green groups and businesses must come at any engagement with climate scepticism from the starting point that there is not a single peer-reviewed academic paper that challenges the central assumptions of manmade climate change and the vast, vast majority of projections suggest it is a serious problem.

The debate has to be around what we do to tackle the climate problem and it is here that green business leaders, politicians, economists and campaigners can bring to their expertise to bear. Interestingly, climate sceptics such as Lord Lawson are increasingly in agreement that this is where battle is to be joined, acknowledging now that some climate change is happening and focusing their efforts on convincing people that we should ignore clean technologies and pursue a strategy of adaptation.

If you do find yourself arguing with a unreformed climate sceptic who refuses to accept greenhouse gas emissions are in any way a problem, my advice would be to point out that their argument has been discredited time and again, and then, when they inevitably ignore you, politely make your excuses and walk away.

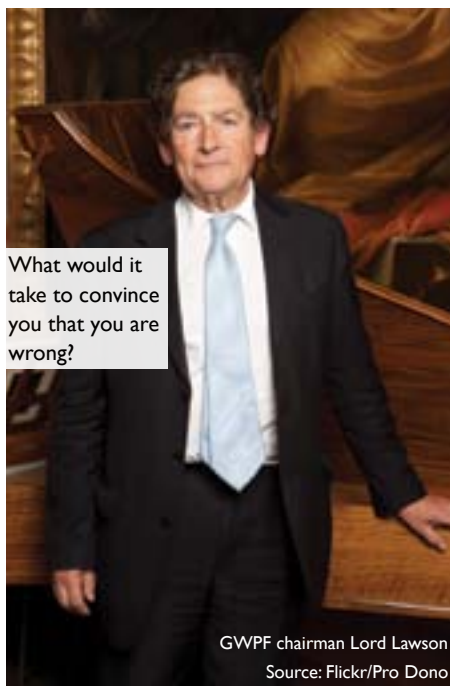
“Climate recklessness”

The next step is to properly name the problem. As numerous commentators have pointed out climate scepticism is a completely inadequate term. All proper climate scientists are climate sceptics, taking a sceptical, dispassionate, and questioning approach to the evidence in front of them and then drawing conclusions from that evidence. “Climate sceptics” are not proper sceptics.

Moreover, the term has been made doubly problematic by the shift in climate sceptic arguments from questioning climate science to questioning the efficacy and cost effectiveness of green technologies and policies. We need a new term. “Climate denier” does not work because many climate sceptics now maintain that they do not deny that climate change is happening (although I often have a hard time believing their partial Damascene conversion), “anti-green” is too clunky and “eco-sceptic” has the same problem as “climate scepticism” in its appropriation of the word “sceptic”.

Personally, I favour the terms “climate reckless” and “pollutocrats”. Climate reckless because what Nigel Lawson and his colleagues at the Global Warming Policy Foundation are advocating is a hugely irresponsible gamble that their climate projections are correct, using the planet and the global economy as the stakes. And pollutocrats because they are at the vanguard of an anti-democratic attempt to promote the short term and narrow interests of unreconstructed polluters at the long term expense of the rest of society, including the hundreds of thousands of progressive businesses who accept that business-as-usual is no longer an option. Although, I accept neither of these terms are perfect and would be open to other suggestions.

By James Murray



GWPF chairman Lord Lawson
Source: Flickr/Pro Dono

The next step has to be to highlight the utter recklessness at the heart of the climate sceptic school of thought - to draw attention to their wager that it is better to continue with business-as-usual in the belief the predicted economy-crippling climate impacts will not occur, than it is to hedge our bets and try and mitigate climate risks, accruing numerous other benefits such as enhanced energy security and reduced air pollution along the way.

Three questions

There are three crucial questions that help to highlight this recklessness, none of which I have heard a compelling answer to from a climate sceptic.

The first is the environmental campaigner George Monbiot's killer question, what would it take to convince you that you are wrong?

Any honest person can answer this question. On the scientific side of the debate compelling, peer-reviewed, evidence demonstrating either that climate change is not happening, or that mankind is not driving it would convince the vast majority of environmentalists that they had been mistaken. Meanwhile, on the admittedly more complex economic side of the argument a genuine weight of evidence demonstrating that green technologies are flawed and climate adaptation is both possible and cost-effective would certainly force me to re-think.

Climate sceptics dodge this question because their fundamentalism means nothing will convince them that their arguments are based on cherry picked data and discredited theories. No amount of rigorous scientific inquiry on the cause of climate change, nor clear data showing greenhouse gas emissions are falling due to the adoption of clean technologies will convince them. Simply asking the question highlights their intellectual dishonesty.

The next question is, what happens if you are wrong?

The simple fact is that if climate sceptics are wrong and the climate scientists are right we are heading for a deeply challenging century in which an increasingly hostile climate will undermine virtually all of the foundations of a functioning global economy, from food security to stable nation states, predictable climatic conditions to reliable energy supplies. Asking the question and insisting upon an answer immediately highlights the recklessness of the game of environmental Russian Roulette climate sceptics want to play.

Of course, the immediate riposte from climate sceptics is to ask the same question right back to environmentalists. But it is easy to answer. If they are right and we are wrong (and bear in mind the vast majority of scientists insist this is not the case) we will have invested unnecessarily in new clean technologies and climate adaptation measures, forfeiting the opportunity cost of having invested in other things (climate sceptics tend to argue this money could be better invested in development projects for the world's poorest, which is strange because so few of them have a

track record of supporting and promoting development policies in any other way). In investing in green technology we would reduce air pollution, create more stable and predictable energy prices, enhance energy security, improve economic and energy efficiency, invent countless new technologies, and create healthier and more liveable communities. As the old environmentalist joke goes, "you mean we've gone to all this trouble and created a better world because of a hoax". Yes, one or two per cent of GDP may have been invested unnecessarily, but we will have accrued countless non-climate related benefits. I'll take the risk of ending up with this world over the risk of ending up with full-blown climate breakdown any day. So would any other rational person.

Finally, and this is the most important question for businesses to ask of climate sceptics, what makes you hate the future so much?

The green economy is nothing more or less than a technological transition; the replacement of old and flawed technologies with new and better technologies. It is just like the first agricultural revolution, the industrial revolution, the post war consumer technology revolution, and the digital revolution. Green businesses are in the process of replacing dirty and unreliable carbon intensive technologies with cleaner and more efficient alternatives. In some cases they cost a bit more currently, but costs are falling and the potential benefits, both environmental and economic, of this upgrade are immense.

Climate sceptics are on the wrong side of this transition. Like the original Luddites and their countless descendants through history, they resist technological progress because it makes them feel scared and insecure, clinging to any theory, no matter how crackpot, that helps to justify their position.

Ultimately, the green economy is about nothing so much as it is about modernity. Businesses understand this. That is why many of the world's biggest firms want to invest in this low carbon transition, partly because they want to mitigate climate risks that could do them untold harm, but mostly because they want to do what progressive businesses have always tried to do: make the world a better place, by innovating and creating new markets, all the while making money in the process.

The past few years might have seen a modest renaissance in climate sceptic influence, but it is useful to remember that the continued ebb and flow of this kind of regressive, anti-modern, anti-scientific thinking is not a unique historical phenomenon. There have always been people who have sought to resist the march of progress, protect their vested interests, and fight dirty in order to do so. It is the duty of individuals, communities, politicians, and yes, businesses, who believe in progress to fight for it at every turn.

*James Murray is editor of the award winning BusinessGreen website: www.businessgreen.com
You can follow him on Twitter: @James_BG*

COP18 NEEDS TO PROVIDE CERTAINTY ON FUTURE OF CDM AND GLOBAL CARBON MARKETS

In September the CDM Policy Dialogue High Level Panel (HLP) reported that “Global carbon markets are collapsing with potential devastating consequences”. Senior advisor to the panel Helle Juhler-Verdoner explains why this issue needs to be urgently addressed.

Is this a problem? Yes it is a huge problem! The global carbon market is an important policy instrument to identify mitigation options and mobilize financing for these.

By Helle Juhler-Verdoner

Why is this collapse happening? Because countries' ambition level to reduce greenhouse gases is much too low. Therefore there is a huge supply of CDM credits but insufficient demand. One billion credits have been issued by the CDM Executive Board but the largest emitters (US, China and India) are not on the demand side. EU is the main source of demand for credits and this is not sufficient to balance demand and supply.

Currently, the CDM is the only functioning global market mechanism. It has resulted in 4,400 mitigation projects in 76 developing countries and mobilized USD 215 billion in investments in developing countries. No other financing tool can match this. Furthermore, it has made mitigation more cost-effective, securing USD 3.6 billion in savings for developed countries in meeting their targets, according to the HLP's research work: *Assessing the impact of the Clean Development Mechanism*.

Governments are discussing potential development of New Market Mechanisms and Frameworks for Various Approaches to market mechanisms in the context of the UN climate negotiations. This is fine, but will take a long time to develop.

The collapse in the market means the capacity that has been built up in carbon markets over the past decades is rapidly eroding. If something isn't done quickly about this, capacity will have to be rebuilt, if and when the UNFCCC decides on future mechanisms. This is a total waste.

In its report launched to the CDM Executive Board on 10 September the High Level Panel (HLP) stresses the need for national governments to urgently increase mitigation ambition by strengthening pledges. Knowing that this is not going to happen any time soon, the HLP advice that the immediate lack of demand is addressed by investigating the establishment of a new fund or enable existing funds to purchase and cancel the current CDM overhang. Furthermore, a *de facto reserve bank* for CDM credits (CERs) should be considered. Finally, while these considerations are made the HLP says that care should be taken not to expand the supply.

The HLP has done a comprehensive work, chairing more than 50 stakeholder meetings across the world and commissioning and assessing research within three major areas: The impact of CDM; The operation and governance of the CDM; and the future context of CDM. The work has been done from mid-February till end of August 2012. Based on this, 51 recommendations have been developed by the CDM PD HLP. Recommendations include the need to improve the operation and governance of the CDM, while recognizing that improvements have happened. The HLP also recommends dealing with the critique on sustainable development and lack of net mitigation impacts. Further collaboration with regional schemes and reaching out to these are encouraged. CDM has built an enormous capacity and experience, this should be applied in new schemes and a reformed CDM should aim to be a standard setter for MRV and tracking of mitigation outcome in new mechanisms.

Building on the HLP's recommendations, Alstom encourages parties of the COP to act urgently. COP18 must provide clarity on the future carbon market architecture, including future of CDM and new market mechanism(s). Negotiators must ensure that a global carbon market will be a core element of the future architecture of an agreement reducing emissions by all large emitters. The world needs a strong, robust and stable price on greenhouse gas emissions to drive low-carbon investments.

Helle Juhler-Verdoner, Vice President of Global Affairs at Alstom and Senior Expert Adviser for the vice-chair of the CDM Policy Dialogue High Level Panel, Joan MacNaughton.

PRIVATE FINANCE NO PANACEA FOR FUNDING DROUGHT

Governments are increasingly looking to the private sector to ensure climate finance pledges remain intact, but as Karen Orenstein from Friends of the Earth US argues, it's foolish to think business will go where governments fear to tread.

Within the corridors of power, a prevalent discourse – almost a religion for some – has erupted in this age of financial crisis. It says that the private sector is the cure for all of society's ills. Government-funded education not improving students' performances fast enough, despite compounding factors like poverty at home and poor nutrition? Let's privatize schools!

By Karen Orenstein

The field of international climate finance has similarly been stricken by this near deification of the private sector – both in terms of where money to address climate change should come from and how it will be spent. The repeated mantra on “leveraging” and “crowding in” private investment – whether at UNFCCC workshops on long-term finance or meetings of the Green Climate Fund (GCF)





The FTT, sometimes referred to as the Robin Hood Tax, applies a small levy to financial transactions such as share dealings, commodity trading and currency speculation and could raise billions of dollars annually.

- is premised on the assumption that developed countries are broke and the only source of finance available is from private markets.

The truth is, however, that there are very good sources of public finance that governments can tap into that would generate real money – like financial transaction taxes (FTT) on Wall Street, the City of London, and other international financial centers. Known worldwide as a Robin Hood Tax, an FTT would generate hundreds of billions of dollars in new revenue annually. Cracking down on tax dodging by multinational corporations would also free up many hundreds of billions of dollars. In fact, developing countries lose more in tax revenue than they receive in foreign assistance each year. Thus, the seeming lack of money to address the climate crisis is largely a lack of political will, not an actual lack of resources.

Similarly for the GCF, some developed country governments view the GCF primarily as a vehicle to *leverage/crowd in/mobilize* (take your pick) private finance. Yet there is a lack of clarity on what this terminology means in practice. Something we can be quite sure of, however, is that an emphasis on international private finance at the GCF is likely to translate into little investment in lower income countries, as well as in marginalized populations within middle income countries.

The history of development finance bears this out. For example, in 2012 at the International Finance Corporation (IFC), the private sector lending arm of the World Bank Group, less than 29% of investment went towards the poorest countries. Of the IFC's

investment in low income and lower-middle income countries from 2006 to 2011, only 2.4% went to small and medium enterprises. The European Investment Bank fared even worse, with only 0.4% of investment in non-European countries directed to small and medium enterprises from 2007 to early 2012¹.

A similar pattern is seen with the Clean Development Mechanism (CDM). As of 2012, over 75% of all projects in the CDM pipeline were located in China, India, Brazil and Mexico². Further, the CDM is strongly biased towards large-scale projects that produce large numbers of credits; smaller-scale projects, which would be more likely to have sustainable development benefits, would not generate offsets as cheaply.

Attracting private finance and meeting the needs of poorer countries are often not overlapping goals; the former is overwhelmingly motivated by a return on investment, not climate and development effectiveness. This leaves adaptation finance -- a tremendous, but usually unprofitable, need in many developing countries - in the dust (sometimes literally).

