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SUMMARY EVALUATION 2009 BY LEE STEIN



THE 15TH
CONFERENCE OF THE PARTIES
UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

WHAT IS A COP?

A CONFERENCE OF THE PARTIES, KNOWN BY THE ACRONYM “COP”, IS THE PROCESS BY WHICH UNITED NATIONS CONVENTIONS ARE GOVERNED BY THEIR SIGNATORIES. THESE MEETINGS ARE MEANT TO ADVANCE THE IMPLEMENTATION OF THE CONVENTION, IN THE CASE OF COPENHAGEN, THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE.

The United Nations Framework Convention on Climate Change (UNFCCC) is an international treaty first presented at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, informally known as the Earth Summit. The more widely known Kyoto Protocol was adopted in 1997 as a protocol to the UNFCCC. The Kyoto Protocol set binding emissions reduction targets for signatories, creating a multilateral approach to addressing the potential ramifications of the scientific predictions related to anthropogenic climate change. The Kyoto Protocol, which came into force in 2005, calls for Annex 1 countries (developed countries) to have reached their reductions targets by 2012. The 13th COP of the UNFCCC was held in 2007 in Bali, Indonesia, with the goal of producing a road map for the creation of future emissions reduction targets post-2012. December 2009 marked the 15th Conference of the Parties of the UNFCCC attended by Presidents, Prime Ministers, and others hosted by the UN. In Copenhagen, the goal was to establish ambitious, binding emissions reductions targets for the post-2012 period.

PERSONAL REFLECTIONS ON COP 15

I had the privilege of attending this historic event as a member of two separate delegations: The University of California Delegation as a member of The Directors Cabinet of the Scripps Institution of Oceanography and as a member of The Natural Resources Defense Council Delegation.

It is humbling to be in an environment consisting of world leaders from 192¹ countries, representing both National and Sub-national levels of government. As a member of delegations from two Non Governmental Organizations (NGOs) I was part of groups formally recognized as Observers, and I played no formal role in Copenhagen. I also attended COP 13 in Bali, Indonesia as a member of the International Finance Corporation delegation, a World Bank implementing agency.

It is impossible to accurately convey the vast collective processes at a COP. The purpose of the meeting was to bring all parties to one place to negotiate, and hopefully agree on, how to move forward to fulfill the aims of the treaty. Formal negotiations took place between official negotiators from each country that is a party to the treaty. Academic and NGO constituencies attended to add support or to advocate. Negotiating points were added or deleted, and drafts circulated for negotiators and their legal teams to review. Various constituencies outside of the formal negotiations also commented on the drafts as they circulated. This started a frenzy of rumors and speculation on the status of any given issue. Corporate interests, trade groups, human rights activists, and others who were impassioned and wanted to have a voice all worked to make themselves heard by negotiators. Some had access to the official negotiators, while those without access held demonstrations in order to be heard. The further from the negotiator, the louder they needed to raise their voices.

The UNFCCC staff did a remarkable job. It is beyond the scope of this summary to elucidate the vast array of responsibilities to be managed in creating an environment conducive to direct negotiations aimed at reaching agreement on how the world will reduce global emissions. In addition to the formal negotiations, the staff coordinated the participation of heads of state and a vast number of side events, all taking place simultaneously. These side events included panels, workshops,

¹ There were 192 countries in attendance in Copenhagen, however there are 193 countries who are signatories to the UNFCCC



Ocean's Day at Copenhagen

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December 14, 2009

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Ad Map
COPENHAGEN

SAVE THE FORESTS
SAVE THE CLIMATE

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- Copenhagen Town Hall
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- Jostedal's Star Museum
- Royal's Behind it or Not!
- Detrolf Scaugh Centre
- Ny Carlsberg Distillery
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- National Museum
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- Royal Arsenal Museum
- Royal Library
- Christiania Church
- Royal Danish Museum
- Our Saviour's Church
- Strøget
- Højesteret
- The National Archives of Denmark
- The Palace
- National Water Collection
- Church
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- Noble Mermaid
- Allan's Church
- The Citadel
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- The Marble Church
- David Collection
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- Holy Spirit Church
- Round Tower
- The Reformed Church
- Guinness World of Records Museum
- Rosenborg Castle
- Royal Museum of Fine Arts
- The Handspinning Collection
- Botanical Garden
- Springrove
- St. Paul's Church
- Our Lady's Church

Important information for the COP15 Secretariat

LEE STEIN

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Governor Arnold Schwarzenegger, Lee Stein, Rep Jeremy Kalin (MN),
Sen. Fran Pavley (CA)



Lee Stein, Eduardo Braga, Governor of Amazonas State, Brazil

lectures, and press conferences. The venues permitted experts and advocates to exchange information on the technical science, social science, or political realities related to climate change from what seemed like unlimited perspectives.

