



# Energy, Climate Change and Democracy

*the future is...now*

Options for Europe<sup>1</sup>

In Progress, July 2007 Version

Draft

The question of energy is the most central of all political problems as it connects several, different concerns:

- the fear that the world is simply running out of the energy necessary for the industrial and consumption processes to continue;
- the most mundane prospect of energy prices generating inflation and stopping economic growth;
- the vulnerability of developed countries to the concentration of available reserves in a few unstable countries;
- the impact from further pressure on the demand side produced by the fast developing Asian giants;
- the planet's change of temperature and the consequences that this may have on the life of billions of people;
- the other consequences of pollution that may generate all sorts of events leading to dramatic environmental and health hazards;
- the conflicts developing around oil wells that not only are capable to destroy the careers of the most powerful head of governments, but also to continuously create a world disorder.

It is therefore metaphorically true that oil is making the world go round. Energy and energy related issues have recently dominated the international political debate.

And yet when it comes to energy many things are not clear - and media often generate even more confusion:

- far from certain is the forecast that fossil energy is close to the end of its availability; it is true, however, that the energy we've been using for decades tends to be concentrated in very few countries;
- part of the problem is due to the fact that there are few countries that display the sort of unreliability that non-democratic regimes tend to have; yet the very idea of exporting democracy to oil exporting regions has failed in a dramatic way;
- to find alternatives for fossil energy is more difficult than many enthusiasts of the "beyond petroleum" mantra seem to recognize; however, it is not clear whether the competitive

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The group is open to further contributions and whoever is interested to join should contact [info@vision-forum.org](mailto:info@vision-forum.org).

disadvantages of “new” energies is a question of scientific/ technological advancement to be completed, or if it is of an economic scale that, because of their legacy (fixed costs, distribution layout) make it difficult to replace the fossil ones;

- the same equations of the climate change theory still display uncertainties both in the intensity and the direction (heating or cooling) of the change; and yet nobody doubts that decades of emissions and emission activities have profoundly changed the geography of the planet and that the planet will have to find some new equilibrium.

However, even if some of the most catastrophic forecasts may prove to be exaggerated, these fears may still be useful in order to provide arguments, political energy and public opinions’ supports for actions that appear to be necessary and overdue.

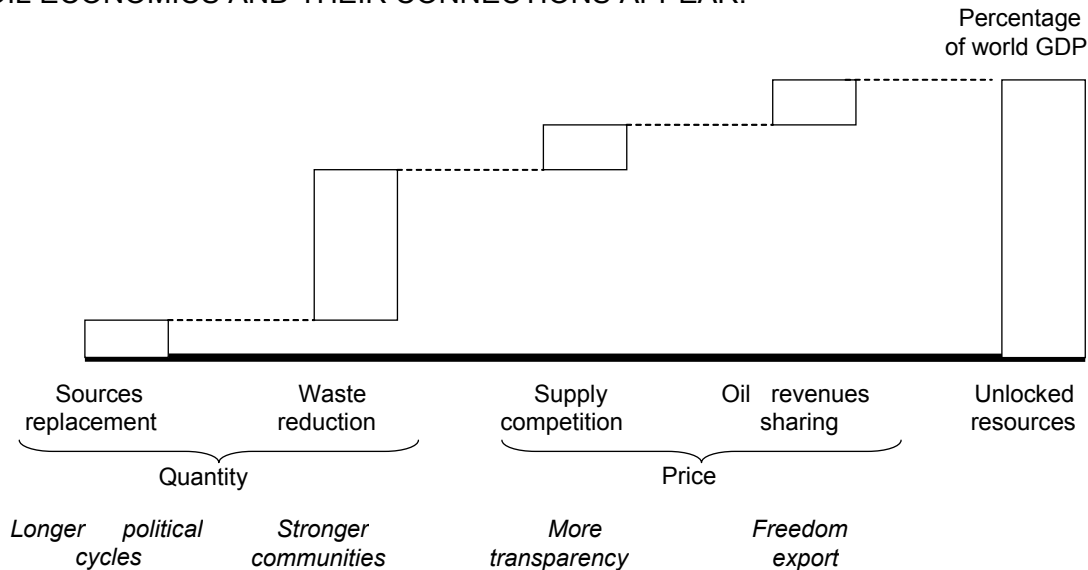
We may still not heading towards a final disaster and yet it is not deniable that our cities, social and economic systems, politics need to go beyond a model almost entirely based on oil and fossil energy. This is not only something that we need to avoid evil, but also a crucial passage for finalizing a transition from an industrial era to an information based society that is largely not yet accomplished.

Too much of the world GDP is locked into the fossil energy access and distribution cycle. Too much of the world political resources are busy with managing the nasty consequences of energy concentration. And any serious, ambitious enough strategy to exit fossil energy does take us back to the question of democracy in developed as well as developing countries, of competition and communities that are strong enough to feel the collective nature of the energy challenge.

The graph does visualizes the concept.

## Developing a fossil energy-free economy

THROUGH A GLOBAL DEMOCRACY AGENDA, FOUR LEVERS OF OIL ECONOMICS AND THEIR CONNECTIONS APPEAR:



The transition to an economy not based on fossil fuels does in fact require: replacement of traditional sources of energy with alternative ones, reduction of waste and inefficiency, and competition amongst energy related corporations as well as among oil exporting countries.

The framework that Vision is developing envisages as indispensable:

1. institutional mechanism capable of orientating politicians’ objectives towards the long run and the interest of future generations (our current bulimic oil consumption has been equated by some to a form of “taxation without representation” on people still unborn),

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2. new energy related social contracts amongst people so that they adopt the altruistic and cooperative behaviour needed to reduce inefficiencies at individual levels,
3. greater transparency and stronger institutions, better equipped to resist national and corporate lobbying and to peruse competition,
4. instruments to promote a political base that seriously peruses democracy in oil exporting countries as necessary for the magnitude of a transformation that is not only technological or productive, but about the very relationship between people and institutions.

The paper does, then, start from the idea that “energy” and “climate change” are not only huge problems, but also asserts that they reflect failures of democracy, of global governance, of the very idea of justice and fair redistribution of the costs of individual behaviours that are essential for a social contract to develop and for a community to exist.