The mantra of shaping the GCF to be as attractive as possible to private investors needs to be replaced with a meme of designing a fund that tackles the climate crisis in the most just, effective, and ecologically-sound manner possible. The two are not the same and must not be equated. The world cannot afford such magical thinking.

Email Karen on: KOrenstein@foe.org

¹ Pereira, Javier, Eurodad, *Cashing in on climate change: Assessing whether private funds can be leveraged through the Green Climate Fund and other channels to help the poorest countries respond to climate challenges*, April 2012, at http://eurodad.org/wp-content/uploads/2012/04/CF_report_web.pdf.

² UNEP – RISO Centre, "All CDM Projects in the Pipeline in Brazil + Mexico + India + China as a fraction of all projects" at <http://www.cdmpipeline.org/cdm-projects-region.htm#1>. Accessed October 2012.

BANKING ON SUSTAINABILITY

Financing climate mitigation and adaptation will be one of the key topics up for discussion during the COP18 talks in Qatar. Aisha Abdullah Al Kharusi explains the actions the National Bank of Oman is taking to fund low carbon initiatives and develop a green ethos in the Middle East.

National Bank of Oman (NBO) was the first local bank to be founded in the Sultanate of Oman. Since its foundation in 1973, the Bank has played an important role in the development of the Sultanate and ranks among the leading banks in Oman. With its headquarters in the capital Muscat, the Bank operates in Oman through a widespread and established network of offices, branches and ATMs that provide retail, corporate and investment banking services. NBO also has branches in Egypt and the United Arab Emirates. www.nbo.co.om

We believe that by conducting our business responsibly we are not renouncing profits but guaranteeing that our business operations are not harmful to the environment and society within which we operate, and in turn achieve more sustainable profits that guarantee the continuation of our business. Financial institutions have an important role in society, and we believe that by conducting our banking operations responsibly we are also responding to our stakeholder's expectations while enhancing our reputation.

Our sustainability strategy is based on three focus areas which best capture the material issues related to Sustainability at NBO, as informed by our stakeholder's needs and expectations. Each of them represents a different level of approach towards becoming an economically, socially and environmentally sustainable and responsible bank.

Responsible Banking for You

- We aim to build customer confidence by fostering responsible banking practices

Responsible Banking for Our Nation

- We aim to contribute towards the development of a more responsible financial system in Oman

Responsible Banking at NBO

- We aim to embed sustainability management across our business and operations Conserving the environment

We recognize the importance of mitigating the environmental impacts of our operations. We are committed to reducing carbon emissions, effective resource management and strategic waste management, all of which will increase our operational efficiency and reduce costs while contributing positively to the environment.

Our ecological footprint

NBO understands the importance of focusing on reducing energy consumption and is currently assessing potential initiatives that could bring positive results. The Bank will continue tracking its business vehicles fuel consumption, making sure we are operating modern fleets are operated to maximize safety and minimize greenhouse gas emissions.

NBO's operations do not affect natural protected areas or areas of high biodiversity value, due to Headquarters and Branches being mostly located on urban land. The Bank's water discharge is channelled through the urban network, and NBO is committing to implementing measures in the future that will reduce consumption.

Furthermore, NBO's focus on local procurement has allowed the Bank to contribute to the development of the local economy and avoid indirect greenhouse gas emissions caused by long distance transportations. In 2011, NBO started purchasing recycled printer cartridges which is now corresponding to 69% of total purchases and the Bank is considering assessing the viability of purchasing recycled certified paper.

Our Green Campaign

An internal "Green Campaign" was launched in June 2010, aiming at saving electricity costs and reducing energy consumption. Staff are now regularly reminded to turn off all AC's and lights when they leave their offices, and security guards make sure all un-needed lights are switched off at the Head Office buildings after working hours. The Bank's automatic air-conditioning system was adjusted and doors are closed to avoid air dissipation. In addition, the Bank mainly uses LCD computer screens with higher energy efficiency standards than the conventional ones.

“ We recognize that sustainability management is the next step for business excellence. This different way of doing business integrates social, economic and environmental performance, with the aim of benefitting all key stakeholders. By adopting sustainable management and reporting in 2012, we will be responding to a range of challenges in terms of financial transparency and accountability as well as our responsibility towards the environment and society. ”

*Salaam Al Shaksy,
Chief Executive Officer - National Bank of Oman*



In the near future, NBO is committing to investigating the use of electricity flow stabilizers to regulate electricity currents and save energy usage as well as establishing a “save paper campaign” to engage NBO employees. NBO also supported the “Save Energy Oman” campaign launched in 2010 by the Ministry of Environment, aimed at raising awareness on the importance of environment conservation. NBO implemented 8 or the 10 energy tips that were applicable to its business and engaged its employees in the cause.

ATM's printing option

NBO was the first bank in Oman to introduce the printing options for receipts at ATMs. Customers can now choose to print or not to print receipts from transactions made on

all NBO's ATMs, helping to reduce paper consumption while educating our customers on the importance of conserving the environment.

Shared printing system

Since 2009, NBO has been implementing a shared printing system through the bank that has helped educate employees to print only what is really necessary.

National Bank of Oman
www.nbo.co.om



COSUMAR: A GREEN CITIZEN COMPANY

The COSUMAR group is the sole sugar operator in Morocco. Comprising of 5 companies with eight production sites in five regions of Morocco, its business spans the fields from farming to sugar consuming. All sites are certified ISO 9001, ISO 14001 and OHSAS 18001 and obtained the CSR Label issued by CGEM and CSR Top Performer trophy issued by Vigeo.

To supply the entire Moroccan population with sugar, COSUMAR finances and supports technically and socially 80,000 farmers on 90,000 ha to produce 3 MT of Beet and 1 MT of Sugar Cane, i.e. 45% of the sugar needs of Morocco. The remaining 55% is imported and refined to meet the shortfall of domestic production.

Ongoing efforts to support agricultural upstream

The COSUMAR Group plays its role of aggregator of sugar plant farmers. It provides seeds, fertilizers, pesticides, water, transport from field to factory and technical support to the crop. The purchase price of the crop is contractually fixed and guarantees constantly improving income for farmers.

The group also provides financial and technical support to young entrepreneurs for small business creation in agricultural areas to provide crop mechanization services and input distribution. These actions create rural employment, reduce rural-urban migration and improve crop yields.

The group is committed socially towards farmers and their families: health insurance, medical caravans, construction and sponsorship of schools... COSUMAR has established an organization and provided human resources (33 engineers and 90 agricultural technicians) and equipment accordingly.

KEY FIGURES:

Turnover: MAD 6.2 billion

Sugar production: 1.2 million tons/year

Employees: 2,000 permanent employees, 10 million working days. The equivalent of 2,500 positions for different services.

COSUMAR AND SUBSIDIARIES:

Sugar Cane Processing Plant

Raw Sugar Refinery

Sugar Beet Processing Plant

Aware of its responsibility for the protection of the environment, COSUMAR Group has identified the impact of all its activities on the environment and developed an environmental program.

For Water:

Significant investments have been made in all plants for reducing water consumption and have achieved nearly 38% water savings and reduced all the liquid discharges.

An agreement was signed with a brick plant and a cement plant to enhance sludge with construction materials and completely eliminate this solid release. The proposed construction of the processing plant of liquid discharges for SUTA plant was finalized.

In addition, a study was launched to implement the waste treatment for SURAC, SUNABEL and SUCRAFOR plants.

At the agricultural level, actions have been taken to improve the management of irrigation water by the development of micro-irrigation and water service effectiveness in terms of programming and improved irrigation practices.

For Energy:

A bagasse boiler was installed to produce steam to a sugar beet plant.

The main benefits of this project are:

- Valuation of surplus bagasse
- Economy of 7000 T of coal per year
- Reduced emission of 15,000 t of CO₂
- Elimination of over 250 round trips of semi trailer trucks (for the transfer of coal)

This project was registered as a MDP project, becoming the fifth Moroccan project registered. The development of sugar culture in Morocco will promote local wealth creation and sustainable development.

COSUMAR

www.cosumar.co.ma



ENERGY EFFICIENCY

40 QATAR SCIENCE AND TECHNOLOGY

Respond magazine hears how QSTP is planning to become the Middle East's cleantech hub over the next decade.

42 CHINA'S ENERGY EFFICIENCY DRIVE

The Global Environment Facility's Ming Yang explains how they have financed a drive to improve the performance of China's industrial boilers.

44 CUTTING EMISSIONS IN BRAZIL

The renewable energy industry is thriving in Brazil – CPFL Renováveis explain how their investments in the latest wind technology are saving money and boosting power.

50 QATAR'S WIND AND SOLAR DREAMS

Qatar currently has the highest per-capita emissions on the planet. Jaidah Group explain how this figure could start to fall over the next decade.

52 STANDARDS SAVE ENERGY

The International Electrotechnical Commission outline how cooperation on smart grids and component standards can build a more resilient electricity sector.



Find out more at: www.rtcc.org/energy

CREATING A SUSTAINABLE FUTURE

Sustainability is at the heart of Qatar Science and Technology Park (QSTP).

QSTP brings together the brightest and most farsighted pioneers of sustainability who want to be in the vanguard of this movement. It has attracted the faculties of top international universities and allows foreign companies to set up 100 percent-owned businesses in Qatar, free of tax and duties. These benefits are provided on condition that these entities will predominantly be conducting technology development.

Though blessed with natural resources, Qatar's reserves of oil and gas will not last forever; therefore efficiency and sustainability have to be at the core of everything we do.

QSTP, as the only science and technology hub in the Middle East, is leading the push towards a sustainable future. It is making the most of the benefits that our economic growth offers today, to make the world a better place for tomorrow. Sustainability is not a slogan at QSTP; it is a living practice.

Locate and innovate

Qatar is located in a part of the world where many incentives exist to drive the sustainability theme. Solar power is in abundance, while other resources, such as fresh water and arable land are very limited, if almost non-existent.

What Qatar also has in abundance is a large and well-educated, young and environmentally conscious workforce. These are the leaders of the future. With the adoption of Qatar National Vision 2030, Qatar has chosen a development path that balances the needs of current and future generations. QSTP exists to nurture the ambitions of the current generation and create a better future for all.

A fine example would be the support QSTP provided to students from Qatar University and Texas A&M University at Qatar (TAMUQ), who, with their ultra-efficient vehicles took part in the Shell Eco-Marathon, an energy efficiency competition which was held in Malaysia in July 2012. Team Gernas 2 from Qatar University came in second place in the prototype alternative diesel fuel category.

QSTP-based organizations have been active in a wide number of areas which have sustainability as a key theme. One of these includes the production of biofuel from aquatic photosynthetic microorganisms and the development of associated technologies.

The project, which is being implemented by QSTP, Qatar University and Qatar Airways, aims to support and enhance the operations of the transport industry. The biofuel project will in particular support the aviation sector, help it reduce its emissions and secure more sustainable energy sources.

QSTP's Proof of Concept Fund provides grants for Qatar-based researchers to demonstrate the technical and commercial viability of their innovations, helping them move from the lab bench to the point where commercial investors are ready to back it. In turn, the New Enterprise Fund will provide capital for start-up technology companies located at QSTP. It will make equity investments in start-up companies from the seed stage through to the early growth stage.

Precious resources

The Solar Carbon Black Project, involving QSTP, Fraunhofer IWS, and TAMUQ, will build and test smart solar reactors. We will produce high-grade carbon and co-products by breaking down natural gas into carbon black (which will be used in the production of nano materials), and hydrogen without CO₂ emissions. The project is jointly funded by QF and the Lower Saxony Government.

Elsewhere, QSTP, GreenGulf and Chevron have set up a 35,000 square meter facility to test new and emerging solar technologies in order to understand their suitability for regional environments. We are investigating the effects of heat, humidity and dust on the performance of solar equipment, as well as local challenges such as water-efficient cleaning systems.

Another area in which QSTP is burnishing its sustainable credentials, and which is vital to all developing economies, particularly in locations where huge infrastructure projects are being created, but which may have a long term detrimental effect on the environment, is in concrete.

A project which is implemented by QSTP, the Gulf Organization for Research and Development, Qatar's Ministry of Environment and Aberdeen University concerns the development of a new generation of sustainable, environmentally-friendly, and affordable low carbon concretes that can be used in the construction of durable, high-quality building and infrastructure projects across Qatar and other parts of the region.

QSTP aims to be at the forefront of the sustainable revolution by providing a plethora of world class research, development and demonstration facilities, funding and inspiration to take the sustainability challenge to the next level.

Qatar Science and Technology Park
www.qstp.org.qa



TOWARDS SUSTAINABILITY AND TECHNOLOGICAL INNOVATION

FINANCING CHINA'S DRIVE FOR ENERGY EFFICIENCY

China's energy intensity (EI) decreased from 35,000 BTU/US\$ in 1981 to 15,000 BTU/US\$ in 2005. This EI reduction was partly due to large capital investments and policy efforts in China's industrial boiler (IB) sector in the 1990s. Ming Yang presents a case study on how the Global Environment Facility (GEF) worked in this area.

In the early 1990s, industrial boilers consumed a tremendous amount of coal and accounted for a large source of China's carbon emissions. Medium and small-scale IBs - producing less than 65 tons of steam per unit per hour (tph)- consumed over 350

million tons of coal in China in 1990, accounting for 35% of the country's coal use. The efficiency of these boilers was approximately 60%, about 20% lower than in the developed countries. These boilers emitted around 715 million tons of CO₂, equal to 30% of total GHG emissions from energy consumption in 1990.