Negotiations took on their own rhythms. They were taking place 24 hours a day. Sometimes the negotiators needed a break or to stop to convene with their governments as deals were struck or fell apart. Sometimes countries walked out to make a point. The drama was real and the stakes high. Life will be different as a result of what agreement is reached. For those closely following the negotiations and working to make their voices heard, such as The Alliance for Climate Protection, the high level of work being done by sophisticated, impassioned professionals was evident even as they met in corners of lobbies of hotels working into the wee hours of the night.

Outside of the formal negotiations and official side events, organizations and delegations hosted additional events throughout the city. Some events were open to the public, while some were limited to private invitation. NGOs and others provided forums in order for constituencies to discuss topics that they believed were essential for the agreement being negotiated. Press conferences were held everywhere. Some of these events were very formal and scientific, some political and others pure entertainment.

I often found myself wanting to attend multiple events occurring at one time throughout the city. Access rules changed mid-conference and security required roads to be closed as heads of state moved around the city. Demonstrations arose unpredictably. Impromptu meetings with old and new friends happened on street corners, in bars, and in the halls of official and independent events in what Ernest Hemingway would have called a moveable feast.

Overall, this global spectacle was amazing to witness, and to a very small degree participate in: The effort to reach agreement among nations on creating mechanisms to reduce global emissions and protect the planet. That said, it would be naïve to believe that all attended for altruistic reasons. Vested interests abounded. There would be winners and losers depending on the outcome of these negotiations.

PERSONAL ANALYSIS

In my opinion, markets are driven by domestic compliance systems. Most in Copenhagen seemed to believe that markets can be driven by UN sanctioned compliance systems. Building a functional system of payments to protect humanity from

the predicted devastation brought about by climate change requires an accurate understanding of market forces. I chose not to enter the debate about whether climate change is anthropogenic, but to focus on the economic realities of the negotiation.

How best to place a price on carbon in order to minimize future warming is a pure question of economics and market forces. How best to deal with adaptation funding, the funding to relocate populations, or to build new water systems, is also controversial. However, compensation is also a factor in this case, and must be considered in any analysis of market forces and therefore in the negotiation itself. This can also be considered as a concept related to tort common law: ergo, developed countries built their economies by putting the pollution into the atmosphere at no cost and do not have a right to impose a pollution avoidance cost on the developing countries. The argument that these developed countries should pay for past carbon emissions adds a historical element to the negotiation.

Most of the action that I encountered had an eerie tone; the negotiating parties (the countries) seemed most focused on how they each would get their share of funding and from whom the funding would originate. Fiduciary obligations are

defined by Black's Law Dictionary to be "a duty to act for someone else's benefit while putting one's personal interests aside." But each country has its own sets of laws and moral beliefs. Each government has a fiduciary obligation to its citizens. No government perceives that it has a fiduciary obligation to the citizens of another country. So by acting at the highest standard of legal and ethical behavior, a negotiating position may so violate the interests of the citizens of another country to the extent that even death and destruction may be the result.

"The 48", as they became known, are the countries most vulnerable to climate change in the near term. The 48 include the least developed countries, the small island states, and the nations of Africa that are most vulnerable to floods and droughts. Some are already experiencing sea-level rise as water creeps higher on their shores. They have no need to learn more science. They feel the science. They are "sinking." They have two quite visible goals:

- To stop any activity that leads to climate change and to stop arguing about what level of particulates in the atmosphere are acceptable.
- To receive funding so that they can adapt to the changing planet.

The 48 have a large voting block, but limited financial resources and limited population. It is not only their land that is disappearing, but also their food sources. The disappearance of coral reefs is a loss of food, culture - threatening traditional family units. These nations have banded together as a voice and voting block. However the issue is complicated for constituencies in other places in the world, where people are dependent on fossil fuel or encountering drought, and governments owe their own citizens – not the citizens of the 48 – a fiduciary duty.

At the COP, like anywhere, strange things happen. Due to a protocol within the United Nations there is a pre-arranged rotation enabling countries to serve as Chair at certain activities. By this rotation, for the 77 countries of Africa the Chair at COP 15 was Sudan. Surreal is the only adjective I have to explain witnessing Sudan as the formal spokesperson to developed countries on economic or moral issues. The dynamics of a COP are remarkable.