The fossil energy problem does, then, expose problems of **democracy**:

1. in **fossil energy exporting countries**, because statistics and economics seem to demonstrate that oil and gas appear to prevent democracy from developing in those areas. Conversely, low levels of democracy in fossil energy exporting countries tend to have a negative effect on the energy market’s performance in the areas of efficiency and innovation;
2. as political agendas in **energy consuming countries** set by political elites are incapable of properly integrating environmental concerns, as the latter has a longer time span than political cycles, and implications so broad that it is hard to fully address the topic in nothing but unorganised citizen constituencies;

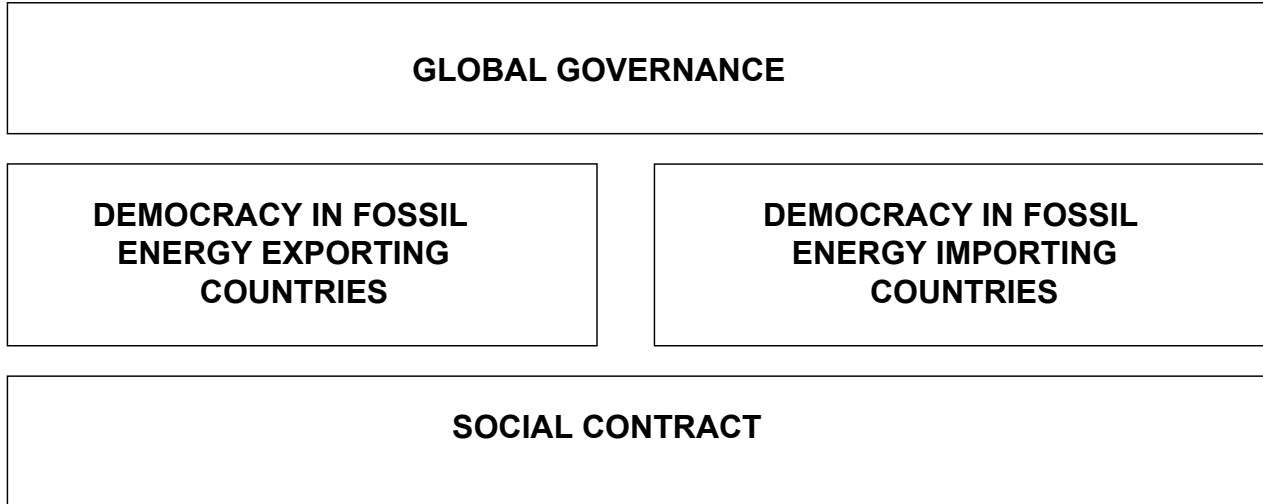
of **global governance**:

3. because member states are obviously not able to respond to questions like this, but also because the **super national, member states based organizations now seem inadequate**. This is at least what transpires from difficult negotiations such as the Kyoto agreement. The adjustments required from the member states are not enough, the strategy seems to be too incremental, the ratification process is too slow, and the enforcement mechanisms are too weak;

and finally of justice amongst individuals and communities, of a **social contract** necessary for the development of democracy:

4. because of huge **problems of redistribution** of energy consumption costs, of energy production amongst states or amongst individuals/ organizations. The issues pertaining to redistribution are not addressed by the compensation mechanisms, and most importantly they are both a challenge for nation based communities and thus an opportunity for new forms of citizenship arise.

# Energy and Democracy



This is most certainly a question that Europe is in fact well placed to tackle, when one considers both its potential influence on markets and political systems and its serf-like relationship with oil. Europe's enduring challenges are both changing the structure of energy supply chains and also changing that of the oil-based political and industrial systems.

The position paper is structured as follows:

1. we will attempt to quickly summarize the climate change and energy question and separate the known facts from the prevailing fears;
2. in the following four points we will articulate the challenges imposed on democracy by the issue of climate change;
3. finally, we will attempt some preliminary ideas for Europe that will be developed in the follow up of the event at the Italian parliament where Vision paper was launched.

The paper is still in progress and will be further developed in the analytical and even more into the recommendation part.

## REALITY AND MYTH IN THE CLIMATE CHANGE/ ENERGY DEBATE

The popularity of movies and books describing various types of apocalypses (either on a worldwide scale as in the “Deep Impact,” or limited to the northern hemisphere as in “The Day After Tomorrow”) show that western media consumers seem to sometimes enjoy, at least in the protective environment of a cinema hall – toying with the idea of the destruction of their own civilization.

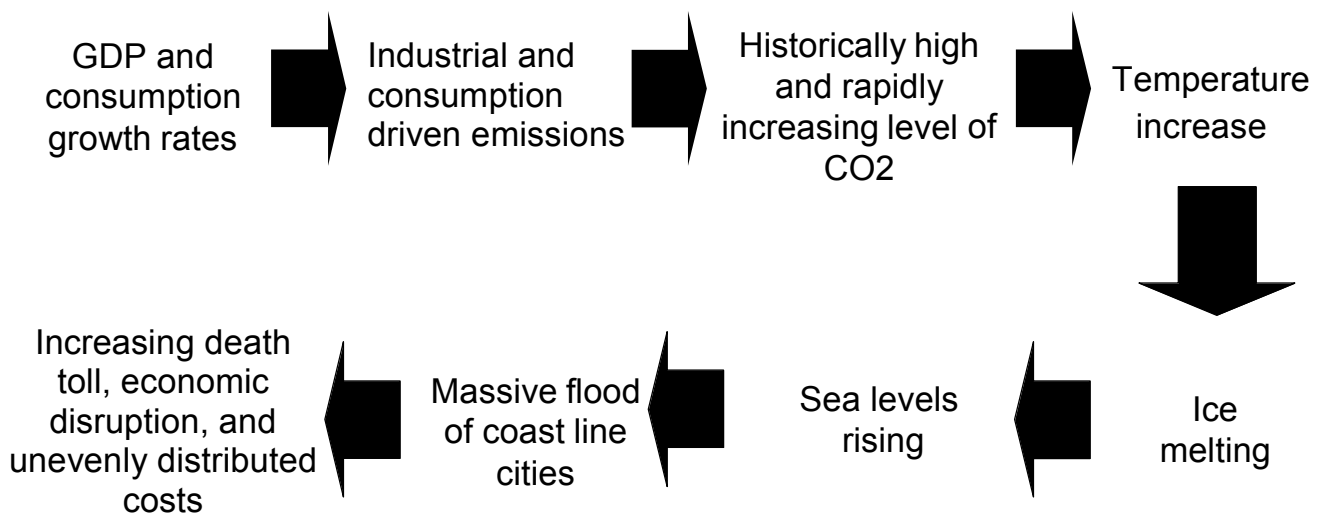
Some may also argue that the popularity of the climate change argument is due to its global reach. Few political concerns affect in such a way as climate change people’s daily lives. Weather forecasts popularity is, after all, one of the factors that has made commercial TVs one of the most successful businesses and social utilities since World War Two.

Could this be the reason for the growing attention that the climate change issue is getting? How much hype is being created and how much real cause for concern should we have when it comes to the latest version of the doomsday scenario?

The reality of the climate change threat is, in fact, more striking for those who happen to live in natural paradises like Iceland or even much more south, in the Dolomites, between Austria and Italy. In these sort of extreme places, the contraction of ice sheets, glaciers are feeding growing concerns.

However, we must recognize that the main hypothesis that is normally associated with climate change rests on a rather long (and therefore not completely certain) chain of causes and effects.

## The Climate Change Causal Chain



The chain reaction triggered by industrial activity and consumption starts with economic growth and overpopulation and finishes with a big toll on human lives and important decreases in gross domestic product. The process seems to work as a self re-equilibrating tragic mechanism meant to correct an excess of economic growth.

In fact, the power of each of the above-described causalities is far from certain. For instance,

- emissions are not only a function of the quantity of GDP and of consumption; variables like the internal composition of the GDP (the more the share of industry against services, the

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- bigger the impact) and the quality of consumption (European cars have, for instance, been progressively equipped by less polluting engines that have made it possible to lower emissions produced for the same kilometres travelled) can significantly change the impact;
- concentration of CO<sub>2</sub> in the atmosphere does not necessarily induce climate change and the correlation between CO<sub>2</sub> concentration and climate change has not been clearly established yet
  - the extent of the damage produced by sea level increase depends also on various factors such as the weaknesses of the infrastructure, or a country's technological and logistical capacity to take action in the face of natural disasters.

