

## Original Paper

# CLIMATE CRISIS AND THE “WE”: An Essay in Deconstruction

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Received: June 16, 2018

Accepted: June 30, 2018

Online Published: July 9, 2018

doi:10.22158/jepf.v4n3p208

URL: <http://dx.doi.org/10.22158/jepf.v4n3p208>

### Abstract

*The new theory of abrupt climate change has yet to receive a response from those arguing for global policy coordination with the COP21 treaty or those who believe in country resilience. The only method to halt climate change with Hawking's irreversibility is to cut CO<sub>2</sub>s sharply now. But it will not happen, because of human rigidity, opportunism with guile and institutional inertia. The global powers, acting for “WE” or “US” concentrate all attention upon petty matters.*

### Keywords

*abrupt climate change, tipping points, survival of mankind, illusion of “WE” acting against global warming*

## 1. Introduction

The new theory of *abrupt climate change*, drawing upon numerous so-called “tipping points”, projects a dire future for mankind. Serious climate and earth scientists may go so far as to predict the coming end of the human species with billions of dead. Time is tight, according to some them, reducing the time span of 100 years figuring in the COP21 Treaty to just 10 years for “business as usual”.

This predicament is attributed to “WE”, asking what shall we do against this most dangerous threat against humanity ever? One may consult post-modern deconstruction theory to critique this wide-spread notion of “WE”. Who are the real actors in this now unfolding drama?

## 2. THE MENACE: Hawking's Irreversibility

Professor Chomsky has in his erudite speeches on YouTube compared global warming with nuclear confrontation as similar menaces. This is though hardly adequate, because run away climate change is worse. Nuclear confrontation is avoided by mutual arming and threat of annihilation. The *Nash*

*equilibrium* is to swerve in a Chicken game. Global warming is not a game of interaction, but evolution. Evolution has a different logic—Hawking irreversibility and not rational human calculation as in gaming interaction.

Nuclear armament is very expensive and totally meaning for both parties when they pursue the very same strategy. Iran and Saudi Arabia should make a deal to stop nuclear proliferation and invest in ecology. Run away climate change lacks a set of actors in interaction, because it is Nature simply with its colossal forces.

So, can “WE” stand up against global warming, with global coordination and policy-making and implementation? No, because there is behind the “WE” a great multitude of different actors with opposing interests: civil society organisations, governments, business, financial institutions, and ordinary people. Some groups in the set of humans make money on global warming, whereas other groups loose assets. Some rise their voice, while others look the other way. Bjorn Lomborg as the only remaining *cornucopian* (Planet Earth can accommodate has yet to understand the issue.

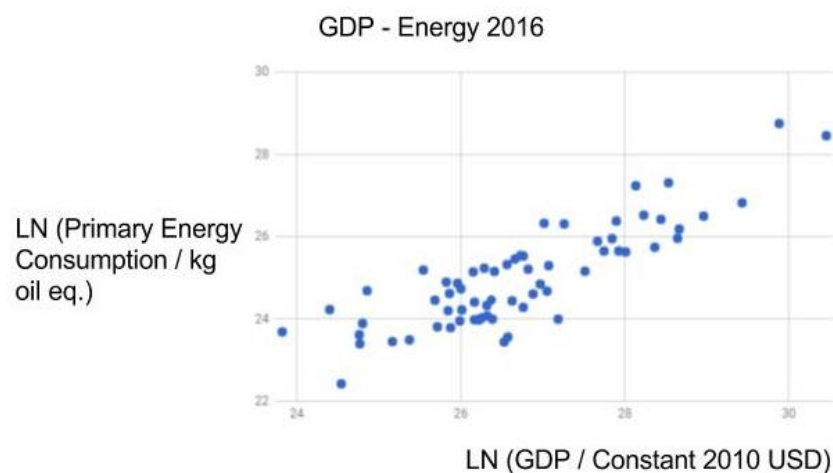
The truth is:

- a) global warming is driven by an incredibly insatiable need for energy;
- b) Global coordination does not work—transaction costs and defection;
- c) Country resilience is lower than many believed, as Nature has the upper hand.

These points are often bypassed by natural scientists, but they can be stated clearly in the social sciences.

