COMBINING ECONOMIC RECOVERY WITH THE CLIMATE

ANNUAL REPORT 2019/2020

I4CE
INSTITUTE FOR CLIMATE ECONOMICS

Une initiative de la Caisse des Dépôts et de l'Agence Française de Développement

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OUR MISSION

The Institute for Climate Economics is a think tank with expertise in economics and finance whose mission is to support action against climate change.
Through its applied research, the Institute contributes to the debate on climate-related policies. It also publicizes research to facilitate the analysis of financial institutions, businesses and territories and assists with the practical incorporation of climate issues into their activities.

OUR EXPERTISE

EDITORIAL

"BEING ABLE TO MOBILIZE EXPERTISE QUICKLY, THAT IS THE ADDED VALUE OF THINK TANKS"

PIERRE DUCRET
President I4CE

THE ECONOMIC CRISIS ASSOCIATED WITH COVID-19 HAS SHAKEN UP THE PUBLIC POLICY AGENDA, PARTICULARLY IN TERMS OF FUNDING THE FIGHT AGAINST CLIMATE CHANGE. The huge injection of public funding has created new opportunities, and equally big risks. With the full brunt of the crisis being felt by sectors that are key to the low-carbon transition, the need to protect jobs may mean that sectors that should be changing are maintained as they are.

THE CHALLENGE FOR I4CE HAS BEEN TO REACT QUICKLY AND CONTRIBUTE TO THE STRATEGIC DEBATE ON ECONOMIC RECOVERY, mobilising the expertise it has carefully developed over time on the economic and financial issues involved in the low-carbon transition. Developing expertise over long periods and being able to mobilise it quickly when the need arises is the challenge of all public policy research organisations, of all think tanks. Taking on this challenge is their added value, their raison d'être.

THE EXPERTS AT I4CE WERE ABLE TO RISE TO THIS CHALLENGE RIGHT FROM THE EARLY MONTHS OF THE CRISIS, and will continue to do so. They have formulated numerous proposals and analyses, which you can read about in this activity report. They were the first to make the case for a green recovery and set out how it can be done. Since early April, I4CE's climate investment plan for the economic recovery has been presented to about one hundred members of parliament, the same number of businesses and about fifty members of civil society.

THIS RESPONSIVENESS WOULD NOT HAVE BEEN POSSIBLE WERE IT NOT FOR I4CE'S LONG STANDING AND SUPPORTIVE PARTNERS. It is thanks to them, and in particular CDC, AFD, ADEME, CDG and the Banque de France, that we had the human and financial means to develop the expertise that has proved so valuable in the current situation. We thank them all.

I4CE KEY FIGURES

27
Team members

30+
Events annually

40+
Publications annually

7000+
Twitter Followers

+6 000
Newsletter subscribers

400+
Press articles

OUR ADDED VALUE: ECONOMIC AND FINANCIAL EXPERTISE

- CLIMATE INVESTMENT AND TRANSITION FINANCING
- VOLUNTARY CARBON CERTIFICATION AND THE LOW-CARBON STANDARD
- PUBLIC FINANCE INSTITUTIONS
- TERRITORIES AND LOCAL AUTHORITIES
- PRIVATE FINANCE
- ADAPTATION AND RESILIENCE
- FINANCIAL REGULATION FOR THE CLIMATE
- AGRICULTURE AND FOOD
- PUBLIC BUDGETS, TAXATION AND CARBON TAX
- FORESTRY AND TIMBER INDUSTRY
- EU ETS AND REGULATORY CARBON MARKETS
- BUSINESS AND INDUSTRY

OUR EXPERTISE

#Investment

How to finance climate action

In the context of the economic recovery, I4CE has proposed a public funding package of an additional 9b€ per year for the climate. The real challenge will be to keep increasing this funding post 2020.

HADRIEN HAINAUT PROJECT MANAGER INVESTMENT

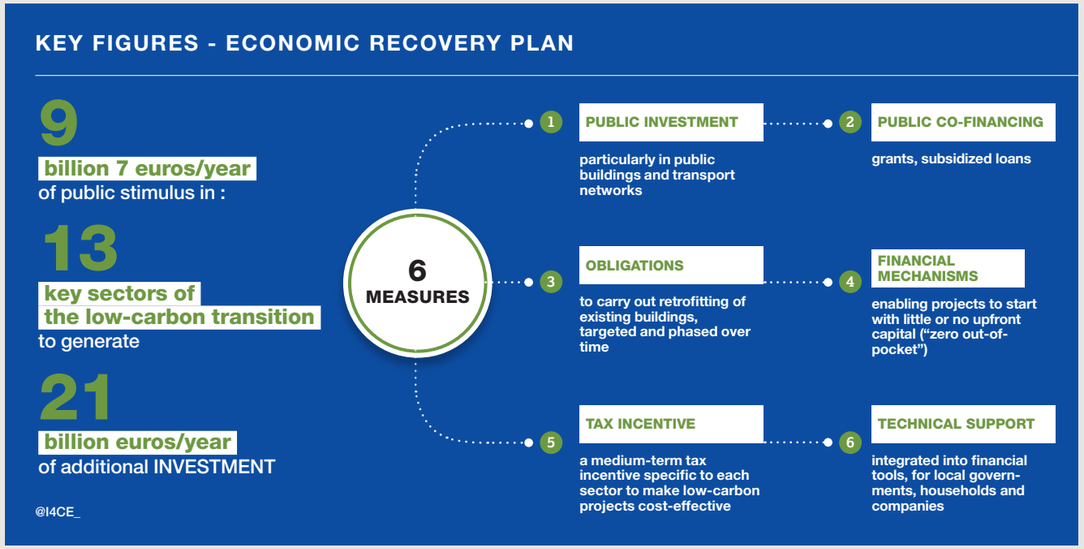
The crisis is affecting a number of economic sectors that are essential in the low-carbon transition, like rail and urban public transport among many others. These are sectors in which France and its people were already investing too little before the crisis began. Whether to insulate buildings, buy a low-carbon vehicle, build sustainable transport infrastructures, or produce low-carbon energy, the French government, businesses and households invested 46 billion euros in 2018, when the country needed to invest at least 15 billion more to put itself on the path to carbon neutrality. To bridge this gap and help the economy recover, I4CE has proposed a public and private finance package, underpinned by a range of economic and regulatory incentives. Many key sectors in the low-carbon transition were analysed, starting with building renovation, rail infrastructures, urban public transport and renewable heat and gas.

ACCORDING TO OUR ESTIMATIONS, THIS PACKAGE WOULD RELEASE ROUGHLY 20 BILLION EUROS OF INVESTMENT for the climate each year, for 9 billion euros of additional public funding. A significant amount which nevertheless remains modest in view of other public expenditure and potential rewards in terms of the economy, air pollution and energy insecurity.

THE REAL FINANCIAL CHALLENGE WILL BE TO CONTINUE TO PROGRESSIVELY INCREASE CLIMATE-FRIENDLY PUBLIC FUNDING POST 2020. Even if the leverage of public funding is improved, this funding must grow with the rising number of projects and the development of low-carbon markets. According to our estimations, the 9 billion euros required today will more than double by 2024.

PUBLIC AUTHORITIES, STARTING WITH THE STATE, could provide visibility by committing to a budget over several years in the next budget bill, and clarifying how they plan to meet these growing needs. In the coming months, debt will not be as easy a solution as it is today.

"In the coming months, debt will not be as easy a solution as it is today."



Laurence Tubiana
CEO of the European Climate Foundation

GREEN RECOVERY: WHAT ARE WE WAITING FOR?

"Never let a good crisis go to waste, said Winston Churchill after the Second World War. This idea has rarely been as relevant as it is now.

Are we going to make the same mistakes again and try to rebuild an economy that pollutes and excludes exactly as it did before?

Or will we seize the unique opportunity represented by recovering from this crisis to redirect our economies towards a model that is more sustainable and more inclusive, in line with the international climate commitments made during COP21?

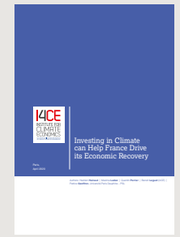
This is what the majority of citizens want. Studies carried out over the past few months show that the health crisis has not detracted from concern about the environment and the climate, which is still at record levels. On the contrary: according to a study by Destin commun (published in September), 65% of French people want to see 'big changes' in the aftermath of Covid-19. But at the same time, 70% think this will not happen.