As the number of scientists endorsing the latest IPCC report shows at least some of the effects of the climate change process are already visible:

1. in 2004 the CO<sub>2</sub> concentration in the atmosphere (374 ppm) was much higher than the maximum value (300) observed over the last 650,000 years;
2. some of the hottest years in history and 11 of the latest twelve years are amongst the twelve hottest years recorded since temperature has started to be systematically measured and recorded;
3. the total area covered by the arctic ice has shrunk since 1978 by 7.4% per decade which is equivalent to the melting per year of an area big as France;
4. the ocean sea level that used to increase between the 1961 and 2003 of 1.8 mm has increased almost twice as much (3.1 mm) if we limit the observation to the 1993 – 2003 period.

The climate change is – as we said before – connected to a different, yet no less important area of political and popular concern: Oil.

Oil seems to be both too much and too scarce. Too much of it ends up as CO<sub>2</sub>; to the extent that we have become afraid about poisoning the atmosphere. At the same time, what is left of the oil reserves does not seem enough compared to our needs.

A few authors have been declaring that oil reserves have passed the “peak”, the peak representing the point where half of the available resources have been exploited. But how much of the resources are actually left? How much of them are at our reach? In fact, the estimation of oil reserves tends to include only the reserves that are less costly to extract<sup>2</sup>.

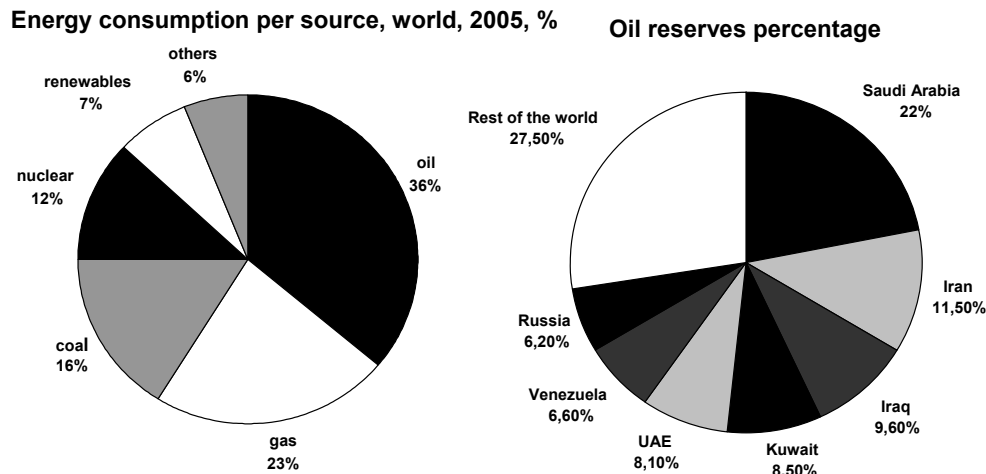
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<sup>2</sup> Including the political/ bureaucratic/ authorization cost that in a not democratic countries may be smaller.

The problem we have now is a problem of concentration and it has two different dimensions:

1. energy sources are not – if not minimally – differentiated and oil and gas make up for 60% of energy consumption;
2. oil and gas, tend to arrive from a very limited number of countries, of which five of them own 60% of oil reserves (and similar numbers apply for gas).

## Energy Concentration



Source : Vision on BP data

Such concentration puts a country like Saudi Arabia in the position of having to provide roughly 10% of the entire energy consumption of the world: it is a huge demand that corresponds to a very large annual cash flow and gives way to important economic and political power. Saudi Arabia's cash flow, based on the market price of a barrel of oil, was said to amount to a 100 billion dollar in 2004, and figures for the 2005 cash flow increased by 50%. Ten per cent of the total energy provision means, in fact, that due to the smallest political tension, an even smaller increase in oil price can produce huge a increase in money flow.

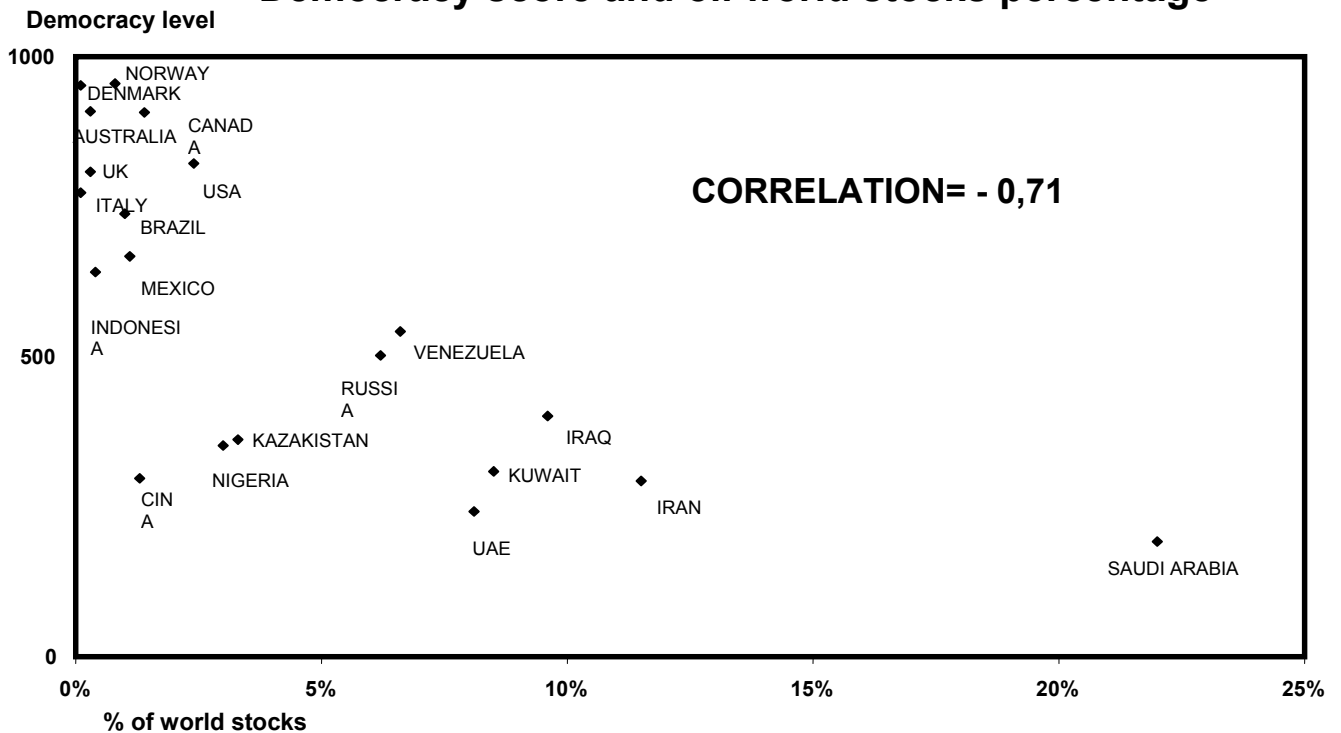
The money value of this concentrations can be hardly overstated when we try to make sense of some otherwise unreasonable behaviours of states and multinationals at global level.