The inefficient IB sector was due to numerous domestic barriers. These included: (a) the industry was in the midst of transition from a government planning model to a market oriented model, and the government energy efficiency policy did not fit the market in transition, which had inhibited the introduction of efficient boiler technologies; (b) standards for thermal efficiency, coal quality, and environmental performance for IBs were out-of-date; (c) decentralized boiler production and weak industry associations had resulted in a scarcity of information exchange within the IB sector; (d) low profitability in the industry, due to below-economic scale production, rising input costs, and intense competition in the small, low-technology end of the industry, had inhibited the development

By Ming Yang





The Global Environment Facility (GEF) unites 182 member governments in partnership with international institutions, nongovernmental organizations, and the private sector to address global environmental issues. An independent financial organization, the GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. It serves as financial mechanism for the UNFCCC, CBD and UNCCD.

and marketing of new boiler products; (e) the lack of consumer information on energy savings, reduced local pollution emissions, ease of use, and increased safety, had inhibited demand for more efficient but higher-priced boilers; and (f) underdeveloped capital markets had been reluctant to lend to producers for domestically untested new products or to consumers for capital investments with payback periods of more than a few years.

As a result, energy efficiency improvements in coal-fired industrial boilers in China in the 1980s and the 1990s had been very modest, with minimal investment in product development and production line overhaul.

Intervention

The objective of the GEF project was to reduce GHG emissions, as well as emissions of total suspended particulates (TSP), sulfur dioxide (SO₂) and nitrogen oxides (NO_x), through: (a) the development of affordable energy-efficient and cleaner IB designs; (b) the mass production and marketing of the improved boiler models that had successfully met performance criteria; and (c) the broad dissemination of more energy-efficient and cleaner IB technologies throughout China through energy efficiency and environmental policy reform, new standards and codes, institutional strengthening, and improved information exchange.

The GEF, the World Bank, and the private sector jointly financed the project at a total amount of US\$121.1 million. The GEF grant of US\$31.85 million covered the project incremental costs that included fees for technology transfer, technical assistance and capacity building, government policy development, new standard and code establishment, and regulatory institution development. The World Bank provided a loan of over US\$80 million to nine Chinese boiler manufacturers.

The major environmental benefits of the project were the reduction of GHG emissions. In the early 2010s, China's industrial boiler capacities totaled 105,000 tph, or approximately 2,100 units with an average capacity of 50 tph per unit. The proportion of energy efficient boilers that were resulted from the GEF/World bank project was estimated at more than 420 units or 20% of the boiler population.

The new efficient boilers were produced and distributed by nine boiler manufacturers in all industrial cities and provinces in China. Most recent recalculations by the Independent Evaluation Group of the World Bank in 2012 estimated that a total of 40 million metric tons of cumulative CO_{2e} emissions will be directly reduced by the project by 2019.

China's industrial boiler sector provided low-hanging fruits in energy efficiency improvement in the 1990s. The GEF/World Bank successfully picked up the fruits with a small grant and a limited amount of loan. This project facilitated the government to establish new energy efficiency policy in IBs, new standards and codes, and new regulation institution; transferred nine energy efficient technologies from Japan and the USA to China; and mitigated 40 million metric tons of CO_{2e} at a ratio of approximately US\$3 per ton CO_{2e} reduction.

The Global Environment Facility (GEF)
www.theGEF.org



GREEN ENERGY TAKES OFF IN BRAZIL

The year of 2011 marked the beginning of operations of the largest company in the generation of electricity through renewable sources in Brazil: CPFL Renováveis.

The activities of CPFL Renováveis depend heavily on the climatic features of the planet, which must be suitable for power generation.

Since its conception, CPFL Renováveis has an essential principle for Business Strategy in sustainable development that is clearly expressed in its vision: “Energy is essential to people’s well-being and the development of the society. We believe that producing and using energy sustainably is vital for the future of humanity,” in its mission: “Generate energy from renewable sources, in harmony with the environment and society, promoting the maturation of the clean energy market.”

Because CPFL Renováveis contributes positively to the mitigation of emissions of greenhouse gases, our projects are eligible to obtain carbon credits, in the Clean Development Mechanism and in the Voluntary Carbon Market as well.

PROJECTS REGISTERED IN UNFCCC (UN)	POTENTIAL OF CERS (YEAR)
Repowering of Small Hydro Plants (SHP) in the State of São Paulo, Brazil	18,583 CERS
Electric Power generation from renewable sources – Windfarms Santa Clara I to VI and Eurús VI	149,358 CERS
IN PROCESS FOR REGISTRATION WITH THE UNFCCC (UN)	
Power generation from renewable sources – Arvoredo and Varginha Small Hydropower Plants	29,254 CERS
Electric Power generation from renewable sources – Barra da Paciência, Ninho da Águia, Corrente Grande, Paíol, São Gonçalo and Várzea Alegre Small Hydropower Plants	138,331 CERS
Electric Power generation from renewable sources – Windfarms Macacos, Juremas, Pedra Preta and Costa Branca	68,632 CERS
PENDING APPROVAL BY THE CIMGC (BRAZIL)	
Electric Power generation from renewable sources – Windfarm Campo dos Ventos II	51,922 CERS
Electric Power generation from renewable sources – Salto Góes Small Hydro Power Plant	30,094 CERS

Additionally in 2011 we have done our first corporate GHG emissions inventory that resulted in 13,113.76 CO2e emissions. As a company committed with climate change matter CPFL Renováveis will keep in the portfolio part of the carbon credits generated in the projects in order to compensate the emissions.

With a portfolio of 4,827 MW of installed capacity of which 945 MW are currently in operation, 790 MW under construction and 3,092 MW in development stage, CPFL Renováveis already has a strong presence in the main renewable energy technologies currently being developed in the country, small hydroelectric power plants, biomass thermoelectric power plants and wind farms and has activities in the development, preparation, construction and operational stages of power generation plants.

The business model of the company was exclusively designed for the investment in renewable energy generation projects, contributing positively to mitigate the issue of climate change.

By using renewable sources to generate electricity, we contribute to environmental preservation, developing actions that ensure the sustainability of our business in the long term and helps create value for our shareholders.

The concept of sustainability is present across the company and it is the reason why we operate in an integrated manner in all phases of a project’s cycle, i.e., in prospection and identification of opportunities stage, by respecting the socio-environmental characteristics of the region, during the development and construction stage, we make use of natural resources in a rational way, and in the operation stage, we guarantee the environmental quality of the catchment area of our power plants.

We believe that the growth of the renewable energy sector is directly connected to some factors such as the global concern regarding the impact that the fossil fuel based energy generation has on the climate and the environment, with direct consequences on the substitution of fossil fuels by renewable energy.

CPFL Renováveis
www.cpflrenovaveis.com.br



We believe that producing and
using energy sustainably is vital
to the future of humanity.



THE RURAL ELECTRIFICATION PROGRAMME IN ZIMBABWE

Rural Electrification Agency (REA) is providing energy to disadvantaged rural communities of Zimbabwe through Biogas Digesters Technology.



Achievement of the Rural Electrification Programme in Zimbabwe

A total of 6,693 institutions were electrified since inception of the rural electrification programme in Zimbabwe up until 31st March 2012. Out of this number 6,316 institutions were electrified through grid electricity whilst 377 institutions were electrified through solar mini-grid systems. An analysis of the statistics reflects that rural schools, rural health centres, government extension offices and business centres have been connected to grid electricity or use solar power. Only 20% of the rural households have access to grid electricity or use solar energy. Despite the achievement recorded under the rural electrification programme, many rural institutions face a challenge in terms of accessing and or affording grid electricity.

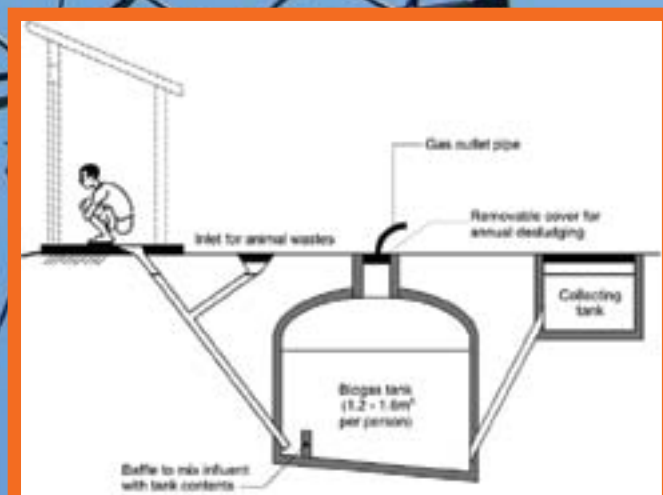
Energy Crisis in Zimbabwe

Just like the experiences in the region, Zimbabwe suffers from a power generation deficit. The rural communities have been hard hit by the energy crisis compared to the urban communities.

Energy provision through Biogas Digesters Technology

To alleviate the energy crisis for the rural communities, REA has embarked upon a Biogas Digesters Technology Programme in the year 2012 that is expected to benefit about 100 institutions countrywide at a cost of USD1.5 million. Biogas is produced by the anaerobic digestion or fermentation of biodegradable materials such as biomass, manure, sewage, municipal waste, green waste, plant material and crops. It comprises primarily methane and carbon dioxide and may have small amounts of hydrogen sulphide moisture and siloxanes. The gases methane, hydrogen and carbon monoxide can be combusted or oxidized with oxygen.

Historically, biogas technology was pioneered in Zimbabwe by nongovernmental organizations in the 1980's. About 400 biogas digesters were constructed countrywide. A few institutional biogas digesters were built by some missionaries at Monte Cassino Girls High School in Macheke, Brunapeg in Plumtree and St Luke's Mission in Lupane. Most of the biogas digesters constructed are no longer functional. In a study conducted in consultation with the Ministry of Energy and Power Development, it was noted that buy-in from the users was pivotal to the successful implementation of the biogas technology since the users were expected to feed the biomass, manure, green waste, plant material and crops.



REA has embarked on an aggressive marketing campaign to increase awareness and adoption of the readily available and cheap technology to individuals, institutions and corporates and remove the stigma associated with the use of human waste.

A technical strategic partner, Southern Biopower Limited (an ecologically and development oriented company with expertise in biogas technology and focusing on renewable energy solutions for Zambia) has partnered REA in the design and construction of five prototype biogas digesters in and around Harare. The strategic technical partnership would facilitate capacity building and technological skills transfer to REA staff and the private sector. Thereafter, the programme would be rolled out to rural institutions with greater focus on schools, health centres and farms.

Advantages of biogas technology

The benefits of using biogas technology are numerous.

To name a few:

- The technology is highly adaptable and usable by both rural and urban communities, including both the public and the private sector. It is very ideal for farms and more so for quality tobacco curing. In its marketing strategy, REA is urging rural communities and households to twin biogas technology (for cooking) with solar systems (for lighting and water heating).
- The technology results in stabilization of waste.
- The technology lowers the country's carbon footprint (resulting from the use of paraffin lamps and other carbon emitting energy sources) and thus results in a cleaner environment.
- There is a great reduction in deforestation. Traditionally, over 90% of the rural communities rely on firewood for lighting, cooking and water heating. The excessive use of firewood has taken a toll on the environment, degrading natural forests and generally causing soil erosion, reduced soil fertility and plant growth.

- It is a cheap and readily available source of energy for lighting and cooking. It goes without saying that there would be an increase in the pass rate for school children resulting from increased access to lighting energy and longer study hours.
- Through the use of biogas technology by institutions or individuals connected to grid electricity, the electricity consumption levels are reduced hence reduced electricity bills. The financial savings realized are channelled towards other family, social or economic needs.
- The use of biogas technology by the rural communities and households results in energy savings that would be channelled towards increased production by the manufacturing sector. Inevitably, the energy savings reduce the current woes faced by the Zimbabwean society of long hours of load-shedding.
- The resultant fertilizer could be consumed at individual household or institutional levels or bagged and sold to neighbouring households or communities without biogas technology.
- This technology presents potentially viable business opportunities for rural communities or households to bag the gas and sell to their neighbours.
- Biogas technology is estimated to have the potential to replace around 17% of vehicle fuel. The renewable fuel could be cleaned and upgraded to natural gas standards when it becomes bio methane.

For the Zimbabwean nation that suffers through the deficit in grid electricity power generation and desperately needs energy, any energy savings from the use of biogas technology make a difference.

Rural Electrification Agency
www.rea.co.zw



ENVIRONMENTAL IMPACT ASSESSMENT:

The Investigation, Identification, Avoidance and Mitigation of Environmental Concerns in Large Infrastructure Projects.

The Nabucco Project is one of the largest infrastructure projects in Europe. When completed, the Nabucco pipeline will transport natural gas over 1300 km from the vicinity of the Turkish-Bulgarian border via Bulgaria, Romania to the Central European Gas Hub near Baumgarten in Austria. The aim of the Nabucco project is to bring freedom of choice to consumers in Europe and to diversify the gas portfolio with gas from the Caspian region and other sources. Given the scale of the project, the Nabucco project is keenly aware of the need to avoid, and where necessary, mitigate any possible environmental impact created by our work. We do this not only by following regulations and directives to the letter, surpassing them wherever possible, but also by engaging, communicating and consulting with stakeholders at all levels. In terms of both project development and environmental impact assessment and mitigation, Nabucco aims to establish best international practices rather than just follow them. Nabucco believes that building a sustainable relationship with all stakeholders is the best way to create value for our shareholders in the long term.

Natural gas is often called the cleanest of all fossil fuels. Particulates produced by natural gas are over 390 times lower than those produced by coal. With lower carbon dioxide emissions than either coal or oil, and lower production of sulfur dioxide and nitrous oxides than coal, natural gas is a logical choice for a planet faced with the choice between rising energy demand, and higher environmental consequences.

But apart from the environmental sustainability of the gas we transport, our main objective is also to minimize impact on the environment produced by our activities: both during the construction and operations phase.



