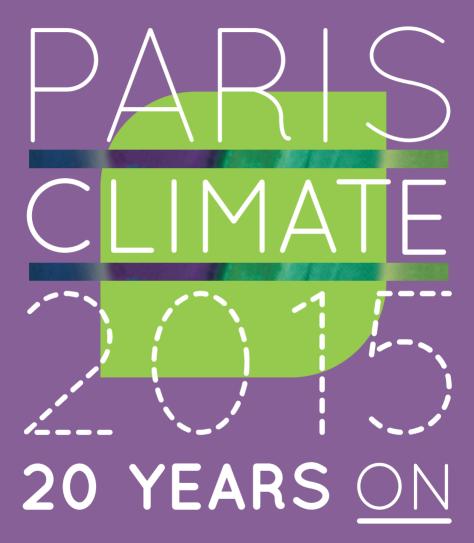




ENGLISH VERSION



Collection of (optimistic) essays on climate prospects





The Green European Foundation is a European-level political foundation whose mission is to contribute to a lively European sphere of debate and to foster greater involvement by citizens in European politics. The foundation acts as a laboratory for new ideas, offers cross-border political education and a platform for cooperation and exchange at the European level.

La Fondation de l'Écologie Politique (FEP) is recognised as a "public interest foundation" by French authorities. Its goal is to foster ideas meant to ecologically transform society, to contribute to the development of conceptual and practical aspects of a new ecological model of society and to uphold and spread the values of political ecology in general.

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It has been repeated many times that climate change threatens every aspect of our lives, from the fundamental to the most trivial of details. Although these alarm bells have been ringing for some time now, they failed to spur decisive action at COP15 in Copenhagen in 2009 which was, by all accounts, a failure and a serious setback in the fight against climate change. We hope that the campaign ahead of Paris COP 21 will lead to a very different outcome.

It is clear that we face great obstacles, yet in the past few months we've seen an impressive collective mobilisation taking place at every level of society. Climate fatigue has been replaced with a determination stronger than ever before that we, as a society, can come together to avert the threat of climate change. It is crucial to harness this positive momentum.

As the *Green European Foundation*, we see our role primarily in supporting this campaign, but also in creating spaces for discussion about alternatives. Across Europe, initiatives and local projects are taking place and new ideas are emerging. In every sector, ordinary people are finding ways to make a difference, whether by reducing their waste, producing more efficiently, or simply consuming less. NGOs, schools, universities, companies, towns and cities, and of course individuals are putting forward ideas and finding ways to exist more harmoniously in their environment. GEF seeks to give a platform to these constructive efforts, and to facilitate dialogue between the different actors. In this direction, we've explored some of these initiatives and themes through our transnational projects and our own quarterly publication, *the Green European Journal*.

But of course we, as ordinary citizens, cannot solve climate change

alone. Our leaders have a key role to play, nowhere more so than at COP 21 when they will have critical responsibility of creating a binding agreement that could very well determine what our future looks like. Rather than considering ourselves powerless, it is our duty to remind them that we are fighting too, that we are watching them, and that we will not stop doing so. But we also need to remind them that citizens are collectively providing a wealth of ideas, inspiration, and innovation, and that we are willing and able to rise to this challenge.

By describing a future in which these ideas have become a reality, in the wake of a successful COP 21, Paris Climate 2015 takes an entirely fresh approach. Rather than warning about what may occur should we fail, these stories collectively portray a world in which we, as a society, have risen to the challenge and won the fight against climate change. It is an empowering vision that helps us to realise that we can and must continue this fight. This is, we believe, why the original French version, coordinated by the Fondation de l'Écologie Politique, has been so well received. It is also why we wanted to bring the vision conveyed through these stories to a wider audience, with these selected extracts, as GEF is proud to support the efforts and creativity that went into making this project a reality. With its engaging tone, colourful design and diverse voices, this book shows us that climate is not just about inscrutable data and unnerving predictions. It is also about allowing ourselves to dream, creating a space to imagine a world that is not just free from the threat of climate change, but also a better world for all of us, providing an enhanced quality of life. In imagining and building this world, we all have a role to play - each one of us is part of this story.

# This collection of essays produced by the Fondation de l'Ecologie Politique and the Green European Foundation

makes one feel

Pascal Canfin, former Deputy Minister for Development and principal climate advisor to the World Resources Institute (WRI).



This collection of essays produced by the Fondation de l'Ecologie Politique and the Green European Foundation makes one feel good! Imagine, a quarter of a century after the climate conference to be held in Paris in December 2015, how our society will have evolved, opening exciting prospects and demonstrating that the decisions we make today can change our future.

The subjects discussed in the various contributions which make up this collection – the place we reserve for living things, the ways we use and produce goods, the governance of both states and companies, the social consequences of climate change and the commitment of citizens – are numerous. And yet the writers who have embarked on this climate projection exercise, from very different backgrounds and without consulting one another beforehand, have finally given us a fairly homogeneous analysis: the response to climate change cannot be summarised as a change of energy model. It implies the commitment of all sectors of society which, if it is to evolve efficiently, absolutely must take account of the needs and sometimes the constraints of others. Solving the equation requires a full realisation of how interdependent we are.

To open this prospective publication, I was asked to reiterate the present context and the conditions which will govern the success of the Paris Conference, a reminder which, I hope, will not be too harsh. In fact, this conference arouses many hopes but also a certain weariness. Why, this time, should it be different from the Copenhagen conference which ended in failure? What can really be expected of the Paris Conference?

The ultimate objective of COP21 must be to lead us to a trajectory compatible with the + 2°C limit established by the scientists of the IPCC (the intergovernmental group of experts on climate change), above which the climate system will reach the point of no return. It must always be remembered that, in the IPCC's black scenario, climate deterioration could reach + 7°C by the end of the century - that is to say a temperature difference greater than the difference which separates us from the last ice age. And that is not to take a "catastrophic" view! It is just a reminder of the global scientific consensus. It is therefore according to this first criterion that the result of the Paris Conference will have to be judged. For me, the second "justice of the peace" will be the capacity to keep the Copenhagen promise, that is to say to transfer 100 billion dollars a year, as from 2020, to help the most vulnerable countries to develop a model less dependent on fossil fuels and adapt their lifestyles and infrastructures to the effects - already all too evident - of climate change. There is in fact no reason why the governments of countries in the southern hemisphere should accept an agreement if the northern hemisphere countries do not say - credibly - how they are going to honour that commitment.

What does a binding agreement mean?

The question of the legal form of the Paris agreement will arise, of course. The international community has undertaken to seek a legally binding agreement. However, we already know that, politically, a legally binding international agreement has no chance of being ratified by the Congress of the United States where the Republicans are (unfortunately) in the majority. One of the challenges

facing the Paris Conference is therefore to avoid the Kyoto scenario where, in 1997, the United States had signed a treaty but then failed to apply it, thus remaining outside any climate-related commitment. It is essential for the "Paris Agreement" to be universal – meaning that it should cover all the big issuers of greenhouse gases, including the emerging countries. Now, considering the political situation in the United States, the universal nature of the agreement would seem incompatible with its legally binding character internationally speaking. But, let us examine more closely what "legally binding" means. The Kyoto Protocol is legally binding. Japan left it in 2010 – and, legally speaking, nothing happened to it. Canada left it in 2011 – and, legally speaking, nothing happened to it. In the absence of some kind of "International Climate Court" (highly desirable but not on the agenda today), the "binding" nature of an international agreement would be very limited.

What remains is domestic constraint, that is to say the national laws

and national courts if the law is not respected. There, we have a point where compromise is possible: announcing commitments in Paris with detailed figures concerning the measures to be taken from the legislative point of view in order to achieve it and setting up international verification and transparency mechanisms. With that attitude of mind, international pressure could push the agreement upwards. It is a fact, for example, that the United States can issue an undertaking to reduce emissions to less than 30-33% – that is to say beyond the announcements of 26-28% already made – by using legislative methods which do not have to be passed by a vote in Congress.

# The **Paris Pact**

However, the addition of the detailed undertakings of the states, most of which will be known by the third quarter of 2015 at the latest, will probably not suffice to keep global warming below the +2°C bar.

The Paris dynamic needs to be considered not only in relation to the UNO agreement but also by including in it all the undertakings which may be given by participants other than states, first among which, of course, are local authorities and companies.

Needless to say, on the companies' side there is a high risk of "greenwashing", which could be limited by a simple provision: the United Nations will be able to acknowledge the undertakings given by companies only if they are integrated into a campaign for transparency and the acceptance of the liability to pay. Thus, a company which announced an objective of reducing its greenhouse gas emissions, including figures, but which refused to include the joint assessment provision in its undertaking, would lose a great deal of credibility!

Finally, the climate change challenge is such that the Paris Pact – that is to say the UNO agreement and everything that may be added to it – must include undertakings which will take new forms. Thus, Standard & Poor's, the rating agency, has announced that, before the Paris Conference, its rankings will include the exposure to climate risk of all the companies listed on the stock market. Now there's an announcement which, if genuinely implemented, reveals a very profound cultural change! I remember that in 2011 I presented to the European Parliament an amendment to the directive concerning rating agencies aimed at including in them precisely the obligation to record the effect of the "climate risk" on the economic model of each company. The ecologists were indeed the only ones who defended that idea at the time! And now, the world's leading financial rating agency is doing so voluntarily, explicitly saying: "The risk is too great to go on ignoring it!"

# A battle between two worlds

The Paris Conference is a new "battle of Paris". A battle between two worlds. On one side are the shale gases, the 1,000 billion dollars of annual public subsidies paid for fossil fuels, the billion dollars paid by the climate-sceptic lobbies in the United States. On the other, the world which notes that, today, in India, renewable energies are

cheaper than fossil fuels - even without public subsidies - and that the only way to ensure peace and prosperity tomorrow is to fight against the deregulation of our climate today.

This battle will not be won without civil society. That is why the role of French and European ecologists will include ensuring that, during COP21, the citizens' march which will be organised is the biggest ever made on environmental matters anywhere in the world. After the 400,000 demonstrators of New York last September, we must plan for between 500,000 and a million marchers in Paris in 2015. It is a huge act of militancy, but such an exciting one! And it starts today!

Catherine Larrère Chairman of the FEP, professor emeritus at the University of Paris I-Panthéon-Sorbonne, is interested in ethical and political matters linked to the environmental crisis and new technologies. In particular, she has published <u>Du bon usage</u> de la nature, Pour une philosophie de <u>l'environnement</u> [On the proper use of nature, for an environmental philosophy] in collaboration with Raphaël Larrère (Aubier, 1997 / Champs Flammarion, 2009).

\_\_\_\_ Marc Lipinski is Joint Chairman of the FEP's Scientific Council. He is a biologist, research director at the CNRS, chairman of the Regional Agency for the Environment and New Energies of the Île-de-France, regional councillor of Île-de-France EELV and author of Les sciences, un enjeu citoyen - Une politique écologiste de la recherche et de l'innovation [The Sciences, a challenge for citizens - an ecologist policy for research and innovation] (Les Petits Matins, 2012).