### DEMOCRACY IN FOSSIL ENERGY EXPORTING STATES

Why did the idea to "export democracy" fail so miserably? Was it a problem of execution (if in the concept of execution we can also include such a dramatic choice like the one to move war to some dictatorial state) or of strategy (of the very assumption that democracy can be exported)? Notwithstanding the enduring disaster that we have witnessed in the last three years, the question is still looming on most analyses of geo politics and oil resources.

Two clusters appear on the map, distinguishing countries with **either a democratic regime without oil resources; or an oil producing country with a democratic regime.**

## Democracy score and oil world stocks percentage



Source: Vision on *Economist Intelligence Unit democracy index*, BP statistical review of World Energy 2006

The negative correlation between the two does appear rather strong<sup>3</sup>.

Several explanations for such a trade off have been proposed and probably the most convincing (the so-called theory of “rentier” states) is the peculiar impact that oil, as well as other less indispensable natural resources have on political regimes.

The argument considers that **governments of countries with important oil reserves** tend to have a stream of revenues guaranteed by the state’s ownership of the production sites. Thus, these countries **are less dependent on taxation to finance them, and less obliged to give citizens the representation normally associated with taxation**. In other words, states of oil and gas gifted countries can act as “rentiers” of some natural inheritance that save them from the hassle of dealing with economic growth and the people’s willingness to pay taxes, which in turn would make way for regulations and a social contract.

Such access to exploitable natural resources provide oil exporting countries with a head start in the growth race, which most statistics tend to ignore when evaluating **economic growth**<sup>4</sup> and absolute level of GDP per capita. Paradoxically, statistical studies tend to show **lower growth rates for countries endowed with natural resources**.

<sup>3</sup> Similar result we have if we calculate correlation between score on democracy and percentage of oil reserves if we limit our analysis on the subset of Islamic countries: relatively oil poor countries states like Egypt or Jordan score better on democracy than Saudi Arabia or Iran. In other words, oil can hinder democracy even more than religion (although many opinion makers seem to be convinced of the opposite).

<sup>4</sup> A recent exception to this are the ex Soviet Union, central Asia countries. The Middle East instead continues to be substantially alien to the great leap forward that Asia is experiencing.

The uncomfortable situations democracies face provide part of the explanation of this paradox: politicians in these imperfect regimes will be concerned by the creation of economic value and its fair distribution amongst the people<sup>5</sup>.

There are other consequences stemming from this situation. Acquiring political power in oil-laden countries is a short-term cost strategy with a practically guaranteed outcome of high revenues. The reward of power is, in a sense, the ownership of a treasure, which also explains why **oil rich regions tend to experience much more wars amongst states and internal fights for the control of oil wells.**

Less democracy, less economic growth, less peace: oil (as well as other natural resources) tends therefore to act as some kind of poisoned pill for those resource rich countries. Furthermore, crucial correlations between oil resources and democracy levels, in other words, between economy and instability for most oil exporting countries are unfortunately overlooked.

In fact, **less democratic practices seem to give way to more cartel style behaviours in fossil energy exporting countries.**

At similar level of oil reserves endowment, if we confront a group of relatively more democratic countries and a group of less democratic states, there is a higher likelihood that less democratic countries belong to the oil countries cartel (OPEC).

The thesis we would like to put forward and develop is that victims of the present state of politics in oil importing countries are both citizens from oil importing and exporting countries.

If this is true, the “democracy promoting” concept becomes a proposition that can be justified on moral grounds. Furthermore, it also becomes a goal that may correspond to the interest of many and may yield the necessary political consensus for such a difficult achievement.

## **DEMOCRACY IN FOSSIL ENERGY IMPORTING COUNTRIES**

The neo-conservative idea of “exporting democracy” has been strongly criticized for several reasons: it does not appear to be working in the country that wishes to export it; nor does it appear to be working in places where it has already been exported. Nor is it conceivable that one could export democracy when one blatantly betrays its basic principles in the home country.

The present position paper argues that this outcome provides insight into parliamentary democracies. It is becoming increasingly difficult for these political structures to incorporate “individual preferences into collective choices”, even though citizens continue to contribute according to the “no taxation without representation” principle.

This argument is best illustrated by the impact the oil industry has on democracy, as the phenomenon can be explained by:

1. the **very large energy related companies** that are capable of influencing political decisions through a small yet very influential circle of people (directors or shareholders of these multinationals);
2. the disproportionately **small power that hundreds of millions of consumers hold**, compared to their rights (most of them are citizens), and their contribution (most of them are the younger or future generations). **Traditional means of political participations**

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<sup>5</sup> See Vision paper on “the democracy of the future” (on [www.visionwebsite.eu](http://www.visionwebsite.eu)) on the evidence and reasons for democracy’s historical competitive advantages as well as their recent deterioration.

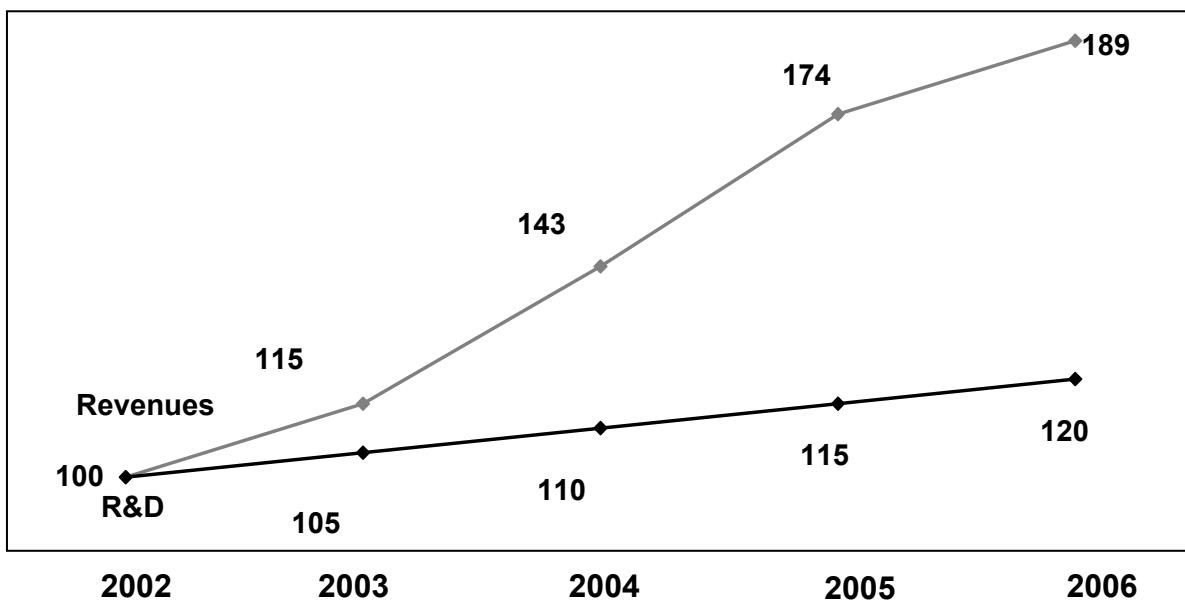
(political parties, trade unions) **do no longer seem to be able to represent their interests.**

The former appears to be much more influential than the latter. This paradox shows the formidable importance of knowing how to organize the lobbying of your interests. Energy companies have a long, established tradition in doing so. Unfortunately, citizens and consumer attempts at lobbying are still far from becoming as influential as corporate lobbying actions.