The Nabucco Project is subject to an Environmental Impact Assessment (EIA) according to the EU Environmental Impact Assessment Directive. The principle of the Directive governing Environmental Impact Assessment in the EU is to ensure that all plans, programmes and projects likely to have significant effects on the environment are made subject to an environmental assessment prior to their approval or authorisation. Consultation with the public is a key feature of this process. National regulations in all the transit countries of Nabucco West are harmonized with the EU directives. These regulations, in general, mandate a two-step process: the first of which requires a submission for an environmental permit, outlining preliminary findings and documentation; the second is a more detailed analysis of possible impacts and mitigation plans. Public consultations form an important part of both these phases.

Nabucco also operates according to the Equator Principles, a voluntary set of standards for determining, assessing and managing social and environmental risk in project financing. Introduced in 2003, the Equator Principles have become the de facto standard for international banks and investors on how to assess major development projects around the world. In July 2006, the Equator Principles were revised, increasing their scope and strengthening their processes.

Experts working on environmental impact assessment for Nabucco must foresee and mitigate possible impacts that range from the micro-local to the global. For example, concerns may range from restoring and maintaining the soil quality of a field affected by the pipeline construction and operation, to the pipeline's carbon emissions. In each case, the aims of the project are to ensure minimum impact to the environment. Wherever possible, maximum efforts are being made to entirely avoid protected habitats and ecosystems. In the EU, the protection of such sensitive habitats assured by the establishment of the Natura 2000 network governed by the Birds and Habitats Directives.

Finally, working to conserve existing environments means working with the people living in these environments. Nabucco works with communities on a regular basis, systematically inviting consultation and engagement from affected communities, civil society, and concerned individuals. Public consultations and information form an integral part of our development activities, and whether online or in person, Nabucco experts aim to listen and address the concerns of all stakeholders.

The addressing of environmental and social concerns relating need not be a brake on development, but they must be taken into account, and where necessary, mitigated. An early and comprehensive analysis of the project's potential impacts equips us to identify and address these concerns early, and to the satisfaction of all parties involved.

Nabucco Pipeline Project
www.nabucco-pipeline.com



NABUCCO - OPENING THE SOUTHERN GAS CORRIDOR

The Nabucco gas pipeline will connect the vast gas resources of the Caspian with European consumer markets.



NABUCCO: THE GAS
HIGHWAY TO THE FUTURE

Nabucco is the project which will diversify gas supplies into Europe and significantly improve European energy security.

Nabucco offers a unique and stable legal framework through the intergovernmental and the project support agreements between the governments of the transit countries.

NABUCCO
GAS PIPELINE

QATAR IS READY TO PLAY ITS PART

Climate change – and how we react to that issue – is a global concern. The myriad of meetings and symposiums that are taking part on the subject are only part of the solution to a worldwide problem.

Talk is good, and South Korea and the State of Qatar have agreed to jointly co-operate in the next UN Climate Change Conference which will be taking place in Qatar from November 26 to December 7, 2012.

Actions speak louder than words, however, and here we have a brief look at what Qatar is doing now – and hopes to achieve in the future – in regards to how we react to climate change. Despite its diminutive size, Qatar has a relevance of stature in terms of climate change in its position as an extensive extractor and retailer of hydrocarbons.

Energy exporter – now, and the future

The importance of the latter raises (and answers) numerous questions in the context of Qatar as a developing nation, despite its being home to the world's fastest-growing economy. Its economy is heavily reliant on the extraction and sale of hydrocarbons, but done in an environmentally-sympathetic fashion. This runs parallel to an understanding that the finite nature of these resources (though Qatar holds the world's third-largest gas deposits) presents its own challenges.

To this end, Qatar has developed the 'Qatar National Vision 2030' (QNV) which describes

Jaidah Group was founded in 1898 as a family company importing foods, wood and other basic necessities. Today, it is one of Qatar's most respected and successful conglomerates, covering a variety of divisions. Of these, the most relevant to climate change is Jaidah Energy, with its extensive research into renewable sources of energy.

the evolution of the economy from one reliant on the aforementioned hydrocarbons to an economy that is primarily knowledge-based. What this means is that while deriving income from the sale of its natural resources (primarily exported as Liquefied Petroleum Gas (LPG) for a range of markets worldwide), the country is provided with the means to develop its vision.

Starting small – but making a difference

So Qatar, while geographically small, has an increasing influence and an understanding of how the world is changing with regard to reaction to climate change. LPG is the cleanest of hydrocarbons, and this is a start, but the methods of extraction – using cutting-edge technology – are as clean as possible also. The paradox, as previously mentioned, is that hydrocarbon sale is funding the change that will see Qatar become a fundamentally different country through QNV.

That is not to say that there is inactivity in the interim. Qatar – which has, by its own admission, an enormous carbon footprint per capita – is making progress right now. In December 2010, Qatar was awarded the right to host the 2022 FIFA World Cup. The Qatari summer and its attendant heat will require the 12 stadiums that will host the games be ameliorated from temperatures that can exceed 50°C and this will be done through an innovative solar-powered and carbon-neutral air conditioning system – a world's first on the scales required to cool an 86,500-seat stadium from 50°C to 26°C.

Qatar's constituent companies are making their presence felt also. One of them, Jaidah Group, is a long-established family business and multi-divisional conglomerate. One of these divisions, Jaidah Energy, exemplifies the parent company's responsibility to responding to climate change. It is exploring renewable and carbon-free power sources including solar and wind power.

Solar power, for reasons discussed above, is of particular interest in the region in general and Qatar in particular. The concept of using what is essentially an infinite (and free) power source to help cool the planet is one that particularly excites companies worldwide, and Jaidah Group's Energy Division is one of them.

South Korea has championed the concept of the 'green economy', which links green growth to sustainable development and poverty eradication. The jointly-organised summit taking place in Doha this November and December is the strongest possible indication that Qatar wants to join this world-changing journey, and make a contribution way in excess of the country's size.

Jaidah Group
www.jaidah.com.qa





When the future speaks,
we listen.

مجموعة الجيدة
Jaidah Group 

TAKING NOTE TODAY FOR A CLEANER, GREENER TOMORROW.

Jaidah Group understands that the growth of tomorrow depends on the decisions we make today. That's why we are listening to the voices of the future and taking measures to protect the environment for many generations to come.

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ENERGY SMART TECHNOLOGY

The **International Electrotechnical Commission** is the leading global organization that publishes consensus-based International Standards and manages conformity assessment systems for electric and electronic products, systems and services, collectively known as electrotechnology. IEC publications serve as a basis for national standardization and as references when drafting international tenders and contracts.

The organisation is a not-for-profit, non-governmental organization, founded in 1906. IEC members are National Committees, and they appoint experts and delegates coming from industry, government bodies, associations and academia to participate in the technical and conformity assessment work of the IEC.

Energy consumption will double between now and 2030, electricity demand will triple by 2050. Today, large amounts of energy are wasted. Proven, existing technologies can bring immediate savings of up to 30% with low hanging fruit in transportation, buildings, cooling and heating or industrial motors.

To reduce emissions and produce enough energy for developed and developing nations in the future, the IEC believes that the whole energy chain will need to be reworked. The need for Electrical Energy Storage (EES) will increase significantly over the coming years. With the growing penetration of wind and solar, surplus energy could be captured to help reduce generation costs and increase energy supply.

The broad roll-out of the most energy efficiency technologies directly depends on globally relevant metrics, technical specifications and universal testing methods, all of which is developed in the IEC.

The IEC provides a global platform for over 10 000 engineers and 164 countries. It has the expertise and the scope to be a key

contributor to enable the many technical solutions needed to address this challenge.

The IEC has developed a series of White Papers on these topics. We invite you to download your free copy (value CHF 50.-/each) : <http://www.iec.ch/whitepaper>

- Coping with the Energy Challenge
- Electrical Energy Storage
- Grid integration of large-capacity Renewable Energy sources and use of large-capacity Electrical Energy Storage

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Jean-Guy Carrier, Secretary General,
International Chamber of Commerce

Greener economies offer opportunities for all of us. They are good for the climate and the environment, and also drive economic growth and job creation. The urgency to address climate change and the impact of a growing population on finite resources is only being intensified as the economic crisis tightens its grip on the global economy.

The International Chamber of Commerce (ICC) welcomes the opportunity to take part in this conference, where a new momentum can be created to move forward with a new global climate agreement. This global agreement and the emerging new architecture should enable business to play its crucial role in the financing, implementation, and scaling up of climate solutions. Business engagement should also be enhanced – in a transparent, fair, balanced, and clear manner – in bodies, such as the Technology Executive Committee, Green Climate Fund or the Standing Committee.

Throughout ICC's long-standing engagement in the climate arena, and the UNFCCC and the Climate Investment Funds in particular, we have underscored that open trade and investment policies are critical for stimulating the substantial increases in technological dissemination and financing necessary for green and inclusive growth. There are already many efficient and environmental effective technologies and products on the market, whose trade could be bolstered by alleviating both market access and policy barriers.

It also needs to be noted, that trade and investment have already raised millions of people out of poverty. If climate issues are to be addressed effectively, it is essential that such economic and social development is on-going.

The private sector has already contributed significantly to tackling challenges associated with global sustainability, but more effort is still required and many opportunities are still untapped. For instance, the commercial potential offered by

sustainable solutions in the natural resources sector alone is valued at between \$2.1 and \$6.3 trillion.

We believe that new trade opportunities would provide a debt-free stimulus that could help to pull the global economy out of the current crisis. For example, a WTO agreement on trade facilitation is expected to deliver gains of at least US\$130 billion per year worldwide and millions of new jobs, which will particularly benefit developing economies.

This is why ICC, in partnership with Qatar Chamber of Commerce and Industry, recently launched the ICC Business World Trade Agenda. Through this initiative, we aim to mobilize business input to shape 21st century global trade and investment rules that will generate sustainable economic growth and job creation based on new global realities.

With a large range of global business leaders already engaged, it is vital that the global business community, governments, and other sectors continue to explore new forms of collaboration to achieve green and inclusive growth.

ICC, drawing on over 90 years of experience, working in more than 120 countries via an extensive network of companies, chambers, and national committees, remains committed to make the green economy a reality.

**Jean-Guy Carrier,
Secretary General,
International Chamber of Commerce**

INNOVATION

56 WHAT NEXT FOR THE GREEN CLIMATE FUND?

Nine recommendations to ensure finance aimed at stimulating investment and innovation does not go to waste.

58 FINANCE FOR THE FORESTS

REDD+ was proposed as an innovative source of funding to halt deforestation, but it's still stuck in the mud. Jessica Boyle from the IISD charts a path forwards.

62 SINGAPORE'S BUILDING REVOLUTION

City Developments explain how their retrofitting and insulation investments are saving S\$19.7 million in electricity annually.

64 INVESTING IN INNOVATION

Doha Bank's owners aim to fulfil the Emir's Qatar Vision 2030 by backing renewables and building an energy efficient new office space.



Find out more at: www.rtcc.org/technology

THE GREEN CLIMATE FUND: VIEWS FROM THE AMERICAS

By Andrea
Rodriguez Osuna

The Green Climate Fund (GCF) was established at the 2009 Conference of the Parties (COP) to the United Nations Convention on Climate Change in Copenhagen¹ to handle the Convention's financial mechanism². It has plans to provide \$100 billion a year to mitigate the impacts of climate change and help nations adapt. The GCF is the closest attempt to provide a binding global agreement on climate change, and given that all countries will have equal decision-making power the fund will allow the developing world to play a meaningful role in designing climate change solutions. Latin America is no exception.

What's Happened So Far?

The GCF's board held its first meeting in August 2012 in Geneva to begin laying the groundwork for the Fund's operations. But little was accomplished other than electing Mr. Zaheer Fakir of South Africa and Mr. Ewen McDonald of Australia as co-chairs. The board only discussed future decisions, drafted a list of topics for discussion and tasks, and called for a second meeting.

What's Pending?

The second meeting will be held in October in Songdo, South Korea. This could be the forum for addressing pending issues that must be decided before the Fund can begin operations, including:

- Determining the role of civil-society observers in the Fund and establishing a clear-cut selection procedure for observer organizations.
- Methods and priorities for accessing funds, funding eligibility criteria, and procedural decisions including how to resolve situations when the board cannot reach a consensus.
- Selection of the host country. While only six countries have applied to serve as host³, the board has yet to select one.
- The business model for the Fund and income generation. The discussion is centered on the need to open doors to facilitate the generation of reliable income, especially from the private sector. But many details still need to be worked out.

- Arrangements between the GCF and the UNFCCC COP. While the GCF is supposed to be accountable to the COP and work under its guidance, there are opposing visions for what this means. Developed countries advocate for a horizontal relationship in which the Fund doesn't have to adhere to the COP's guidelines. Developing countries want to make sure that the Fund is fully accountable to the COP.

How to Strengthen the Fund?

According to its governing instrument, the GCF must operate transparently and with accountability, and seek equity, efficiency and effectiveness. The Fund, too, must play a role in channelling new, additional, adequate and dependable financial resources to developing countries, using a country-driven approach⁴. The outcome should be a mechanism that responds to the needs of the most vulnerable countries by providing real and feasible climate change mitigation and adaptation solutions. NGOs from the Americas will continue advocating for this and the following recommendations for the Fund:

- **Secure reliable funding.** The Fund's effectiveness will depend on the availability of resources to address the mitigation and adaptation needs of developing countries. It is imperative to create mechanisms for generating constant and reliable income for the Fund to ensure long-term and solid planning on mitigation and adaptation.
- **Ensure adequate funding.** In light of the principle of "common but differentiated responsibilities,"



most funding should come from developed nations. Additional funding should be obtained from the private sector, but adequate safeguards must be put in place to ensure that private entities cannot gain control of the Fund.

