Climate diplomacy from Rio to Paris: the effort to contain global warming

William Sweet, 2017

Balanced discussion is hard to find in the area of climate change, and it is certainly not found here.

The book starts out with an anecdote about climate change catastrophe. Two researchers crossing the Canadian far north fall through dangerously thin ice and are killed. The moral of the story – global warming is destroying the ice. There are a couple of factoids presented:

The Eskimos in northern Greenland are experiencing "rotting ice." 200 to 300 billion tons of ice are being lost each year as meltwater.

The last time atmospheric CO_2 was this high, the global average sea level was 70 feet higher.

These "expert" facts are presented without context. The meltwater figure comes out to 42 to 63 mi.³ per year, a figure one can wrap his brain around. I am sure that it is hard to measure meltwater within an ice sheet in the Arctic. This figure has to be some sort of a SWAG, and one can be confident that it is on the high side. Still, the Arctic is a vast place. It would amount to about 1/4 of an inch per year of melt. As irrationality experts Dan Ariely and Daniel Kahanman would testify, this is very much an area in which how you ask the question controls your perception of the answer.

With regard to atmospheric carbon dioxide, it has been decreasing quite consistently since the age of the dinosaurs. Back then animals seem to have had the upper hand, generating more carbon dioxide than plants could fix. Plants absorb carbon dioxide from the atmosphere. As plants have become increasingly efficient, the available carbon dioxide in the atmosphere has shrunk between 5 and 10 times. In the anthropomorphic era machines have joined animals in exploiting biomass for energy, partially reversing the long-term trend toward less carbon dioxide in the environment. To say that ocean levels were 70 feet higher is a bit of a stretch – the continents were configured differently back then. Who knows? Sweet provides no footnotes to guide us.

A figure never cited is temperatures of those bygone geological eras of massive amounts of CO_2. They were perhaps a couple of degrees higher than the present. The dinosaurs and our mammalian ancestors seem to have survived quite nicely.

Sweet writes "The total collapse of Antarctica's Ross Ice Shelf, an area the size of France, or the complete hiving off of Greenland's ice cover— these are developments, were they to occur abruptly, that could render virtually every major coastal city of the world uninhabitable from one decade to the next." Put this up there with asteroid collisions in nuclear wars. True – it could devastate life on earth. Is it happening? The week I write this review the news is that the Antarctic ice sheet, though it continually

changes, appears to be relatively the same as it was when Shackleton and Scott first explored it a century ago. This is an area in which experts disagree, and humility is certainly in order. Moral certainty, as we statisticians say, is a difficult thing.

Sweet invokes the wisdom of crowds: "This is why hundreds of thousands took to the streets of New York City in September 2014, when the UN secretary-general convened a one-day summit to galvanize support for a strong international climate agreement. The specific purpose of the summit had been to gather world leaders, get them to focus on the climate problem, and inspire them to stronger collective action. But the public demonstration that was organized independently of the United Nations ended up outclassing the official event." Sweet and I, and you too, dear reader know that those tens of thousands gathered in New York were not experts on climate change. Showing up at such a demonstration is a social phenomenon, one which now goes by the name of "virtue signaling." Its measurement is of sociological interest, but not of any scientific interest.

Sweet writes in the conclusion to the preface "Like journalists generally, I try to take no sides." That's up there with "I'm from the government and I'm here to help." No -- he is an advocate. His last sentence belies the argument: "Whether catastrophic climate change is headed off will depend greatly on what happens in diplomatic negotiations. If those negotiations fail, it will be only a matter of time until states are at each other's throats, as the circumstances we have depended on crumble all around."

Sweet assumes that global warming is real, that it will be all bad, and that it is caused by rising levels CO2. He does not present the case for any of these propositions, and never mentions serious scientists who question all three.

This would be an exceptionally long review if I made it all one piece. Therefore I am posting this review of the preface as the book review itself, and chapter reviews as comments.