And yet the recovery plan proposed by I4CE shows that a green recovery is possible, for a reasonable amount of additional public investment given the amounts invested to help the economy recover.

The priorities put forward by I4CE - thermal renovation, electromobility, rail and urban public transport - can mostly be found among the 149 proposals from the Citizens' convention for climate. It is clear, and both experts and citizens agree; what is missing is political will.

Let us remember that another recent study, carried out by EY France for WWF France, shows that a green recovery would support a million jobs by the end of the quinquennium, which is two times more than a traditional recovery. Not to mention the other benefits, in particular for health and quality of life.
So, what are we waiting for?

— Further reading on this topic:



Investing in climate can help France drive its economy recovery

Landscape of climate finance in France

#Budget

G20: 151b$ for fossil fuels since the start of the crisis

Aid granted by G20 countries since the start of the pandemic has so far favoured the production and use of fossil fuels over clean energy.

LOUISE KESSLER DIRECTOR OF ECONOMY PROGRAM

Since the start of the health crisis, governments around the world have spent huge sums to save businesses and then revive the economy. On top of state support provided to all businesses - like the chômage partiel in France - specific aid has been granted to fossil fuel intensive industries or alternatively to clean energy industries.

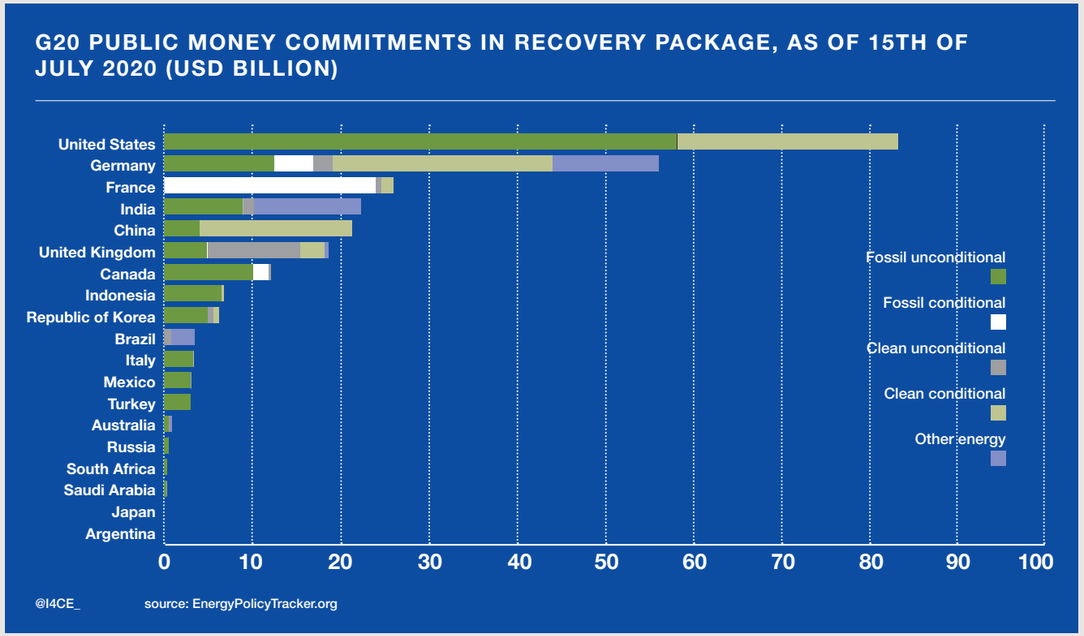
ACCORDING TO ESTIMATIONS BY I4CE and 13 other research institutes that have come together in an international consortium, the financial commitments made by G20 countries from the start of the pandemic up to early July 2020 have been far more favourable to fossil fuels than clean energy. 151 billion $ were invested in fossil fuel intensive industries, mainly aviation and the auto industry, as well as in fossil fuel production and to generate electricity from fossil sources. Part of this assistance was made conditional on the industries involved committing to reduce emissions ('environmental conditionality') but this is of questionable value either due to the vague nature of exchanges or because they have no binding nature. The consortium estimates that 20% of aid supporting fossil fuels had such conditionality, a figure that is much higher in certain countries, including France.

THE SUPPORT PROVIDED IN FAVOUR OF CLEAN ENERGY, like energy efficiency, renewable energy or cycling, grew to 89 billion $ in early July. 80% of this aid concerns technologies that are key to the low-carbon transition, but their environmental impact depends on the energy source that is used. This is true for electric vehicles in countries where electricity is not completely carbon-free, and rail transport.

"We need a second wave of measures to combine the recovery with climate"

The predominance of aid given to fossil fuels of course reflects the fact that the economy, broadly speaking, still depends too heavily on carbon. But this is still concerning for the low-carbon transition. While Germany, the United Kingdom, and even China spent more on clean energy than on fossil fuels, the opposite is true for countries like France, Australia, Canada and Saoudi Arabia. The recent announcement made by Prime Minister Jean Castex of a 20 billion € package for the ecological transition could reverse this trend in France.

THE FIRST WAVE OF MEASURES TO SAFEGUARD and revive the economy were launched as an emergency response to support the sectors that were hardest hit by the crisis and to protect jobs. We now need a second wave that combines the economic recovery with climate protection.



ENERGY POLICY TRACKER PROJECT

Since the start of the crisis, governments around the world have adopted many measures to safeguard and then help the economy recover. These measures will have an impact on greenhouse gas emissions. To help you make sense of it all, a consortium of 14 think tanks including I4CE launched the website EnergyPolicyTracker.org in July. This site looks at the G20 countries, which are responsible for 80% of global emissions, and the different financial instruments used by their governments: secured loans, cash advances, public investment, subventions, tax benefits.
The site will gradually expand to include other countries and will be updated regularly, to see if future recovery measures set the world on track for carbon neutrality.

The international consortium behind EnergyPolicyTracker.org is made up of:

- **International Institute for Sustainable Development (IISD),**
- **Institute for Global Environmental Strategies (IGES),**
- **Oil Change International (OCI),**
- **Overseas Development Institute (ODI),**
- **Stockholm Environment Institute (SEI),**
- **Columbia University in New York, Forum Ökologisch-Soziale Marktwirtschaft (FÖS),**
- **Fundación Ambiente y Recursos Naturales (FARN),**
- **Instituto de Estudos Socioeconômicos (INESC),**
- **Institute for Climate Economics (I4CE),**
- **Instituto Tecnológico Autónomo de México (ITAM),**
- **Legambiente, REN21, The Australia Institute (TAI).**

#Budget

Citizen proposals for the climate and economic recovery

The proposals put forward by the Citizens' convention for Climate could help the economy recover, by stimulating investment in building or transport. But at what cost for public finances?

QUENTIN PERRIER PROJECT MANAGER TAXATION

On June 21, the members of the Citizens' convention for climate put forward a range of proposals to accelerate the transition to a low-carbon economy in France. These proposals come at a timely moment to feed into the country's economic recovery program. I4CE has made a provisional assessment of the cost of these measures to the public purse.

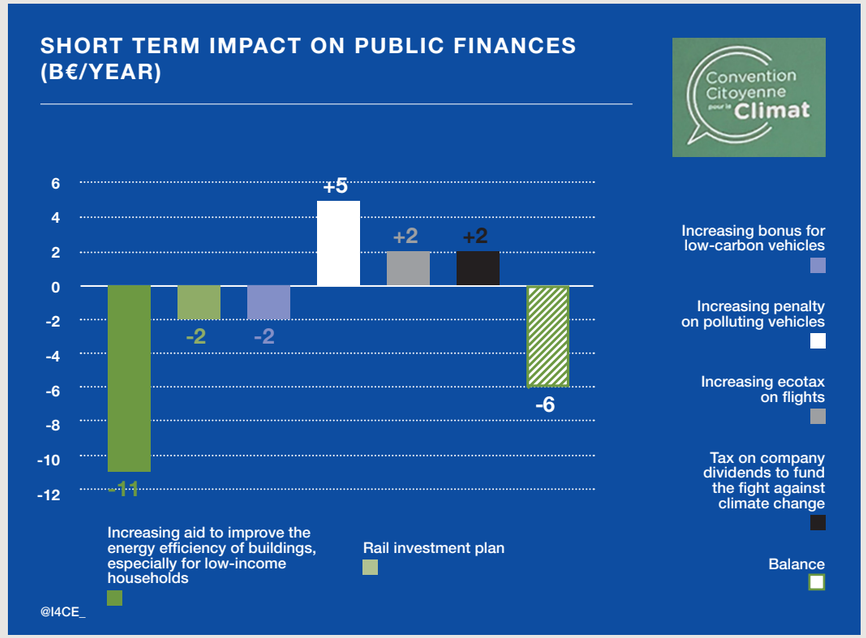
OF THE 149 CITIZEN PROPOSALS, ONLY FOUR REQUIRE SIGNIFICANT SPENDING OF PUBLIC FINANCES. These are: support for mandatory and total renovation of energy inefficient buildings, investment in freight and a reduction in VAT on rail services, and a reinforced green incentive scheme for electric vehicles. This means that 145 proposals could be implemented at a very reasonable cost. This initial assessment is a clear signal that the citizens were able to come up with a wide range of actions, including investment and subventions, but also taxation, reglementation and information.