### 3. Energy Needs

Thus, energy consumption is closely related to country affluence. The poor countries can only improve living condition by increase energy supply. Their energy demand can only go up, because energy supply is highly skewed to the advantage of the rich countries, but they emit most CO<sub>2</sub>s—see Figure 1.



**Figure 1. Energy and Affluence Globally**

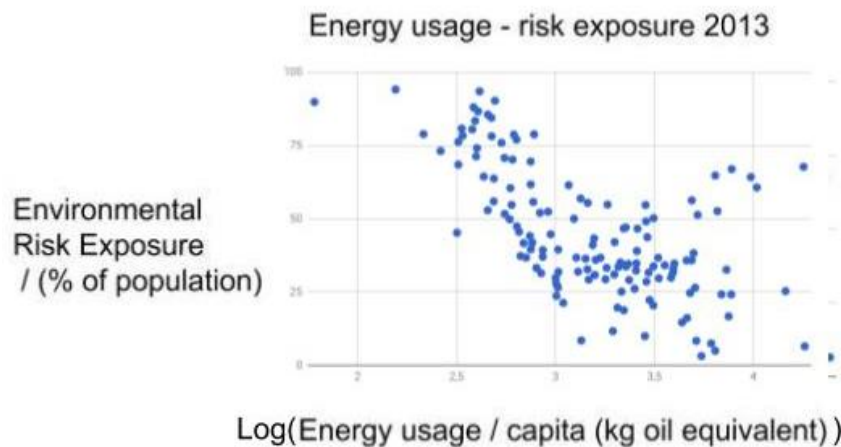
Energy is the capacity to do work. And work is the Adam Smith and J-B Say sources of human welfare. The growth in energy consumption since the industrial revolution and especially after the Second World War has been just immense, especially the supply of fossil fuels. In poor countries, the demand for energy is huge for economic development toward “catch-up”, whereas rich countries are heavily dependent of fossil fuels for economic growth. The majority of countries in the COP project are in poverty, as they need more energy. Thus, they can only decarbonise when renewable energy sources become available. This is the redistribution task of COP21: decarbonisation against support for renewable energy by the Super Fund.

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The living conditions in the poor countries in Latin America, Africa and Asia as well as the Pacific reflect the low level of energy employed. This basic fact determines life opportunities in a most dramatic fashion. The low access to energy has consequences for the environment and the life situation of people, including health, schooling, work, food and potable water.

African countries are poor because they have too little energy. Thus, they have much less GHGs than Asia. Yet, they need the COP project of the UNFCCC to renew their energy sources and move from fossil fuels and traditional renewables to solar power. Hydro power depends upon water availability that shrinks with global warming.

African energy deficit is conducive to a dire environment with enormous damages and risks. Consider the following global figures. Figure 2 shows how low energy leads to an unsafe environmental.



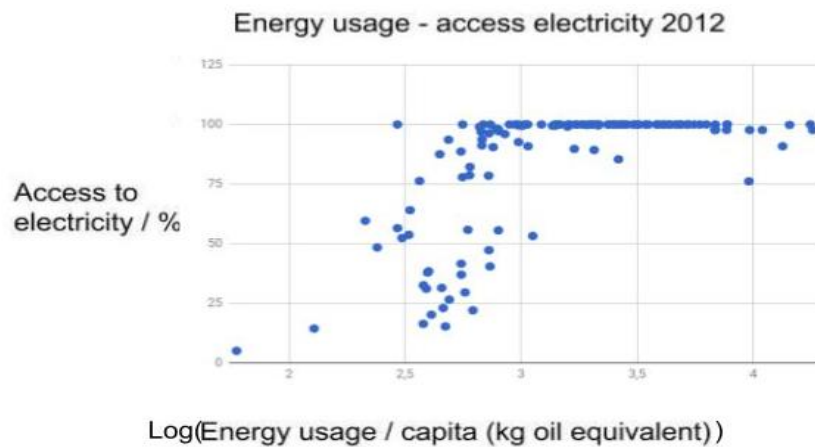
**Figure 2. Energy and Environmental Risk Exposure**

Source: Environmental Performance Index, Yale University (<https://www.epi.envirocenter.yale>).