- **Guarantee fair access to funding.** The fund must develop clear and fair guidelines and priorities for funding to ensure that all countries have equitable opportunity in accessing financing. The funding application should be flexible enough for nations to describe priority needs and the value of proposed actions. Funding should be based on the degree of vulnerability to climate change impacts as deemed by science.
- **Simplify the process for obtaining funds.** Countries should be able to request funding directly without going through intermediary agencies, such as what happens with funds from the Inter-American Development Bank or the World Bank. The criteria and requirements for accessing funds must be clear, and the request forms must be straightforward to fill out.
- **Make the Fund an accountable entity.** The Fund can only be accountable if there is frequent evaluation and sanctioning in the case of non-fulfilment of goals. While the COP has not been an example of efficiency, it is important that as the global representative of the Climate Change Convention it is endowed with sufficient power to guarantee that the Fund's work meets the goals for which it was created.
- **Make the Fund a participative and transparent entity.** Civil society organizations must be able to participate in the decision-making process of the Fund, and all sectors of civil society

must be represented in a balanced manner. Decisions and progress should be adequately publicized to ensure transparency.

- **Find a suitable permanent trustee.** Because of past human rights violations and severe environmental damage stemming from some World Bank projects, a number of governments and civil society organizations have expressed distrust and doubt regarding the Bank's suitability as permanent trustee of the Fund. A public tender should be held to find the best permanent trustee. In the meantime, an effective mechanism should be implemented to guarantee that the World Bank's role as trustee aligns with the Fund's goals.
- **Provide funding to adaptation-related activities.** Developing countries have contributed much less to climate change and yet are in a far worse position to deal with its impacts on human rights and wellbeing. While mitigation measures are important, the capacity to adapt to climate change should not be considered a lesser priority. For Latin America, adaptation funding is vital to cope with the effects of climate change.
- **Advocate for a rapid kick-start of the GCF.** Despite existing barriers, the Fund must avoid additional unnecessary delays and start operations promptly. Climate change is one of the greatest threats to humankind and continued delays will limit the effectiveness and potential success of actions to fight it.

Andrea Rodriguez Osuna is a Climate Change Consultant at the Interamerican Association for Environmental Defense. www.aida-americas.org

1 UNFCCC, 2010. Decision 1/CP.16.

2 UNFCCC, 2011. Decision 3/CP.17.

3 Mexico, Namibia, Germany, Switzerland, Poland and South Korea.

4 <http://unfccc.int/resource/docs/2011/cop17/eng/06.pdf>

DEFINING REDD+ SUCCESS: KEY CHALLENGES MOVING FORWARD

REDD+ is a highly technical and rapidly evolving subject with significant promise to produce multiple mitigation and sustainable development benefits. But there are uncertainties as to how REDD+ will evolve under the international climate regime.

A number of critical determinants of success have been identified by developing country experts and stakeholders,¹ which require further consideration both within and outside of the climate change negotiations. Among these:

Identifying Sustained Sources of Financing

Financing remains a key issue for REDD+². Funding from multilateral and bilateral institutions needs to be transparent, equitable and accessible. Private sector involvement across the REDD+ supply chain is equally critical. Both should facilitate the engagement of national experts and strengthening of existing in-country capacity.

Ensuring Effective Private Sector Engagement

Private sector engagement and finance is central to REDD+ success. Private sector involvement can help bridge the financing gap between public sector financing and developing country needs, as well as make vital contributions to REDD+ initiatives by

providing technical expertise. Increased private sector involvement hinges on policy clarity and certainty.

Continued Public Sector Commitments to Readiness and Implementation

To date, many developing countries have committed substantial time and resources to REDD+ planning. Several developed countries have contributed substantially to supporting these readiness activities, but further clarity around long-term commitments is required to ensure that REDD+ can progress through the planning and piloting phases to full national implementation.

Designing Effective Safeguard Information Systems (SIS)

REDD+ safeguards aim to ensure that REDD+ actions do not cause negative social or environmental impacts and cover a range of issues, including respect for the knowledge and rights of indigenous peoples and local communities, transparent national forest governance structures, effective participation of stakeholders, and the conservation of natural forests and biodiversity. Systems for providing information on how safeguards are addressed and respected do not necessarily require new mechanisms, methodologies or indicators. There are opportunities to build upon existing architecture, including methods and processes to report on obligations and provide information under international agreements, national legislation, bilateral and multilateral agreements and REDD+ pilot-level initiatives.

Capacity-building for Monitoring, Reporting and Verification (MRV)

Countries need support and assistance to determine available domestic skills, capacities, information and data, which will be the building blocks for developing effective MRV systems. Capacity building (e.g.,

By Jessica Boyle



Jessica Boyle is a Project Manager with IISD's Climate Change and Energy team. She has particular expertise in the politics and processes under the UNFCCC, most notably on REDD+. Jessica was the Project Manager of **Building REDD+ Policy Capacity for Developing Country Negotiators and Land Managers**, a three year Initiative undertaken by **IISD** in partnership with the ASB Partnership for the Tropical Forest Margins at the World Agroforestry Centre (**ASB-ICRAF**).

forest assessments, monitoring forest cover change, information management systems) and technology transfer (e.g., geographic information systems, remote sensing) are critical in this respect.

Sharing Lessons Learned and Tools Developed

Identifying and analyzing lessons learned, contributing to innovative thinking and continuously seeking to improve processes will be critical to REDD+'s success moving forward. Workshops under the UNFCCC are one way to share country experiences, but broader opportunities for sharing experiences informally at the country level are also critical. A systematic assessment of the applicability and usefulness of REDD+ tools and methods is needed across the REDD+ value chain. In this respect, there is a need and desire for continued dialogue to address the various concerns and needs of governments, the private sector and civil society.

References

¹ The key issues outlined were all areas identified by developing country policymakers, experts and stakeholders over the course of a three year capacity building initiative; including eight regional workshops in Asia and Africa, expert meetings and in-country case studies.

² Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

At COP 18, Parties are likely to continue discussions in three key areas; namely: (1) Financing options for REDD+, (2) Reference levels on which to base MRV systems, and (3) Further elaboration on systems for providing information on how safeguards are addressed and respected. But at this stage, progress on REDD+ is very closely tied to the broader negotiations — particularly where financing is concerned.

Until significant clarity around a post-2020 framework is achieved, it will be difficult for negotiators to forge much further ahead on REDD+ at COP 18 or beyond. The pace of REDD+ negotiations in recent years has been encouraging; but many of the remaining decisions are dependent on REDD's role in a post-2020 agreement, and require scaled-up financing from both public and private sources.

Nonetheless, there is a great deal of support for REDD+ as a critical part of addressing the mitigation and adaptation challenges posed by climate change. Policy planning, piloting and implementation activities are already taking place to varying degrees in upwards of 50 developing countries, and numerous developed countries remain committed to supporting these activities. Progress on any of the key issues highlighted above would be a significant step forward to ensuring its full inclusion in a future international climate change agreement.

SAVING WATER AND ENSURING COMFORT

GROHE continues to facilitate sustainable lifestyles around the world. Long committed to strict environmental principles, the sanitary fittings manufacturer has made it its mission to support consumers in assuming responsibility for the environment.

This is achieved with the help of sustainable products, which allow consumers to reduce their water usage and energy consumption, leading to a smaller carbon footprint without compromising on comfort and enjoyment.

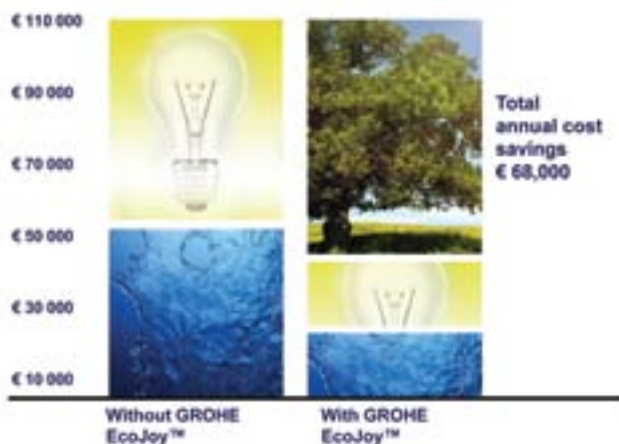
All GROHE products are characterised by a perfect balance of quality, design, technology and sustainability. These four pillars of the product philosophy form the basis for the high long-term value for which GROHE is known throughout the world. Research into product lifecycles has revealed that the greatest impact on the environment occurs during the usage of the products.

GROHE therefore offers economical, long-life products that will please and function in the long term. These advantages, in combination with the perfect design, encourage customers to “bond” with their faucets, so to speak love them and keep them for as long as possible.

Ecology and economy in the projects business

Environmental aspects drive product improvement and are a key development goal in the ongoing refinement of the product portfolio. This sustainability aspect is an important success factor for GROHE, especially in the international projects business. In particular, products featuring the resource-efficient GROHE EcoJoy® technology meet the requirements of national building energy efficiency labels.

In countries with a negative water balance, much greater importance is attached to the economical use of this vital resource than in Central Europe. Products incorporating GROHE EcoJoy® technology play an important role in these regions.



These are variants of existing faucet or shower lines whose built-in water-saving technology helps reduce the consumption by up to 50% without compromising on comfort. A sustainable all-in solution for the bathroom allows a family of four in Germany to save an average of 70,000 litres and 1,300 kilowatt hours per year.

Products for a water-efficient all-in solution

Single-lever mixers equipped with GROHE EcoJoy® guarantee a maximum flow rate of 5.8 litres per minute regardless of pressure fluctuations. Faucets for the kitchen sink are also available as GROHE EcoJoy® variants.

For the bathroom, there are showers with integrated saving technology and models equipped with an “EcoButton”, which gives users fingertip control of their water consumption. GROHE thermostats also feature an EcoButton, which reduces the flow rate by up to 50%. Flushing systems for the toilet are available with a start/stop button or with a two-volume flush, which allow the user to choose the amount of water they want to use. Touch-free or self-closing faucets are especially recommendable for public and commercial restrooms.

What is more, GROHE has reduced the packaging volume of its products by about 50%, which means that fewer pallets need to be transported by truck, which, in turn, means reduced carbon emissions.

Sustainability begins at home – with GROHE products.

Grohe AG
www.grohe.com/mea



Grohe AG is Europe's largest and, with a market share of roughly 8%, among the world's leading manufacturers of sanitary fittings. As a global brand for sanitary products and systems, GROHE sets standards in quality, design, technology and sustainability, providing water to perfection.

With its headquarters in Hemer and Corporate Center in Düsseldorf, the company currently employs some 5,400 people worldwide, including 2,400 in Germany. In 2010, the company's kitchen and bathroom fittings and showers, automatic fittings for the commercial and contract sectors, and installation and flushing systems generated sales of EUR 980 million.

GROHE has six production plants, of which three are located outside Germany, namely in Portugal, Thailand and Canada. The company currently generates 80% of its sales outside Germany.

Since July 2011, GROHE has held a majority interest in Chinese market leader Joyou following the successful completion of a public tender offer. GROHE subsidiary Joyou Grohe Holding AG holds 57.2%.

POLICY LEADERSHIP IN MEXICO

Instituto Politécnico Nacional (IPN) is the institution leader in technological education in Mexico. It ensures policymakers have all the information they need to make the correct decisions.

Founded in 1936, the Instituto Politécnico Nacional (National Polytechnic Institute, IPN) is the foremost public technological higher education center in Mexico. The institute produces technology development and research of the highest quality geared toward solving the challenges facing humanity, of which climate change is the priority. Its projects fit into the Climate Change National Strategy of the Mexican government.

The Institute was founded to contribute to economic, social and political development of the country. The global climate change effects are a critical risk. Therefore research on climate change has become in a priority for IPN. Research on climate change includes strategies, programs and projects leaded to assessing the risks, identifying effective and cost-effective interventions, co-benefits and co-harms of adaptation and mitigation, improving decision support and estimating the costs. These have been established as global research priorities.

The government of Mexico recognizes the scientific and technological leadership of IPN. Academics and researchers of IPN collaborate in the elaboration of the Climate Change Programs for the states of Oaxaca and Sinaloa, to provide scientific information demanded by the policymakers. These programs are taking in to account by the governments and are focused to tend the global research priorities above mentioned.

IPN research on climate change is growing rapidly; several projects are performed in this field of knowledge. One of them is directly related with decision support: "Governance and Climate Change in Protected Areas: The contribution of rural livelihoods and institutional management to biodiversity conservation and carbon sequestration".

Strategy

Training, research and exchange of academics and students are some of the key points in the scientific network of IPN. In this context, Network of Environment offers a platform to share information in this field; some projects developed into this network are

focused in both mitigation and adaptation to climate change, such as the project: "Climate Change Indicators in the hydrologic regions in northern of Mexico". Furthermore, this network promotes the academic culture of sustainability which is adopted by the academics and students through actions such as "Special Climate Change Program".

How to transfer the scientific knowledge to the academic community while making impact in the society through the governance and policy makers? We are developing a critical interdisciplinary and inter-sectorial program, which includes the active participation of Institutes and Research Centers, other national and international universities, private and governmental sectors and non-governmental organizations. This program is the UNESCO chair: "Epistemology of Environmental Science to Sustainability. Climate change, environmental policy, and public health are some of the topics. These results have provided tools in order to support decisions from the policymakers.

IPN curriculum

The recognition, understanding and actions demanded by climate change conditions, require human resources of high quality. At the present time, academic programs of IPN have been revised in order to include sustainable development and environment topics as a transversal academic unity for all programs. Although climate change by itself is not a direct requirement in all curricula, its relevance has oriented and justified the creation of postgraduate programs such as the masters in climate change. This program is in collaboration with the Fundación Universitaria Iberoamericana (FUNIBER).

Instituto Politécnico Nacional (IPN)
www.ipn.mx



GENERATING VALUE FROM GREEN BUILDINGS

Retrofitting commercial buildings can lead to an increase in their value. Companies can not only expect average savings in operating expenses of 10%, but commercial buildings can also potentially see an increase in capital value of about 2%.