I should add a comment on my own bona fides. I am a retired computer programmer, entrepreneur and computer book author. In retirement I have studied statistics and have read sufficiently extensively to be a top 500 Amazon reviewer. I have lectured at the university level on ecology and read extensively on climate change. I provide links to the books I have read and reviewed throughout this review and my comments. Those I have reviewed include: [[ASIN:0143118285 Whole Earth Discipline]] by environmentalist Stewart Brand,, [[ASIN:0262518635 A Vast Machine]] by Paul Edwards,, [[ASIN: 0300154321 Losing Control: The Emerging Threats to Western Prosperity]] by Stephen King, [[ASIN:B00YW3GQAE The Neglected Sun – Why the Sun Precludes Climate Catastrophe]] by Fritz Vahrenholt and Sebastian Luening, [[ASIN:1934791288 Climate Change Reconsidered]] by S. Fred Singer, and [[ASIN:B004YPJ8ZU Global Warming Gridlock]] by David Victor. These are important names in the field; Sweet names only Victor. I add Roger Pielke, who is much in the news now as he speaks out about how the establishment has conspired to shut him up.

In summary, I conclude that this is a rather shrill book of advocacy. Balanced discussion is hard to find in the area of climate change, and it is certainly not found here.

Chapter 1 – Can Catastrophic Climate Change Be Averted?

Sweet writes: "First, Chancellor Angela Merkel persuaded the European Union to adopt the 2ºC goal as part of the 20/ 20/ 20 program it agreed upon in 2007, calling for a 20 percent reduction in greenhouse gas emissions from 1990, 20 percent renewable energy, and a 20 percent improvement in energy efficiency— all by 2020."

This was at the Copenhagen conference in 2007. As goals, these cannot be faulted. What Sweet has not presented so far is the scientific argument upon which all this is premised. Allow me, the reviewer, to do Sweet's job.

The sun's radiation strikes the earth continually, 1 kW per square meter. By day it warms the earth's surface, by night, as the earth cools off, that energy is re-radiated back into space.

The fraction of radiated heat that gases capture depends on the wavelength. Radiation arriving from the son has a short wavelength, commensurate with the sun's surface temperture. Reradiated heat has a longer wavelength, commensurate with the temperature of the earth's surface.

Short wavelength radiation mostly passes through the atmospheric gases. However, certain gases capture the long wavelength reradiated heat: water vapor, carbon dioxide, methane and fluorochlorocarbons among them. They have a "greenhouse effect" of holding heat that would otherwise be reradiated out into space. The theory is that this warms the atmosphere.

The amount of carbon dioxide in the air has grown since the inception of the industrial era, from 280 ppm to 400 ppm at this writing. It is continuing to increase as mankind uses fossil fuels. It is projected to reach 450 ppm by the year 2050.

The theory is that more and more heat will be captured in the earth will continue to warm. But there are a number of other factors at play. First is the Earth's albedo – the solar energy that is immediately reflected back to space before it ever hits the earth. This depends on several factors, chief among which is cloud cover.

The Earth's cloud cover depends on a number of factors. Two major ones appear to be sunspots and particulate matter, soot. Soot is a byproduct of burning diesel, coal, and other hydrocarbon fuels. Soot provides the nucleus around which water vapor can condense, forming clouds. Therefore, the very burning of hydrocarbons which increases carbon dioxide also appears to increase cloud cover, increasing albedo and decreasing the amount of solar energy striking the earth.

An increase in sunspots corresponds to a decrease in solar radiation. Solar radiation affects the rate at which the ozone layer deteriorates. The more deterioration, the more nuclei for forming clouds in the greater cloud cover. Many writers contend that solar activity has a great deal to do with the fluctuations in the Earth's temperature. S. Fred Singer writes in [[ASIN:1934791288 Climate Change Reconsidered]]: "We begin with the review paper of Svensmark (2007), Director of the Center for Sun-Climate Research of the Danish National Space Center, who starts by describing how he and his colleagues experimentally determined that electrons released to the atmosphere by galactic cosmic rays act as catalysts that significantly accelerate the formation of ultra-small clusters of sulfuric acid and water molecules that constitute the building blocks of cloud condensation nuclei. He then discusses how, during periods of greater solar magnetic activity, greater shielding of the earth occurs, resulting in less cosmic rays penetrating to the lower atmosphere, resulting in fewer cloud condensation nuclei being produced, resulting in fewer and less reflective low-level clouds occurring, which leads to more solar radiation being absorbed by the surface of the earth, resulting in increasing near-surface air temperatures and global warming."