The biggest oil companies are currently the biggest companies in absolute terms. They are bigger than the main corporation of any other industry, or “new economy” champions. Even multinational pharmaceutical companies, and automotive companies, who have been dominating the industrial civilization for decades, cannot compete with oil companies.

The following table shows that the variation of oil companies’ R&D investments over the last few years is clearly not following the increase in total revenues.

### **Total revenues and R&D investments variation comparison (Exxon Mobil, TOTAL, Royal Dutch Shell, BP, Chevron) R&D: 100= 1400 m€; Revenues: 100= 734 billion \$**



Source: Vision on data from the UK Department of Trade and Industry, and annual reports

Furthermore, a large part of the R&D does go into finding and experimenting new and expensive drilling technologies, which means that a rather small amount of investments are truly dedicated to going “beyond petroleum”. Yet the investment allocation decisions of these firms are entirely legitimate. They are private concerns and even if they were public this would not by itself solve the problem<sup>6</sup>.

<sup>6</sup> In fact, as Vision pointed out in its liberalization paper on rebooting the Lisbon Strategy public ownership can – within current democratic arrangements – make things worse. The chances that public firms may respond to public interests - that traditional means of democracy seem not able to represent any more - may stay the same. With the additional bad consequence that managers may not even respond to shareholders any more, but to politicians and to their personal or parties’ short-term interests: with further deterioration of the fairness of the democratic game.

**If this is the case, one should also admit that this is a perfectly legitimate, even economically rational behavior.** If one studies corporate strategy, one would position oil related business into the cash cow quadrant of a BCG matrix and such incoming revenue requires yielding as much money as possible in a short span time.

While the oil industry is acting according to economic rationale, the real problem lies in understanding if democracy is also performing as expected. Are democratic regimes still capable to create right incentives for enough R&D efforts to be invested towards the long term goal of green energy?

The answer is: probably not. According to some, the very recent political history of the most powerful country of the world (USA) demonstrates such failure.

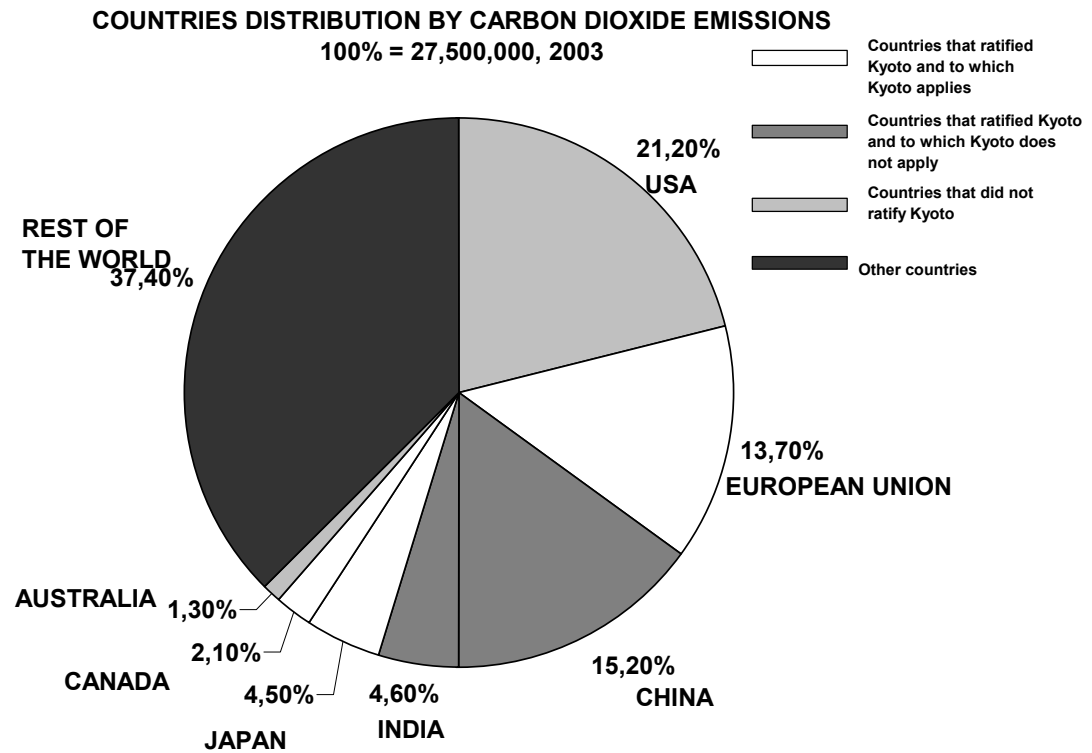
The problem is not so much the power of lobbies-as democracies have always up until now been able to put up with such activities. The problem resides rather in trying to represent, defend and diffuse largely shared interests. These interests range from consumer interests in avoiding disruption and lowering prices, to citizen interests such as improving environment and health, to the not energy related companies to affordable energy

## **THE QUESTION OF GLOBAL GOVERNANCE**

Was Kyoto enough? Are Kyoto achievements worth the lengthy negotiations that they required? If we compare Kyoto with the magnitude of the climate change challenge, we cannot avoid the following conclusion: not only was it too little, too late, but probably also too small and too weak.

Kyoto's geographical reach appears to be too small as the agreement does not apply to the United States, (who, like Australia did not ratify) or China, (who, like India, is not a so called "annex 1" developed countries and therefore is technically listed in the annex 1 of the treaty where countries whose emissions must be reduced are mentioned) This considerably affects the agreement's goals. Outside its reach we have countries like the United States who alone are responsible for 40% of the emissions cumulatively produced since World War Two; and China who is expected to generate 50% of the predicted emissions for the next 25 years.