ALL IN ALL, I4CE ESTIMATES AN IMPACT ON PUBLIC SPENDING in the order of 6 billion euros per year in the short term. This net cost is the total of the four spends above, representing 15 billion per year, minus three income streams that represent 9 billion euros per year: a higher penalty on polluting vehicles, an eco-tax on flight tickets and a tax on company dividends.

THIS ASSESSMENT OF 6 BILLION NET IS OF COURSE APPROXIMATIVE, and could require modification once political decisions have been made. Regarding the funding for renovation work, part of the 11 billion required could come from companies via Energy Saving Certificates, which would reduce the cost to the state. On the revenue side, the President of the Republic used one of his wild cards to rule out a tax on dividends. Lastly, some expenditure could quickly evolve over time, notably the bonus-malus vehicle incentive scheme if electric vehicles became widespread.

NEVERTHELESS, THIS PRELIMINARY COST ASSESSMENT HELPS US establish orders of magnitude in order to clarify public decision-making. We can see that the amounts in question are not negligible for public finances, but they are comparable to other budgetary decisions made by the state. The suppression of local residence tax, for example, costs the state 16 billion per year. The citizen proposals are in no way a 'Marshall plan', but help raise ambitions at a reasonable cost.

"The citizen proposals are in no way a 'Marshall plan'"



Public Session of Citizens' convention for Climate in February 2019

— Further reading on this topic:

Environmental and health co-benefits of public action « it's (also) the economy, stupid ! »

#Territories

There will be no ‘green recovery’ without the local authorities

Local authorities must deal with the sharp decline in revenue due to the health crisis. Just when they should be increasing spending for the climate.

MORGANE NICOL DIRECTOR OF TERRITOIRIES PROGRAM

Local authorities will drive the ‘green recovery’. They represent almost 70% of French public investment and have key competencies. It is local authorities that, for example, are propelling strategies for carbon-free transport, whether that is through urban public transport, new cycle lanes, or charging stations for electric vehicles. It is also local authorities that will have to adapt urban public spaces to future heatwaves.

PROBLEM: LOCAL AUTHORITIES MUST DEAL WITH THE SHARP decline in revenue due to the health crisis, a decrease estimated for the time being at 7.5 billion euros for 2020, while just to renovate public buildings and develop public transport infrastructures, they would need to increase investment and co-funding by 2 billion euros. Increasing state provision for local investment by 1 billion euros in 2020 is certainly good news, but it will likely not be enough. ‘Likely’ because as yet figures do not even exist on what local authorities need to make the climate investments required! It is essential that local authorities quickly assess their funding needs, based on the decarbonisation trajectories that they have developed over the past few years.

IT IS ALSO WORTH REMINDING OURSELVES THAT IT IS NOT ENOUGH TO LINE UP BILLIONS OF EUROS in order for investments to be made in the field. For projects to emerge, local authorities need human resources to lead and organise projects locally, to structure them. They also need engineering and expertise. All this requires an increase in dedicated operational expenditure, and for the recent easing of budgetary constraints on these expenditure paths to be maintained.

“As yet figures do not even exist on what local authorities need to make the climate investments required!”

LASTLY, WE MUST AVOID THE PITFALL OF INCREASING THE NUMBER OF STATE SUPPORT SYSTEMS, when on the contrary the current system should be simplified. Integrating climate investment goals into existing systems, such as the ‘Action coeur de ville’ programme or the State-Regional Plan Contracts, would be a good step forward. In the longer term, it is necessary to consider negotiating a ‘regional super contract’ that brings together existing structures and supplements them, with commitments from all financiers.

Green budgets
OVER TO THE LOCAL AUTHORITIES!

The government has published the first environmental assessment of the state budget. (...) This ‘green budget’ exercise allows environmental issues to be taken into account during budget discussions. To achieve carbon neutrality by 2050, it is essential to give ourselves the resources, including financial resources, to realise our ambitions, and to reform all financial aids and taxes that take us away from this goal. A ‘green budget’ also responds to public requests for transparency, concerning the amounts allocated, drawn and exempted to support the ecological transition.

The state has made a first step. But the transition to a low-carbon economy that is resilient to climate change is first and foremost a regional issue. The impacts of climate change materialise regionally, and many levers capable of reducing GHG emissions are also regional. Local authorities, with jurisdiction in the three key domains of transport, urban planning and housing, are where many structural decisions on planning and economic development are made, conditioning our ability to live in a changing climate.

Local authorities are central to making the ecological transition a success. Like for the state, budgetary discussions within local authorities would benefit from an environmental budget assessment. A ‘green budget’ would be a tool to both steer and ensure public action is coherent and transparent. It would also help local authorities to highlight actions undertaken to fight against greenhouse gas emissions and even facilitate funding through green bonds.

Some local authorities did not wait for the state to make a ‘green budget’ before starting to work on this issue. However, the methodological challenge of such an exercise should not be underestimated. That is why we, AMF, France Urbaine and I4CE, are already collaborating with five towns and urban communities to develop a common framework to help local authorities that want to make a green budget a reality. This framework, which will in the first instance focus on the challenges of attenuating and adapting to climate change, will be shared with all interested parties from the second trimester of 2020.

Join the movement of climate budgets for local authorities!

LA GAZETTE (DEC. 9, 2019)

co-authored by:

- **ANDRÉ FLAJOLET,** vice president of the Association of mayors in France (AMF)
- **DOMINIQUE GROS,** co president of the ‘sustainable development and energy transition’ commission at France Urbaine
- **MORGANE NICOL,** ‘local authorities’ director at the Institute for Climate Economics (I4CE)

#Adaptation

Making the economic recovery contribute to climate resilience

The public authorities should take the opportunity represented by the recovery to build an economy that is resilient to the now unavoidable effects of climate change.

VIVIAN DEPOUES PROJECT MANAGER ADAPTATION

“We cannot wait for a fire to break out before we build a fire station.”

The goals of the energy transition (and this is to be welcomed) are very much a part of discussions on plans to revive the economy. But the public authorities should also take this opportunity to build an economy that is resilient to the impacts of climate change.

IT WILL CERTAINLY BE NECESSARY TO INVEST A LITTLE MORE, whether that is to adapt coastal development, mobility infrastructure or tourist installations. Some of these needs, like adapting urban public spaces to heatwaves, have already been identified and their costs have been sufficiently projected to allocate funding as of now. They will find their rightful place in future investment support programmes set up by local authorities.Above all it is essential to invest better by making adaptation part of the drafting and steering of public decisions.

ACCORDING TO THE FIRST ENVIRONMENTAL ASSESSMENT OF THE STATE BUDGET, which the government published in 2019, 7b€ of annual expenditure goes towards adaptation in France each year, in environmental and agricultural policies, regional cohesion, and research. The problem about these policies is that they do not make adaptation an explicit goal, which means it is impossible to guarantee that responsibilities are clearly assigned or that resources are used optimally. One way of ensuring this happens is to have budgets dedicated to adaptation. In the United Kingdom, the rail network manager had an envelope of £150M for the period 2017-2019. An earmarked budget that helped maximise co-benefits in terms of adaptation.

BUT ADAPTATION IS NOT JUST A MATTER OF INVESTMENT. The epidemic has shown that services that are invisible in normal times are on the front lines during a crisis. Weather warning systems, public security and providing assistance to vulnerable people are all services that are and will be hugely important in the context of climate change. Public resources are under stress, and the funds allocated to running these services should be ring-fenced. To paraphrase the virologist Peter Piot, we cannot wait for a fire to break out before we build a fire station.