OCEAN ACIDIFICATION AND THE SCRIPPS INSTITUTION OF OCEANOGRAPHY

As a member of two important delegations, I was quite proud to be a citizen of the State of California and to be associated with the Scripps Institution of Oceanography (SIO). SIO was very successful in bringing ocean acidification and remote monitoring advancements to positions of prominence on the international agenda. Ocean science has monitored CO2 for 50+ years. Ocean PH has only been recorded for 22+ years. Now that the issue of ocean acidification and the science explaining it has entered the international arena, the outcomes related to ocean acidification might be the most challenging that humanity has ever faced.

Currently, there is no financing mechanism suggested to address ocean acidification. As with all marine issues, the connection to humans is less compelling than with land-based challenges. No proposals to address ocean acidification were included in the proposals. As the scientists at Scripps can easily validate, ocean acidification is pure science. The chemistry formula is without dispute. Add more CO2 (and certain other gases) and the PH drops. $CO_2 + CO_3^{2-} + H_2O \rightarrow 2HCO_3^-$. This issue will emerge beyond regional fiduciary obligations. This is the issue that most highlights the tragedy of the commons, but at a magnitude never contemplated.

In The Economist (12/15/09), Oliver Morton wrote an exceptional article featuring Scripps scientists entitled "Blowing in the Wind." Throughout the COP Tony Haymet Ph.D., Ray Weiss Ph.D., Richard Somerville Ph.D., and Prof V. Ramanathan Ph.D. provided in-depth reports on their historic research, gaining worldwide respect in the process.

CALIFORNIA: THE SUB-NATIONAL LEADER

History has recorded that COP 13 in Bali was about creating a roadmap. In my point of view, Copenhagen was about sub-national groups moving faster than the federal governments on regulating emissions. The leader of the sub-national efforts was California Governor Arnold Schwarzenegger, whose work with the state senate and assembly led to passage of the landmark emissions reduction legislation, AB32, a model for the world. In my opinion, Governor Schwarzenegger was also the leader of this COP, supported by his team from California: Secretaries Linda Adams, Mike Chrisman, and A.G. Kawamura; Mary D. Nichols head of the California Air Resources Board; and their staff members who were visible and took a leadership role at the COP as well.

Governor Schwarzenegger thanked all who have supported him in these efforts, and at multiple events he thanked California State Senator Fran Pavley, who as a state assemblywoman authored AB32. It was a pleasure to see Senator Pavley on the international stage. Anthony Eggert of the California Air



Jesse Fink, Felicia Marcus (NRDC), Lee Stein



Sec. Mike Chrisman (CA, Natural Reserves), Dr. Richard Somerville (Scripps), Lee Stein, Rob Monroe (Scripps)



Lee Stein, Sen. Fran Pavley (CA), Carl Nettleton, Open Oceans Global



Nobel Laureate, Rajendra Puchauri



Under Sec. Kristina Johnson,
Department of Energy, Lee Stein

Resources Board was actively engaged in many venues as was Felicia Marcus, former California EPA Administrator and current Western Director at the NRDC. I found it very impressive to watch her in action.

California was a shining example of what effective sub-national legislation can achieve ahead of its own federal government. The world watched. The world is adopting and joining this effort.

NRDC AND E2

I was proud to be from California and also proud to be associated with the NRDC, and to have been active as cofounder of the Southern California Chapter of Environmental Entrepreneurs (E2) 10 years ago. I often state, and would like to reiterate, that I am grateful to be able to be associated with such a remarkable organization and such remarkable people.

Frances Beinecke, NRDC President, was gracious and professional. Since I have been an advocate of forest conservation and REDD+ for years, I was most pleased when AEP and Duke executives complimented her in the Avoided Deforestation meeting. She is a real pro! In an interview following Copenhagen, Beinecke expressed that "for the first time in history, the United States is joining with other major emitters to take real action against global warming", and that hopefully the Senate would take decisive action in the coming months knowing that "Americans won't act alone".²

As a testament to the NRDC and E2, almost everyone I met in Copenhagen knew that E2 had played an active role in AB32. It felt so good to be an E2 member. A favorite moment was when someone from Brazil started talking about the tailpipe law from California, AB1493, and another E2 success!

FORESTS AND REDD+

Forests are the largest terrestrial carbon store. While the Kyoto Protocol's Clean Development Mechanism (CDM) recognized reforestation and afforestation as carbon-mitigating activities, avoided deforestation (AD) was excluded from the CDM. However, new monitoring technologies have been brought to market, which enable AD mechanisms. COP 15, with the REDD+ (reducing emissions from deforestation and forest degradation) discussions, was the first time I witnessed very serious agreement that the preservation of existing forests will be built into the next Protocol. I am confident that REDD+ will emerge in some form as a certified mechanism.