IEA Statistics © OECD/IEA 2014 (<http://www.iea.org/stats/inde>).

Low energy use leads to poverty, malnutrition, diseases, lack of potable water, insufficient sanitation,

etc. Typical of many Latin American, African and Asian nations is the lack of stable electricity, which hampers everything and reduces environmental viability. Figure 3 has the global picture.

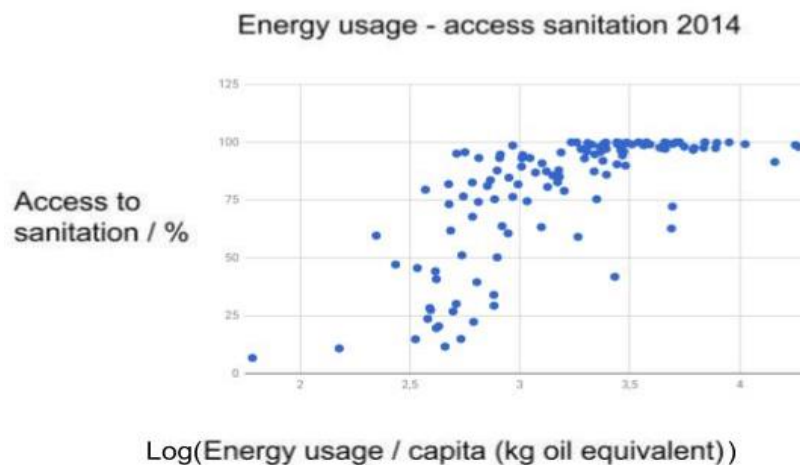


**Figure 3. Energy and Electricity Access**

Source: Environmental Performance Index, Yale University (<https://www.epi.envirocenter.yale>).

IEA Statistics © OECD/IEA 2014 (<http://www.iea.org/stats/inde>).

The access to safe and stable electricity is crucial for health, schools, food, water, etc. Figure 4 links energy with proper sanitation.



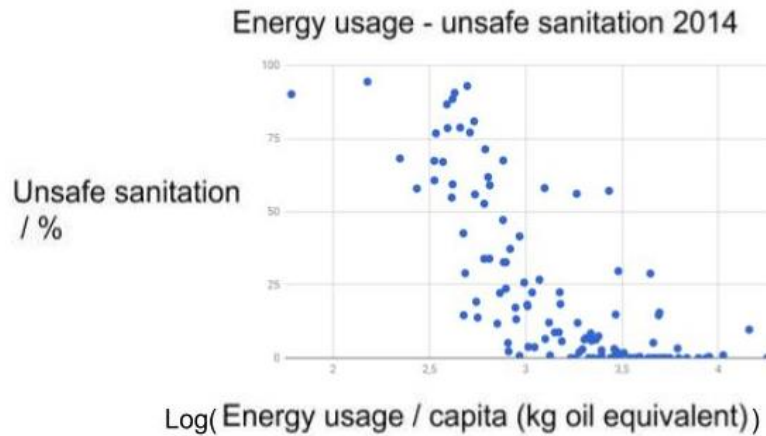
**Figure 4. Sanitation and Energy**

Source: Environmental Performance Index, Yale University (<https://www.epi.envirocenter.yale>).

IEA Statistics © OECD/IEA 2014 (<http://www.iea.org/stats/inde>).

Especially, the rapidly growing African and Asian mega-cities lack entirely sewage plants. Thus, dirty water is put into the big rivers where other cities downstream take their potable water.

Figure 5 underscores the necessity of more energy in poor countries.