That is a bit dense, but basically, more sunspots means fewer cosmic rays, which means less stuff for water vapor to condense around, which means clearer skies and higher temperatures. Solar cycles have a big influence on weather and temperatures. It is not as simple as Sweet would make it appear.

Very significantly, the IPCC apparently managed to prevent Svensmark from using the CERN nuclear collider in Switzerland to investigate his cosmic ray theory. It took a long time and a lot of effort to overcome their diliatory tactics so he could do his research – which puts a hole in the greenhouse gas theory. There is a lot of politics around the IPCC.

In fact, climate models are without a doubt the most complex computer models ever created. They burn immense amounts of computer power. Programming them is indeed a worldwide, collaborative effort. Different teams specialize in different parts of the model, which they combine using different researchers' individual judgment. Paul Edwards writes about this complexity in [[ASIN:0262518635 A Vast Machine]].

No set of researchers can build a model from scratch. All models are "seeded" with components created elsewhere. Of course, the IPCC being the central agency manages most of the distribution. Not surprisingly, the model they disseminate considers CO2 to be the major agent in warming.

All researchers and consultants are dependent on a flow of grant money. The IPCC powerfully controls money and access to facilities like CERN. I was a consultant to the government in 1980 and learned through hard experience that it is not wise to go against the "school solution" to any problem. The IPCC knows what it wants to hear, and pays those who echo their message. Climate research under the IPCC is not a quest for truth.

Modeling is difficult at many levels. Collecting data is difficult: how, what altitude, what instruments? All factors affect the results. The data points must be arranged in a grid, every so-and-so kilometers across the surface, and every so-and-so meters high. Raw data must be interpolated. The model must incorporate theories of wind movement, heat conductivity, convection and so on. Edwards' primary message is one of humility – we cannot know. Beware of moral certainty. I would repeat André Gide's words, "Seek those who seek the truth. Avoid those who have found it." Sweet favors scientists who would claim to have found it.

Sweet is certainly not speaking for every climate scientist when he says that: "At the time German negotiators were advancing that position, a scientific consensus had developed that 2ºC would correspond to an atmospheric concentration of carbon dioxide (CO2) of roughly 450 parts per million (ppm). At a conference held at the Hadley Centre for Climate Prediction and Research, in Exeter, England, scientists agreed that 2ºC of warming would be about as likely as not at 450 ppm and almost a dead certainty at 550 ppm; to be absolutely confident of stabilizing temperatures at 2ºC one would have to prevent atmosphere concentrations of CO2 from exceeding 400 ppm." No, this is an extreme and an alarmist position. Sweet owes it to the reader of his "takes no sides" book to at least mention what the other side has to say.

When he does choose to speak about the other side, he names David G. Victor, whose [[ASIN:B004YPJ8ZU Global Warming Gridlock]] I review favorably. Victor talks only about how attainable the political objectives of the climate change community are... Not very. He is not a climate change scientist and does not go into the validity of the climate change claims. In this sense, Sweet is setting up a straw man. Victor does not oppose him on the science; Victor is not interested in the science so much as the politics.

Sweet is realistic about the limitations of wind and solar energy. There are simply not enough sites to put windmills, and there is not enough real estate for solar farms. I, the reviewer, note that the biggest in the world, at Ivanpah in the Mojave Desert, occupies 6 square miles (16 square kilometers). Rated at 392 megawats, it generates less power than a midsized conventional coal or nuclear station. Aswan Dam, by comparison, generates two gigawatts.

Give Sweet credit for another good observation – he considers the construction of nuclear reactors to be a positive sign. Yes it is – the dangers of nuclear are overblown. Living as I do about 50 miles from Chernobyl I observe that fears of nuclear energy appear to be misplaced. Even the ancient, badly designed Soviet era nuclear plants here in Ukraine seem to continue to function adequately. New ones are orders of magnitude better by every measure.