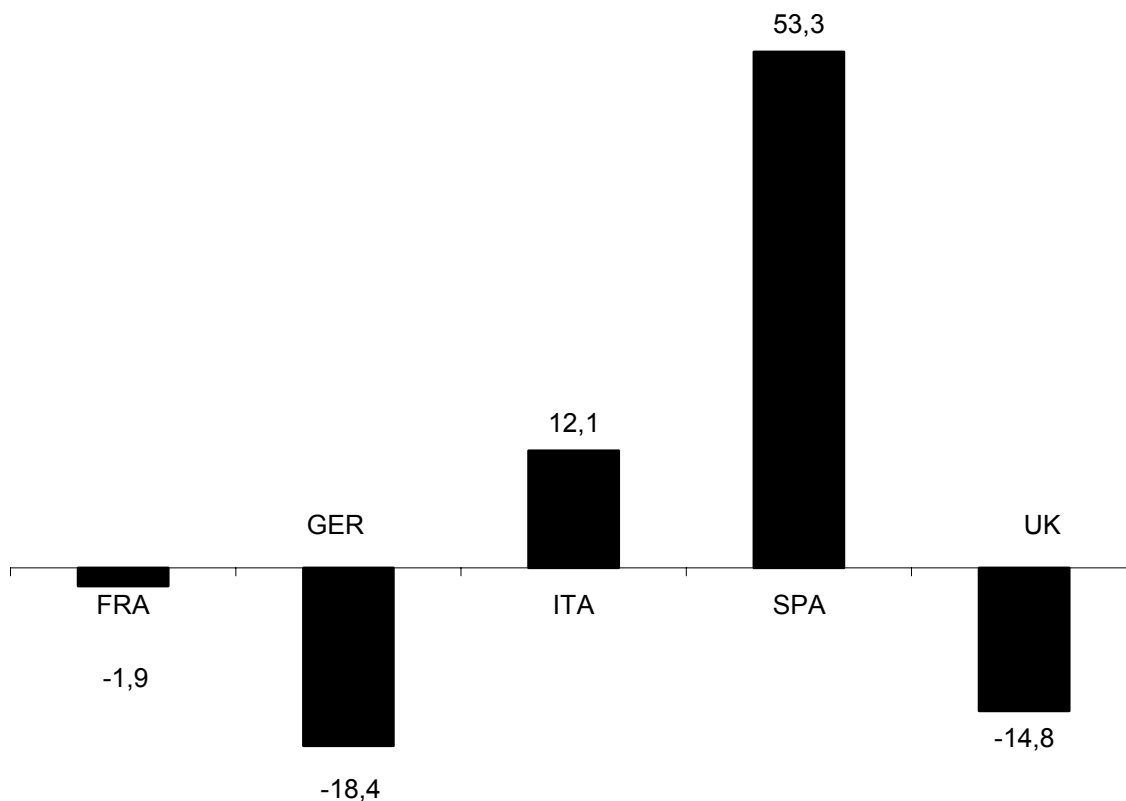
# Country Distribution by Carbon Dioxide Emissions



Source: Vision on United Nations Statistic Division

Kyoto is thus been applied to a relatively small share of polluters. However, even if we only consider the countries that ratified the protocol, the improvements required by the agreement are too little. It is the very decision of Europe to cut emission of 20% to sound as acknowledgment that the 8% reduction of Kyoto was not enough. And yet the agreement is also weak and the bottom line is, in fact, that the variation in emissions is, after all, going into the wrong direction.

## Evolution of Carbon Emissions 1990-2005 (%)



Source: Vision on European Environment Agency 2007 data

It is weak, also because the reinforcement mechanisms are not clear and punishing agreement breaches remains theoretical.

But more importantly it is the mechanism itself through which agreement like Kyoto are reached to be too slow and the result, if any, to arrive too late: it may seem strange but the first UN sponsored "Intergovernmental Panel on Climate Change" convened in Montreal in 1988; the Kyoto Protocol was open for signatures in 1997; countries like Italy completed the ratification making the treaty effective five years later. Fifteen years of studies and negotiation, fifteen years during which we have recorded twelve of the thirteen hottest years of the last two centuries and have accumulated more than half of the emissions that mankind has produced in half a million years.

### WHO IS TO BE BLAMED? THE NEED FOR A GLOBAL SOCIAL CONTRACT

Local communities fighting their national politicians on projects to develop sites to collect waste; fast developing countries disputing the strategies put forward by developed countries for sharing the burden to reverse the climate change process; Muslim fundamentalists declaring wars to the west and their allies on the exploitation of oil wells: **The questions connected to how to share the revenues of energy and the costs produced by their use increasingly seem like a Pandora Box.**

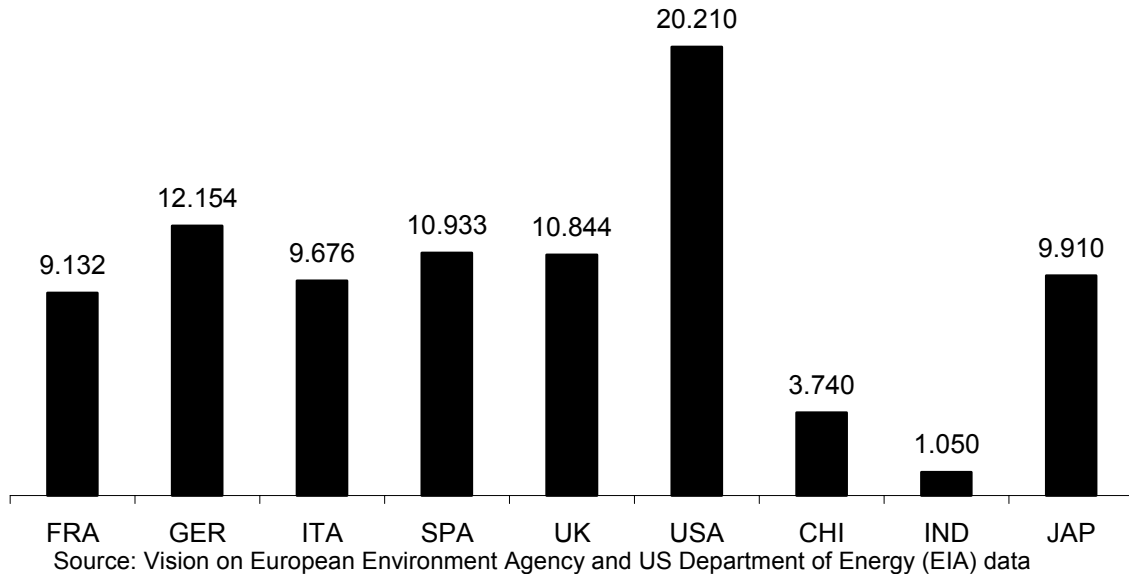
When we consider the problem of emissions at world wide level, the feeling is that diplomacies are being trapped into two forms of injustices that make each of the two (actually three) negotiating parties in the position to blame the other for the result and everybody capable to have the moral arguments to resist any compromise.

The first, well known injustice is the one that we see when we consider emissions per capita.