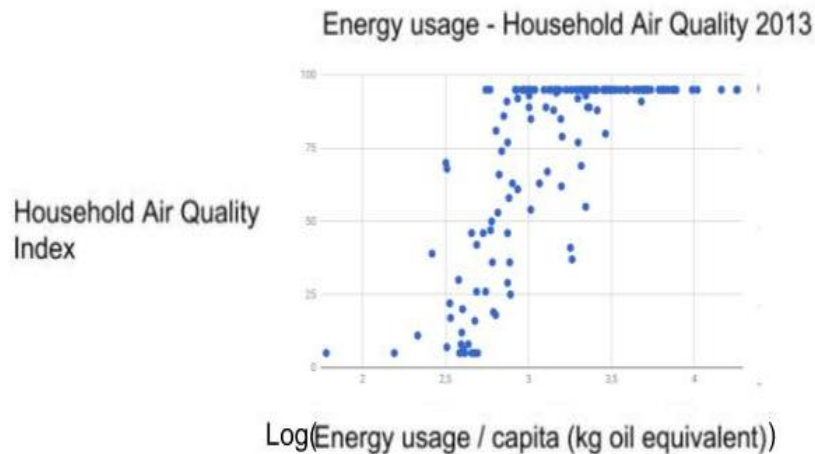


**Figure 5. Energy and Unsafe Sanitation**

Source: Environmental Performance Index, Yale University (<https://www.epi.envirocenter.yale>).

IEA Statistics © OECD/IEA 2014 (<http://www.iea.org/stats/inde>).

Air quality too depends upon energy access (Figure 6).



**Figure 6. Energy and Air Quality**

Source: Environmental Performance Index, Yale University (<https://www.epi.envirocenter.yale>).

IEA Statistics © OECD/IEA 2014 (<http://www.iea.org/stats/inde>).

Typical of many poor nations—Latin America, Africa, Asia—is the lack of stable electricity, which hampers work and reduces environmental viability. The access to safe electricity is crucial for health, schools, food, water, etc. Given the lack of enough energy in poor countries being conducive to the above bad living conditions, one understands the hopes of the poor countries for help with energy transformation leading to better access to just energy.

In terms of GHGs, rich countries have much higher levels of yearly emissions compared with poor countries, holding population constant. Only when a poor country has an enormous population is it a

big CHG polluter. Strict linear relation hold between GDP, energy consumption.

If, as we believe, energy consumption is behind global warming, the set of poor countries face a most difficult dilemma. On the one hand, they can demand much more energy like fossil fuels, but they then contribute much to climate change, On the other hand, global warming while fabricated by the rich nations and a few very populous poor nations, will have very negative consequences for poor nations. The only way out of this dilemma is that all countries contribute to halting global warming by turning to renewables, especially the set of rich countries.

The figures above present a summary of the human development theory with its UN sanctioned HDI measure—human development index. Poor nations and emerging economies know all too well that their developmental goals depend upon access to cheap. Thus, they will never accept global decarbonisation if they must give up fossil fuel energy without compensation.

Several poor nations strive for “take-off” and the emerging economies go for “catch-up” at any cost. They demand assistance for achieving some form of decarbonisation. So they were promised a Super Fund of 100 million dollars per year—where is it?

The advanced economies accept decarbonisation, only it can be combined further economic growth. Energy gives affluence and the climate change problematic. Can the COP21 project succeed?

#### **4. L POLICY MAKING AND IMPLEMENTATION: Some Fallacies**

As a matter of fact, a few dominant theoretical frameworks doubt the achievability of major policy-making and implementation project. Let us consult them with regard to the COP21 endeavors.

##### *4.1 Bounded Rationality (Simon and March)*

Simon and March (1958) would have had no difficulties in rejecting the COP21 project as not fitting the rational decision-model. He would point out the cognitive limitations in the project:

- a) No comprehensiveness: COP21 bypasses one major GHG, namely methane. If lots of methane are released in the Arctic, COP21 will fail no matter what;
- b) Ambiguity of objectives: what is the sense of “decarbonisation” when no specific targets are set in absolute numbers that are observable and verifiable?
- c) Absence of control mechanisms like oversight, incentives (positive or negative) and mere promises without sanctions.

Simon argues that only bounded rationality or restricted decision-making is feasible, both for single individuals and organisations or groups. Especially organisations pursue “standard operating procedures”, according to March, meaning simplifications of the requirements of full rationality, as laid down by the neo-classical decision model in economics. As a matter of fact, the arrival of abrupt climate change makes the COP21 project already outdated.

##### *4.2 Implementation Gap (Wildavsky)*

Scholars with the discipline of public administration follow the teachings of Wildavsky (Pressman & Wildavsky, 1984) about an inescapable gap between policy ex ante and implementation ex post.