He continually returns to the argument about carbon. This is the crux of the matter. If carbon is evil, there is not much we can do. Carbon dioxide will continue to grow despite almost any measures taken to control it. The issue at hand is, is atmospheric carbon dioxide really that dangerous? Are the projections of global warming due to atmospheric CO2 substantiated? This chapter assumes the answer rather than making the case.

In addition to the conviction that carbon is evil, Sweet takes as given the notion that the levels of carbon growth in the atmosphere can be projected into the future in a straight line fashion. There are several reasons why this is probably not true. Sweet does not even address them – let me the reviewer do so.

First, the entire first world is experiencing sub replacement fertility. Populations have leveled off and will soon be falling where they are not doing so already. Virtually all of the growth in carbon emissions will come from China and India, not the developed world. Therefore, these two countries must be central to any solution.

Second, electricity and heat, which account for the biggest share of CO2 emissions, 42% according to the International Energy Agency, is already economizing. The sector is best positioned to take advantage of renewable fuels such as wind power and solar, and is best positioned to take advantage of nuclear. Nuclear is the joker in the deck. It is absolutely clean from the carbon emission perspective. Its safety record is the best among almost all energy sources. The reasons not to use it are far more related to fearmongering than actual science. Sweet would be doing the world a favor if he joined other ecologists such as [[ASIN:0143118285 Stewart Brand]] in advocating greater use of nuclear rather than pillorying the first world into adopting a hair-shirt reduction of overall energy use, something which simply will not happen.

Better insulation can significantly reduce heating and air conditioning energy consumption. Ukraine, where I live, is a prime example. Older buildings were not instructed to be energy efficient, and the lack of individual metering means that most apartment dwellers have little incentive to control their energy use. Again, rather than attempt to impose a world bureaucracy, leading governments to craft common sense legislation to provide incentives for reduced individual consumption is a workable, if less dramatic program. The only reason not to is that it does not forward the hidden agenda of wealth redistribution and global control by the elites.

Third, the world is undergoing a transportation revolution with the advent of self driving cars. CO2 emissions from transportation accounts for about 23%. With the advent of self driving cars vehicle size can be significantly reduced, as much of the bulk is there is insurance against accidents. There can be more multi-passenger vehicles. There can be more home deliveries via drone vehicles rather than driving to destinations such as the pizza shop. Lastly, self driving vehicles will lack sex appeal. When the car ceases to be a status symbol, it can afford to be quite a bit smaller and more economical.

Lastly, there is debate on the question as to whether it would be a bad thing if the earth were to warm up a little bit. It has certainly been warmer in past geological ages. More warmth would appear to benefit agriculture in Argentina and Chile, and Canada, Russia and northern Europe. Allowing the planet to warm up is a gamble that one would not knowingly make, but to project that the results would be uniformly bad would also be incorrect. Just as in every previous change in world climate during the Holocene era, those which were not precipitated by man but in which man was present, some human populations benefited and others suffered or had to move.

Chapter 2 – What Else Is at Stake?

The argument in this chapter is the trade-offs between lower carbon emissions and growth. Politicians must address political issues, and politicians in poorer countries cannot expect to give priority to climate over the well-being of their citizens.

Sweet cites German climate scientist Hans Joachim Schellnhuber. That is an unusual name that I recall from my stint teaching ecology in 2009. Among other bizarre statements, he claimed on German TV in 2008 that the Himalayan glaciers would all be gone by 2035. Even the worst fearmongers have retreated a long ways, now saying only maybe, 70% of them, by the end of the century. The IPCC was forced to publish an apology for having used Schellnhuber's figure. My judgment is that Sweet is not choosy about his experts, as long as they agree with him. This from the Internet:

"Often in the past, Schellnhuber has been criticized for his oligarchical and arrogant behavior and attitude toward the theory and practice of democracy. He is famous for the following quote, from 19 June 2012, as it was given in an interview to the Frankfurter Allgemeine Zeitung: “The role of climate science remains to slam the problem-facts on the table and to identify options for appropriate solutions. The role of politics is then to mobilize the will of the citizens with the aim of implementing decisions that are based on science.” With these words, Schellnhuber, who has been criticized in Germany for too facilely leaving the limits of his professional field as a scientist so as to influence politics, now even depicts the scientific elite to be the essential elite to tell politicians what they have to tell their citizens to do."