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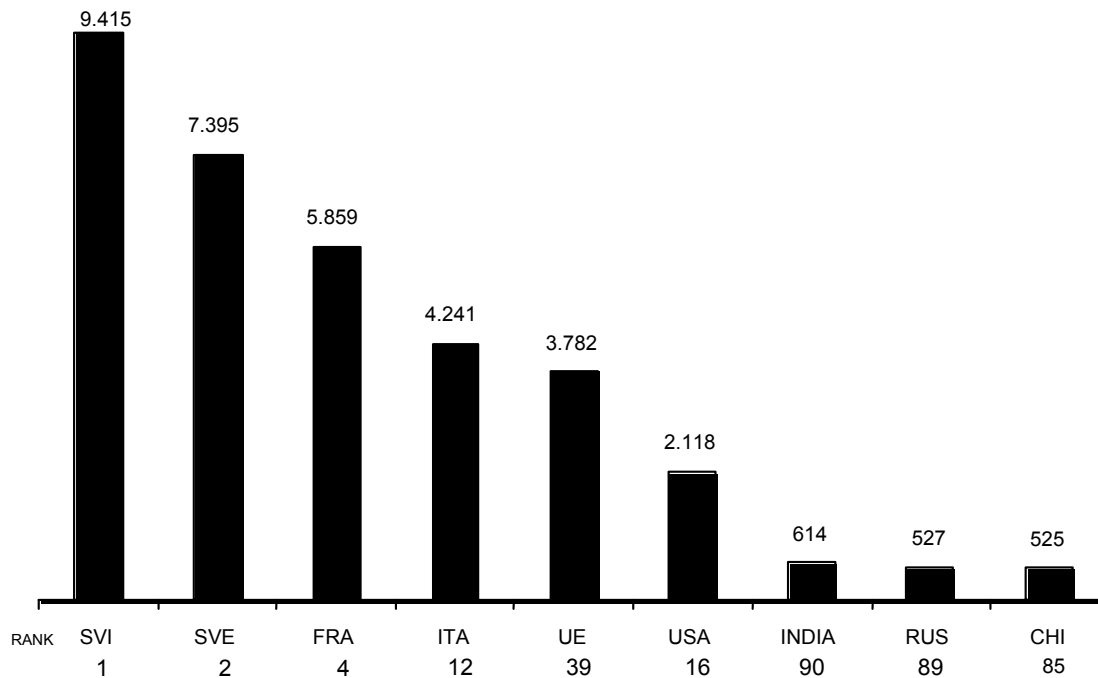
A citizen of the United States is producing on average almost twenty times more CO2 than an average Indian (and even more unexplainably twice as much emission as an average Briton).

## Co2 Consumption per capita (in metric Tons) 2005



The figures displayed above need to be compared with the GDP/Emissions ratio (see below) to fully understand the efficiency of different systems. The variance of the efficiency of different systems (measured as GDP over emissions) is not significantly different from the one through emissions per capita. Switzerland for instance is almost twenty times more efficient than China (and, in any case, almost twice as efficient as Italy).

## GDP according to Emission rates per Country (2002-2005 - IN THOUSANDS OF US \$ PER METRIC TONS)



Source: Vision IMF, United Nations Statistic Division

So who is to be blamed? The rich countries for impacting so heavily on environment in relation to their population or the developing ones for affecting the atmosphere in such a big way if compared with the size of their economy? Who should be carry most of the costs of correcting the situation?

The compensation provided by Kyoto through payment from country to country hardly qualifies as compensation.

Payments could in fact theoretically be based on at least four different typologies of parameters:

1. the failure to reach some percentage of reduction of the emissions that each signing party is supposed to achieve against a previous period;
2. the absolute levels of future emissions;
3. the past absolute cumulative quantity of emissions insofar as they are going to produce damages to other countries in the future;
4. the past absolute cumulative quantity of emissions insofar as they have produced damage to other countries in the past.

A full compensating mechanism should sum up liabilities for each polluting party based on the second, third and fourth type, but a system that imposes "payment" for the past, though indefinitely detrimental emissions, is unrealistic and probably illegal.

The compensation mechanism should at least compel countries to contribute for absolute levels of pollution created after the treaty was signed, and not only for percentage changes. Otherwise, technically and practically speaking, there is simply no real compensation, but rather a display of incentives instead of an international trade of pollution rights.

Furthermore, most poor countries will end up on the receiving side of the payments, whereas they should have been able to collaborate with a financial institution in charge of co funding environment related projects.

This is the logic of Kyoto - a “logic” reasonably resisted by India and China who consider only future emissions and percentage change and legally unjustifiable strategies that suit well developed countries. This kind of scenario can lead to the idea that Kyoto could become a protectionist measure justified by environmental protection.

The Kyoto Agreement is the best that diplomacies, international bureaucracies, and multilateralism can produce. And yet it is evidently not enough. It does not correct injustice, whereas injustice makes even slimmer the chances of having a worldwide, community feeling to share the same problems and bear the responsibilities of them in the most fair way. Of having at least some forms of global demos without which the dream of a global democracy is doomed to continue to be a dream and, as in a vicious circle, weak international organizations risk to continue to exist without any viable alternative.

## **A ROAD MAP FOR THE FUTURE AND THE OPPORTUNITY FOR EUROPE**

From observing the current structural inconsistencies in our political and economical models, several ideas come to mind. Macro regional negotiations instead of the UN type of nation state multilateral agreements. Multi layer Kyoto-style legal frameworks capable of mobilizing and committing to a voluntary basis not only States and big manufacturing corporations, but also city councils, regions, small and medium firms, service industries. Citizen participation as a political force backing governments engaged in battles with lobbies protecting incumbents and strong marketing investment in order to increase individual responsibility and make consumers choices more consistent with the ones that the same individuals may make as citizens.

The solution to Kyoto is mostly about going beyond Kyoto as an approach that seems increasingly obsolete. It consists in moving beyond the traditional remit of multilateral agreement and using Kyoto as the platform upon which we can design and implement new mechanisms to directly involve actors that are not normally considered – if not in an indirect way – so they can become actors of global processes.

Europe, or better, the European citizens and their leaders are in a rather unique position to provide such alternatives. European collective memories are still affected by historical events, events that taught European the importance of getting together: this should act as the grounds for responding collectively to this increasingly urgent matter. They also have immediate interests in terms of energy security as well as consequences generated by climate change, such as mass migration that climate change may produce. They also have the institutional framework that may be a (rather imperfect) benchmark to which other macro regions and the world as a whole may look to find the framework to govern the question.

Europe can take the lead to avert the next World War of the Twenty First Century, after having been the ones to trigger the world conflicts of the Twentieth.

This may be not only a decisive factor on the war against temperature increase and world wide nature deterioration, but also a crucial development for the next stage of the Union’s development. Europe is badly in need of a vision. Vision is strongly suggesting the quest and implementation of new creative ways to tackle climate change and the question of global governance that goes with it. Furthermore, this could replace the “Peace in Europe” objective, and become the mission capable of revigorating the European project.

There are, in fact, three main options and on each Europe may have an advantage.

**The first is to reduce the level of complexity of multilateral agreement and acknowledging that the problem, as well as the decision making power, tend to be rather concentrated.**

European Union could not only – in the short term - lead the rationalization of the negotiation process but also promote – in the medium term – the creation of macro regions that would increase the number of countries involved in discussing and making the various negotiating delegations more representative.

A negotiation amongst few actors is, in fact, rather logic when it comes to emissions<sup>7</sup>.