Lucile Schmid is Vice-Chairman of the FEP and a member of the executive office of EELV in charge of preparing COP21. She is a civil administrator at the Ministry of the Economy and the author of several works including in particular <u>L'égalité en danger?</u> [Equality in danger?] Bourin, 2006) and <u>Parité circus</u> [Parity Circus], Calmann-Lévy, 2008).



# The 21st Conference

The 21st Conference of the Parties to the Climate Agreement (COP21) will take place at Le Bourget, near Paris, in December 2015.

In 2013, François Hollande and his government expressed their wish to host this 21st Conference of the Parties to the United Nations Framework Agreement on Climate Change. The official announcement presented this future event as, "One of the most important diplomatic moments of the French President's five-year term of office". The practical preparations, including working parties, the coordination of NGOs, informal and committed demonstrations in the regions and the count-down to the event are already under way. Unfortunately, in recent months some rather negative signs have been appearing. The fifth report of the inter-governmental group of experts on climate change (IPCC – Intergovernmental Panel on Climate Change), a summary of which was published in November 2014, clearly affirms that human activities, particularly the use of fossil fuels, have brought about an exceptional rise in the concentration of greenhouse gases, transforming the Earth's climate

at a rate not witnessed for hundreds of thousands of years. In early 2014, the proposals newly issued by the European Commission were already disappointing, being considerably weaker than the guidelines previously adopted in 2008 and 2012. In October 2014, the European Council increased the trend by adopting an agreement, judged as minimal, on the main lines of what is called the Energy-Climate Package for 2030. In the energy sphere, there is now a real risk that each Member State of the European Union will favour an approach based on the specific characteristics of its own economy and social habits (distribution between renewable and traditional energies – coal, nuclear – choice of energy prices, choice of investments, etc.), rather than a Europe-wide view based on an integrated policy with 5 to 10-year objectives. The European Parliament might adopt that vision but, today, it is the Member States which have the last word, through the European Council.

# Is it still possible to reverse the trend in the coming months?

Could the trend still be reversed in the next few months? Although the recent political agreement on the reduction of emissions reached between China and the United States is a positive sign, the prospect of a binding agreement being adopted at the Paris Conference looks uncertain, to say the least. The increase in the transatlantic use of shale gases accompanies

action by powerful climate-sceptic lobbyists, led by those favouring fossil fuels. At the same time, the promotion of renewable energies and the investments they necessitate are being challenged once again in a context of economic crisis and limited public resources. The whole notion of changing the social and economic development model is now setting the pace. Does not viewing the forthcoming COP21 as just an opportunity for French diplomatic success mean concealing the fact that ecological transition is at stake? Beyond the terms of an agreement which we hope will be binding and widely shared from North to South, how can we create the conditions necessary for a lasting campaign? We believe it is public opinion which will tip the balance of power by regenerating "the" policy, with resources less traditional than those which seem to have disappointed people in the past.

Against the current of environmental lethargy, the Green European Foundation and the Political Ecology Foundation have jointly decided to approach the question in a deliberately optimistic, or even utopian, way. We in fact thought it essential to echo the citizen-based, social and associative movements, signs of which are appearing all over Europe and in other developed countries as well as in the emerging countries and those of the southern hemisphere. Without ignoring the institutional landscape, we think that the climate challenge is crucial enough to stress that what is being deployed here and there, unlike UNO-style blocking mechanisms, is renewing the environmental air and maintaining hope. The climate problem is

certainly extraordinarily complex, linked to physico-chemical phenomena which are difficult to present simply and which imply economic, geo-strategic, social, political and cultural challenges. However, in a way and firstly, it is also everybody's business and is therefore, in essence, democratic.

To bypass the "stop and go" approach induced by the terms and conditions governing the preparation of international and European conferences, it would thus be desirable to consider the dynamics of the participants and their initiatives. This might enable us to escape resistance and conservative attitudes of all stripes – be they national, financial or economic – and to commit ourselves to tackling climatic questions in the long term. Those participants are local authorities, companies, NGOs and communities of citizens or even individuals who are concerned by the fate of the planet and its present and future occupants. Rather than producing an account of the latest negotiations or summarising the IPCC's reports, we have therefore decided to ask some twenty authors of both sexes to place themselves in an unusual situation: to write from the point of view of a not too distant future, in about 2035. Then, looking forward, they were asked to sketch the main lines of the features of the society of the future in the – perhaps unlikely – event of a Paris Conference which had really been a success - giving a boost to relations between the campaigners against climate change.

# Half way down the road from the present day

Half way down the road between the present day and the middle of the 21st century, the date the IPCC has retained as the ultimate deadline for trying to reduce greenhouse gas emissions by 40 to 70% and thereby containing global warming at a maximum of +2°C on average, the projection to 2035, makes it possible to describe

a society which is profoundly different from the society of today in terms of values, behaviour and individual and collective dynamics. These are the new rules of the game which have emerged in the institutional and democratic context, in the economic and business-based sphere, regarding our relationship with science and progress, in agricultural matters, when planning a town or living in one together and when analysing the geo-political questions which dominate that newly composed world.

The outstanding characteristic emphasised by all our authors certainly lies in the description of a society in which ecological transition has enabled a social fabric to be reinvented with radically redefined relations with nature and time. All the "democratic outsiders" who, today, include the young, women, the poor, migrants and others, have rediscovered a role and are operating in a world where the ecology is given its full place. Its outlines and the way it will operate institutionally are yet to be designed and its new values, which must necessarily be cooperative and non-violent, need thought. Although

the expectations collected here take account of what has already happened, they do not in any way claim to foretell what will happen.

# In a complex world

In a complex world of climate change, a system's past history does not enable its future to be predicted. Rather, we should prepare ourselves to face the unforeseeable and to imagine possible worlds. Those worlds are as numerous and varied as the dif-

ferent authors of the following texts and, although our writers agree on the importance of changing the social model, they do not always agree on how it should be constituted: opinions about the importance of the market are especially divergent.

However, a few strong lines are drawn. The first concerns political and economic arrangements: the link between the state, or rather the states (and their coordination), companies (and the re-composition of their management), investors (how finance will come to understand that it can affect the decarbonisation of the system).

Oddly enough, what might at first appear to be the projection's most realistic theme (doesn't it concern strategic variables in energy transition?) turns out to be the most utopian part: can states, markets and companies really be expected to change to that extent?

At any rate, we must not expect everything to be achieved from that theme. One certainty emerges from the texts presented: governments will no longer act only under pressure from public opinion, citizens' action and social mobilisation movements; those movements will act, and are already acting, without waiting for governments to take action and independent of them. It is at levels other than that of government alone (and even of the world), and in areas other than the economic area alone, that the transformations which count will occur: those of the world as it is actually experienced. However important they may be, government incentives and restrictions do not suffice to change ways of life mechanically: such changes will spread only if they are wanted, rather than endured.

However effective reductions in greenhouse gas emissions and the adoption of less polluting techniques may be, a climate change which is already happening and will continue will not be stopped. To adapt themselves to the situation, many human and non-human populations will have to move. These migrations will have to be assisted, acknowledging human rights and doing whatever is possible to reduce the damage caused to the non-human component.

The texts we are going to read describe a better world: living things respected, the global village at peace, wealth shared, politics regen-

erated, the ecology integrated into society. But that better world is not the best of all possible worlds. It is too multi-faceted, open to the diversity of the possible, leaving room for individual and collective initiative. However pacified it may be, it is a world in movement which experiences conflict: not only because there is room for debate about different possible solutions but also because a solution cannot be chosen without collective or personal renunciations or break-ups. In short, a living world in transformation, about which not everything is known and which people may want to discuss or define.

In fact, the essays presented here are only pieces of a jigsaw puzzle, a "collection" to be completed so as to compose a picture which is imaginary but which may nevertheless inspire our future actions. By projecting ourselves 20 years into the future, we are giving ourselves the psychological means of leaping over modern blockages and regaining the will and capacity to imagine a new world based on different foundations. Unlike the usual discussions, this effort of the imagination enables other stories to be told and makes it possible to describe the contours of a society which will not be sectarian, authoritarian or libertarian. The society of tomorrow will not be fixed and will be troubled by other tensions and other doubts. Not all the texts making up this work adopt the notion of presenting a ready-to-use model of the ideal society. The transition is not a sudden switch from one, disparaged, state to another, idealised, one. The diversity of the writers and their approaches is therefore a deliberate choice which allows the blockages, tensions and movements which will disturb our next twenty years to be taken into account, when facing the choices we shall have to make.

By giving us glimpses of a structured, viable society with long-term objectives and steady time management, the authors have restored credibility to the notion of a project. Is it not precisely during these turbulent times that we should take a moment to imagine what tomorrow might consist of? In 2035, twenty years after the Paris Conference, what will have emerged is a movement, a dynamic which may lead us to another way of living and thinking. In the end, processes which have been started are what make transformations possible.

By Marc Barra

# THAT GOT SICK OF GOING ROUND THE WORLD

# SEING COMPATIBLE WITH NATURE

Aware of the failure of the Kyoto Protocol and the carbon market, the designers of COP21 on climate in Paris in 2015 favoured measures concerning effectiveness, the mix and energy decentralisation in the territories. Against all expectations, they ratified a global "mileage tax" on several consumer products, and on food in particular. Twenty years later, that beacon reform has changed the deal in France and in Europe and has brought numerous advances in its wake: indus-

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trial relocalisation, agro-ecological conversion and local biodiversity management. What could have passed for a tax-hammering at the time became a real springboard for companies and employment. The scientists were given the place of honour at the time of that summit meeting where biodiversity was also invited to the negotiating table,

PARIS CLIMATE 2015

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am afraid we will never be able to compete against the... Organic Leek©

allowing the emergence of an international council entrusted with monitoring the management of resources. New generations of economists gained access to responsible posts while civil society became involved through citizens' panels. In 2035, we are harvesting the fruits of those ambitions. Better still, the relocalisation process is progressively teaching us to innovate in order to transform activities with adverse effects into activities compatible with nature: rethinking town planning, territorial management and construction, implementing a different kind of farming or experimenting with solutions inspired by nature. A political and scientific turning point for the ecology.

# THE MILEAGE TAX CHANGED EVERYTHING

What used to be just a slogan: "A mileage tax to relocate our jobs and save the climate!" became a reality. With the support of several economists usually relegated to second place, it was the beacon measure of that world summit. Their report changed the deal. It showed that the introduction of a mileage tax on consumer products, combined with cooperation between states, would lead not only to a drastic reduction in CO2 emissions due to transport but also to new opportunities in terms of local job creation. In spite of the

reticence of exporting companies and the negotiations at the time concerning a new free-trade treaty (TAFTA) between the United States and Europe, the reform gained popular support and credibility as time went by.

The mileage tax was born in 2017. Progressive at first and aimed mainly at the products which produced the most greenhouse gases, it was applied according to the distance the goods travelled before reaching their place of distribution or purchase. The initial tax rates were low and the amount was modified according to which method of transport was concerned. It was charged only on goods, not on human journeys. Originally, the project concerned only fruit and vegetables but its sphere of application soon expanded to include meat products, wood, cereals, eggs and packing materials. While the price of a vegetable produced in France remained unchanged, the price of a tomato from Spain or a kiwi fruit from New Zealand increased in proportion to the distance travelled.