Sweet talks about international agreements on the environment, an area in which David Victor is expert. Though he quotes Victor elsewhere, he does not share Victor's wisdom in this particular subject. Carbon emissions are a function of the whole society, especially of its business activity. While a government might enter into some treaty obligation to hold down carbon emissions, in any free society the government simply cannot levy limitations on emissions on individual businesses. It would go against free-market principles, and it would be incredibly cumbersome. The administration of limits would undoubtedly be rife with politics, clumsy and unfair.

Sweet pretends that governments could do this. He writes "Any international agreement with legal force is by nature top-down. Governments representing states commit to actions that they and their successors might otherwise not necessarily take." It is simply not within the power of governments, whatever they may agree with one another.

Another page, another committed leftist introduced blandly and neutrally: "It did so by nudging countries along, to use a term popularized in policy circles by the University of Chicago scholar Cass Sunstein." Sunstein is considered by many to be on the leftist fringe. Taking him seriously suggests that this work as well is part of that fringe.

Sweet dedicate several pages to "The field known as climate justice or climate ethics [which] is surprisingly elaborate and has attracted high-power intellects with a rather wide range of attitudes and opinion." Needless to say, everyone in the field is convinced that there is a monstrous problem and convinced of their own moral standing in telling the world how to solve it. If there is no problem, they have no job.

The issue is what do the rich countries owed to the poor countries of the world. Given that the rich countries are contributing the most to [the supposed] global warming, what should they do? Of course, the elite opinion is that the citizens of the rich countries are guilty and owe a great debt to the citizens of the poor countries. This is in keeping with the larger New World Order agenda of distributing the world's wealth more or less equally, and of course, having a global bureaucracy of the elites manage the redistribution. Note that as this book comes out in late 2016 said global elite has been resoundingly rebuffed by the Brexit vote, the Trump election, and the Italian referendum.

Chapter 3 – Can Diplomacy Deliver?

Sweet quotes the right guy, David Victor: “The UN process has not worked because it involves too many countries and issues; it aims for progress too quickly. The result is a style of diplomacy that concentrates on getting agreement where agreement is possible rather than on crafting deals that actually make a difference,” argues David Victor."

As a side note, Sweet should do as well with other straw men in the realm of science in addition to diplomacy.

Sweet talks about the rain forest nations agreement to control land use. This is a common sense approach that has actually worked. There are many reasons to save the rain forests, CO2 emissions certainly among them. In my time in the Amazon I observed that rain forest was being converted into pastureland by a very primitive method – clearcutting what could be sold and burning what was left, then running cattle on the land. The profits were minimal – a couple of dollars an acre. Convincing the Brazilian government to halt the practice of allowing buccaneers to "patent" rain forest land in this way is certainly a wise move. Moreover, it benefits the Indian and city dwelling populations at the rather minimal cost of cutting out get-rich-quick artists. And, it is implemented through national legislation. A good idea.

The UN program is called REDD, for Reducing Emissions from Deforestation and Forest Degradation. It is obviously political, and excites a lot of argument back and forth, but the core idea is sound.

Associated programs – Sweet does not go into much detail – aim to reduce emissions by helping farmers improve their agricultural practices. Once again, this appears to be all for the good. Presumably it makes the farmers more efficient and cuts CO2 emissions at the same time. Moreover, it can be implemented at the national level without any coercion from international agencies.

Sweet discusses carbon emissions credit trading, a program based on the successful acid rain trading programs of the 1990s. The insight is that it is much cheaper for some industries to reduce emissions than others. Once again, these programs can be put in place at the national level. They are, of course, quite political in that they inherently favor some players over others. But that is a matter of national politics.

An alternative to carbon emission credits would be a carbon tax. It would have the benefit of having monies go to the government. It would also give industries the incentive to make their processes more efficient. As with any such proposal, it involves increased government intrusion into business. The trade-offs have to be worked out through the political process at the national level.