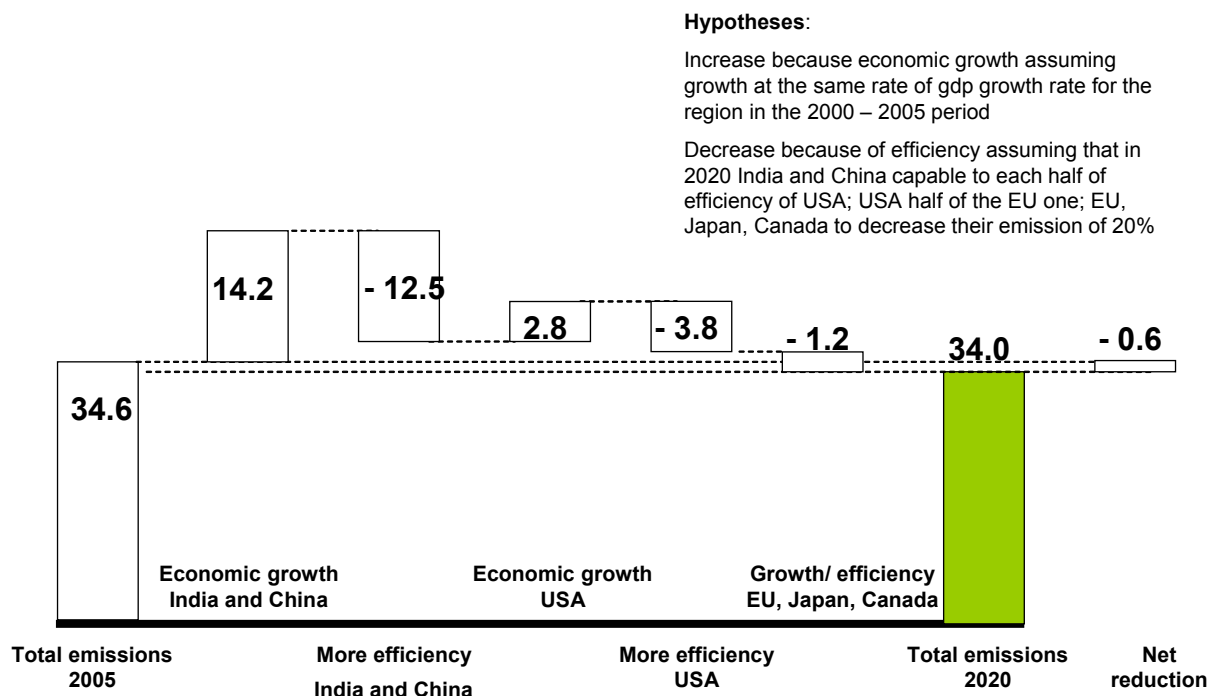
Five parties (as per the previous pie) – EU, USA, China, Japan, India – are responsible for more than 60% of the emissions (and most likely this share is going to increase in the future).

Including Russia to this group will give more political support and including Brazil will provide the biggest political support to new forms of energy. Last but not least the group will include Canada as the upcoming player in the oil industry and with a large share of the most recently found oil reserves.

The group will be large enough to account for a significant share of the questions we want to govern and yet diversified enough in terms of interests to represent also countries that may be smaller. Decisions may then be modified when extended to the rest of the world and yet the group would play the hugely important role of developing possible frameworks for solutions.

The group will also *de facto* be an extension of the G8 and of the security council and the eight states/ regions may even establish a sort of permanent executive council dedicated to the question of energy.

### Emissions Evolution 2005-2020 (BILLION METRIC TONS)



Source: Vision on World Bank, IMF and UN data

<sup>7</sup> The G8 + 5 (launched by Tony Blair in 2005 and institutionalized by Angela Merkel) seems a realistic decision making instrument.

A first round of negotiation amongst these parties seems a realistic approach to the development of a world wide more effective energy and climate change policy. A possible result of a reasonable set of reciprocal concessions is illustrated by the previous chart.

The chart envisages that at the world wide level a realistic objective would be to stop rather than to reduce the level of emissions. And a number of optimistic assumption are needed to make such a result achievable. The following could be an achievable possibility: China and India achieving half of the USA efficiency (measured as GDP over emissions); the USA reaching half of the EU efficiency; and the EU (as well as Canada and Japan) succeeding in becoming the fore runner by cutting their emissions by 20%<sup>8</sup>.

It looks like a reasonable distribution of efforts. And yet this result may be a miracle when we consider the pressure that the growth of China and India are about to produce on the Earth. Even with the heroic assumptions that our calculation make, in 2020 China is set to produce three times more emissions than the United States.

The strategic focus implied by the chart would rest entirely on finding ways to reduce emissions per unit of GDP produced without lowering GDP and actually providing for each efficiency improvement a new opportunity of income and value generation for new, energy efficiency related industries.

However, the chart does also discount Vision's work group ideas about the irrelevance of the popular argument of the fossil energy extracting costs<sup>9</sup>. The possibility of a deal also rests on the possibility of making explicit to each what the potential gains: the possibility of moving its own development pattern on a more innovative, efficient, long term curve for China and India. The United States could regain some of their credibility and moral authority; Europe can find a motivation, an idea that may even be needed for the very survival of the European project.

EU would probably be the natural moderator of this group. This option would be strengthened if UK, Germany, France and Italy would agree to unite their voices. The moderator will have, in fact, to strike a deal around two division lines: one that opposes developed economies such as the USA and Australia, on one side, and developing ones, such as India and China on the other. The second division line will highlight the interest of fossil energy based nations, such Russia, against champions of new forms of energy, such as Brazil.

The moderator's role will consist in making explicit the return that each party may gain from entering into the deal.

However, Europe will also have an other role: to gradually extend the seven seats assigned to States, to coalition made of states, macro regions that may establish themselves following models similar to the European ones.

Europe has an advantage – as opposed to both UN led initiatives and Nation States – both in terms of delivery (its regulations are automatically applied to Member States) – and citizen representation (through the parliament), which will help drafting decisions with an international impact.

The promotion of the EU model (which still needs to be corrected and revised for the future) could generate other macro regions and this may be crucial in finding an institutional framework capable of generating lasting institutional responses to challenges like the ones set by emissions.

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<sup>8</sup> Further evolutions in time of the emissions are being developed and be presented in the next version of the position paper.

<sup>9</sup> The argument of the irrelevance of the costs point deserves more theoretical discussion and will be presented in the next version of the position paper.

**The second possibility is to add other institutional actors to the reduction process.**

We need to immediately give a legal framework (and a compensation mechanism such as the market for trading emissions certificates) to the other institutional levels (city councils above a certain number of citizens, regions and states similar to the US ones) willing to engage in the climate change global challenge.

This would also be a recognition that things such as urban mobility and houses/ offices heating are, after all, responsible for a significant share of emissions and that they can be effectively reduced through local decision-making.

Once again, beyond the effect on emission balance, climate change may make way for innovation when it comes to the nations states centralized decision making process which are, as stated before, largely inadequate<sup>10</sup>.

**The third option is about leveraging public opinion that is the driving force in making climate change and environmentally friendly strategies so popular.**

The battle on the macro front of the negotiations amongst macro regions would be much in need of a public opinions asking within each regions (although this may prove difficult in some of them) strong decisions on energy and climate change.

Europe has an advantage also on this front: for the mechanisms (to be drastically bettered in the future) through which European citizens can participate to the decisions of the macro region; for the presence of a segment of public opinion which is European; for being young and mobile; for the absolute need we have of developing a European demos if we want the European project to survive.

The possibilities for citizen led initiatives are even beyond politics.

People could voluntarily join low or zero emission groups that would be given some financial, and even more importantly, recognition-driven rewards.

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The energy question does, in this sense, become both a challenge to the traditional means of democracy and the opportunity to experiment its renovation.

This is perhaps a question that Europe is well placed to tackle, when one considers both its potential to influence markets and political systems tempered by its serf-like relationship with oil.

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<sup>10</sup> The inclusion of city councils and regions/ states into the climate change decision making process, as well as the institutionalization of individual responsibilities and citizens led political initiatives will be one of the main objective of the further research Vision will undertake in the next months.