Implementation theory was developed for national policy-making with finding of a major gap between blue-prints in the centre and implementation failure at the local or regional levels. Policy-makers engaging in nation-wide programs face bounded rationality. Thus, each and every national policy includes uncertainty and has to be adapted or changed locally.

The same policy—implementation gap applies to international relations where coordination efforts are not only hampered by bounded rationality but also the restrictions from public international law, especially the principle of state sovereignty.

The COP21 Treaty may have been a great leap forward from one point of view, namely environmentalism as philosophy, but the entire COP21 project face enormous implementation difficulties, as policies are vague and management lacking.

#### *4.3 Organised Chaos (March and Olsen)*

In the theory of organisation, one has been very interested in the possibility of groups of people to engage in rational action, like the governments of the world setting up a plan for global decarbonisation. The answer is that individual rationality may be feasible at the micro level, but large organisation with many decision-makers must fail at the macro level. There will be simply too much conflict, confusion, mistakes, lack of consistency over time—in one word chaos. In organised collective action, leadership is luck, preferences changing and information biased.

Judging the COP21 Treaty from the perspective of March and Olsen (1976), launching their conception of government as organised chaos, one may have serious doubts about the implementation of the COP21 project. A promise is made of giant money in a Super Fund, but how to fund it? Global decarbonisation is set out in three main stages, but it is a too slow process with many loopholes. And the conflicts among states are deep concerning which countries should do the most and contribute the most to the Super Fund.

### **5. GLOBAL COORDINATION: Transaction Costs**

The UN has conducted no less than 23 COP global meetings besides the standing agency IPCC, but decarbonisation has NOT begun. CO<sub>2</sub>s are still increasing 2017, globally. Inter-state decision-making faces almost insurmountable difficulties, according to international relation theory.

#### *5.1 Reneging or Cheating*

Even if one accepts that the COP21 project is rational or semi-rational decision-making (clear preferences, reasonable technology, game theory would warn that it is wide open to strategic behaviour and asymmetric information. It does not matter it is micro level or macro level choice, as both individual and collective decision-making can be cheated upon by reneging upon promises (Dutta, 1999).

The COP21 Treaty is nothing but a paper with promises for a very long time and with enormous practical consequences. Why deliver upon it? Energy transformation is costly and affect ordinary people. When costs go up, maybe defect from promises made a time ago? Or demand a hefty

compensation from the Super Fund?

The paradox of the famous PD game lies at the core of the COP21 project. It is rational for each single participant in the Common Pool Regime (CPR) to defect hoping that the others will deliver (N-1 problem) or to delay contributing because the benefits will be shared by others (1/N problem). The US has already reneged because the Trump administration does not to contribute to the Super Fund or India's decarbonisation costs. As the COP21 project moves along, there will be many opportunities for defection, especially as the PIL sanctions this.

### *5.2 International Society versus Anarchy of States*

The COP21 Agreement enters public international law, when it has been ratified by the UN member states. Scholars have held great hopes about the PIL, restraining state sovereignty. But it is only forcing governments when it comes to the questions of war and peace, where the Security Council rules if unanimous. Rule of rule in an international society has not yet accomplished, meaning that several treaties of PIL can be reneged upon, like the COP21 Treaty. Governments tend to first and foremost act upon national interests, even when it goes against international norms (Burchill, Linklater, & Devetak, 2013).

## **6. RESILIENCE: False Promise of Adaptation**

In the great debates between environmentalists and cornucopians as well as around the precautionary principle, the position of resilience was developed by economists and policy analysts. It contains:

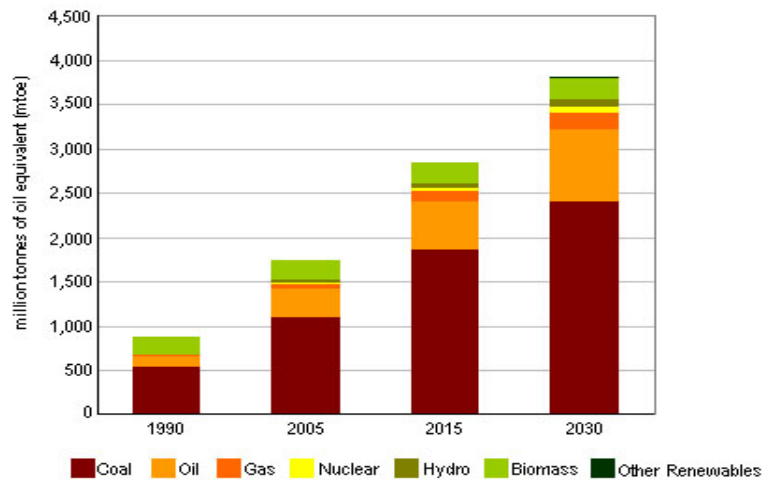
- i) do not look for possible ecology disasters ex ante;
- ii) wait and see what happens;
- iii) take proper action ex post;
- iv) do not exaggerate ecological harm;
- v) build up resources for remedies;
- vi) do not prevent improbable ecological damages;
- vii) always take action afterwards on correct information.

The principle of resilience rejects the principle of precaution. It is based upon a risk approach that underlines probabilities. Even if the possible damage is huge but the probability is low, do nothing, just wait and see. Resilience is much in tune with bounded rationality: What do You really know for certain?

Its main spokesmen were Wildavsky (1988) earlier and Lomborg (2007) now.

Resilience may give more GHGs. Take China: "Take-off" point me around 1980 pursuing a successful "catch-up" policy for a few decades. Its energy consumption, especially fossil fuels, has skyrocketed with GDP, resulting in the largest CO<sub>2</sub> emission globally. Figure 7 has a projection for China.



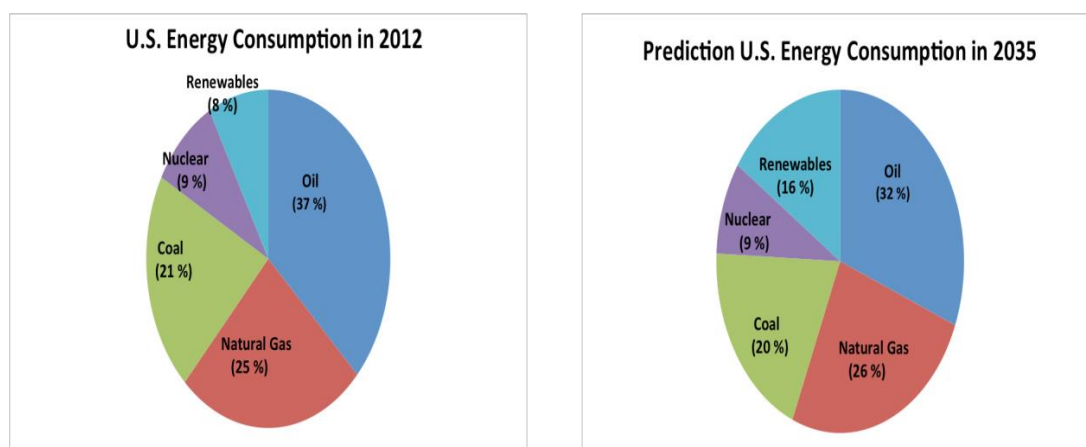


**Figure 7. Energy Projection for China**

Source: [http://www.wrsc.org/attach\\_image/chinas-projected-energy-growth-fuel](http://www.wrsc.org/attach_image/chinas-projected-energy-growth-fuel)

Decarbonisation does not seem highly probable. Much hope was placed at a recent reduction in CO<sub>2</sub>s, but water shortages forced China to revert to coal in 2017 with attending augmentation of CO<sub>2</sub>s. China is investing in both renewables and atomic power, but it also plans for very large energy increases in the coming decades with lots of energy consuming for new huge projects.

It is true that the US has reduced its CO<sub>2</sub> emissions during the last years, mainly by a shift from coal to natural gas. Actually, several mature economies like, e.g., the UK have been able to halt the rise of CO<sub>2</sub> emissions, either by more energy efficiency or a shift to natural gas or renewables. Figure 8 captures some features in US energy plans.