October 31, 2019, I4CE, Terra Nova and IDDRI organized a conference in the Senate and concluded by the Minister of Ecological transition.

“the knowledge needed to act is already available. ”

THE COMMON BELIEFS ABOUT ADAPTATION

On October 31, 2019, I4CE, Terra Nova and Iddri organised a conference in the Senate, sponsored by the senatorial delegation for strategic foresight and concluded by the minister for ecological transition. On this occasion, I4CE unveiled proposals designed with Terra Nova to strengthen measures to adapt France to climate change. It was an opportunity to put an end to certain popular misconceptions, like “we don’t have enough data on the impacts of climate change to act”. Not true. The impacts are now very well documented after years of scientific research on a global, European and national scale, and even sub-nationally. In France, a scientific project led by Jean Jouzel that brings together various research teams has published five reports on the Climate in France in the 21st Century, sharing regionalised climate change scenarios in the medium and long term. These scenarios are available online to allow actors in diverse industries, such as water management, insurance or agriculture, to undertake their own vulnerability studies. Meanwhile the national observatory on the effects of global warming maintains a database of current change indicators and studies undertaken, and closely monitors scientific research on the subject for all. Each year it publishes thematic reports, submitted to the Government and Parliament, on diverse subjects such as extreme weather events, the coastline, the forest, overseas departments, the city and health risks. And there are many other data available. In short, we now have the knowledge needed to take action.

#Finance

Financial regulation has a role to play in the ‘green recovery’

Financial regulators have numerous tools at their disposal to improve how the climate is factored into the financial markets, and thus help fund the transition.

MICHEL CARDONA SENIOR ADVISOR FINANCE

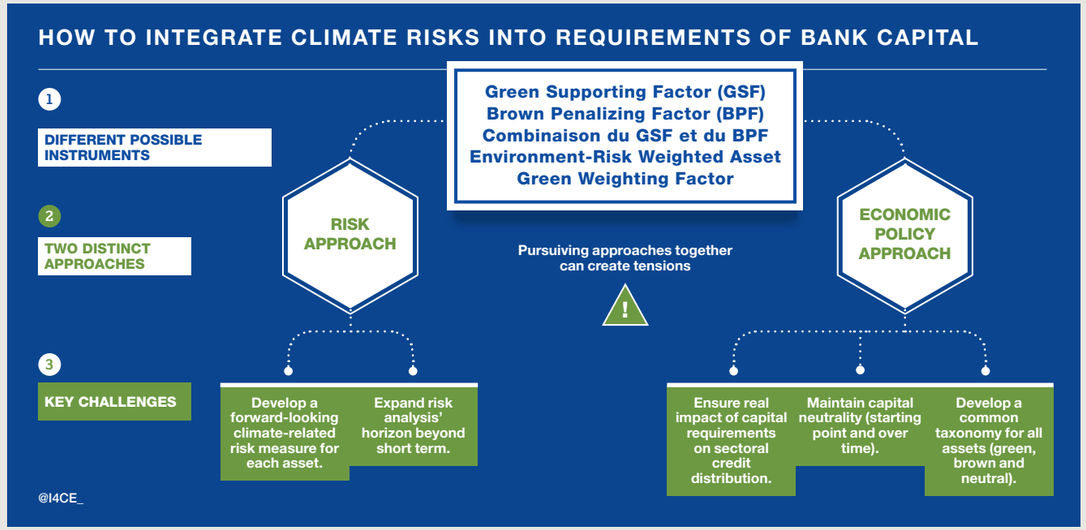
The priority in the economic sector is to revive economic activities, and numerous voices are calling to make this a ‘green recovery’. Given the scale of funding needs required for the transition, it is essential to supplement public funding with private funding. Yet it is obvious that private funding is lacking. ‘Green finance’ is still just a market ‘niche’. In order to mobilise the whole finance industry towards the transition, underlying financial mechanisms must now align with the demands of climate change.

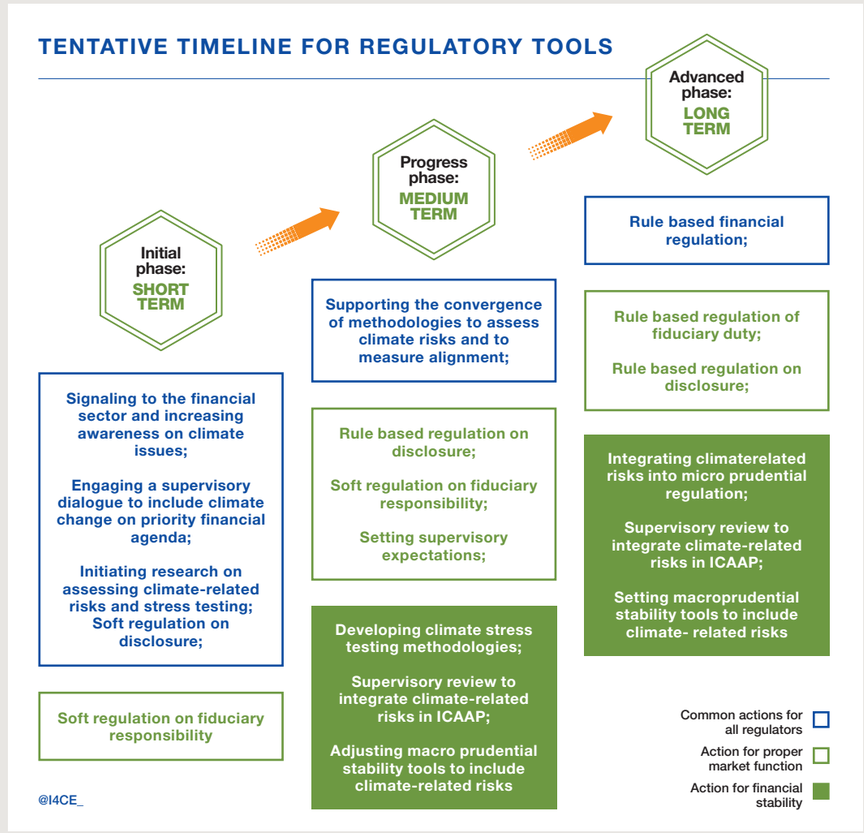
FINANCIAL REGULATION HAS AN IMPORTANT ROLE TO PLAY IN THIS. Financial regulators and supervisors have various instruments available which can be used to pursue three goals. The first goal is to ensure that the financial markets operate correctly, with improved transparency and financial market information on climate change, through precise and mandatory disclosure rules.

THE SECOND GOAL IS TO IMPROVE THE FINANCIAL STRENGTH OF individual financial actors and the stability of the financial sector as a whole. This could happen by integrating climate change into management standards (capital requirements or risk division rules) and into the supervision process (notably via climate stress-tests), through the development of monitoring tools (climate macro stress tests), and by using macro-prudential tools (capital buffer or limits on sector exposure).

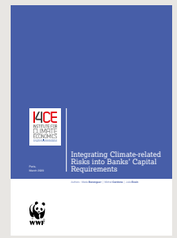
BY PURSUING THESE TWO GOALS, THESE TOOLS INDIRECTLY HELP FUND THE TRANSITION because financial actors can better acknowledge information and risks relative to climate change. But this indirect action is not necessarily enough. There must be debate on the opportunity of using certain financial regulation mechanisms in developed countries to proactively guide the flow of funding towards specific economic sectors. This third goal is controversial and triggers entrenched positions. But the urgency and scale of the risks of climate change makes this debate essential in order to inform political decision-making. Now is the time to address it for the financial sector to fully support the green recovery.

“There must be debate on the opportunity of using certain financial regulation mechanisms in developed countries to proactively guide the flow of funding.”





— Further reading on this topic:



Integrating Climate-related Risks into Banks’ Capital Requirements

What role for financial regulation to help the low-carbon transition?

#Finance

Public financial institutions can contribute to a 'climate-compatible' recovery

By putting the climate at the center of public financial institutions' mandate, governments will help them to contribute to an economic recovery that is compatible with climate issues.

ALICE PAUTHIER RESEARCH FELLOW FINANCE AND DEVELOPMENT

Public financial institutions (PFIs), whether public national or multi-lateral banks, are mandated with supporting the development of economies and societies. They encourage and redirect investments using a wide range of financial instruments: loans, equity, subventions and guarantees.