The French government played the game by exempting from that tax products which we could not produce on French territory. Although palm oil did not escape the tax, certain tropical fruits and vegetables, as well as cocoa, were exempted from it.

Initially, the funds raised by the tax were supposed to finance producers who agreed to play the relocation game, but its mere announcement radically affected production systems: many businesses, and SMEs in particular, relied on this progressive reform to capture new markets, relocate their production activities and respond to the growing demand of the French for

local products. Even today, this situation mostly benefits French companies. It must be said that civil society had long been ready for it, especially in regards to the food market. The scandal of the horsemeat trail in lasagne dishes or the distant source of many foodstuffs strongly increased public support for the system.

In 2020, the authorities extended the tax to building materials, renewable energies and digital and industrial technologies, to encourage industrial economy campaigns and circular synergies on French territory. Fiscal constraint, which had been the obsession of the economy at the start of the century, began to be seen as a lever for innovation.

# CLENTIFIC COUNCIL FOR ESOURCE

Although the initial purpose of the mileage tax was simply to reduce transport and the CO2 emissions associated with it, it could have had potentially harmful effects for the environment: the increased demand for production increased the use of our territory and of local raw materials usually imported from developing countries. That situation led many participants to question the wisdom of our production systems and their effect on biodiversity and the landscape and territories in general.

It was particularly thanks to the impetus of the 2014 world biodiversity summit in Seoul that it was possible for decisions to be made in that respect, opening the way to other reforms complementing the mileage tax. Scientists, invited at the last minute, played a leading role in the process. The presence of researchers from the Stockholm Resilience Centre and scientists from Global Footprint tipped the balance in favour of the formation in 2017 of an international council for the management of resources and the biosphere, entrusted by the international community with defining a set of minimum precautionary rules. The commission's role was initially informative and its work consisted mainly of defining a use of renewable natural resources (marine, forest, geological and genetic) which would not exceed their regeneration rates, the rates at which polluting or waste materials could be released into water, the air and the soil to be acceptable in the light of the assimilation and recycling capacities of the environments into which they were discharged and, lastly, the maximum rate of use of non-renewable natural resources according to their replacement by renewable sources.

The scientific council's guidelines were actually transposed into national legislation in 2022 and then into regional and local legislation in 2025, in particular with the help of regional environmental observatories. The minimum precautionary rules on the use and management of resources were found

to have made a good addition to the mileage tax of which they were an extension. They define a framework for operators in the territory, and a number of quality-based principles for carrying out their activities in a way compatible with actual experience and its rhythms. The farming and land-use sectors of the territory were targeted as a priority.

# ARMING COLOGY CHANGED OIRECTION N FRANCE

The introduction of the mileage tax and the scientific council's appraisal led almost naturally to a reform of the Common Agricultural Policy [CAP] in 2020. Thereafter, subsidies which had long favoured pesticide-hungry intensive crops and cereal exporters were based on this new model. CAP grants were progressively switched to sup-

porting the production of organic or similar farming products. In France, the regional agricultural bodies became local intermediaries for the new CAP, favouring the ecological conversion of farms and the local coherence of their produce.

In the light of the increased subsidies aimed at encouraging them, ecological farming practices increased, Whereas, in 2010, south-western France was flooded by maize and wheat covered La Beauce, diversified production is now seen there according to the local circumstances and climate, moving in the direction of the demand by citizens for farming to be linked with the local land. The growers of kiwi fruit in the Bordeaux region are experiencing better times with the increasing price of kiwi fruit imported from New Zealand. We are also witnessing a marked return to stockbreeding on a more local scale in multi-crop/livestock systems. We see more of the old, rural breeds. With their research, the scientists are helping farmers to work the land but also with direct sowing and plant cover, or with various worthwhile crop rotation and crop-combination systems so as to diversify their production. Permaculture campaigns have also multiplied, as has forestry-farming in some regions.

The great famine, so long predicted by the seed merchants' and pesticide producers' lobbies, did not materialise. On the contrary, production now covers domestic demand without difficulty while the application of green farming principles has confirmed the almost definitive cessation of the use of pesticides and the reduction of additives by almost half in only a few years! The big grain producers became the first defenders of the model, not only as regards their quality of life and their health but, of course, because they continue to receive a more than decent income under the new subsidies system.

Quality labels and charters such as the 'Appellations d'origine contrôlée' (AOC) or the indication of a protected geographical area (IGP) now have the wind behind them. The producers of Laguiole cheese have given up using silage and maize while the producers of Roquefort are very careful to protect

the natural environment of Les Causses. In the same way, the Saint-Nectaire AOC envisages that cows must obtain 90% of their food in natural fields, using as little manure as possible and, generally, the use of traditional methods of transformation is limiting the part played by chemicals.

In particular, it was thanks to the contribution of the Afterres 2050 Scenario that the French government was able to rely on trustworthy data and models for the green conversion of its farms. That scenario proposes agricultural models which encourage the diversification of products, in accordance with the preservation of biodiversity and climate regulation. It is complementary to the mileage tax and has had a multiplying effect not only on local demand for foodstuffs but also on the demand for the biomass necessary for the energy supply and the production of fibres or building materials.

Whereas the number of farmers had continued to fall since the 1970s, the switch to green farming decided on by France has proved a godsend for the employment of farm workers and farming cooperatives which have grown steadily since 2020.

# ERRITORIES N THE MIDST OF N ECOLOGICAL RENEWAL

The conclusions of the COP21 in 2015 and the biodiversity law voted in immediately thereafter also focused on the measures needed to adapt local authorities to the effects of climate change. In addition to energy-saving mechanisms, undertakings were given to reinforce the adaptation of medium-sized towns and big cities. The concept of a green infrastructure, initiated by the European Union in 2010, was awarded a European grant fund, strengthening the idea that biodiversity in towns is not merely aesthetic and rec-

reational but is also a response to real urban needs which for a long time were supplied by large investments in what are known as "grey" anthropogenic infrastructures. Those needs included water management, air quality regulation, biomass production and the modulation of energy consumption in buildings.

As regards development planning, the notion of a green infrastructure favoured the introduction of green and blue belts of land on a communal scale to encourage the movement of species confronted by climate change.

Some towns have fixed themselves the target of increasing the proportion of planted areas in urban environments by 20% to combat the "heat island" effect. They are also increasingly often investing in ecological engineering for the management of rainwater and waste water with the reduced sealing of soils and the creation of ponds and phyto-purification basins.

By 2020, the principle of a zero net loss of biodiversity in the territories strengthened the notion of a green infrastructure. It envisaged slowing down the sealing of land and reducing the use of farmland for building in response to tax measures aimed at encouraging population density (tax on vacant housing, assistance with densification). The implementation of this new tax system was slower, requiring the simultaneous elimination of existing taxes and their replacement (for example: a development tax), but the regions played the game. Some communes opted for a minimum land sealing threshold for all building development projects, a measure adopted by one small country – Bhutan – which even included it in its Constitution.

Whereas sustainable construction had become generalised in the 2010s through energy measures alone, the addition of the notion of a green infrastructure and "zero net loss" gave biodiversity which, until then, had been the weak link in property operations, an important place. Moreover, the relocation induced by the mileage tax gave rise to many discussions about decentralised systems such as water management, energy production or building materials. The big building and public works companies seized the opportunity and, anticipating the increase in demand, became green builders. To do so, they took advantage of the emergence of new, more ecological kinds of materials which developed locally, linked with the conversion to green farming methods which was occurring elsewhere: straw, flax, hemp, wood and recycled materials have now flooded the building market, to the great benefit of both producers and users. There again, the effect was considerable in terms of jobs, since numerous small and medium-sized companies were enabled to emerge within this new agroindustrial industry. The state and the territorial authorities had realised that what the public was demanding supplied an efficient lever, particularly in land development operations and in markets where invitations to tender were the rule. As a result of the mileage tax, the Public Contracts Code was also revised to favour the possibility of using local skills and local suppliers as a priority.

One of the surprises of the implementation of these territorial reforms was the magnitude of the benefits obtained by local authorities. Land development, which used to rule in the early 2010s, incurred many hidden costs borne by the taxpayer and the local authorities: rainwater management costs paid by the towns, health costs linked to remoteness from nature, travel due to urban sprawl, loss of earnings due to the concreting of farmland, etc. Recent reports confirm that green solutions – as overall investment and management costs – are much lower than their former alternatives. For residents, those initiatives mean better health, improved quality of life and also fewer taxes.

# WIN-WINPOLICIES FOR EMPLOYMENT AND QUALITY OF LIFE

The reforms undertaken since 2015 have confirmed the predictions made by many economists: the economy is not an end in itself but is an efficient tool in the service of the objectives declared (by those same economists, by civil society and by scientists). Challenged by their citizens, governments had the courage to embark on reforms and see them through to completion, reforms which turned out to be motivating for employment. Although many citizens took a paradoxical attitude to the ecology, being aware of their responsibilities but disinclined to undergo restrictions, they now see those reforms as truly coherent. They have become responsible

consumers today because companies and local authorities have become responsible too! A virtuous circle which confirms the importance, from the outset, of designing a more virtuous system which does not oblige the consumer alone to take responsibility for making the "right choice".

The economic or regulatory reforms undertaken since 2015, which are still continuing, mainly benefited the companies which anticipated them – and the many companies which were created thereafter. It is a game in which not all the players can win and governments are well aware of the fact. At the same time, many countries in Europe and elsewhere in the world followed that route to transition, starting with the mileage tax. Each country confronts its own specific local characteristics in terms of production and the use of resources. In just a few years, the constraints linked to the mileage tax and the scientific council on resource management have supplied levers for innovation.

In 2035, scientific ecology has found its place outside of any political party. It is not a tool in itself but it guides tools. It has opened the way to other forms of governance in which it plays a transverse role. Thus, in 2030, the French government proposed the elimination of the Ministry of the Ecology and replaced it with Ecology Departments in each ministry: transport, agriculture, energy, etc. In the regions and communes, the environment departments are now attached to or merged with other departments, enabling them to be fully integrated.

By Matthieu CALAME

# HR()MAN EXPLOITE EARTHTO GARDENE



Matthieu Calame is the director of the Charles Léopold Mayer Foundation for the advance of mankind. An agricultural and economic engineer by training, he organised the conversion to organic farming on the Villarceaux estate (1995-2003) and, among other works, has written <u>Une agriculture pour le XXI<sup>®</sup> siècle</u> [An Agricultural Model for the 21<sup>st</sup> Century] (ECLM, 2007).

# THE TRICK Of Reason

The trick of reason which, according to Hegel, directed history, can turn out to be benign. That is what happened with the agricultural and food transition, which proceeded in spite of the absence of international commitments, through the convergence of some very varied players.