**Figure 8. US Energy Future**

Source: <https://www.e-education.psu.edu/egee102/node/1930>

Although the Figure 8 predicts a doubling of renewable energy, the dependency upon fossil fuels,

including coal energy, will not be much reduced. We are talking here about relative numbers, but if the US increases total amount of energy supply, then there may even be more fossil fuels. The reduction in CO<sub>2</sub>s during recent years seems to be coming at a reduced rate. The hope is for economic growth without energy increases, but we are not there yet. And most countries demand much more energy for the future.

Resilience could be a promising risk strategy, only when the threat is not fully known or manageable. Abrupt climate change falls outside of these requirements!

Among some climate scientists, there is recently a new urgency. The melting of the North polar ice is advancing so quickly that all projections about temperature rise on the Earth must be revised upwards. Quicker warming sets in motion very positive feedbacks that threaten human survival. The goal of COP21—limit global warming to + 2 degrees Celsius—is no longer achievable. Instead, climate chaos seems more likely. A few predict that mankind has no more than 10 years before things become unmanageable. When the North pole ice is gone, global warming goes much higher than + 2.

The theory that climate change is now becoming irreversible is based on new hypotheses concerning the consequences of global warming:

- sea level rise and Arctic ice meltdown is quicker than believed;
- climate refugees may rise to 100 million people;
- food and water shortages come earlier than believed;
- the + 2 degrees Celsius target is misplaced as the Earth warms differently at various regions, i.e., still much hotter at the poles;
- the release of methane from the permafrost and the frozen ice at the North pole will bring temperature rise to + 10 degrees Celsius;

As the potentially huge methane emissions enter the climate change debate, one fully understands the mounting pessimism. And the entire time scale for fighting global warming shrinks considerably, from 100 years to 50 years or even less.

## **7. REALISTIC SOLUTION VERSUS UTOPIAN**

One may outline a more radical COP21 policy and ask for its implementation to start now:

- 1) Close down of all coal power plants in 2020; replacement of charcoal in poor countries by mini gas stoves;
- 2) Massive investments in solar power parks—see below; subsidies for solar installations in private homes;
- 3) Accelerated experiments with carbon capture to find accurate cost-benefit calculation.

Here comes the solar power revolution that will allow a massive reduction in fossil fuels. Let us see what it entails in terms of management tasks for global coordination, assisted by for instance the COP21 Secretariat and the IPCC.

**Table 1. Number of Ouarzazate Plants for 40 per cent Reduction of CO<sub>2</sub> in Some Giant Countries**

<b>Nation</b>	<b>Co2 reduction pledge/% of 2005 emissions</b>	<b>Number of gigantic solar plants needed (Ouarzazate)</b>	<b>Gigantic plants needed for 40 % reduction</b>
United States	26-28 (Note 1)	2100	3200
China	none (Note 2)	0	3300
EU28	41-42	2300	2300
India	none (Note 2)	0	600
Japan	26	460	700
Brazil	43	180	170
Indonesia	29	120	170
Australia	26-28	130	190
Russia	none (Note 3)	0	940
World	N/A	N/A	16000

*Note.* Average of 250-300 days of sunshine used for all entries except Australia, Indonesia, and Mexico, where 300-350 was used.

It will of course be argued against such a 40 per cent speedy reduction in CO<sub>2</sub>s that it leads to economic recession. So may it be! But it would reduce future much higher costs. After all, economies adapt and will recover due to all new investments needed in a decarbonised world. Ramesh (2015) emphasizes that India needs much economic assistance for decarbonisation—a giant task for global coordination to assist poor nations!

Let us look at the American scene in Table 2.

**Table 2. Number of Ouarzazate Plants Necessary for 40 per cent Reduction in CO<sub>2</sub>**

<b>Nation</b>	<b>Co2 reduction pledge/% of 2005 emissions</b>	<b>Number of gigantic solar plants needed (Ouarzazate)</b>	<b>Gigantic plants needed for 40 % reduction</b>
Canada	30	230	300
Mexico	25	120	200
Argentina	none (Note 2)	0	80
Peru	none (Note 2)	0	15
Uruguay	none (Note 2)	0	3
Chile	35	25	30

*Note.* Average of 250-300 days of sunshine per year was used for Canada, 300-350 for the others.