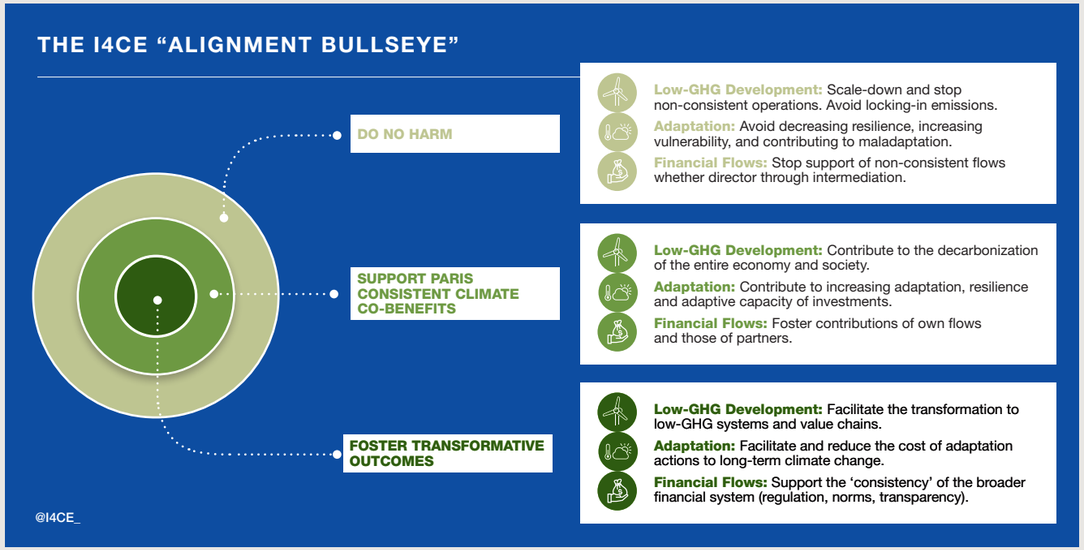
PFIS ARE WELL PLACED TO HELP SET UP AN ECONOMIC RESPONSE TO THE CRISIS THAT IS COMPATIBLE WITH CLIMATE GOALS. Since 2015, an increasing number have integrated climate issues into what they do. Some, especially multilateral banks and the members of the International Development Finance Club (IDFC) have committed to 'aligning' all their activities with the goals of the Paris Agreement. In other words, to make sure that their activities do not damage the climate or actively help protect it. These commitments have led them to develop a range of tools, criteria and metrics. It is on this basis that they can now build a 'green' response to the economic crisis.

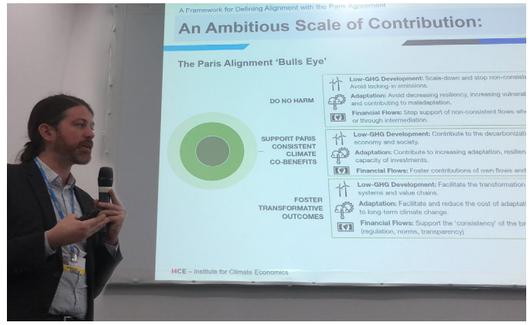
But to do so, governments must first ensure that the recovery plans they are asking PFIs to implement are themselves 'green'. The European Union has for example made an important step with its 750 billion euro recovery package centered on the green transition, with the European Investment Bank playing a central role.

GOVERNMENTS MUST ALSO, INDIVIDUALLY OR COLLECTIVELY, make a clear signal to PFIs that they have to respect - and in many cases strengthen - their commitments to achieve goals on climate and sustainable development. The 'Finance in Common' summit in November 2020 will be a key opportunity to strengthen the mandate of PFIs on this.

Meanwhile the operational teams within PFIs should receive a clear signal from executive management: climate ambition remains a priority, including in the design and payment of funds in response to the economic crisis. Lastly, and perhaps most importantly, PFIs must continue to share their experience with each other and engage with the commercial financial community through forums such as the Climate Action in Financial Institutions initiative or UNEP FI, and others. These efforts are not luxuries for better times, they are the key to success.

"Even in the current context, PFIs must keep aligning their activities with goals on climate and sustainable development."





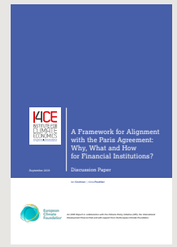
WHAT IS ALIGNMENT?

Many public development banks - and a growing number of private institutions - have committed to 'aligning' their activities with the goals of the Paris Agreement. Yet, to this day, there is no consensus on what alignment means. I4CE's 'alignment target' provides a shared framework that highlights the main challenges.

Alignment's first challenge is to 'do no damage'. Over the past decades, public development banks have focused their climate efforts on funding projects that are likely to limit greenhouse gas emissions, such as renewable energy installation or energy efficiency. Funding development projects that have co-benefits for the climate is essential, but it is equally important not to fund, for example, the construction of a new coal-fired power plant at the same time. The first step of alignment is to do no damage across all activities.

Development banks must also ensure that they make best use of the public resources entrusted to them. What is the point of funding another wind turbine when other private actors could do that just as well? It is essential for these institutions to seek to have 'transformational' impact. This is one of the main challenges of aligning with the Paris Agreement. It is a challenge that should not be underestimated, since development banks, due the structure of climate goals - and notably the famous 100 billion goal - are used to thinking in terms of financing volumes rather than impact.

— Further reading on this topic:



A framework for alignment with the Paris agreement

#Carbon Market

The European carbon market put to the test by Covid

The crisis is an opportunity for the European Union to rethink the role of its carbon market: it is nothing more and nothing less than a safety net in the event that other policies do not work.

CHARLOTTE VAILLES PROJECT MANAGER BUSINESS AND INDUSTRY

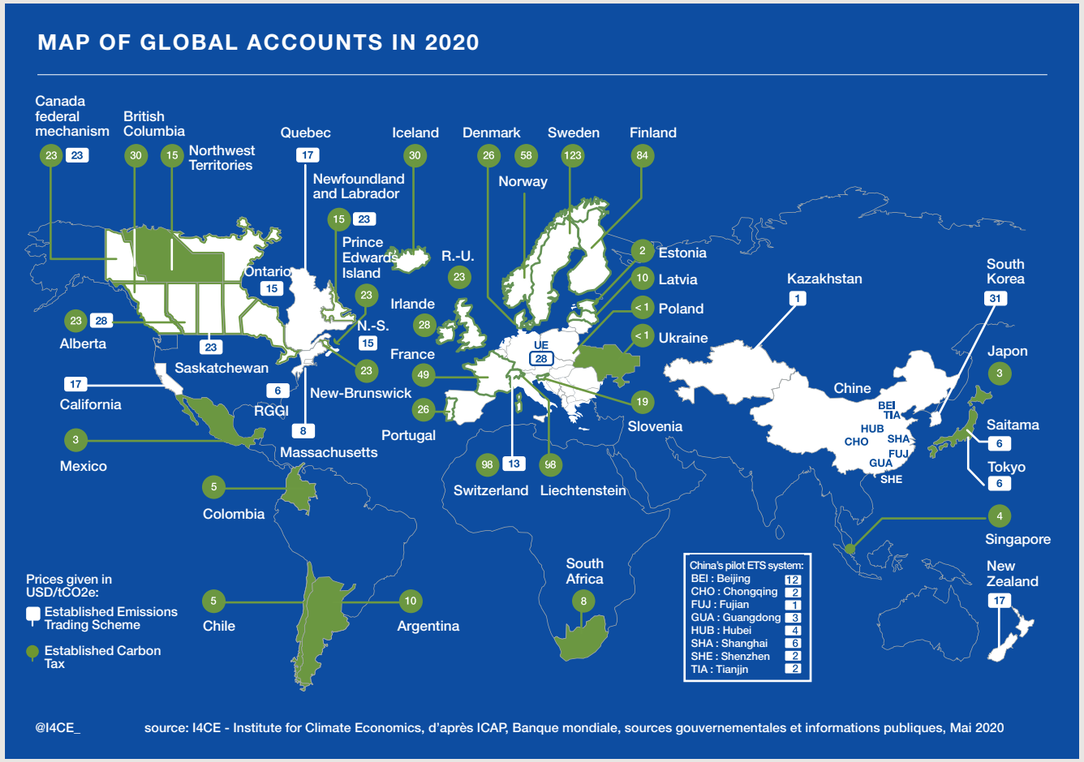
“We do not have to choose between the EU ETS and other policies to decarbonize European electricity and industry”

The current economic crisis once again makes obvious how vulnerable the European emissions trading system (EU ETS) is to external shocks. The crisis is expected to have a very significant impact on 2020 emissions and create a fresh surplus of allowances, when the surplus accumulated since 2009 has still not been reabsorbed. To prevent another chronic fall in carbon prices, the parameters of the market stability reserve must therefore be strengthened, which is planned for 2021. Another solution would be to establish a price floor, as exists in other ETSs. But the crisis should more widely be used to rethink the role of the carbon market, drawing on the example of California where the ETS has assumed the role of a safety net.