In the vanguard of those players were the local authorities, particularly the towns. Oh, certainly not the mega-cities with several million inhabitants carried away by the Singapore syndrome and imagining themselves participating tomorrow in a kind of global Hanseatic League capable of jointly managing the planet. We know that their inability to manage their growth, the explosion of inequalities and the price of housing quickly made those cities unstable and impossible to live in. No, it was average and normal-sized towns, often with 200,000 to 2 million inhabitants, which started a silent revolution. Taking over initiatives by individuals, be they shared gardens or community-supported agriculture (corresponding to the AMAP movement in France), those local authorities began taking an interest in the health and strength of their supply system. The shared feeling was that we should

PARIS CLIMATE 2015 eat local produce, both to make supplies secure and to restart local economies. The local authorities had difficulty finding partners in industrial farming but they did not give in and, strengthened by the massive support of their populations, they started re-establishing the system, taking an interest in the land market, setting up farmers – with both financing and training – and, one thing leading to another, with the national political entities which were hindering their project. Territorial agricultural and food policies came into being.

The food question was soon placed on the agenda of the towns' networks and became a constant factor in their arguments at all levels, at specific international UNO meetings or meetings dedicated to the environment, in the fight against inequalities and climate change. Alongside questions of violence and the social link, mobility and housing, the food question imposed itself as a lever for territorial action, especially as, through collective canteens or social assistance mechanisms, the municipalities had strong financial and cultural levers. The built-up areas, relying on their food report, naturally came to the usual conclusions concerning the reduction in the proportion of products of animal origin. They started promoting the food transition already begun in the privileged section of society more actively in schools: less meat, less fat, less sugar, less salt. And, because the effects in terms of public health and also in behaviour at school soon proved positive, the movement became irreversible. Of course, the local authorities sometimes took liberties, especially in terms of administrative rules on public control - and there were abuses - but generally speaking what could the authorities say? Polarised on their mighty cities at international level, of their own accord they had abandoned those territories to their fate and were only too happy if they were still capable of managing themselves!

In Europe moreover, the consequence of the economic and social crisis had been a tenuous and sporadic movement towards the re-installation of farms. Unemployment among the young had reached such a level that a small percentage of people, often with a good level of education, had "gone back to the land". The movement may have been reminiscent of the movement of the 1970s, but on a different scale: it was necessity rather than an ideal which was impelling these "neo-rurals". Post-consumerism was no longer a pose but a fact of life, which must surely explain why the success rate of such installations was very high. Thus, people made a virtue of necessity and a pleasure of virtue. Originally, the movement was considerably restricted but it was to produce its own "positive" culture: sobriety suffered became sobriety chosen. In less than a decade, the movement, which met other pre-existing dynamics such as the "transitioners" and "commoners", whose numbers were declining, supported, encouraged and spread a series of new and imaginative ideas, very coherently combining localism, eco-feminism, the search for self-sufficiency and resilience, an ideology of interdependence, what has been summed up in the Spanish word "jardinerista", the spirit of the gardener. Because resources were limited, the most remarkable successes were based simultaneously on an agriculture very sparing in its use of additives and land, original marketing circuits and an organisation in which peak working seasons were evened out by mutual assistance

systems with non-farmers. In countries such as Spain, this movement resonated with the political movement Podemos, although whether that was an advantage or a hindrance is still being discussed today. Although there is no evidence that the movement progressed more quickly in Spain than in the rest of Europe, it was nevertheless there that it was most visible. The fact that all those things were happening in Europe certainly played a considerable part in how such "re-peasanting" phenomena were perceived. They were viewed not as a sign of backwardness but as a sign of decline for some or a rebalance for others, and in all cases as a process which clearly challenged the accepted model in the linear and irreversible urbanisation of the world. A partial but perceptible urbanisation process was in fact occurring, making discussions about the necessity of increasing the rural population more credible in the context of the social and energy transition process. The phenomenon was observed attentively by the new industrial countries which were starting seriously to confront the almost insoluble nature of the social, environmental and political management of their mega-cities.

In one of those turnarounds to which it knows the secret, the Chinese government thus suddenly decided to end its rapid and massive urbanisation policy and to favour all the levers which might slow it down and maintain rural populations. Let me list the reasons for that turnaround. The first was doubtless the chronic destabilisation of India as the result of rural Maoist movements - a sort of political agrarianism - which awakened fearful memories in China. It would be best not to fool around with 600 million small farmers. Moreover, as deadlocks were clear from the lasting breakdown of the World Trade Organisation, China was going to have to turn towards its domestic market. A consensus was finally reached among the ruling class concerning the ecological and health-related deadlock induced by its agricultural model. China's reasoning was growing wise. An agricultural system which was productive because it was labour intensive but economical as regards additives would enable the environment to be restored while somewhat stabilising the large towns. By accepting a sustained inflation rate, it authorised increased agricultural prices and hence an income for farmers, enabling a growing share of the country's industrial production to be absorbed - comparable to the "Thirty Glorious Years" following the second world war, in fact, with the ecology added. It is also true that repeated health scandals had considerably increased the willingness of consumers to pay for products of better quality.

Were the gods in favour? In any case, the increasingly unsustainable nature of extreme religious movements of all kinds and their instrumentation gave new impetus to inter-religious dialogue at that time. The problem was, of course, how to avoid theological questions which aroused anger, social questions which were divisive and economic questions which caused stalemate. An ad hoc group composed of representatives of the various religions reached agreement on the only consensual matter in the spirit of the times: "The Earth is a gift from God which must be cultivated and cared for". A few indigenous movements tried to claim that the Earth was the flesh of the Earth Mother, requiring mediation by Mgr Stengers of Pax

Christi, who obtained a compromise solution – that the translation of the final declaration into Guaraní would be slightly different and that the English text which was the valid one would include the expression "the Divine Earth" which could be understood to mean both that the Earth was God and that it proceeded from God. Only one movement, started by the Neo-Wotanists of the extreme right wing, called for a return to the state of nature and therefore condemned the very principle of the garden as a degeneration of the race's natural virtues. That movement left, slamming the door, and nobody knew how and by whom they had been invited. Their limited number – one high priest and three and a half worshippers – did not affect the process.

The fact remains that, by mutual agreement, the ecumenical movement thus created adopted the slogan "Let's take care of the Earth" for its intended sphere of action and the general campaign which then began helped disseminate and legitimise the message. It was easier to do because the values required were echoed in the various different religious bodies: mercy, moderation, care for the weakest, sobriety. A gay imam from Cape Town boldly launched the idea of a green, ecological Jihad, the fight against pollution, pointing out that green was already the colour of Islam. Lastly, the promotion of a diet containing less meat helped calm people's anxieties about forbidden foods. There again, only one sect, the Neo-Pythagoreans, determinedly hostile to beans, mounted a brief Internet campaign which turned out to be nothing but a hoax set up by a professor of philosophy from Caen.

In 2025, the movement could rely not only on the FAO but also, more surprisingly, on the World Bank and the IMF where, it is true, the new industrialised countries had acquired greater influence. The economic morass had clearly shown that nothing was left of the "Washington 1 Consensus" and that, at the same time, the lack of consensus was becoming increasingly dangerous for world peace. The international organisations had therefore carefully prepared a meeting in Medellín aimed at laying the foundations of a new minimum consensus on the economic development model to be promoted.

In spite of the care taken with preparing it, the plan was a semi-failure, mainly because it put two things on record: a minimum architecture for a world food policy and its priority guidance towards the alimentary aspect of the Common Fund for Combating Climate Change, for the very reason that that question enabled progress to be made on the major environmental and social solutions. The Medellín Consensus therefore concentrated on the following two points:

- Carbon fixing by the farming systems must be a priority.
- The economic organisation of the food chain is based on the principle of economic subsidiarity which authorises a systematic preference for the most local product, from the commune to the world.
- A world forestry farming fund must be created alongside a world forestry fund.
- The IMF introduced a currency for green development projects.

This development currency (green-DTS) is managed by a council where the number of votes of the states results (with a ceiling) from: the size of the population, its economic power, the country's stock of organic material (with weightings too on fossil organic materials and current organic materials).

• Lastly, the World Food Programme (PAM) was re-launched with a commitment by the principal countries to coordinate their security stocks and, above all, to grant the PAM a right to mobilise the equivalent of one month's share of those stocks so as to intervene on the markets, not only upwards, by selling them, but also downwards, by buying them. Those stocks are in fact virtual, but come down to the fact that the PAM had been assigned the power to limit the placing of goods on the market per country during high production periods to limit price falls and, conversely, to oblige countries to sell if prices rose, mechanisms which had failed lamentably during the 2007-2008 crisis.

It was the first substantial stone of a worldwide governance of food and agriculture – and not before time!

The painful delivery of the Medellín Consensus should have been strong and highly productive. It in fact offered a theoretical and legal framework for the deployment of local food policies and the international control of market risks, as well as an investment tool enabling the transition to green farming to be financed. At the same time, the continuous rise in the price of energy and ingredients worked its selective effect. The coincidence of a sustained and remunerative demand for food products and a high cost of additives naturally favoured highly productive farms which used few additives. The agro-economic efficiency of using additives leapt forward. In terms of research and investment, forestry farming carved itself the lion's share. It was indeed the least that could be expected after a century and a half of the excessive cultivation of cereals in farming and food. Chestnuts had taken their revenge on wheat.

By Yannick Jadot

# ECONOMY IS WHAT MAKES SOCIETY



\_\_\_\_\_Yannick Jadot has been a member of the European Parliament (EELV) since 2009. In 2002, he joined Greenpeace France as its campaign director and and took part in several high-profile actions. He is now Vice-President of the International Trade Commission and spokesman for the Greens/ALE for COP21.

# 20<sup>TH</sup> JANUARY 2035. .....

The newly elected President of the European Union has confirmed the good news: Europe should achieve carbon neutrality by 2050 at the latest. It leads the world in climate matters. It has reduced its energy consumption by more than a third since 1990 and half its energy is now derived from renewable sources. However, nothing had been achieved a quarter of a century earlier.

# HE WORLD WATCHES I DISMAY AS THE GOS DANCE

## 2009.

When the United Nations Climate Conference started in Copenhagen, it was hoped that it would reach a binding global agreement in which the 193 participating countries would undertake to reduce greenhouse gas emissions to tolerable levels for the planet – less than 2°C hotter than during the pre-industrial era, an agreement which would achieve sufficient solidarity from the most vulnerable countries – the poorest and least responsible for the climate crisis. Popular movements were formed, the NGOs worked hard, Al Gore, the former Vice-President of the USA, presented his film,

"An Inconvenient Truth" all over the world, the British economist
Nicholas Stern demonstrated the astronomical economic cost of our
inaction concerning the climate. The Grenelle Environment Round Table
Debate impassioned French society and the world's great and good made
many promises. We shall see what actually happened!

The Copenhagen Summit Conference was a resounding failure. It is true that the leaders paraded to the podium, each more ambitious and concerned for humanity than the last. Sarkozy, Brown and Merkel sang from their personal song sheets, that is to say who would be the first to save the climate:, that new Eldorado of consensual political communication. But in just a few hours, the Chinese, Indian, Brazilian and South African leaders agreed with American President Obama on a route map devoid of commitments and doused the powerful hopes of our European leaders. The European Union, divided and ineffectual, found itself paralysed by the switch in the world's centre of gravity.

The presence of so many heads of state and government leaders opened the prospect of a strong commitment by the international community. It turned into an appalling parody. Whether the fundamental impostures or the postures of form aroused the most disappointment it is hard to say.