Sweet concludes this chapter with the concession that the United Nations may not be the right forum for an agreement. In other words, he appears willing to concede some ground to Victor and the other advocates of smaller, partial and more localized solutions. This is practical – give him credit. And give credit to the local solutions that have worked. But, at the same time, let us not lose sight of the fact that the trendlines for technological progress and population shrinkage are also working to reduce CO2 emissions, and the fact that the linkage between CO2 and global warming has not been established beyond a shadow of a doubt. Reducing CO2 emissions is certainly a good idea – mankind should not lightly toy with the environment – but imposing draconian solutions would amount to overreach.

Part two – The Players

Chapter 4 – The Superpowers

The superpowers in climate negotiation are the European Union and the United States. The European Union has been by far the more aggressive in implementing carbon reduction policies. Sweet credits the European public with being more aware of the risks of global warming. He credits leaders with scientific backgrounds such as Margaret Thatcher and Angela Merkel. He does not credit, though he certainly should, publications such as the Manchester Guardian, the Economist, the Frankfurter Allgemeine and other European publications which seem to have been pretty much of a single mind on the subject. In other words, dissent, which Sweet would depreciate as climate denial, has been stronger in the United States.

United States Senate voted unanimously in 1997 not to approve any climate treaty that put the United States at an economic disadvantage by failing to include developing countries such as China. Al Gore and Bill Clinton were going one direction, the Senate quite another.

Sweet writes: "By the middle of Obama’s second term, pollsters were also registering a distinct change in US public opinion on climate change. Concern had first peaked in 2006, with prominent cover features appearing in diverse magazines like Vanity Fair, Wired, and Time, which showed a forlorn polar bear floating on a melting ice sheet." Let

me annotate this anecdote. The subtext was that polar bear populations were greatly imperiled. It turns out that polar bear populations are quite stable and healthy, despite what this picture may have shown. This is an example of the "fake news" which is in the headlines as I write this review – except this bit from the left and not the right.

Sweet also discusses Hurricane Katrina. In this week's news we also have the fact that the last decade has seen the fewest hurricanes in history strike the United States. This is news which one will not hear from the climate change alarmists. What to make of it? Simply that climate is hard to predict. Another note, as I write this, is that almost the entire United States is in the grip of an unprecedented cold spell, and is 3 feet of snow on Hawaii's peaks. Weather is unpredictable. These are only anecdotes, and as we statisticians like to say, anecdote is the singular of statistic. These anecdotes do not point to global cooling, just as the California drought may not point to global warming. Some humility is in order.

Sweet does not mention the scandals that have affected the IPCC. The East Anglia email scandals, which showed scientists conspiring to manipulate their data to show global warming. Dr. Mann's notorious "hockey stick" graphic of global warming in the 2007 IPCC report.

Sweet also fails to mention the consensus that although the earth did warm fairly rapidly in the decade of the 1990s, the warming has been scarcely perceptible in the first decade and a half of the 21st century. The IPCC is silent on the subject. It lends a lot of credence to the naysayers such as S. Fred Singer and Fritz Vahrenholt who say that solar activity has a lot to do with temperatures on earth.

Sweet predicts in the book that the Republican presidential candidate in 2016 will probably take issue with Obama's aggressive policies. He appears to have been right.

Sweet does not mention the impending collapse of the European Union, with Britain having voted to leave and Italy apparently on the brink. While the major issue appears to be immigration, Brussels imposed regulations such as those concerning climate control are certainly part of the impetus.

Chapter 5 BRICs, BASICs and Beyond

BRICs is an acronym everybody knows – Brazil, Russia, India and China. BASICs is a regrouping of Brazil, South Africa, India and China, often including Mexico.

Sweet rights correctly: "The most important single fact about the BRICs, BASICs, or whatever you want to call them, is that their emissions have grown in the past twenty-five years at a speed and to an extent that was not foreseen when the Framework Convention was negotiated." He goes on to say that China now accounts for about 40% of global carbon emissions, estimated by the Netherlands to be 10 billion tons of CO2 per year. India is responsible for about 10%.