Initially presented as the cornerstone of European climate policy, it must become a backstop for meeting climate objects in the event that the predicted reductions from other policies prove insufficient.

THIS IS BECAUSE HISTORICALLY THE EU ETS HAS CONTRIBUTED LITTLE TO REDUCING CARBON EMISSIONS. Over the past two years, in the electricity industry, it has encouraged the use of gas rather than carbon, but to achieve climate neutrality it is not enough to ‘switch’ between fossil fuels. The industrial sectors covered by the EU ETS have to date made little progress. Decarbonization requires huge investments in low-carbon technologies, which was never possible with the carbon market alone. Worse, the existence of the EU ETS hindered the use of other levers, such as the integration of carbon criteria in material markets or the introduction of Contracts For Difference for innovative low-carbon projects.

WE DO NOT HAVE TO CHOOSE BETWEEN THE EU ETS AND OTHER POLICIES TO DECARBONIZE EUROPEAN ELECTRICITY AND INDUSTRY. We need both. And we should not fall back into the trap of expecting everything from the EU ETS. This is even more important to remember at a time when the Commission plans to expand the carbon market to the transport and housing sectors. This extension, if indeed it does take place, should be conditional on not giving up other existing policies, and even on implementing new ones. It could otherwise slow down the transition of these sectors to carbon neutrality.



GLOBAL CARBON ACCOUNT IN 2020

Explicit carbon pricing systems - whether in the shape of a tax or the carbon market - are continuing to develop around the world. Each year, I4CE presents an overview of these public policies in its ‘Global carbon accounts’ and infographics: the countries that have introduced these policies, the sectors covered, price levels, revenue generated and where it goes. The 2020 Global carbon accounts shows that as of April 1, 44 countries and 31 provinces or cities have an explicit price on carbon. These jurisdictions represent 60% of global GDP. Three new countries have introduced a carbon pricing policy: Canada, South Africa and Singapore. The explicit carbon prices vary between 1 and over 120$ per tonne of CO2.

Prices are still below 10$ for three-quarters of the emissions covered, despite international scientific consensus situating the optimal price for these mechanisms between 40 and 80 US$/tCO2eq in 2020. Carbon revenues are up slightly for the year, reaching about 48 billion dollars, compared to 45 billion in 2018. Half of this comes from taxes and half comes from emissions trading markets. Revenues are mainly directed towards projects related to the ecological transition, or allocated to the jurisdiction’s general budget.

During the 2008 financial crisis, the quota-based emissions markets collapsed, which made these mechanisms much less of an incentive for manufacturers. The current crisis will put the safeguards introduced since then to the test.

— Further reading on this topic:

Global Carbon Accounts 2020

#Fiscality

The carbon tax is not the only solution

Raising the carbon tax is not one of the 150 proposals made by the Citizens' convention for climate. Benoit Leguet reacts in this interview published in La Croix.

BENOIT LEGUET
MANAGING DIRECTEUR

La Croix : Is the ecological transition possible without raising the carbon tax?

BENOÎT LEGUET : We must not make the carbon tax the be-all and end-all of the ecological transition. The carbon tax is an interesting tool, but it is just one tool in the tool box. Too many people, including economists, see it as a Swiss army knife that can solve all our problems by itself. The carbon tax has its advantages, but it also has problems. The good news is that there are other solutions.

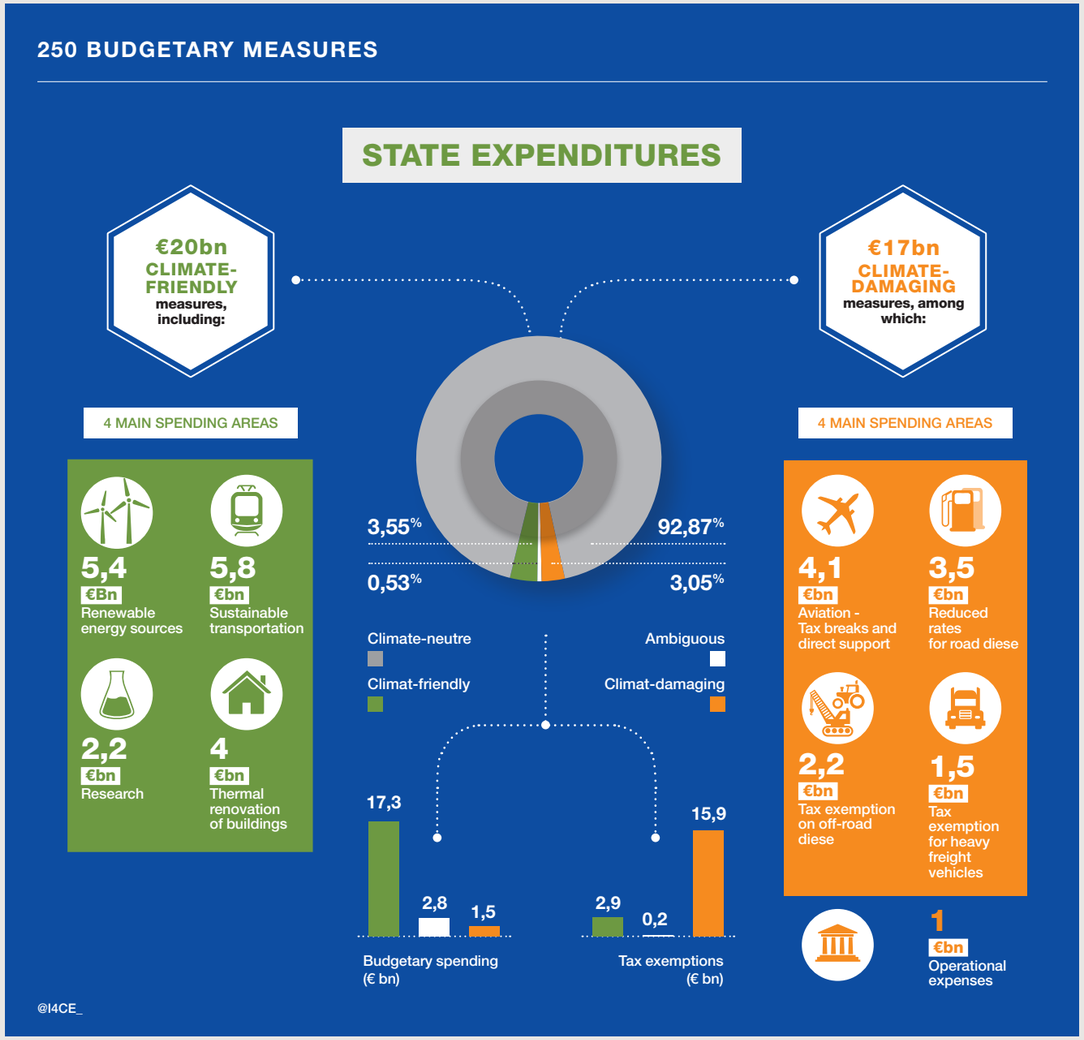
Too often, economists who talk about carbon pricing forget that different economic sectors have vastly different dynamics, particularly when it comes to investment. For example, raising the carbon tax cannot send a sufficiently strong signal to justify insulating housing. For this, the price per tonne of carbon would need to be fixed at a level that would be devastating for all other industries. To get a major insulating programme going, therefore, reglementation is much more effective. This is precisely the path proposed by the Convention.

La Croix: Most experts call for taxing carbon emissions more and more heavily to discourage the use of oil. Isn't the carbon tax above all politically and socially impossible to enforce?

B. L.: The carbon tax as we know it is above all a tax on fuels. Take the situation of someone living 30 km from their workplace, who has just bought a car. If the price of carbon was increased by raising the carbon tax, should they move home, quit their job, or scrap the car and walk to work? The carbon tax has negative effects that are hard to avoid, so I am not surprised that the Citizens' convention did not select this idea.