Retrofitting done to achieve the standard BCA Green Mark certification can result in significant reduction in energy consumption. Average savings from 23 buildings in Singapore (comprising office, retail, hotel, and mixed-used developments) sampled in 2011 after retrofitting was about 17% of the total building's energy consumption.

These were some of the key findings of a joint study conducted by the Building and Construction Authority (BCA) – Singapore's governing body for the built environment and the department of real estate at the National University of Singapore, in collaboration with six real estate consultancy firms.

Singapore's pursuit of greener buildings found its beginnings in the successful launch of the Green Mark rating system in 2005. Launched by BCA, the scheme is an assessment system to rate buildings based on their environmental impact and performance. This initiative was quickly followed by the first Green Building Masterplan in 2006, and the second in 2009.

The Singapore Sustainable Blueprint, which was unveiled by the Inter-Ministerial Committee for Sustainable Development in 2009, set the target to improve energy efficiency by 35% from 2005 levels, by 2030. To meet this target, BCA aims for at least 80 per cent of all buildings in Singapore to be more resource-efficient, and be at least Green Mark certified, by 2030.

"For the last six years or so, we have gotten about 750 projects certified green under our Green Mark Scheme. We're talking about 23 million square metres of floor space in total that is environmentally-

friendly," says John Keung, chief executive at BCA. Of this, City Developments Limited (CDL) has contributed almost 10% of the total volume of green building projects in Singapore, he adds.

In recognition of CDL's efforts, the developer received the inaugural BCA Green Mark Platinum Champion Award in 2011. Previously, CDL was the sole winner of the first-ever BCA Green Mark Champion Award, which was launched in 2008.

As an example of CDL's sustainable developments, the 521-unit H₂O Residences (picture below), located in Sengkang New Town, was designed to integrate with the surrounding water bodies. The development, which won the BCA Green Mark Platinum Award, was also awarded the ABC (Active, Beautiful, Clean) Waters certification from the Public Utilities Board.

Some of its green features, designed for energy efficiency, include a north-south building orientation to minimise external heat gain and achieve maximum daylight harvesting, external shading devices, and energy efficient light fittings and motion sensors. This is expected to help the development reduce overall energy cost estimated at over S\$475,000 per year. In addition, a rainwater harvesting system for landscape irrigation and water efficient sanitary fixtures and fittings is expected to achieve water savings of 35,181 cubic metres per year.

According to CDL, some S\$19.7 million in electricity is saved annually from its 37 BCA Green Mark awarded buildings between 2008 and 2011.

CDL has since set the bar even higher; the company's 'green' standard is now a minimum BCA Green Mark Gold^{Plus} for all new developments, compared to its 2010 target of attaining at least a Green Mark Gold rating.

"Although the green economy is still at its infancy and demand for green buildings is only just starting to grow, we hope that our position as a pioneering green developer will give us a first-mover advantage when the age of socially responsible consumerism dawns," says Kwek Leng Joo, managing director, City Developments Limited.

Looking ahead, CDL will continue to step up its strategic approach towards sustainability, with technology and innovative design remaining key in resource conservation and enhancing resource efficiency, Mr Kwek added.

City Developments Limited (CDL)
www.cdl.com.sg

Source: This is an abridged version of an article first published in *The Business Times* on 29 November 2011, written by Mindy Tan. © Singapore Press Holdings Limited. Reproduced with permission.



**CITY
DEVELOPMENTS
LIMITED**

Artist's Impression





An extremely strong element forms the core of all our buildings.

Our belief in sustainability.

At the heart of every CDL building is a belief that cares for the one home we all share – planet earth.

Globally, the building sector is responsible for a third of the world's greenhouse gas emissions. Here in Singapore, it accounts for more than 16% of our nation's emissions.

So even though climate change is an issue all businesses have to address eventually, it's an especially pressing one for the building sector.

Here at CDL, we've long since started to make amends with mother earth.

Over a decade ago, we put our belief that sustainability makes a better, and more resilient, business model into action.

From design to construction, from procurement to maintenance, each stage of our development process now aligns closely with this commitment.

Further to this, we've also initiated capacity building and other green innovations to help the industry become more sustainable.

In 2011, we reduced carbon emissions of our corporate office operations and data centre to net zero. On top of this, we achieved a 7% carbon intensity emissions reduction from baseline year 2007 levels. For 2020, our target is a reduction of 22% from baseline year 2007 levels. And by 2030, we're targeting a 25% reduction.

These efforts have made us the only Singapore corporation listed in all three of the world's top sustainability benchmarks – The Dow Jones Sustainability Indexes, the FTSE4Good Index Series and The Global 100 Most Sustainable Corporations in the World.

Today, when you walk into any of our properties you'll find not just years of comfort and pleasure, but also our dream for a future that's cleaner, greener and brighter.

And as long as our buildings continue to be rooted in our values, it's a dream we're hopeful will last for generations to come.

That's our belief.



CITY DEVELOPMENTS LIMITED

Conserving the Environment • Caring for the Community

DOHA BANK – ENVIRONMENTAL ADVOCATES, GREEN BANKERS

Doha Bank Group is one of the leading integrated financial institutions in the GCC and one of the most active advocates for sustainability and environmental protection.

Doha Bank is a leading voice and innovator in the region's growing green banking market, and actively drives awareness initiatives that are related to environmental protection and sustainability. The Bank believes such critical support for environmental causes is best achieved by incorporating green values and also by approaching information sharing and awareness from the grassroots of our society.

For the Bank's Group Chief Executive Officer Dr. R. Seetharaman, the arrival of the UN climate talks in the capital represents a huge step forward in the country's efforts to build a sustainable future: "The State of Qatar's role as host of COP18/CMP8 marks a truly significant milestone in the development of this great nation," he said. "It is a great cornerstone for Qatar as it works steadily to realise the foresight and vision of His Highness the Emir to create a truly sustainable society as outlined in Qatar Vision 2030, which states environmental development as one of the four main pillars that will contribute to achieving the envisioned balance required for a sustainable society and economy."

Dr. Seetharaman added: "Doha Bank's approach is significantly aligned with this Vision and the Bank is constantly seeking new opportunities to contribute to Qatar's progress in reaching this socio-economic objective. We are committed to creating a strong platform for the youth of today to contribute to the progressive socio-environmental and intellectual development of society. Doha Bank firmly believes that our objectives as corporate and individual representatives of the community should include the commitment to reduce our overall carbon footprint and ensure sustainable development."

In 2011, Doha Bank worked with Global NGO's to jointly launch the nationwide ECO-Schools Programme in Qatar. The programme,

which continues to be actively implemented in Qatar, is designed to encourage and support schools in the country to proactively participate in the implementation of good environmental practices, reduction of carbon footprint and increased eco consciousness.

Dr. Seetharaman has also hosted numerous road shows and seminars on the subject of Global Warming and Climate Change. Events have been held in Qatar, The UAE, Oman, Kuwait, Turkey, Japan, Singapore, and India.

Doha Bank was also one of the major sponsors of the first ever Doha Green Conference held in 2009, which covered key issues that will help lead the market's transformation towards greater sustainability. Among the other programs the bank has actively participated in are the State of Qatar's "Green Qatar Clean Qatar" campaign, organizing the annual Al Dana Green Run, Public Awareness Campaigns through the Bank's ATMs, and key community engagement programs such as tree planting, beach clean-ups and recycling activities.





The Doha Bank Tower, far right. Photo: © Alexey Sergeev <http://asergeev.com/pictures/archives/compress/2011/926/03.htm>

The Bank strives to encourage both the development and diffusion of environment-friendly technologies and also supports an active, rather than reactionary, approach to meeting environmental challenges.

Doha Bank demonstrates this philosophy at its own headquarters which are designed to Green standards with motion sensing and light, air conditioning and ambient systems that are optimized to reduce the consumption of energy.

Green is also a daily business consideration for Doha Bank which has introduced a policy of trying to transition global meetings in to the digital sphere by using modern videoconferencing options to further reduce the Bank's overall carbon footprint. The Bank has also, since 2010, distributed its annual report primarily in digital formats to avoid the extensive use of paper, having transitioned previously in 2009 to recycled paper.

Doha Bank, which organized its latest Al Dana Green Run in January 2012, will be hosting a special edition of the 3km community event to commemorate Qatar hosting the COP18 and CMP8 summit. This special Green Run takes place on 24 November 2012.

Al Dana Green Run raises awareness of wildlife preservation and environmental protection. Professionals and homemakers, men, women and children, sports enthusiasts and members of various socio-cultural groups actively participate in the event.

Doha Bank
www.dohabank.com.qa



DB cleans up beaches as part of CSR.



Yunus Arikan,
Manager, Cities Climate Center,
ICLEI – Local Governments for Sustainability



FROM WORDS TO ACTION: Cities show what it means to raise ambition

Yunus Arikan is the Manager of the Cities Climate Center at ICLEI World Secretariat in Bonn.

ICLEI is the world's leading association of cities and local governments dedicated to sustainable development. We are a powerful movement of 12 mega-cities, 100 super-cities and urban regions, 450 large cities as well as 450 small and medium-sized cities and towns in 84 countries.

We promote local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, biodiverse, low-carbon; to build a smart infrastructure; and to develop an inclusive, green urban economy with the ultimate aim to achieve healthy and happy communities.

Last year, cities and local governments urged the global climate community to work with local leaders and governments to urbanize the climate agenda through ambitious goals and direct implementation. “So everyone needs to raise the level of ambition”, we called out.

In Durban, this clarion call was taken up in the official outcome document. Even more importantly, throughout numerous workshops and roundtables of Durban Platform in 2012, national delegations from both developed and developing countries expressed explicit support in the need to engage local governments to scale-up climate actions.

The rationale is clear; while national governments are stuck behind endless negotiations and corporates become victims of markets and stock exchanges, it is the cities and local governments are implementing climate-related decisions and policies every day.

The week before Rio+20, at the ICLEI World Congress 2012 in Belo Horizonte, Brazil, numerous local governments demonstrated leadership on climate issues through political leadership, re-invigoration, implementation, innovation and synergy. Take a look at the inspiring examples that proves what raising levels of ambition meant in practice:

- Seoul's new “One less nuclear power plant” plan aims, through energy efficiency and renewable energy generation and with a strong emphasize on stakeholder engagement, to reduce GHG emissions by 7.33 million tCO₂e, save US\$ 2 billion and generate 40,000 jobs by 2014.
- The renewed plan for Copenhagen to become the world's first carbon neutral capital by 2025 rewarded the city to become the European Green Capital of the Year 2014.
- Mexico City's 2008-2012 Climate Action Programme succeeded to reach a total emissions reduction of 7.7 million tCO₂e, exceeding its initial goal by 10.2%.
- Within its first year of its implementation of the world's first urban cap and trade programme, Tokyo Metropolitan Government successfully collaborated with the city's commercial and industrial stakeholders to reduce emissions by 13% and further increased resilience to energy shortages during the Fukushima disaster.

- Following its adoption in 2011, eThekweni Municipality takes the lead in worldwide implementation of Durban Adaptation Charter that aims to ensure that adaptation strategies are aligned with mitigation strategies whereas mitigation activities do not increase vulnerability or result in mal-adaptation

These are just snapshots of the massive amount of information reported by more than 180 cities from 20 countries worldwide at the carbonn Cities Climate Registry (www.citiesclimateresistry.org) where “national governments can be encouraged to take ever bigger and more ambitious steps to fight climate change”, in the words of Christiana Figueres, the Executive Secretary of UN Climate Change Secretariat.

The movement of local governments implementing climate action is big, but it needs to be massive. Innovative cities need to be joined by thousands more and each of them must run faster, in order to face the challenge of global climate change.

This was a key driver for Mayor Park Won Soon of Seoul to announce commitment of Seoul Metropolitan Government to reduce use of fossil and nuclear energy in municipal operations by at least 30% by 2020 compared to 2010 level, as a part of his joint effort together with his fellow Mayors of ICLEI Global Executive Committee and World Mayors Council on Climate Change through the 2012 Seoul Declaration of Local Governments on Energy and Climate Mitigation, ahead of the PreCOP Ministerial Meeting in S. Korea in October.

Cities and local governments are already demonstrating their vision and potential through measurable, reportable and verifiable local climate action. In Doha, it is the turn of global climate community has to provide all the necessary support to move faster in reducing emissions and in offering sustainable livelihoods for their citizens. For the Earth doesn't care where reductions take place but demands less emissions to be accumulated in the atmosphere – urgently.

GLOBAL ACTION

68 THE WORLD'S CARBON MARKETS

Feeling depressed about the state of the negotiations? Our map of the world's expanding carbon markets is guaranteed to cheer you up.

72 CLEANING UP LAGOS

Nigeria's financial capital has long had a reputation for waste and pollution. The Lagos Waste Management Authority how landfill gas capture technology can help clean the city's air.

76 BOGOTA'S CLIMATE PLAN

Gustavo Petro, Mayor of Colombian capital explains why he has decided to launch a full review of Bogota's climate adaptation plans.

80 UNFCCC CELEBRATES 20TH BIRTHDAY

Former Executive Secretary Michael Zammit Cutajar looks back at June 1992, when the world's leaders queued up to sign the Framework Convention on Climate Change.



Find out more at: www.rtcc.org/living

GLOBAL CARBON MARKETS

Carbon trading is seen by many as the most effective market-based system to encourage greenhouse gas emission reductions. The World Bank estimated that carbon trading worth a total of \$176bn took place during 2011.

Despite struggling carbon prices, a host of new trading schemes have been announced as countries, regions and even big business identify the positive impact that carbon trading can have not just on the environment, but economically too.

There are a number of different trading mechanisms in operation but most either auction or assign allowances to emit a quota of CO₂. This creates an incentive to reduce emissions so that excess carbon credits can be sold to those who exceed their allocation of emissions.