For a summit meeting about the climate is not a simple G7 where the most important challenge is the final photograph. Nor is climate negotiation only an environmental negotiation. Combating climate deregulation necessitates profoundly changing our methods of production and consumption in energy, industry, farming and transport. So many habits, incomes and interests to be overturned. Never had such an international negotiation mobilised such fierce opposition by such powerful lobbies. It was not "the truth" which upset those lobbyists but the solutions to the climate crisis. As the only multilateral negotiation still active, climate negotiation clearly posed the question of international governance, the redistribution of wealth, access to resources and, finally, cooperation in a world where competition ruled.

# THE ALMOST

Following the failure of Copenhagen, the fight against climate deregulation went off the radar. It was easy for those who wanted to postpone indefinitely the transformations to be initiated to use the economic crisis as an excuse - those who did not want energy transition, a change of development model or a challenge to the system in which 20% of the world's population takes and uses 80% of the planet's resources.

2014

Facts are stubborn beasts, though, and Europe soon faced its destiny. In 2014, the energy bill it owed to the rest of the world was gigantic and kept on growing, reaching over a billion euros a day – nearly 4% of our

GDP – and making us ever more dependent on Russia and the oil kingdoms of the Gulf. Nearly 100 million Europeans are suffering from energy poverty. Our energy infrastructures are nearing the end of their lives and colossal investments are necessary. The environmental and health damage linked to energy is growing worse and climate deregulation is accelerating. One piece of evidence becomes compelling again: our present and our future depend on our energy choices.

The European Union would therefore have to adopt a new climate and energy route map, the 2030 climate-energy package, an extension of the 2020 package decided on in 2008. Europe then became world leader in that sphere: it undertook, by 2020, to reduce its greenhouse gas emissions to under 20% (compared with 1990), to have 20% of renewable energies in its "energy mix" and to increase its energy efficiency by 20%. Those objectives contributed to the development of powerful industries and services.

However, in 2014 a fatalistic attitude to climate and the energy counter-revolution were at work. Europe's ambition ran out of steam and the European leaders agreed on "minimal" objectives for 2030: a reduction of at least 40% in greenhouse gas emissions and 27% of energy efficiency and renewable energies. In short, the energy transition effort fell by half between 2020 and 2030 compared with the 2010-2020 decade – an aberration at a time when renewable energies were becoming competitive and technologies and home insulation programmes increasingly efficient. That package marked a new backward step for Europe, contrary to the expectations clearly expressed by Europe's citizens; contrary to the dynamic of the towns and regions which had embarked on energy transition and contrary to economic reality, as two thirds of the new electricity production capacity in Europe was already based on renewable sources.

# 2015, EVERYTHING IS HANGING: PARIS WILL OT BE COPENHAGEN

### 2015.

It is not only economic and social rationality which makes ecological transition imperative. And it is not only society which demands courageous decisions. The climate itself will be joining the party. 2015 will dethrone 2014 as the hottest year ever recorded.

The glaciers in the Arctic and the Antarctic are melting as never before, setting hundreds of icebergs adrift. In the United States, after an exceptionally cold and snowy winter in the east and the north, blocking the American economy for weeks, drought is rife in the spring and summer in the centre and the west.

The world's grain markets are profoundly destabilised. Many hunger uprisings are exploding in Africa and Asia where harvests are poor too, while eminent members of the Republican Party, which holds the majority in Congress, continue to express a climate scepticism which is more political and

religious than scientific, and the "oil leaks" scandal that has come to light, giving rise to several resignations. Documents in fact reveal that, in order to finance their electoral campaigns, senators and representatives have accepted large sums from oil producing groups in exchange for an undertaking to deny the reality of climate change and to block any political initiative in that sphere.

In China, air pollution in the big cities is degenerating into a political crisis. For several years now, pollution of the air, the water and the soil have regularly been the reason for increasingly violent local riots, expressing both fury at the deterioration in living conditions and a more muted rage at political repression. In the spring, millions of peaceful demonstrators took part in "air riots" in the streets of the big cities every week. These movements of exhausted families, made ill by the yellow, brown and grey skies which have not allowed a glimpse of blue for months, are seriously worrying those currently in power. In southern Asia and the Gulf of Mexico, hurricanes are unusually violent.

Europe is not spared. After a mild, dry spring it is now experiencing a new heat wave. Recent heat records are being broken: temperatures in excess of 35°C for more than 10 days in the north, temperatures in excess of 40°C in the south for more than 15 days. The victims of the heat and ozone peak at a number of tens of thousands. Agriculture is ravaged and electricity is rationed, because a third of the nuclear power stations have had to be closed for lack of sufficient water to cool them. Storms succeed one another at the end of the summer and, because of the drought which preceded them, they cause floods all over the continent. In October, the Île-de-France prepares itself for a hundred-year flood, the metro is closed and the authorities prepare to evacuate hundreds of thousands of people. Fortunately, the rain stops and Paris avoids a catastrophe.

In that context, the world's leaders meet in Paris in December 2015 at the great climate conference and are called upon to take action. Climate marches are organised everywhere. Hundreds of thousands of people converge on Paris. If no agreement is reached, Paris 2015 will become Seattle 1999, when demonstrators took control of the city to protest against the World Trade Organisation's summit which was trying to deceive our companies. In 2015, in the world's public opinion, inaction would be a crime against humanity.

An agreement is reached and it is a good one. The countries' undertakings concerning emissions should make it possible to remain below the 2°C bar.

Their undertakings are binding and monitored. The leaders will have to meet again in two years' time for an update and to adjust the undertakings, if necessary. Trade sanctions are envisaged for any states which have not played the game. The prime agreement concerns financial transfers to the countries most affected by climate deregulation and least able to confront it. In

exchange, all the technologies designed to lessen the problem and adjust to it will be transferred to them at a much reduced cost. A plan to stop deforestation over two years is announced. The scope of climate negotiation, previously a constraint, becomes an advantage: energy autonomy; sustainable development; access to energy industrial revival; job creation; food security; less climate-related migration; fewer extreme weather incidents... These are some of the benefits linked to the achievement of the Paris Agreement.

# CONSCIOUS SOCIETY IS BORN

Obviously, such an ambition cannot be realised without difficulties. Resistance is strong and the industrial fossil and nuclear fuel groups and the chemical and automobile industries ferociously oppose an agenda which puts an end to decades of incomes based on energy intoxication.

Fortunately, in the 2010s, the people were ready. Already, numerous companies, districts, towns and regions all over

the world had wholeheartedly joined the climate-conscious economy, the new economy which includes the +2°C objective and carbon neutrality. In Germany for example, far from the oligopolies whose incomes are derived from polluting energies, the people already own half the renewable energy production capacity, installed since the abandonment of nuclear power decided on in 1999. More than 80,000 of them thus formed some 650 cooperatives. Denmark followed close behind with a law which imposed offering 20% of the shares in any wind-based project to the local population. In France, the first citizens' wind farms finally came into being, modelled on Béganne, in the Morbihan [Brittany].

It is not difficult to imagine the revolutionary dimension of an energy transition in which everyone, individually or collectively, can produce and share the energy he or she needs from sun, wind, biomass or water. A choice made by the citizen rather than in the interests of the big groups! An energy democracy, horrific in the eyes of the oil and nuclear giants which express their fierce opposition to the policies of economies based on the development of renewable energies, and which mount one last offensive in favour of shale gas or coal, the income from which they are bound to control. The fight against climate deregulation will have to be sacrificed. But society cannot be stopped when it takes charge of its

THE RECONQUEST
OF EUROPE IMPLIES
A CLIMATE-BASED
SEMOCRACY

own destiny through decentralised technologies accessible to all, when it recovers hope and works towards a positive and benevolent future.

In 2015, following the Paris Agreement, Europe sets itself new objectives for 2030: 40% efficiency, 45% renewable energies and a 60% reduction in emissions. The Energy Union is launched and Europe re-commits itself to its history when, in 1952, the European Coal and Steel Community was born. It is no small challenge: to construct lasting peace by

organising energy independence and, thereby, Europe's industrial and economic power. Sixty years on, Europe thus embarks on a new economic, industrial and democratic revolution, using energy transition as the foundation stone of a re-launched Union, providing solutions to the daily constraints felt by Europeans as global challenges and reconciling itself with its citizens and with nature.

Euro-bonds are soon issued to finance a "Marshall Plan" for the climate-conscious economy. Public investment cannot do everything, but the dynamic is launched. Employees, pensioners, savers and shareholders mobilise to develop the investment funds in which they have obtained shares. By 2015, hundreds of billions of dollars, until then invested in fossil fuels, are redirected to climate transition, giving an enormous boost to technological, social and democratic innovations which enable the economy to be transformed. Renovated buildings, gentle mobility using trams, local trains, zero-emission buses, intelligent interconnections and networks, green chemistry – thousands of small and medium-sized companies investing in all the territories of Europe.

# 2017.

The European Union reforms its common agricultural policy. For the first time the dominant farmers' unions find themselves in difficulty due to their overwhelming responsibility in an agricultural model which not only contributes to climate deregulation but also makes our agriculture and hence our food extremely vulnerable to its consequences. The new CAP fixes its objectives to guarantee the alimentary sovereignty of Europe and the world's other countries with quality products; to protect farm workers; and to ensure the renewal of the natural resources on which our lives depend, and to help moderate the temperature of the planet.

The CAP, renamed the European Food Policy, establishes a new contract between agriculture and society. By 2017, 50% of its budget is devoted to supporting domestic demand via collective canteens using ingredients of high quality, produced locally by sustainable small farms. This new policy quickly stops people leaving the sector. Jobs which cannot be delocalised are created in all businesses. Protein self-sufficiency is supported, ending the pillaging of southern hemisphere countries. The short-circuits in agriculture and food, including the supply of urban consumers, constitute a huge snub to the farming and food groups of the big supermarkets which for so long believed they could determine the conditions governing production as well what we put on our plates.

### 2020.

Four million new jobs have been created already. The economic reconquest of the territories enables them to regenerate themselves socially, culturally and democratically.

# A SOCIETY WHICH HAS REGAINED HOPE CANNOT BE STOPPED

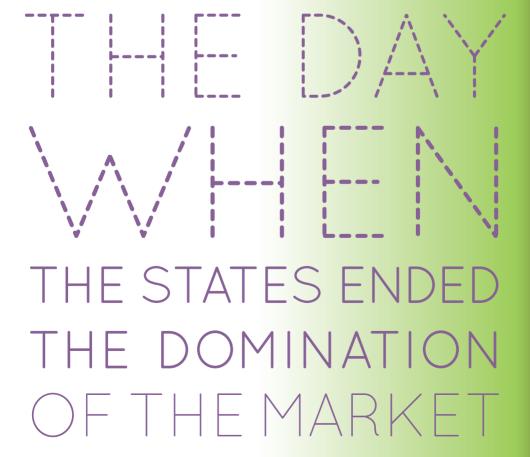
2035

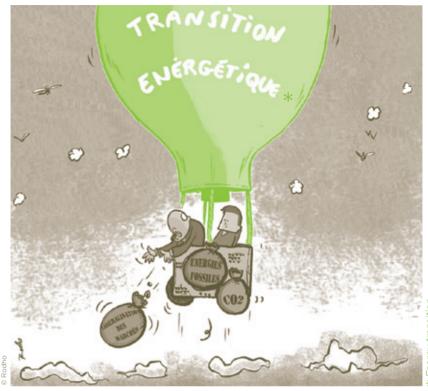
The climate-conscious economy in which we now live forms the basis of other economic relationships, weaves new social links and redefines the frontier between the merchant and the non-merchant. It is what creates society; it creates movement. Every day, more and more citizens adopt new consumption practices and create new types of organisation. Those networks in turn boost new behaviours which revolutionise the spheres of education, culture or information. Those new behaviours and methods of organisation redesign

a communal lifestyle and offer new routes for emancipation in response to the challenges of everyday life and the threats which continue to confront the planet.