That is certainly not to say that nothing should be done. To encourage people to change their behaviour and choose cleaner cars, it would be fairer and more effective to tax vehicle purchase rather than use, through an expanded bonus-malus incentive system. We could also reintroduce a label to tax vehicles based on emissions. It is when choosing a car that households can make a real choice. Afterwards, it is too late, they are trapped. Once again, we see that the carbon tax is not the only solution, nor necessarily the best, to reach our goal.

"To encourage people to change their behaviour and choose cleaner cars, it would be fairer and more effective to tax vehicle purchase rather than use"



250 BUDGETARY MEASURES EXPLICATION

The vote on the state budget is a key moment for the climate, which is why I4CE has carried out a climate assessment of the budget. It has identified over 250 expenditures and tax loopholes that influence France's emissions, upwards or downwards. These are 250 good reasons to pay attention to the budget and look beyond the flagship measures that political debate tends to focus on, like the carbon tax. Since this study was published, I4CE has launched several new projects to make climate assessments of public budgets, with local bodies and internationally.

— Further reading on this topic:

A first 360-degree climate assessment of France's State budget

#Agriculture

Let us not be afraid of obligation of result

With the budget for the Common Agricultural Policy under stress, we must ensure that every euro spent for the environment has real impact on the ground.

THOMAS BONVILLAIN RESEARCH FELLOW AGRICULTURE AND FORESTRY

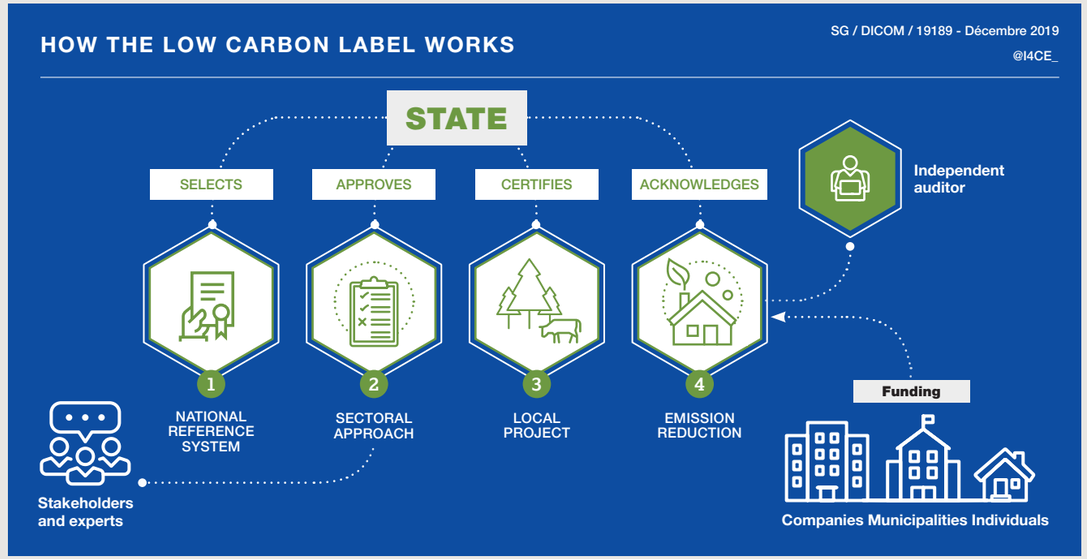
Public budgets are being cut, and this is especially true for the Common Agricultural Policy (CAP), which is currently under reform. For each euro spent with sustainability as its stated goal, there must be real impact on the ground. The Commission plans to make this happen by shifting some aid towards obligation of result, rather than obligation of conduct, which has predominated up until now. From now on farmerswill be remunerated for their efforts depending on the environmental impact measured on the ground. Obligation of result is seen as a complex and costly method to implement, so this move raises a number of concerns. Will farmers have to install sensors, carry out soil analyses and therefore face skyrocketing costs for CAP funding? This is not the case.

THE ANALYSIS CARRIED OUT BY I4CE FIRST SHOWS THAT THE DISTINCTION BETWEEN OBLIGATION OF CONDUCT AND OBLIGATION OF RESULT IS TOO BLACK AND WHITE. Pure obligation of result in the environmental field never actually exists. Instead there is a continuum of more or less accurate estimations of results. Nor is obligation of result necessarily more costly. For example, AECMs, based on obligation of conduct, are more expensive to manage than carbon certification, which is based on obligation of results. The generic nature of the measure is instrumental, helping to amortize set-up and monitoring costs for a large number of farmers.

LASTLY, CONCERNING THE EFFICACY OF THE MEASURE IN TERMS OF ITS ENVIRONMENTAL IMPACT, moving towards obligation of result does not seem to be determining in itself. Two factors are determining however: the programme's ambition and its additionality requirement - conditioning the subvention, for example, on improvement compared to an initial state. The efficacy of instruments geared towards obligation of conduct is criticised and flawed, but we should not make generalisations. Funding to support the conversion to organic farming, for example, is considered highly effective and is equivalent to an obligation of conduct.

HOWEVER, CARE SHOULD BE TAKEN TO AVOID A SITUATION IN WHICH FARMERS HAVE TO CHOOSE BETWEEN PRIVATE AND PUBLIC FUNDING. This is a real risk, if, for example, the synergies between future CAP measures and carbon certification frameworks are not considered in advance. The Commission's wish to employ new measures based on obligation of result is good news. It must be explored, and without fear, so that the CAP may finally rise to the climate challenge.

"For every euro spent with sustainability as its stated goal, there must be a real impact on the ground."



CARBON LABELLING AND COMPENSATION: DON'T GET CONFUSED!

Not a week goes by without some company announcing it plans to become carbon neutral. To reach this goal, it commits to reducing emissions and 'offsetting' its remaining emissions through funding projects like planting trees or managing forests or grasslands. In most cases, the emissions reductions made through these projects are certified by carbon labels like the Label Bas Carbone in France (developed by I4CE and partners, and adopted by the Minister of Ecology), the Woodland Carbon Code in the UK, and private labels Gold Standard and Verra internationally. These labels are not perfect and should continually be improved, but they are based on an expert review process and transparent specifications.

Carbon neutral commitments and offsetting have always provoked considerable criticism. Some companies reduce emissions only slightly and rely heavily on offsetting. While such criticisms are legitimate, they should not be used to bring the projects that are funded, and the labels that guarantee their quality, into disrepute. This confusion would be anecdotal if it were not so dangerous: it could cripple efforts made over many years to ensure that every euro that is spent in the name of the climate - via offsetting or other funding projects - actually helps fight climate disruption. This would give way to initiatives of mixed quality, which are hard to compare and do not always evaluate climate impact in a transparent way.

— Further reading on this topic:

Will the obligation of environmental results green the CAP ?

Domestic carbon standards in Europe

#Entreprises

Scenario analysis of the issues of the low-carbon transition

To help businesses identify and anticipate the risks and opportunities of the low-carbon transition, I4CE has published a practical guide to implementing a forward-looking approach: scenario analysis.

AURORE COLIN RESEARCH FELLOW TERRITORIES

Huge changes to all sectors of the economy are needed for the low-carbon transition. Interaction between sectors means that all businesses are concerned, and not just those in the most carbon-intensive sectors. Changes to their business environment related to the low-carbon transition can have major consequences on key elements of profitability like the demand for certain products or services, production costs, or even the value of their assets.