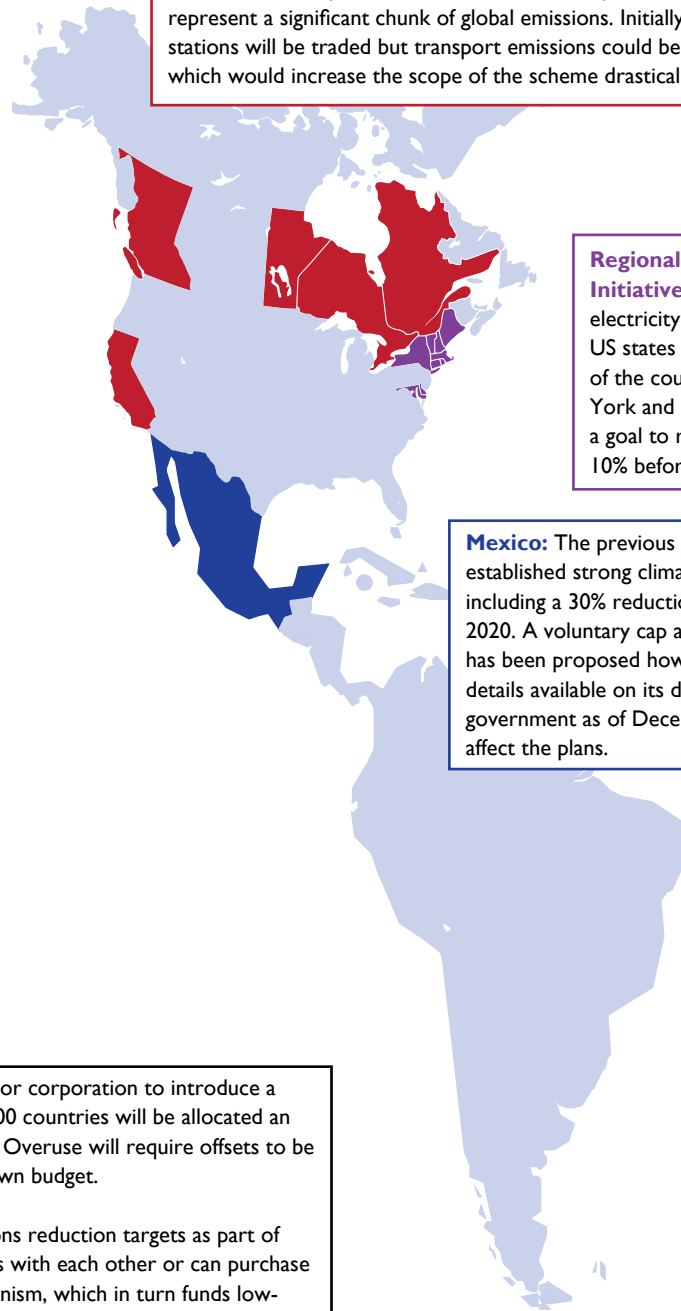
Western Climate Initiative (WCI): The tie-up between California and several Canadian provinces is still under development but will eventually represent a significant chunk of global emissions. Initially CO₂ from power stations will be traded but transport emissions could be included in 2015, which would increase the scope of the scheme drastically.

Regional Greenhouse Gas Initiative (RGGI): Covers electricity producers in nine US states in the north east of the country including New York and Massachusetts. It has a goal to reduce emissions by 10% before 2018.

Mexico: The previous government established strong climate change legislation including a 30% reduction in emissions by 2020. A voluntary cap and trade mechanism has been proposed however there are few details available on its design and a change in government as of December 1, 2012 could affect the plans.

Microsoft: The company became the first major corporation to introduce a "track and tax" system. Departments across 100 countries will be allocated an emissions budget for energy use and air travel. Overuse will require offsets to be purchased out of the offending department's own budget.

UN/Kyoto Protocol: Countries with emissions reduction targets as part of the Kyoto Protocol trade emissions allowances with each other or can purchase offsets through the Clean Development Mechanism, which in turn funds low-carbon projects in the developing world.



EU Emissions Trading Scheme (ETS):

The trading scheme covers around half of the group's emissions and unlike many systems, it includes some emissions from the transport sector, specifically aviation. Charges on aviation apply to any flight using EU airports regardless of whether the airline is based, creating tension with other countries. The EU is targeting an emissions reduction of 20% by 2020.

China: The world's largest emitter will begin regional pilot schemes in seven cities from 2013 onwards with a view to establishing a national market in the future. Heavy emitting industries and electricity producers will be included at first. An agreement with the EU will see some cooperation with the design of China's trading platforms.

Tokyo: The city-wide scheme applies to large office buildings and industrial infrastructure, which are required to use a combination of renewable energy and efficiency measures to stay within a prescribed emissions cap.

South Korea: An increasingly active country in climate change diplomacy, as host of the Green Climate Fund and the Global Green Growth Institute, South Korea will also begin carbon trading in 2015. More than half the country's emissions will be covered by the scheme, which includes 500 of its heaviest emitters.

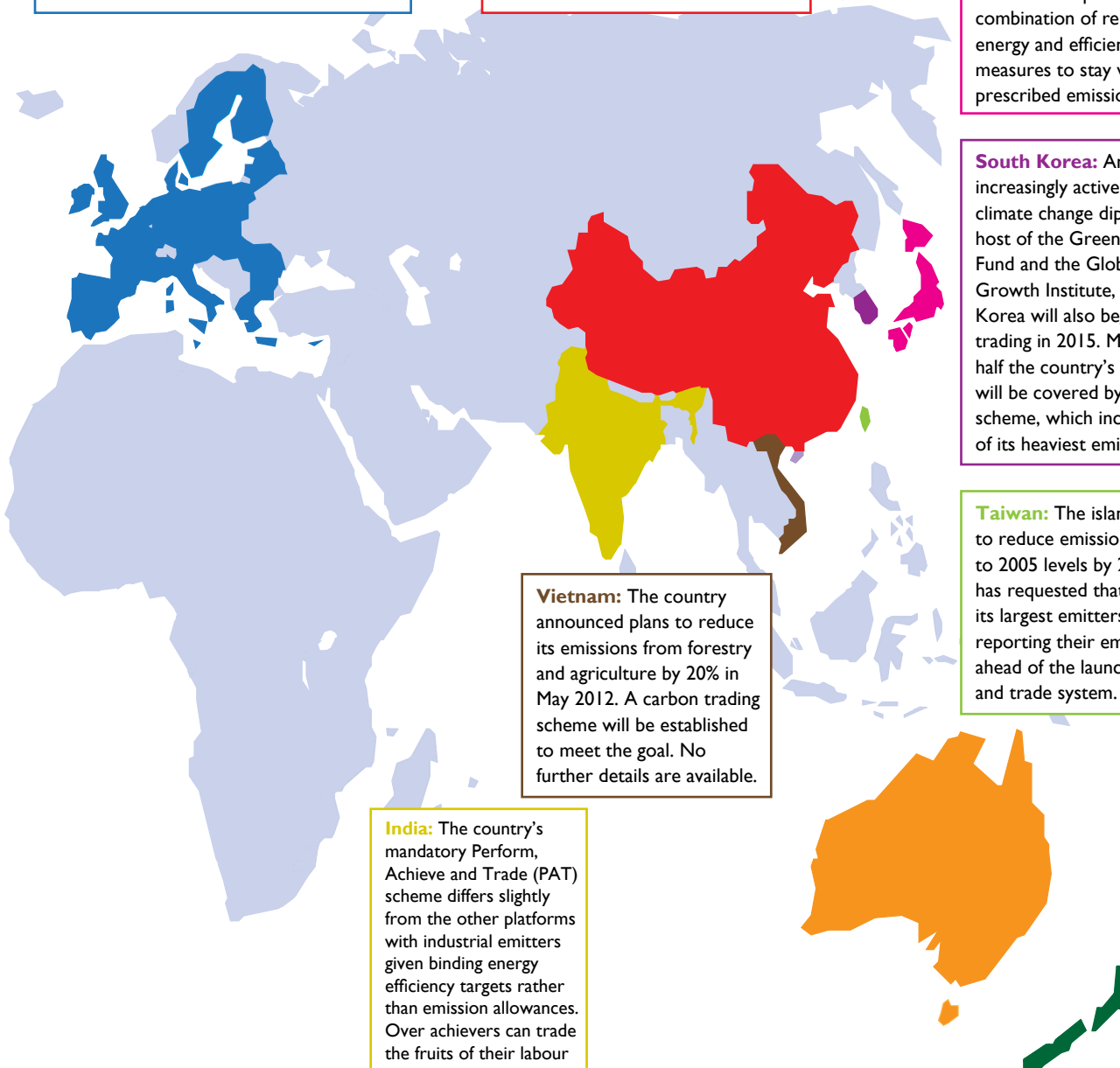
Taiwan: The island hopes to reduce emissions back to 2005 levels by 2020 and has requested that 270 of its largest emitters begin reporting their emissions ahead of the launch of a cap and trade system.

Vietnam: The country announced plans to reduce its emissions from forestry and agriculture by 20% in May 2012. A carbon trading scheme will be established to meet the goal. No further details are available.

India: The country's mandatory Perform, Achieve and Trade (PAT) scheme differs slightly from the other platforms with industrial emitters given binding energy efficiency targets rather than emission allowances. Over achievers can trade the fruits of their labour with other companies.

Australia: The country launched a carbon price of A\$23 per tonne of CO₂ emitted with 300 of the country's largest emitters included. A link-up with the EU market is scheduled for 2018.

New Zealand: Although the system includes only every second tonne of carbon emitted, the New Zealand trading scheme does cover a wide range of sectors including agriculture, energy, liquid transport fuels and waste. It also rewards sectors such as forestry with credits for absorbing CO₂ from the atmosphere.





BAGRI: BANKING ON NIGER'S FUTURE

The Agricultural Bank of Niger (BAGRI) is a limited company with a capital of 10 billion CFA francs (€ 15,244,925) fully paid.

BAGRI was created under the leadership of the state which owns 35% of own-account capital and a portage about 64%. The remainder is being held symbolically by five private shareholders.

It was approved as a universal bank by the Banking Commission in its meeting on January 4, 2011. The task assigned to BAGRI is to establish a funding system as extensive as possible with both financial targets and profitability, but also social and development goals including the financing of agriculture, the fight against food insecurity and endogenous industrialization of Niger based agri-business.

To effectively fulfill the mission entrusted to the bank, the first target segment chosen was the producers and agro-operators. These

operators can benefit from interventions of BAGRI directly or through microfinance institutions and partners.

It is important to note that BAGRI is a universal bank that finances all sectors of national economy:

- A focus for the agro pastoral sector (agriculture, livestock, fish, DFS, etc.).
- A universal bank size for the sake of diversification and prevention of covariant risk.

To intervene safely in the agricultural sector, proponents of BAGRI have created mechanisms of support as:

- A guarantee fund of crop and livestock production that covers the risk on rain-fed agriculture by 75%, irrigated at 50%



Photo: © Rotary images Alyce Henson.

and animal production sectors at 50%. This fund should be funded by the state and development partners.

- A Provident Fund and mitigation of disasters agro pastoral activities that should be funded by the State and the Development Partners.
- An interest relief fund subsidy on loans to producers of agro pastoral, supporting a 5 points percentage of interest. This Fund should be funded by the State and development partners.

BAGRI was well equipped when it started with substantial resources (the most capitalized bank in Niger) and efficient banking technologies.

BAGRI positions itself in many ways like the financial instrument for a secure implementation of 3N initiative for Food Security and Sustainable Agricultural Development in Niger which is the agricultural policy of Niger. One of the major aims of this national policy is to develop an agricultural sector that allows producers' access to bank credit. The Bank works as well in conjunction with the High Commissioner's to 3N Initiative to generate the creation of modern agricultural entrepreneurs able to ensure satisfactory production.

It is important to remember that classic Nigerian banks are reluctant to finance the

agricultural sector which they consider too risky and therefore have not developed an expertise and an appropriate approach for refinancing agro pastoral. BAGRI is trying to meet the challenge.

Niger has one of the least developed banking sectors in the world (only 1.25% of Nigeriens have a bank account). BAGRI is making efforts to equip all major towns and cities in the country with banking teller. Already with 24 agencies, BAGRI has the densest network of all banks in Niger. This strong presence of BAGRI in rural areas makes it a rural development bank of choice.

In two years of activity, the Bank has invested over 8 billion CFA francs in agriculture. It provides 90% of all agricultural finance in the Nigerian banking system.

Finally, to better play its role in financing agriculture, BAGRI will need substantial funds to support the Agricultural Guarantee Fund, the agro pastoral Calamity Fund and interest relief fund.

The Agricultural Bank of Niger (BAGRI)
<http://bagriniger.net/bagriweb/>



GENERATING ENERGY FROM WASTE IN NIGERIA

The UNFCCC's Clean Development Mechanism (CDM) has prompted the world to look at Africa as a platform for containing greenhouse gas emissions. In Nigeria, all such CDM projects are centered on the Oil and Gas sector with none in the waste management sector. The City of Lagos through LAWMA has identified Landfill Gas Capture (LFG) as a viable sectoral investment and successfully registered three of its landfill under the UN guidelines.

Lagos is the world's fastest-growing Mega City with an annual growth rate of 6-8% and a population of over 18 million. The city hosts much of the commercial and economic activities in Nigeria and generates over 10,000 metric tonnes (MT) of waste per day. In line with global advocacy for the adoption of GHG abatement technology, the Lagos State Government through Lagos Waste Management Authority (LAWMA) has embraced improved technological standards towards ensuring a sustainable integrated waste management system.