In 2035, my grandchildren wonder whether they will study in Warsaw, Rome, Nantes, London or Kiev, whether they'll go and live in Barcelona, Saint-Étienne, Brussels or Istanbul. Their homes produce more energy than they consume and the local energy cooperative of which they are members celebrates its 25th anniversary. They eat healthily thanks to a network of local organic farmers. This weekend, they'll be travelling to Berlin on the high-speed train to attend a concert by the new world famous pop star, a European.

By Thomas Porcher





\* Energy transition. Market liberalisation. Fossil fuel. CO2

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# THE OUTCOME

The outcome of the COP21 held in Paris in December 2015 was a historic agreement. Contrary to what everybody feared, for the first time all the representatives of the OECD countries decided to fight global warming together and to initiate the energy transition process at world level. After long years of inaction, they at last

realised that they had been responsible for two thirds of the CO2 emissions in the 20th century although they represented only 15% of the world's population. Every aspect of the problem should be tackled: in 2015, an American was still emitting 17 tonnes of CO2 per head while a Chinese person was emitting only 6, even when America's economic activity was confined mainly to the tertiary sector (and therefore emitted less CO2) and the majority of European industries were moving to China (taking their emissions with them). In 2015, in spite of a strong scientific consensus about global warming, 80% of world energy consumption was still based on polluting sources of energy: oil, coal and gas. Nobody any longer had anything to gain from continuing in that insane direction. In the context of international negotiations, the OECD countries had been

called upon to "clean their own doorsteps" before requesting an additional effort from the emerging countries. As time went on, their credibility diminished drastically. So, confronted by that finding, the states assembled in Paris decided, for the first time, to implement the change and set an example. The representatives of the OECD started by listing what they should stop doing.

# STOPTHINKINGTHAT ENERGYTRANSITION WILLHAPPENTHROUGH MARKET FORCES

At the end of this conference, the representatives of each country decided to stop relying on the virtues of the market to resolve the problem of global warming and/or to initiate the energy transition process.

The energy production and consumption structure is extremely rigid and inert, the cost of entering it high because of the infrastructure it necessitates and demand inflexible as regards to price fluctuations. All those specific characteristics tend to make the energy sector oligopolistic and it is difficult

for small players – especially in renewable energies – to impose themselves on the sector's traditional companies.

The representatives finally admitted that the liberalisation of the energy markets had not had the expected effects. It had not enabled new participants to play an important part, nor had it made prices fall, and that failure was the irrefutable proof that the energy markets are not comparable to other markets and do not respond to the very theoretical rules of the traditional economy. To reach that conclusion, they analysed the consequences of the liberalisation of the energy sector in the United Kingdom in terms of tariffs and the structure of the market. Whereas, during the 2010s, the European Commission had believed that that was the example to follow, they could not deny that the liberalisation of the British electricity market had given birth to an oligopoly of six companies which shared the market in the absence of any credible competitive threat! It was clear that, although electricity prices were supposed to have fallen, they actually increased. The representatives could only note – bitterly – the gap between the facts and

1 \_ R.H. Boroumand, « La dame de fer, la main invisible et la fée électricité », [The Iron Lady, the Invisible Hand and the Electricity Fairy], Le Monde, 15th July 2013. the forecasts of the European Commission's experts when the single market was created. They finally admitted that, although in the "traditional" energy sectors at the time, such as the distribution of electricity and/or gas or the production of oil, no player had succeeded in carving a significant place for itself, the situation would be even more complicated for companies wishing to operate other kinds of energy and renewable energies in particular.

Moreover, since that climate conference, the signal-price is no longer commonly considered an efficient instrument in the energy sector. In fact, only a few decades earlier, many economists had predicted that a lasting rise in oil

prices above a certain threshold (fixed at about \$ 40-50) would lead to the development of other energies. Their economic reasoning was to show that, by rising, the price of oil would enable renewable energies to become more profitable and thus to enter the market. As time went on, those numerous economists had to admit that their demonstrations had failed. Everyone had noticed that although the price of oil had quintupled between 2000 and 2010, rising from \$20 to over \$100, the energy transition had not started naturally. Modern renewable energies had still not managed to take a significant place in the world's energy basket and remained at only 8.2% in 2015.

Conversely, however, they knew that where dominant energies were concerned (oil, gas and coal), there could be substitutions between energies due to price movements. In fact, during that decade, shale gas had made an indelible mark on people's minds. The development of new extraction methods and the resulting boom in American shale gas production led to a collapse in the price of coal, to the extent that, in 2015 in Europe, coal power stations were more competitive than gas power stations, leading in turn to higher coal consumption. To us, that sounds archaeological in terms of economic policy and would be unthinkable today!

In fact, to prevent this "substitutability" phenomenon from repeating itself during the first years of energy transition, the representatives of the OECD countries introduced economic measures aimed at keeping the energy transition process on course, regardless of the price of other energies and its effect on the industries' competitiveness. They decided to make competitiveness and trade depend on the environment: a radical change in priorities.

To ensure that developing countries would not use the available fossil fuels which had become cheaper as a competitive lever, the OECD representatives undertook to allow them more margins on the use of protectionism or the regulation of direct foreign investment. The discussions were stormy but the OECD countries at last admitted that they had used the same economic policy measures themselves in the past!<sup>2</sup>

**2** \_ H-J. Chang, <u>2 ou 3</u> choses que l'on ne vous dit jamais sur le capitalisme, [A few things they never tell you about capitalism], éd. Seuil, (Paris, 2012) p.322

They had also noted the failure of the carbon market. Although the aim of that market had been to persuade the most polluting companies to reduce their emissions, it had been merely a tool to encourage them not to change, due to the extremely low price of coal. However, at least the project had started: it consisted of defining

carbon emission ceilings per country for the polluting companies and sectors. Then, through the play of the market, the most polluting companies were able to buy the quotas of a company which had emitted less than its authorised ceiling. However, as the emissions quotas had been under-allocated, the price of coal soon fell considerably. The signal-price, aimed at discouraging pollution, had had the opposite effect!<sup>3</sup>

3 \_ J. Gadrey,
« Préserver la nature en
lui donnant un prix ? Les
dérives marchandes »,
[Preserving Nature by
Putting a Price on it?
How Commerce Has Lost
its Way], Alternatives
économiques, 2013

The representatives of the OECD countries therefore decided to eliminate the market share and keep only the ceilings.

They also realised that they needed not only strategic states if the energy transition were to succeed, but also that the strategies of the various countries would have to be coordinated, because energy transition - above all - necessitated coordinated political choices and those choices were not going to be generated naturally through the play of the market. If each country conducted its energy transition process by favouring one type of energy over another without concern for its neighbours, there would be effects, particularly on energy prices, which could induce other countries to use them. They remembered Germany which, when it announced its complete abandonment of nuclear power without reaching agreement with its neighbours, had behaved like a lone rider at a time when its choices were having substantial repercussions on its European neighbours. The facts showed that it could not adopt a non-nuclear policy unless its European neighbours had back-up thermal power stations to make up for the inflexibility of German renewable energies.<sup>4</sup> It is true that Germany's abandonment of nuclear power was an unprecedented example of political courage and had aroused much discussion about energy transition in European

**4** \_ R.H. Boroumand, S. Goutte et T. Porcher, 30 idées reçues sur l'énergie, [30 received ideas about energy], (De Boeck, to be published in 2015). countries but, to be effective at world level, the states knew that energy transition would have to be tackled globally. The representatives of the states present at the conference therefore decided that the fight against global warming and the promotion of the energy transition it implied would have to be coordinated if they were to succeed.

It was during that climate summit, thereafter called "The Summit of the Truths", that the OECD countries also admitted that renewable energies were not going to develop thanks to innovations induced by exchanges and transfers of technologies. Most of the innovations had not been born of economic liberalism but were in fact the fruit of policies aimed at encouraging public investment in research. For the first time, the group of countries therefore decided to establish the political will by means of coordinated action which would no longer trust the market or which made it a matter of politics. For the first time, they finally admitted that the market is not objective, that it is a human construction which too often represents those in a position of power and that the existence of an objectively designed free market was a myth 5 \_ H-J. Chang, which needed to be dispelled.5

For energy transition to be genuinely initiated, the states would therefore have to stop trusting the market, choose the new winners (renewable energies and energy efficiency) in a coordinated manner and contain the power of those already in place. The representatives of the OECD countries at the Paris climate conference had decided to do away with the tiny environmental measures previously introduced and to take new, wide-ranging ones. They had

decided to offer the world a demanding model for the environment and social rights, as they knew that the responsibility for embarking on that movement was theirs, that the rest of the world, particularly the emerging countries, could only follow them and that cooperation, rather than competition, was the only possible way of stopping the all too rapid deterioration of our planet, the Earth. That realisation at the Paris Conference changed the energy deal at world level. Several construction sites were set up and are still operating in 2035. The energy produced is not much more expensive in the end but consumption has fallen dramatically due to energy efficiency, transport developments and the changes of practice imposed on industrialists and consumers. Worldwide, the industry adapted itself to the new consumption methods. the mass production of cheap disposable products was very restricted and companies today produce fewer products more simply, stressing the longevity of their products and their quality as well as their low environmental impact. The development of shortcuts led to the relocation of consumers' habits. The fall in production reduced the number of jobs necessary and a new distribution of work took place with shorter working hours. A new model, more concerned with humanity and the environment, is gradually seeing the light.

By Stephen Boucher

# HAS REACHED THE AGE OF INTFILIGENCE



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### 000-2014:EUROPE THOUGHT IT WAS STUPID, SO IT WAS

2000-2014: Europe thought it was stupid, and so it was. In March 2009, the film director Franny Armstrong produced The Age of Stupid, a highly effective a semi-fictional semi-factual drama. It depicted an archivist who, reviewing the video archives of the first years of the century, found to his dismay that all the evidence and analyses needed to measure climate change were there – and that the appropriate decisions had not been made at the right moment. Result: it is too late. The world is in ruins in 2055 and the archivist takes refuge in a tower in northern Norway, buffeted by a terrifying storm. The start of the 21st century

clearly marked the Age of Stupidity – as was confirmed by the Copenhagen conference a few months after the film was released.