Some Latin American countries have lots of hydro power, but it may dwindle rapidly due to abrupt

climate change. Solar power would be excellent energy for Mexico and Brazil for example.

Table 3 has the data for the African scene with a few key countries, poor or medium income. As they are not in general energy consuming on a grand scale, like Asia, decarbonisation should be feasible with Super Fund support.

**Table 3. Number of Ouarzazate Plants Necessary in 2030 for 40 per cent Reduction in CO<sub>2</sub>**

Nation	Co <sub>2</sub> reduction pledge/% of 2005 emissions	Number of gigantic solar plants needed (Ouarzazate)	Gigantic plants needed for 40 % reduction
Algeria	7-22 (Note 4)	8	50
Egypt	none (Note 2)	0	80
Senegal	5-21	0,3	3
Ivory Coast	28-36 (Note 4)	2	3
Ghana	15-45 (Note 4)	1	3
Angola	35-50 (Note 4)	6	7
Kenya	30 (Note 4)	3	4
Botswana	17 (Note 4)	1	2
Zambia	25-47 (Note 4)	0,7	1
South Africa	none (Note 2)	0	190

*Note.* Average of 300-350 days of sunshine per year was used.

Table 4 shows the number of huge solar parks necessary for a few Asian countries.

**Table 4. Number of Ouarzazate Plants Necessary for 40 per cent Reduction in CO<sub>2</sub>s**

Nation	Co <sub>2</sub> reduction pledge/% of 2005 emissions	Number of gigantic solar plants needed (Ouarzazate)	Gigantic plants needed for 40 % reduction
Saudi Arabia	none (Note 2)	0	150
Iran	4-12 (Note 4)	22	220
Kazakhstan	none (Note 2)	0	100
Turkey	21	60	120
Thailand	20-25 (Note 4)	50	110
Malaysia	none (Note 2)	0	80
Pakistan	none (Note 2)	0	60
Bangladesh	3,45	2	18

*Note.* Average of 250-300 days of sunshine was used for Kazakhstan, 300-350 days of sunshine per year for the others.

Given the economic advances in Asia, most countries need a lot of solar power parks for decarbonisation. The COP21 management would be able to help.

Finally, we come to the European scene.

**Table 5. Number of Ouarzazate Plants Necessary for 40 per cent Reduction in CO<sub>2</sub>s**

Nation	Co <sub>2</sub> reduction pledge/% of 2005 emissions	Number of gigantic solar plants needed (Ouarzazate)	Gigantic plants needed for 40 % reduction
Germany	49 (Note 5)	550	450
France	37 (Note 5)	210	220
Italy	35 (Note 5)	230	270
Sweden	42 (Note 5)	30	30

*Note.* Average of 250-300 days of sunshine per year was used.

It may be tempting to combine climate change with other issues, like general environmental degradation and the quest for a sustainable economy or social equity. Sachs may speak of the age of sustainability, but is just a figment of the imagination. Nothing is durable. European nations dismantle nuclear power stations at horrendous costs, but keep employing fossil fuels, even coal. The risks with global warming outweigh those of nuclear power debacle. Japan had 52 nuclear stations, but now only 2. What to do? LNG just as South Korea? Brazil plans to turn the Amazons into a park of hydro power dams, but the fresh water of the world is rapidly shrinking.

If the egalitarian discourse of among others Piketty, Stiegler and Sen is combined with the climate change or environmental degradation issues in a final search for sustainability, then only conflict is the outcome.

## 8. Conclusion

The “WE” in the global warming is a myth, as different groups collide over climate change response with their special “stories”. Global warming can only be halted by somehow reducing quickly the CO<sub>2</sub>s. It will not happen, either in global or through country resilience. The G20, responsible for 70% of the CO<sub>2</sub>s, occupies itself with other “petty” issues, or some of them are hardly capable of facing the largest threat ever.

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## Notes

Note 1. The United States has pulled out of the deal.

Note 2. No absolute target.

Note 3. Pledge is above current level, no reduction.

Note 4. Upper limit dependent on receiving financial support.

Note 5. EU joint pledge of 40 % compared to 1990.