All the numbers concerning China are huge. The growth in consumption of coal to generate electricity is massive. The growth of the automobile population is likewise massive – traffic jams are everywhere. Air pollution is pervasive and deadly – Sweet estimates a million deaths a year.

Conversely, China leads the world in developing solar technology. It has massively increased its use of solar and wind energy – admittedly from small bases.

Sweet is a big fan of Barack Obama, giving credit for bilateral agreements negotiated by John Kerry with the Chinese. He does not mention treaties or the U.S. Senate in this discussion. It begs the question of how real the negotiations are. Obama has done a lot by executive order, and it appears that some of that is about become undone. It is significant, however, that China is willing to engage in dialogue whereas in the early years of the millennium it had held to the position that as a developing country it had no moral obligations with regard to curbing carbon emissions.

India, although its carbon emissions are low, only about 1.8 metric tons per person per year, has been quixotic in its negotiations. It does not want to give up bargaining power. Nonetheless, it has acknowledged that there is a need to limit global carbon emissions. The major problem is that more energy will be required if it is to grow economically, and coal is the only plausible source of such energy.

Sweet contends that Russia has been a fairly good global citizen. This is partly because they have reaped billions of dollars by selling emissions permits in the international market due to the generous emissions targets it received under Kyoto. Still and all, Russia is the world's fourth largest emitter of greenhouse gases, after China, the United States and the European Union.

Brazil and Indonesia have the benefit of huge rain forests, giving them significant bargaining chips in international negotiation. Brazil has the additional advantage of using ethanol in place of petroleum in many instances.

Sweet concludes "the growth trajectories of countries like China and India are incompatible with the 2°C goal, and yet without following these trajectories, is hard to see how these countries can climb out of poverty and attain the same standards of living taken for granted among the advanced industrial countries."

Chapter 6 – Sentimental Attachments, Existential Threats

Sweet talks about the group of 77 (now over 130) as the gathering place for nations that are not members of the organization of economic cooperation and development (OECD), the European Union, or the CIS.

Sweet says that most of the group of 77 regard the climate issue as a device to exact some compensation from the rich countries for their supposedly exploitation, with regard

to mining, rubber, and other raw materials. Their objective is to alleviate their own poverty.

The group of 77 did advocate global emission stabilization at Kyoto, spiting the United States, and apparently having little to lose in as much as they do not produce that many emissions.

On the other hand, they tend to have supported OPEC out of a sense of solidarity, not because higher petroleum prices were in their interest. OPEC has consistently dragged its feet on the issue of climate change, wanting no agreements whatsoever on carbon emissions.

The Association of small Island states has been somewhat powerful simply because they are pitiable and at the mercy of rising sea levels.

Japan has been ambivalent.

Canada started out committed to Kyoto, but then they discovered the tar sands in Alberta. Instead of reducing its emissions by 6%, it allowed them to rise by 25%. Sweet contends that it happened under an archconservative government elected in 2006 (that would be Stephen Harper). Note that you will not see any reference to an archliberal government in this book. I doubt that Sweet thinks that there could be too liberal of a government.

Australia has not increased its own omissions, but it is a major coal exporter to China. Its interests are divided. It enacted a carbon tax in 2012 only to repeal it in 2014.

Sweet addresses, and brushes aside, some of the IPCC improprieties in the 2009 report. He does not discuss the way IPCC is structured. Let me, the reviewer, shed a little light.

The IPCC slices itself in three both horizontally and vertically. Horizontally, there are groups that address the science of global warming itself, then the impact of global warming, and lastly policy changes that ought to result. Vertically, there are working groups throughout the world collecting data and preparing reports. At a second level, groups of experts consolidate and compile the data into reports. At a third level, they issue an executive summary, the text which most reporters and laypeople will use.

The scandal that Sweet does not mention is that the primary authors that the third level, the executive summary, tend to have been drawn from Greenpeace, Friends of the Earth and other very activist organizations that are not at all impartial. Some of the materials that have been published at the executive summary level did not go through the vetting process in the first two levels. There were errors, such as the Himalayan glacier fiasco. There have been some red faces and high-level resignations.