REDD+ allows for economic incentives to avoid deforestation, based on carbon credits that can be generated through the prevention of deforestation – and therefore carbon emissions – that would have occurred without the REDD+ project. The "+" was added to acknowledge the importance of respecting indigenous and local forest dependent peoples, as well as the co-benefits that forest conservation provides in the conservation of biodiversity. REDD+ includes monitoring, reporting and verification to enable developed countries to commit to a compensation scheme to pay for developing countries to protect forests. REDD+ has matured over time, developing from a concept, to scientific methodologies and papers, to applications in the field that have provided lessons for improvement and even some initial successes.

In Copenhagen there was broad agreement on inclusion of REDD+ in the post 2012 Protocol. It was agreed by most to have the potential to be the most significant reduction in emissions for the lowest economic cost. REDD+ appeared to be the one subject being debated with strong visible agreement all around. The details and dynamics of potential implementation are beyond the scope of this document, however the common agreement and common bond between state and non-state actors, industrial and environmental parties, was very exciting. I had the pleasure of spending time with



Secretary Linda Adams, EPA (CA), Lee Stein



Mary Nichols, Chairmen CA Air Resources Board, Frances Beinecke,
President NRDC, Dr. Virgilio Viana, FAS Brazil, Lee Stein



Monique Barbut, Global Environment Facility, Lee Stein

² Jessica Rae Patton "Speaking Out on Copenhagen" 12/22/09, Emagazine.com, <http://www.emagazine.com/view/?4968>



Lee Stein, Al Gore



FOREST DAY
3



Lee Stein, David Doniger (NRDC), Linda Adams (EPA), Michael Goo (Counsel, Chairman Edmund Markey (D-MA), Subcommittee on Energy and Environment), Barbara Finamore (NRDC)



Professor Virgilio Viana, of the Sustainable Amazonas Foundation, a true leader in the REDD arena with the success of the Juma project and the Bolsa Floresta Program. There were a number of humbling moments knowing that history was unfolding in the room.

Familiar faces came from many different places. As an example, I recently participated in a roundtable discussion hosted by the Cornell Hotel School and the Center for Entrepreneurial Studies. I was impressed to see fellow round table participants Brigitta Witt, Vice President of Environmental Affairs of Hyatt and Mari Snyder, Vice President of Social Responsibility and Community Engagement of Marriott involved in the COP. Both Hyatt and Marriott are taking leadership roles. The Marriott role in REDD+, as a sponsor of the Juma project run by FAS in Amazonas Brazil, is a leading example how corporate leadership in an area of social and environmental protection can add value to international negotiations.

THE US GOVERNMENT: WILL ACTION BE TAKEN?

In my personal opinion, the U.S. Department of Energy (DOE) had an extremely impressive message in Copenhagen. Secretary of Energy Steven Chu presented the DOE perspective at multiple locations and Undersecretary Kristina Johnson hosted a discussion in the US Pavilion in the Bella Center. I had the privilege of watching both Secretary Chu and Undersecretary Johnson present, and I what I saw and heard was very compelling. If this had been a road show for a company getting ready for its initial public offering (IPO), I would have bought the maximum allotment of DOE shares. Secretary Chu and Undersecretary Johnson know the issues and the technological solutions. They have a very solid plan of technological implementation and innovation. If there is hope it will come in the hands of these remarkable officials.

Strong action from the DOE must be supported by new legislation from Congress. US negotiators have made it quite clear that they need a strong signal assuring that China and India and developing countries will agree to reductions. Without that, there is general agreement that little likelihood exists that the (estimated) 16 swing votes in the US Senate can be persuaded to vote in favor of any climate legislation.

To those in the United States Senate who argue against climate change science, I would like to pose a rhetorical question. If you are correct, and a system is implemented causing a marginal change to your lifestyle at a marginal cost, yet there is no climate change, how much have you lost? And if you are wrong, what will the consequences be to future generations -- the victims of your misplaced conclusions when the world suffers irreparable, irreversible damage? Rhetorically, since there is debate, does not a simple risk reward analysis demand we take the safe path and implement a safe approach for humanity? We cannot afford to gamble with our children's future, which happens if we take no action. And if the US led

with action instead of waiting for action or signals from others, we just might be able to maintain the world as we know it.