We looked even stupider because we had all the technical solutions necessary to choose not to be stupid. The experts' reports pointed to a series of measures "without regret": a drastic improvement in the energy efficiency of our buildings, vehicles and domestic appliances, widespread dis-

tribution of renewable energies, the capture and storage of the carbon emitted by the intensive energy industries ... solutions for which the technical know-how already existed and was making constant progress. Our stupidity was political as well: we knew how to bring about a rapid improvement in the emission regulations for vehicles, using standard methods. Several territories had shown their capacity to adopt a "zero carbon" action plan. If they had been adopted by all the states of the European Union, the best of their policies, taken individually, would have enabled Europe to be considerably closer overall to the ambition necessary to respond to the climate challenge at the level recommended by the scientific experts.

However, in fact, the decisions made were not in line with either climatic or economic science. The analyses were there, showing that the target of a 40% reduction in greenhouse gas emissions in 2030 compared with 1990 was not economically efficient because it implied an acceleration of the efforts after 2030. The European Union itself had shown it in its impact studies. Others had clearly shown that in any case that intermediary stage had been defined in relation to a target of a 60% reduction in emissions by 2050, a target which would have to be adapted sooner or later in line with the 95% later recommended by the IPCC. The states nevertheless continued to procrastinate, persuaded that their action was "ambitious", a word very much in fashion in the political debates about climate at the time.

Ultimately, Europe was indeed fundamentally stupid in its hesitancy to affirm its conclusions worldwide and to invent a new model of economic prosperity and social wellbeing which would not depend on fossil fuels. What seems obvious to us today in 2035 was the subject of debates, assessments, think tanks and innumerable other forums. As the former European Commissioner and later director of the OMC, Pascal Lamy, said at the time: who is better placed than Europe to "civilise globalisation"? Who is in a better position with its long heritage of diversified civilisation, its culture of democracy, its collaboration institutions, its cultural wealth connecting it with every part of the world, its level of education, its social cohesion – imperfect no doubt, but strong compared with the rest of the world?

We who today proudly live in "the union in diversity" which Europe represents, we who have shared our "hard power" instruments so as no longer to have to return to the "soft powers" which theoreticians such as Joseph Nye had been kind enough to offer us, are astonished at the ill-founded fear of the states of those days about sharing their skills and affirming themselves as the active formers of globalisation. Everyone has forgotten the procrastinations, short-sighted political calculations and secondary debates pitting the supporters of a "free market" against those of "a political Europe" which had accompanied, for example, the preparation and then the rejection in 2005 of a European Constitutional Treaty envisaging only partial institutional improve-

ments to the weaknesses inherent in the European continent.

Retrospectively, we can only share the feeling that the century started badly for Europe. But Europe managed to find the resources necessary to avoid a fatal decline.

### 2014-2020 : EUROPE EUROPE SWITCHES FROM STUPIDITY TO INTELLIGENCE

What did we need in order to be not "stupid" but "intelligent" on the scale of the European continent? Not, as was too often posited at the time, "more political courage", a response insufficient to be operational. Courage is not decreed and is rarely chosen by the electorate. What Europe needed and what it had feebly sketched out with the Constitutional Treaty, were institutions which could overcome the delays inherent in political action so that courage would not be necessary and action could be deployed quite naturally with a long-term view. Because, as was emphasised by a think tank in the early 2010s coordinated by the

philosopher Dominique Bourg, our contemporary democracies were wrong about the environmental challenge in at least three essential respects.

Firstly, they were at pains to take adequate account of the medium and long term (10 to 12 years and beyond). However, there again, it was known that among the nine limits of the planetary system identified by Johan Rockström, the climate was probably the one where temporal inertia was the greatest, our actions today having effects, according to the greenhouse gases concerned, over periods ranging from a few years to several centuries. The states certainly had the capacity to project themselves into the future. In 2008 and then in 2014, the states had set themselves binding objectives which committed them for the next 12 and 16 years respectively. At national level, Denmark had undertaken to be coal-free by 2025. However, examples of decisions implying a difficult choice between the present and the future were rare.

The western democracies, at European level too, found it equally difficult to comprehend problems beyond the boundaries of their own competence, whereas environmental problems, especially those linked to the atmosphere, have always required the collaboration of the principal emitters on every continent.

Lastly, the climate situation, probably the most complex challenge the human race has had to confront in its history, emphasised the difficulty existing institutions had in integrating the expertise and dealing with its complexity. Responding adequately to the climate challenge in fact implies mobilising skills in numerous spheres because the solutions affect every facet of society, either because they are linked to all the ways in which the energy at the heart of our economies and ways of life is used, or because they are linked to the use of the land or to the production and consumption of its products.

In a way unexpected at the time, the turning point came at the Paris climate summit in December 2015 with the negotiation of a legislative package concerning the circular economy and a 300 billion euro investment envelope. It was the opportunity to write a new account of the European Union's projection into the future, in the long term and not in defiance of globalisation, inducing willingness to invest in the Union confronted by the isolationist tendencies of several states. Projecting one's future means believing in the future.

It was also an opportunity to arrange a broad citizens' consultation in mid-2015 in preparation for the climate summit on the choices of society required for the next 20 years. It was probably the strongest and most beneficial innovation introduced by the Juncker Commission at the time to distance the debate from immediate contingencies. The Commission in fact understood that the failure to listen to the people's anxiety about globalisation with sincerity, the EU's economic weaknesses and the absence of any common project were dooming Juncker's presidency to failure. Since then, the Commission, in easy partnership with the Council, has organised a pan-European deliberative survey every June, before one of the principal summit meetings of the heads of state: a representative sample of all the citizens of the European Union meets, examines a dossier essential to the future of the continent and issues its opinion of it. The informed opinion which emerges from the survey is carefully examined by the heads of state who take it into account in their negotiations.

In environmental matters too, the European Commission, seeing its laws thwarted in many spheres, had tried to ask for additional powers and means of inspection, particularly in environmental matters, but in vain. After several episodes of extreme weather – crushing heat waves for four consecutive years and destructive winter storms – that era marked the point when the political agenda caught up with scientific reality: the era of climatic procrastination was quite obviously nearing its end.

It should also be pointed out that 2010 and 2020 were years when the added value of the European Union was disputed. Great Britain's long predicted departure from the European Union was barely compensated for when Serbia, Montenegro, Norway and Switzerland joined it. Norway and Switzerland made their entry expressly conditional on institutional reforms in the EU favouring the increased adoption of long-term action, inspired by their own methods of government.

It was a rude awakening in the mid-2020s. Faced by China which exceeded Europe in all respects – the number of patents registered, the attraction of better researchers, industries at the top of their game, the development of new energies and the concomitant stoppage of coal-fired power stations, its international military capacity and its institutional aura confronting

a European democratic model perceived as inefficient... it was time for Europe to mobilise. For some time, China had ceased to be merely "the planet's factory" to which Europe subcontracted and where it outsourced its polluting industries, it was the planet's university, its industrial and social laboratory. Conversely, Europe had to a large extent become a zone of tourism and subcontracting for the well off and entrepreneurial Chinese. The European democratic model, economically, diplomatically and even culturally outclassed, saw its very heart being openly challenged. Sometimes you have to hit bottom in order to bounce back.

## 2020-2035 : EUROPE GRADUALLY COMMITS TSELF FOR THE LONG HAUL

1st November 2034: the new president of the European Union takes up his duties. The specific mission of the 45 year old Norwegian, recently elected by direct universal suffrage for five years in consideration of his vision of Europe's future, is to define and implement the European Union's long-term objectives in five areas: a 20-year transport, digital and energy infrastructure plan, the development of an industrial strategy, a basic and applied research programme, the finalisation and implementation of the European interdependence plan for resources and a circular economy and a vast cultural and educational exchange programme.

He is the first European president to hold this role as long-term guardian and his appointment was the fruit of a slow but sure maturation period to overcome the short-term contingencies which Europe was facing.

The years 2020-2030 were the decade of disappointments regarding the "route maps", "strategies" and other 10 or 12-year targets previously adopted by the member states of the Union. Strategy Europe 2020 to promote growth and employment, the 2020 and then the 2030 energy-climate package ... it must be admitted that the Union's targets proved unattainable and were widely exceeded long before their closing date because they were timid and inadequate to tackle the acceleration of climate change. Their trajectory therefore required a drastic correction.

Today, Europe has its own financial resources representing 20% of the zone's GDP and a ten-year investment plan adjusted to the pace of the European elections. Its finances are supplied by a frontier tax offsetting competitive differences against imports which do not fulfil the same social and environmental standards. A sovereign fund was created and supplied from exports of European renewable energies.

On the institutional front, the European president was backed by the late Regional Committee and the European Economic and Social Committee, merged and transformed into a second legislative chamber dedicated to future generations. With the power to promote action programmes and dedicated long-term legislative projects, the new assembly can also block legislation proposals compromising the long term to the sole benefit of the short term. It is composed of representatives from the regions, the economic world and civil society, drawn at random from a pool of people proposed by the member states. Lastly, the chamber oversees the proper integration of citizens' consultations into the European decision-making process.

Gone is the plethora of European commissions seeking to satisfy the national egos of its 31 member states. A panel closely united around ten interactive portfolios operates along the lines of the very old and very precursory Swiss Federal Council. The Union itself is rationalised around three distinct integration levels: a hard nucleus of ten member states which have pooled their economic, monetary, fiscal, energy-based and social skills; a vast single market; and a broader zone of cooperation, with close partnerships established with the countries of the Mediterranean basin, Ukraine and Turkey. For the application of environmental legislation, a properly equipped inspection service worthy of the name was set up. It is never too late ...

Today, in 2035, it can be confidently affirmed that Franny Armstrong was wrong. In 2055 we shall not be in the catastrophic situation she depicted in 2009. Europe is far better equipped to manage any environmental, economic and social challenges which go beyond the borders of its member states and the short term. Europe has reached the Age of Intelligence.

Par Marion Paoletti

# DEMOCRACY'S ANSWER TO THE CLIMATE EMERGENCY



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### DEMOCRATIO RANSITION

"Green authoritarianism", "attacks on human freedoms", "a return to planning". Certain European intellectuals, united in what they called their "scepticism" about climate change, were quick to see in the ambitious ecological transition initiated after the climate agreement signed

in Paris in 2015 a risk of "totalitarian drift". However, twenty years later, that transition has been a success, because it was both accepted and endorsed by the people. The acceptance and appropriation of the ecological transition would not have been possible without the decisive changes which occurred in most European democracies over the last twenty years. The transition affected not only the ecology but society too, and was profoundly political.

Each country's political institutions in fact evolved in two directions. The gap between governors and the governed shrank considerably thanks

to institutional mechanisms which, only twenty years earlier, had seemed "dangerous" or problematic. There are no political specialists anymore and, hence, no non-specialists, the expansion of those called on to take part in politics having to be considered as a condition necessary for a better understanding of common assets such as the climate. Moreover, the advances achieved by political parity made it possible to consider (and solve) the problems of access to political representation by women in a way similar to those of other categories encountering the same difficulties: less sense of political competence, difficulties with public speaking, a feeling of having no right to stay long in the political sphere. Today, the categories of people with few academic qualifications, immigrants, and the youngest, feel they have the same authority as anyone else to stand for election or speak at a meeting and it would never occur to anyone to treat their words with less respect. Here again, the broadening of the voices listened to and the equality with which they are heard seem to be a decisive change which illuminates the transformation of priorities compared with how things were in previous decades.