It is not clear to this reviewer that the abuses have changed. The IPCC is a political organization with an agenda of its own. Sweet says that it is not as transparent as it could have been. This is absolutely true. What is also true is that it does not have any apparent desire to be transparent.

Sweet finds it unprecedented and promising that Pope Francis has gotten involved in the climate change discussion, on the side of the angels. He says that Obama and Merkel have been compromised by political blunders, but Pope Francis not. I am not sure I agree – we will see how it plays out.

Part three – The Action

Chapter 7 – The Road to Rio

Sweet goes over the history of the Montréal protocol, the elimination of chlorofluorocarbons which had been damaging the ozone layer. This is a topic which [[ASIN:B004YPJ8ZU David Victor]] covers very well, as he argues that the same approach will not work for CO2 emissions.

Sweet provides the history leading up to the establishment of the Inter-Governmental Panel on Climate Control, the IPCC, in 1988.

Chapter 8 – Rio and Kyoto

The Rio Earth Summit Took place in June 1992. It produced the UN Framework Convention on Climate Change, the purpose of which was to prevent "dangerous anthropogenic interference in the climate system." It did not include specific commitments.

By the time of the Kyoto conference in 1997, there was widespread attention being paid to global warming. Friends of the Earth and Greenpeace were among the most prominent NGOs present.

Al Gore led the delegation, and committed the United States to 7% cuts in 2008 – 12 relative to 1990, while the Europeans agreed to cut 8%. Gore did this despite the certainty that the U.S. Senate would reject the agreement.

Although Kyoto was flawed, not all parties able to ratify it, Sweet contends that it worked fairly well. Compliance was better than with most such treaties. Greenhouse gases were reduced, with England and Germany leading the pack. This was in large part due to previously planned replacement of coal powered electric generating facilities.

Sweet compares the Kyoto treaty with the Nuclear Nonproliferation Treaty. They are similarly broad in terms of the number of participants, and have somewhat similar levels of success. Significantly less than 100%, but still very meaningful.

Here Sweet lays out his thesis. Without curbing greenhouse gas emissions "The likely results are by now so familiar to most educated people that it is tiresome to repeat them: rising sea levels and increased flooding of coastal cities and deltaic plains; more frequent, prolonged, and severe droughts in the world's drier agricultural areas, and more frequent and intense rainfall in the wetter regions; more extreme and severe weather generally; and, ultimately, the possibility of an abrupt change in overall climate dynamics, or a concatenation of regional climate disasters, leading to a world-scale catastrophe."

I would contend that most educated people have indeed heard the argument, and that many do find it tiresome. It is increasingly clear that they don't all agree, especially not to the point of agreeing to make significant personal sacrifices.

Sweet concludes: "Perhaps the most vivid recent warning came from a group of scientists who calculated the year in which, for various world cities, the average year would be hotter than any year recorded between 1860 and 2005 (the period for which detailed temperature records are considered highly reliable). For Manokwari, Indonesia, that year could be as soon as 2020, and for Kingston, Jamaica, it would be 2023. The "new normal" would arrive in New York City and Washington, DC, in 2047 and in Orlando and Phoenix in 2046. Moscow will start seeing the new normal in 2063, and Anchorage, Alaska, only in 2071. "In all, the scientists found that between 1 and 5 billion people [eventually] would be living in regions outside such limits of historical variability."

I add, wryly, that the reader should take it upon himself to compare this with past prognoses coming from the IPCC. There is always disaster on the horizon, but it keeps moving out into the future. Are they crying wolf?

Chapter 9 – Copenhagen

Sweet considers the Copenhagen meeting of 2009 to be in general a failure. It did not come to enforceable agreements, only agreements in principle, commitments to try. The United States did not commit to any targets, simply made a financial commitment to poorer countries.

Sweet says that though there was blame enough to go around, the European Union in general did not deserve much of it. If anything, they might have pressed the United States and the other participants harder. He contends that it might've worked if the major participants it had more courage. Another perspective is that David Victor was right – United Nations assembly the wrong forum for such an agreement. Meaningful agreements will be concluded among smaller groups and concerning narrower issues.