Representative Jeremy Kalin from Minnesota was in Copenhagen driving the sub-national theme and is leading a fly-in to Washington, DC with some 1,000 state representatives joining him from throughout the country. The Governors of Brazil are working with Governor Schwarzenegger and hopefully will have forest legislation enacted between their states. If the Federal Governments are not able to agree, the action will come from cities and states worldwide.

RESULTS OF CHINA'S INACTION

News reports following Copenhagen have spoken of China blocking the negotiations throughout the two weeks of the conference, and even refusing to allow industrialized countries to state their targets of 80% cuts by 2050 in the agreement.³ President Obama sat at the table for several hours of negotiations while Chinese Premier Wen Jinbao sent a "second tier official" from the foreign ministry.⁴ Articles go on to analyze Copenhagen as a forum where China showed new levels of geopolitical dominance and wanting to protect its current rates of growth, which are largely dependent on energy from coal.⁵



Lee Stein at the Bella Center



Gabriel Ribenboim, The Sustainable Amazonas Foundation, Brazil, Lee Stein

³ Mark Lynas "How do I know China wrecked the Copenhagen deal? I was in the room", 12.22.09, The Guardian, <http://www.guardian.co.uk/environment/2009/dec/22/copenhagen-climate-change-mark-lynas>

⁴ *ibid*

⁵ *ibid*

CHINA IS AT ECONOMIC WAR WITH CALIFORNIA

The recently published analysis is interesting, however, I would like to offer a different perspective and label it as my personal observation as a focus group of one person: that China is at economic war with California. The real issue at stake is the creation of an entire economy of innovations that will be needed in the low-carbon economy. China used the negotiations in Copenhagen to send a signal to US investors that climate legislation will not provide a secure market for "Greentech" and that this industry should not be built in the US.

Consider the following: If China does not send a political signal to the US and there is no US climate legislation, then there will be no market signal to the US financial markets to invest in "Greentech". That will give China (and others) a chance to build an R&D infrastructure to be a "Greentech" technology leader. However, if the market signal does emerge in the USA, then significant investment, AND JOBS, will arise, and China (and others) will not have a chance to own this market. Silicon Valley and the United States will become so well funded that China and India will not be able to have their R&D engines catch up.

I say that China is "at war with California" since much of the capital investment and innovation will be California centric. By doing nothing, it is my opinion that China, et al. keeps those 16 swing votes in the US Senate from voting for decisive climate legislation, and thus from sending that essential market signal to potential Greentech investors. COP 15 highlighted the economic war spurred by climate change negotiations, not just the political and social implications of action or inaction. I hope those 16 US Senators soon realize that energy efficiency is one powerful mechanism to address climate and energy efficiency is just good business, and a National Security mandate. Our competitors want to own those markets. AB32 is a jobs creation bill and so is climate legislation. Sub-national leaders continue to lead a on a path that should be followed.

One analogy summarized the confused negotiations, but I do not recall the name of the speaker. The speaker's analogy was to imagine a 100-story building where someone steps off of the roof. As they fall past the 80th floor, then 50th floor, things are not so bad. When they get to the 20th floor the statisticians would extrapolate the historical trend lines and conclude that since nothing bad has happened yet, the odds of something bad happening are more remote than ever. The speaker was referring to those who think that there is time, to those that think 450ppm or more is workable – once the evidence is 100% conclusive, it is too late to act.

The market signals can be dictated by domestic legislation with no need to wait for international binding agreements. Dialogue is now shaping up within the United States for a "border adjustment mechanism" in "any climate policy crafted by Congress." This will add a tariff system enabled through unilateral action to enhance the United States ownership of R&D for the emerging Clean Energy Economy.

Experience has taught me that negotiations have a rhythm of high points, low points and positioning. It is often hard to have a negotiation between two parties. It is even harder to have a negotiation between three parties. Of course 192 parties, some at war with each other, will understandably have trouble coming together. The concept of a global treaty is an admirable goal, but not necessarily the one that will protect the world as we know it. In my opinion, the next steps to take are unilateral action by countries that want to own the economic R&D of Greentech – countries that are willing to take decisive action without being controlled by third parties.

We should not be upset about the outcomes of COP 15, but we should take action without waiting for others to act. Hopefully we are on the verge of the U.S. taking the bold steps necessary to accomplish what wasn't achieved at COP 15 – affirmative actions toward measurable results that will improve our planet.



Prize Capital, LLC
1616 Camino Del Mar
Del Mar, CA 92014
prizecapital.net
stein.to
858.442.2300
tom@prizecapital.net

SPECIAL THANKS

Scripps Institute of Oceanography
Natural Resources Defense Council