The distance travelled in just a few years is remarkable if we make the effort to look back: in the mid-2010s, the political democracy "crisis" seemed to have reached its peak; politicians and their staff aroused rejection and defiance in most European democracies and decisions, dependent on interest groups and looking opaque in negotiations, had difficulty obtaining any kind of consent by the people. Xenophobic and nationalist ideas were spreading everywhere and, while the number of people using their vote steadily declined, the idea of an authoritarian solution seemed the preferred possibility. We should honour the parliamentarians of all sides for having suddenly become aware, in 2017, of the democratic ideals, which were then widely held in our societies too, to make political democracy change radically in a direction more in line with people's expectations, those members of parliament who, since the early 1990s, when that age of defiance was coming into being, had resisted democratic reforms and renovations as much as they could and conceded as little as possible to demands for democracy. Probably, Marine Le Pen's good result in the second round of the presidential election in France acted as a detonator for the whole republican political class, whereas the presence of her father in the same election 15 years previously had not had the same virtues.

In 2017, professionals in politics adopted the best changes in western societies: individuation (everyone wanting to give his or her opinion), a remarkable rise in cultural attainments, progress in the degree of information and openness to the outside world. Through decisive reforms such as giving the right to vote to non-Community foreigners resident on French soil for five years, proposing an international and tolerant deadline date rather than a nationalist fallback, in the face of oligarchic temptations, they then responded to society's democratic aspirations with some decisive reforms which it would be worth re-examining to understand more clearly what would probably have been impossi-

ble without those transformations: the success of the ecological transition. The changes in recent decades (equalisation between social classes, access to means of expressing an opinion and political decision-making, political de-specialisation), which were of remarkable concern to all Europe's democracies, caused them to work towards a shared, participative and egalitarian system. Those changes were particularly strong in France, which I shall use as an illustration here, a country where tensions between the rejection of politics and passion for it, nationalist-authoritarian temptations and democratic aspirations were particularly vigorous twenty years earlier and where it seemed that nationalism and authoritarianism were inexorably bound to defeat those aspirations.

In a reaction which could be likened to a survival reflex, the National Assembly, elected in 2017 and transformed into a Constituent Assembly, put an end to the Fifth Republic and the presidential irresponsibility which had characterised it. In the new parliamentary political system, fundamental principles, in law and in practice, redefined the place of elected representatives and the people, on a more egalitarian basis, and efficiently supported the entry of men and women traditionally left on the margin of politics, the outsiders whose words were now taken into consideration. The acceptance of long-term challenges was now constitutionally guaranteed and placed at the heart of a renewed lawmaking process. Without those transformations, it is hard to imagine how successive governments could have hoped to honour the ambitious undertakings they had signed up to at the end of 2015 in response to the climate emergency.

Whereas the monarchical shortcomings of the Fifth Republic had irrigated all institutions, particularly at local level, the new institutional provisions put an end to presidentialism and local presidentialism in particular. For example, at local level, the executive and deliberative functions were separated as had not previously been the case. The eviction of the monarch from republican institutions consolidated the culture of deliberation in local and national assemblies. Above all, it was on the gap between elected and non-elected representatives that the most decisive work was done. The aristocratic habits of most representatives, who had come to view themselves as different because they had been elected almost by the hand of God, now seemed a distant memory. They now stand surrounded by the population and resemble it. What is more, we hardly ever hear of political men (to mean women as elected men), but of political people, a way of emphasising that they are there, first of all, to serve the population. This more balanced relationship between the governors and the governed seems to have been achieved also by the introduction of a kind of lottery, thus renewing a link with a way of appointing political representatives which had been more or less voluntarily forgotten. To take true account of the increasing share of blank ballot papers by people attached to the right to vote but not recognising themselves in any of the parties on offer, the percentage of blank papers at each election is reflected in an equivalent percentage

of representatives drawn at random from a list of volunteers. That measure had the merit of reminding everyone that in a democracy power belongs to each individual and hence to anyone. Needless to say, the limitation on the accumulation of mandates, in time and space, so long called for by the population, whether on the left or the right, considerably helped to reconcile people with the policy. Moreover, the lowly position in which citizens had been kept was virtually eliminated by the fact that democracy was much more precisely directed.

Although the call for the participation of citizens in France had become rooted since the early 1990s and participative mechanisms had multiplied, particularly at local level, a change as such had not sufficed to make representative democracy look attractive again. It has to be admitted that representatives were reasonably free to follow or not follow the opinions they listened to, or didn't, and citizens were fairly sceptical about the value and utility of their efforts. As of 2017, direct democracy procedures were authorised, such as the right to present a citizens' petition to local and national assemblies, the assemblies being required to examine them when the thresholds were reached, and referendums in response to popular initiatives, especially at regional level, which became compulsory with decision-making value, again provided that the initiative was successful. We turned our backs on the practice of the right to petition, to initiative and call for referendums, bounded and impossible to exercise, hypocritical in a word, as it still existed in 2015. The populist and demagogic woes predicted by those who resisted the reforms in the name of representative democracy did not happen. It is true that a few xenophobic, sexist, trans-gender/homophobic attempts were made, but the check of their legality (or constitutionality) before the event operated effectively. On the contrary, those democratic innovations turned out to be useful tools for social and environmental justice and consideration of the length of time, thus re-connecting with a certain practice used in referendums in the United States in the late 19th century. They turned out to be equally effective for evading the polluting interest groups which were more at ease in the context of a closed negotiation reserved for just a few.

The big development projects of the local grandees which here and there threatened wetlands, farm land or protected species, paid the costs of several productive popular initiatives and demonstrated the people's lively interest in both local democracy and environmental matters.

Relationships, discussions and persuasion campaigns were developed by groups traditionally little concerned by environmental challenges. Such local actions were essential to the success of the ecological transition process and that form of direct and egalitarian democracy did not weaken the more deliberative forms in debating forums which actually multiplied. It must be said that democracy takes time and elected representatives, who hold only one office and are even more invested in it, have developed their new role as promoters

of collective debate. In recent years, these physical discussion forums are driven and hybridised by information and communication technologies. Thus, it is usual nowadays, in a public debate, for the discussion to give rise to a regular measurement of opinions by an electronic command device which helps speed up the decision-making process.

More generally, such participative democratic formulas are added to and consolidated by all the mechanisms deployed to encourage the arrival of new entrants to politics who were traditionally kept on the sidelines. Parity reform was truly revolutionary in France in the late 1990s, considering that since individuals were of one sex or the other, political representation should be so too. The parity constraint was constantly strengthened after 1999 but still did not suffice to achieve the objectives fixed by the political representatives: to make representative democracy attractive again. The revolution generated in public order and social class seemed rather conservative in practice: a faster rotation of elected women who sometimes left politics shortly afterwards (which did not prevent some of them becoming professional more quickly), the glass ceiling for women who seldom or never reached leading positions, as if "women" and "power" were irreconcilable; specialisation still passed on from one woman to another; appointment by the powers-that-be; devaluation of the words of female politicians, even in parliament, rank and tenacious sexism.

As from 2017, the question of women's difficulties in gaining access to elected posts ceased being thought of as a matter of identity but was considered in relation to other people also historically excluded from politics: the problems of public speaking; rapid removal after election; the sense of political incompetence affecting not only women but also elected people with few academic qualifications; newcomers (especially when they came from what is called "civil society"); and the youngest, members of disadvantaged categories (who are the most under-represented in politics but whose presence poses the fewest problems in public debate). By considering the problems of those excluded from politics, the 2017 debates established an elected representative's status which placed most importance on the training of elected female representatives, not only at public speaking level but also as regards relations with the administration, or more technical training courses to avoid specialisation in the professional or associative spheres previously invested in. It was followed by a dynamic mixture of the sexes which condemned any kind of hierarchical system and differentiation between the sexes to the dungeons. That dynamic not only irrigated discussions in the representative assemblies (where any sexist, racist or similar attack is systematically prosecuted, as are the senders of the sometimes revolting letters received by elected female representatives) but also the debates in the arenas of participative democracy. For example, women's (and men's) public speeches about family life or health care experiences are not systematically devalued but are heard and taken into account with as much consideration as the words of men (or women) seeking to adopt the

register of an expert or a universalist. It follows that the hierarchy of matters worthy of public interest was radically modified, in the same way as the priority now given to environmental matters.

It is true that the development of political democracy in recent years has been especially striking in France where, as the effect of presidentialisation at all levels and of particularly forceful professionalisation, the seizure of power by a minority seemed to run counter to the strength of otherwise vigorous democratic ideals. However, such political de-specialisation movements progressed in all Europe's democracies, aligning them with a new participative and egalitarian political system. It was indeed that new social expansion of political democracy which pushed most of the decisive subjects up the hierarchy of political concerns, that is to say in the communes. The ecological transition which started in 2015 fixed ambitious targets for itself without really knowing whether it would have the means to achieve them. The development of democratic institutions and practices acted as a complement to the ecological changes. The safeguarding of human societies was and remains inextricably linked to determined action by the public authorities in climate policy matters but it still cannot be dissociated from a movement on the scale of society as a whole. That movement would not have been as powerful without a new democratic dynamic. No, decidedly, the ecological transition would not have been so successful without the determination to work for the democratisation of political democracy.

# 20 YEARS

#### TERMS & CREDITS

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France will be hosting the 21st Conference of the Parties to the Climate Agreement (COP21) in December 2015. It is hoped that the international negotiations which will take place in Le Bourget for a fortnight under the patronage of the UNO will result in an ambitious, universal and binding agreement by the international community enabling greenhouse gas emissions to be reduced and global warming to be limited to + 2°C.

To take a truly idealistic approach, supposing the 2015 Paris Conference was a success and 2015 and the years thereafter saw a spectacular turnaround in international political decisions...

#### What might the world look like in 2035?

To paint the portrait of such a post-transitional ecological world, a diverse group of writers recognised in their fields have produced the texts which make up this publication concerning the various questions which are key factors in the expected scenarios: world governance and new territorial, agricultural, social, economic, legal and political models.

They are pieces in an as-yet incomplete jigsaw puzzle depicting a new world, imagined a quarter of a century after the Paris Conference.

The contributions by the authors of the Paris Climate 2015: 20 years on collection and the illustrations accompanying them convey a society in which ecological transition has enabled us to reweave our social links and change our methods of government, making them fairer, and rethink our relations with nature and the production of value in the long term.

In the near future, citizens' action, a new economic logic and their reflection in terms of collective expectations will lead to a renewed political dynamism, both locally and internationally, in response to the challenge of climate change. A better world, not "the best of all possible worlds", but one which is multifaceted, open to the diversity of the possible, giving ample room for individual and collective initiative and, therefore, for discussions on the solutions is to be envisaged.

Can imagination make it easier to understand the risks that climate change bears? That is the question at the heart of this collection of "climate prospects", imagined by the Fondation de l'Écologie Politique [FEP] as an original and creative debating tool for use at the 2015 Paris Climate Conference, in partnership with the Green European Foundation, and financed by the European Parliament.

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