As the primary institution statutorily responsible for managing waste in Lagos, LAWMA aims to provide professional, efficient, and sustainable waste management services at the national and regional level. In this regard, the Authority has adopted waste management best practices/approach capable of reducing over





5,000 k tCO₂eNm³/h of GHG in 10 years with a view of abating up to 80% of GHG emission associated with solid wastes in Lagos before the year 2030. These measures are evident in the application of improved expertise down the waste management line (storage, collection, transportation and disposal) through use of low emission waste trucks as well as adoption of a comprehensive cradle to grave approach which includes recycling and implementation of viable LFG capture and utilization system.

The Lagos LFG capture and utilization venture has the potential of generating carbon offset credits and has been registered with a CDM number 6672 LFG project in Nigeria. The registration is on the capping and recovery of LFG from three landfill sites (Abule-Egba, Solous and Olusosun) within Lagos. These landfills occupy over 75 hectares of land and contain over 12,000,000 metric tonnes of waste deposits with a management plan to abate over 3,000 k tCO₂eNm³/h for 10 years (Table 1)

In implementing this project, city of Lagos intends to collaborate with the private sector (investors/financiers) and other organizations/institutions for the purposes of achieving knowledge transfer and capacity building.

Lagos Waste Management Authority
www.lawma.gov.ng



Average of LFG flow and expected emission reduction over the next 10 years from three landfills in Lagos:

1	Olushosun	Average of LFG flow (LFG Recovery) Expected Emission Reductions (1 KCER = 1k tCO ₂)	3,946 Nm ³ /h 2,340 k t CO ₂ e
2	Solous 1, 2 and 3	Average of LFG flow (LFG Recovery) Expected Emission Reductions (1 KCER = 1k tCO ₂)	669 Nm ³ /h 384 k tCO ₂ e
3	Abule Egba	Average of LFG flow (LFG Recovery) Expected Emission Reductions (1 KCER = 1k tCO ₂)	694 Nm ³ /h 390 k tCO ₂ e

ABRUZZO: EUROPE'S GREEN HEART

Abruzzo region in Italy recognised the importance of green growth in the 1990s, and it is now ensuring this ethos is implemented at level of governance.

Regione Abruzzo has over 70% of protected land thanks to its high environmental standards, also related to biodiversity, and to the coexistence in a single region of two different landscapes: the marine environment of the Adriatic coast and the mountains, with the Gran Sasso Mountain, the highest peak of the Apennines.

That's why political administrations, commit in the development of a sustainable economy as the right way for the future of Abruzzo that triggers local business and long term employment.

In this context the "Covenant of Major", proposed by the European Parliament for the

achievement of the 20-20-20 target in the energy field is widely implemented in Abruzzo. All of our municipalities have joined the Covenant, benefitting from the funds used for the start-up activities, and thanks to it now all the school buildings in the region are energy efficient, together with other important tangible actions. Finally, all students have been involved in an energy awareness contest since 2004 called Energiocchi.

On the basis of these activities and in confrontation with OECD and other international bodies a three points strategy for "Climate Change" was proposed to develop the green economy:

- Bottom-up approach
- The presence of an intermediate body, as the regional government
- Strategic structured funds agreed with the regional level

Who are the real protagonists of this strategy? They're headmasters, students, local administrators and regional entrepreneurs. Today, all 306 municipalities of the Region

have made energy efficiency interventions, primarily in schools and public buildings, for a total of 306 buildings made efficient, many kilometres of network of energy-efficient lighting, and photovoltaic and biomass plants for the production of energy at local level.

This forward thinking has earned Abruzzo the title of Green Region of Europe since the early 1990's. The particular context of uniqueness, even in the food and wine and traditional products sector has grown in public administrations and businesses.

Even among the people an environmental awareness has developed that has recognized the development of a sustainable economy as the right way for the future of Abruzzo.

Regione Abruzzo
www.regione.abruzzo.it



Lake Scanno.



“Cura Personalis” or Care for the Person

The Latin phrase was first used to describe the responsibility to care for each member of the community with their unique gifts, challenges, needs and possibilities. Applied broadly today, it suggests individualized attention to the needs of others, distinct respect for their concerns, including the care of their environment.

The School of Foreign Service in Qatar is leading the way with sustainability efforts, and has implemented various initiatives including, reduction in paper usage, switching to LED lighting and minimizing the use of plastic water bottles. The results speak for themselves:

Energy consumption down by 32%

Paper usage reduced by 25%

Plastic water bottle consumption reduced by 23%

Our aim is not only to educate future leaders, but also to develop responsible caretakers of the world we all share.

qatar.sfs.georgetown.edu



GEORGETOWN UNIVERSITY
School of Foreign Service in Qatar

BOGOTÁ ADDRESSES CLIMATE RISKS

Bogotá, the capital of Colombia, has faced in recent years tough challenges in relation to climate variability in general. These have been expressed mainly in the form of countless floods, droughts and landslides, which have mainly affected the most vulnerable populations. Conscious of the situation, Bogotá Mayor's Office recently decided to put climate change issue in the center of the city's development plan.



Barrio La Candelaria.

Photo: © Germán Montes, 2008, Instituto Distrital de Turismo.

In the words of the Mayor of Bogotá, Gustavo Petro: "Bogotá contributes to global warming, but not in the same proportion as the big cities and far less than American, European and Southeast Asian cities." For this reason, and although Bogotá only contributes marginally to the production of this phenomenon, we have proposed as the Development Plan for the city "A Humane Bogotá", which is the only one in the country that puts as one of its cornerstones the fight against climate change.

Thus, this plan has been proposed as a strategic pillar for the organization of a territory that faces up to this phenomenon and is arranged around the water resources. It is in this light that it has been proposed that the city contribute to environmental conservation orienting actions toward the organization and sustainable management of the city-planning process, which is expressed in the organization of transport, infrastructure, facilities, housing, public space and civic culture, among other factors. For this reason, Bogotá has initiated the development of programs that seek to give priority attention to social and environmental conflicts within informal settlements in high risk areas, ensuring a balance between ecosystems and the provision of ecologic corridors to ensure water supply and ecosystem dynamics.

It is also worth mentioning our "regional territorial strategy on climate change", which includes plans directed towards:

- 1) the design and development of a city and regional plan for climate change
- 2) the development of an information and monitoring system on regional environmental conditions for decision making, relating to water management and land use planning
- 3) the adoption of criteria for eco - sustainable planning and building
- 4) conducting a regional assessment on the status of water resources, as an element for decision-making, taking into account its life cycle.

On the other hand, there is a program called "Recovering the Main Ecological Structure and Water Supplies", through which projects are implemented aimed at improving the quality of the water from the



Mayor of Bogotá, Gustavo Petro. Photo: © Alcaldía Mayor de Bogotá.

tributaries of the Rio Bogotá, the recuperation of water resources, the consolidation of a buffer zone around the urban borders, environmental control of soils, the control of areas affected by mining, and areas susceptible to illegal settlements, water resources management, and knowledge for sustainable use of the biodiversity.

Other programs such as “The Integrated Risk Management”, “Zero Residues” and “Human Mobility”, also form part of the actions aimed at reducing the vulnerability of populations and territory against threats from climate change.

Bogotá Cities and Climate Change Summit

In this context, in November 2012 was held the Bogotá Cities and Climate Change Summit, in order to exchange experiences and issues relating to the design and execution of actions in this matter. The event was attended by over 30 international delegates, including political leaders, local authorities and civil society representatives from the cities of Latin America and other continents, and promoted the signing of the Bogotá Declaration: “Humane Cities Up Against Climate Change”. Thus, Bogotá says to its citizens and the world that in this city is where a new model of humane development began to be developed, which strives to adapt to and mitigate the consequences of climate change as one of its main challenges in achieving global sustainability.

www.bogota.gov.co (Mayor’s Office website)

www.ambientebogota.gov.co

(District Environment Office website)

www.ciudadesycambioclimatico.org

(Bogotá Cities and Climate Change Summit website)



Bogota panorámica. Photo: © Germán Montes, 2008, Instituto Distrital de Turismo.



Photo: © Alcaldía Mayor de Bogotá.

MAKING WAVES AND KEEPING THE LIGHTS ON

Mexican company Marersa is investing heavily in new wave technologies that it believes can meet soaring demand for electricity in the country and throughout the Central American region.

Mareomotrices de Energías Renovables (Marersa), is a new Mexican company that has been working on technologies for wave energy, electric cars charging systems, magnetic levitation wind turbines, micro hydraulic turbines and for ecological generators.

The main project and challenge for Marersa has been to develop Wave Energy systems. Since 2008 we have developed and filed more than 12 patents. We are convinced that wave energy is the main source for supplying clean energy to the world, since it is more predictable, trustworthy, continuous and, in our case, cost effective.

Even though we are already building the first 3MW power plant for the Federal Commission of Energy in Mexico, the constant research and development that we are doing has lead us to the next generation of equipment. We are going to use hydro-pneumatic systems combined with Piezoelectric ones for some systems, and mechanical equipment for the next generation of Wave Impact Systems.

The challenge has been to break the lack of interest of financing companies for new technologies, the lack of opportunities from government offices to invest in the research and development of wave energy systems that take more than four years to deploy.

Mexico has more than 11,000 Km of coast, where renewable energy systems to meet domestic demand and to export to the USA

and Central America. By next year, we will be generating more than 60 MW in Mexico from wave energy with more than 85% plant efficiency, and we will increase the production up to 600 Mw by 2015 with the contracts that we already have, and with the ones that we will sign by the end of 2012.

Our plan is to settle new joint-venture companies in Dominican Republic, Colombia, Costa Rica, Guatemala and Panamá, by 2013. During 2014 we will expand in the USA, Chile, Brazil, Argentina and South America. On 2016 we will expand in Europe and Africa as well.

Next year we will be testing a new mechanical systems attached to our buoy systems and we will commercialize systems that will run from 1 Kw up to hundreds of Megawatts, but the main system will consist of modules that will generate 70 Kw each.

Since the pressure that we capture from the wave can be from several N-m up to thousand of N-m, the main challenge is to control the pressure that the system receives to move generators and to use only the pressure that we need, but without having a risk to have the pipelines blowing because of the high pressure that hydraulic oil transmits to the accumulators.

On the mechanical systems, the challenge is to control the side impact on the system that waves can give when they don't impact directly in the front of the bouye. Another challenge is to prevent the systems from the ocean fury of Hurricanes and big storms. We have all those problems solved, and by February we will have the first commercial plant operating with waves that run from 2 to 3.5 meters height.

By April we will be producing wave energy by mechanical means in technology partnership with an aerospace company with aeronautical specifications. Our goal is to supply clean affordable energy, cost effective, with low maintenance and operational costs and that can be installed all over the world. Our systems can be installed for around 2 million US Dollars per Megawatt, with more than 85% plant efficiency.

Mareomotrices de Energías Renovables (Marersa)
www.marersa.com



Marersa recently completed a 3MW trial of its wave technology south of the city of Tijuana in northern Mexico.



Marersa: Harnessing nature

www.marersa.com



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FROZEN IN TIME

George HW Bush signs the Framework Convention on Climate Change, 3 June 1992.



The United Nations Framework Convention on Climate Change (UNFCCC) celebrated its 20th birthday this year. The treaty was 'opened for signature' at the 1992 Rio Earth Summit; in 1994 it entered into force, and in 1997 the Kyoto Protocol was adopted. Getting world leaders to sign the treaty in Rio was a major achievement. It had taken years of negotiations to reach this stage – and states were still wrangling over the wording of the Text of the Convention with weeks to go.

Michael Zammit Cutajar was the UNFCCC's first Executive Secretary, and stood by every state representative as they signed the treaty. Leaders typically entered the room set aside for signing after they had addressed the main plenary in Rio. "We were to the side of the plenary in a big lobby" he said. "I remember the air conditioning was very effective – it was freezing. We had a little table, the treaty on it and a place to sign." Many leaders asked if they could use their own pen – notably UK Prime Minister John Major, German chancellor Helmut Kohl and US President George HW Bush.

The room was reserved for Secretariat staff and national delegations – but Zammit Cutajar remembers there was one notable exception. The legendary French explorer, inventor and scientist Jacques Yves Cousteau had also managed to get into the room. "He was wearing a light blue Mao jacket, and hid behind a palm tree most of the time.

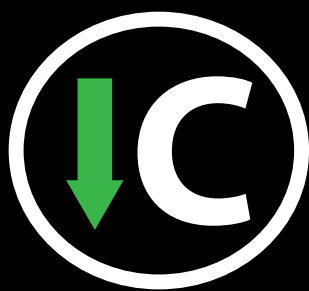
When the leaders had finished he popped out and shook their hand – nobody shoed him away".

Bush had laid down his conditions ahead of the summit, declaring: "the American way of life is not negotiable", and Zammit Cutajar recalls that US participation was not guaranteed. Nevertheless, the Republican President made history by signing up to the climate convention: "His staff cleared the room – even Cousteau had to leave," Zammit Cutajar said. "Only American press were allowed in, together with a member of the US legal team. Bush was very tall, and the table was very low, so he had to splay his legs to get down to that level."

Leaders continued to arrive to sign the book during the summit. Fidel Castro arrived in full military uniform, while French President Francois Mitterand apparently arrived with an entourage of beautiful women in tow. Optimism was abound: "There was a sense of achievement that climate was on the up," Zammit Cutajar said, "a sense of cooperation and that everyone was on board."

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China Low-Carbon Leadership Summit

19th - 20th March 2013, Beijing, China



Join 500+ participants in a high-level low-carbon conference to be held in Beijing.



The China Energy Conservation Association (CECA) and Entico Corporation present a unique opportunity for businesses, technology experts and innovators to meet and discuss how China can meet its future energy challenges over the coming decade.

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Officials from leading Chinese industrial and development ministries will be attending at the request of CECA and are available for pre-arranged meetings.

#greenisworking

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