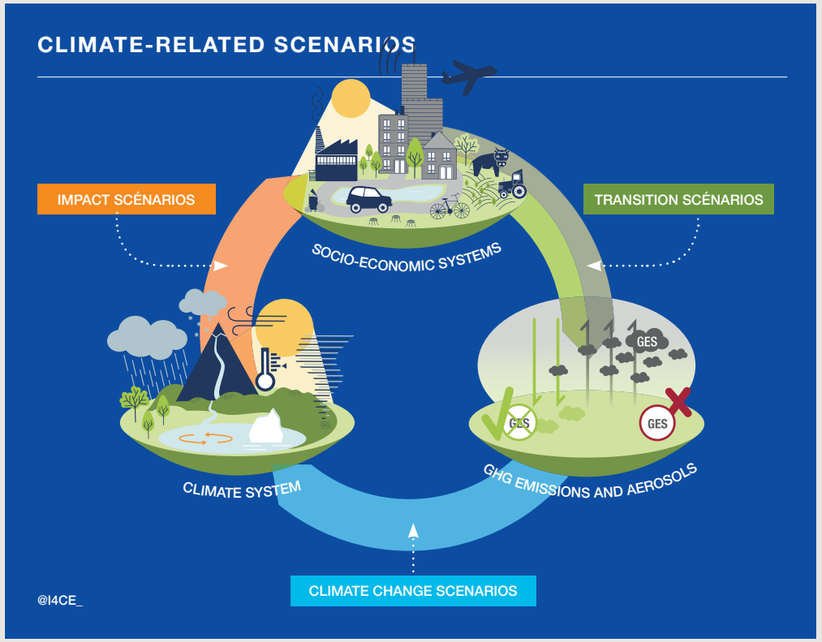
THE CHANGES THAT OUR SOCIO-ECONOMIC SYSTEMS REQUIRE ARE GENERALLY UNDERSTOOD, but there are uncertainties about the scale, pace and exact nature of the low-carbon transition in the future. Forecasting methods, and scenario analysis in particular, allow businesses to face these uncertainties. They help businesses to understand how the low-carbon transition could take place and how it could impact their business environment, so they can anticipate the risks and opportunities involved.

THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) RECOMMENDS that businesses carry out scenario analysis for strategic purposes and in order to communicate certain elements of the analysis to financial actors, which increasingly want to understand the exposure of the businesses they finance and their ability to implement a resilient strategy. This means scenario analysis of the issues of the transition is both relevant for informing business strategy and beneficial for relationships with financial partners.

"The TCFD recommends that businesses carry out scenario analysis for strategic purposes."

HOWEVER, EVEN THOUGH SCENARIO ANALYSIS HAS BEEN USED FOR DECADES IN STRATEGIC THINKING within some businesses, their widespread application to climate challenges raises difficulties. On top of this, further details are required on what information financial actors need, exposing confidentiality issues.

THIS IS WHY I4CE HAS PUBLISHED A GUIDE TO SUPPORT NON-FINANCIAL BUSINESSES in carrying out a scenario analysis of the strategic issues related to the low-carbon transition. It presents the essential steps and is accompanied by a selection of resources (methods, tools, literature). The guide also gives businesses ideas on communicating useful information from the scenario analysis to financial actors, while overcoming the issue of confidentiality.



— Further reading on this topic:

Understanding transition scenarios

Scenario analysis of the issues of the low-carbon transition

SCENARIO FAMILY

Before building and using scenarios, it is essential to know how to decipher already-existing climate scenarios. These scenarios can be divided into three broad groups, each looking at a different question pertaining to the interactions between socio-economic systems and the climate:

- Transition scenarios explore the various possible transitions to a low-carbon economy. They describe the changes to socio-economic systems that would make it possible to limit global temperature rise to 2 or even 1.5°C. Different low-carbon transitions can be envisaged depending on the targeted climate goal, the scale and spread of efforts to reduce carbon emissions over time, by sector and by country, or by the weighting given to different solutions rolled out to cut or sequester GHG emissions.
- Climate change scenarios - or climate forecasts - explore the possible impacts of human activities on the climate system according to different developments in socio-economic systems. The long-term evolution of the climate is conditioned by current and future GHG emissions and therefore by the uncertain evolution of our socio-economic systems.
- Climate impact scenarios explore the possible consequences of the evolution of the climate on a given system (for example the physical environment, an ecosystem, or a human system such as a town or a farm). The impacts of climate change will be determined by the changes in climate but also by the evolution of socio-economic systems, which will determine their degree of exposure, their sensitivity and their ability to adapt to climate change.

PUBLICATIONS

ALL PUBLICATIONS CAN BE DOWLOADED ON:
www.I4CE.fr

19 jun 2020
CLIMATE REPORT
Will the obligation of environmental results green the cap?
by: Thomas Bonvillain / Claudine Foucherot / Valentin Bellassen

04 jun 2020
CLIMATE REPORT
What role for financial regulation to help the low-carbon transition?
by: Michel Cardona / Maria Berenguer

27 may 2020
CLIMATE BRIEF
Environmental and health co-benefits of public action: "it's (also) the economy, stupid!"
by: Patrice Joffron (Universite Paris Dauphine I Psl) / Benoit Leguet

14 may 2020
CLIMATE REPORT
Global carbon account in 2020
by: Sébastien Postic / Marion Fetet

24 apr 2020
CLIMATE REPORT
Scenario analysis of the issues of the low-carbon transition
by: Charlotte Vailles / Romain Hubert / Aurore Colin

10 apr 2020
CLIMATE REPORT
Investing in climate can help france drive its economic recovery
by: Hadrien Hainaut / Maxime Ledez / Quentin Perrier, Phd / Benoit Leguet / Patrice Joffron (Université Paris Dauphine I Psl)

11 mar 2020
Integrating climate-related risks into banks' capital requirements
by: Maria Berenguer / Michel Cardona / Julie Evain

30 dec 2019
Domestic carbon standards in europe
by: Gabriella Cevallos / Valentin Bellassen / Julia Grimault

04 dec 2019
The proposals of 5 think tanks to meet the energy and climate challenge in europe
by: Charlotte Vailles / Ian Cochran

29 nov 2019
CLIMATE BRIEF
Finance fit for paris (3fp) – results and scores for france
by: Michel Cardona

28 nov 2019
CLIMATE BRIEF
Key figures on climate – france, europe, worldwide
by: Aurore Colin

08 nov 2019
CLIMATE REPORT
Tracking investment into energy transition in germany and france: a comparison of methodologies and selected results
by: Julie Emmrich / Ingmar Juergens / Alexander Klinge / Aleksandra Novikova / Hadrien Hainaut / Ian Cochran

07 nov 2019
Understanding transition scenarios – eight steps for reading and interpreting these scenarios
by: Aurore Colin / Charlotte Vailles / Romain Hubert

04 nov 2019
CLIMATE REPORT
Towards an alternative approach in finance to climate risks: taking uncertainties fully into account
by: Vivian Depoues, Phd / Michel Cardona / Morgane Nicol / Vincent Bouchet (Groupe Caisse Des Dépôts)

01 oct 2019
CLIMATE REPORT
Landscape of climate finance in france – 2019 edition
by: Maxime Ledez / Hadrien Hainaut

01 oct 2019
CLIMATE REPORT
A first 360-degree climate assessment of france's state budget
by: Marion Fetet / Quentin Perrier, Phd / Sébastien Postic

19 sep 2019
CLIMATE REPORT
A framework for alignment with the paris agreement: why, what and how for financial institutions?
by: Ian Cochran / Alice Pauthier

CLUBS

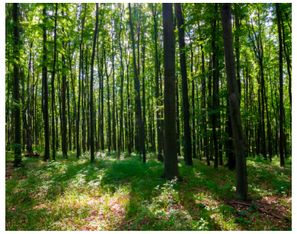
I4CE clubs

I4CE creates spaces for dialogue: sometimes fraught with controversy but also - and above all - a place to share experiences and information. Like the clubs on agriculture and the forest, or the Climate Action in Financial Institutions initiative.

CLUB INITIATIVE CLIMATE ACTION

Launched in 2015, the Climate Action in Financial Institutions Initiative is now composed of over 50 public and private financial institutions around the globe that would like to incorporate climate challenges effectively into their strategy and operations. I4CE acts as the initiative's scientific secretariat, to help member institutions learn from each other, share best practices and lessons learnt, and collaborate on subjects of shared interest.

CLUB CARBON AGRICULTURE FORESTERY AND WOOD



The 'Agriculture Climate' Club and 'Carbon Forest and Wood' Club are two places for candid exchanges between actors from all horizons. Actors wishing to gain skills and pool their knowledge; to understand reglementary changes and the impact they may have on their own sector; and to identify new forms of action and funding tools. These clubs each meet at least twice yearly, and I4CE also provides monitoring and analysis.

CLUBS KEY FIGURES

40+ Participants at each event

30+ External expert interventions

GOVERNANCE

Board members

I4CE is a non-profit organization founded by the Caisse des Dépôts and the French Development Agency.

Pierre DUCRET
Chair of the Board
– Climate Change Advisor for the Caisse des Dépôts Group

Virginie CHAPRON-DU JEU
Secretary General of the board of directors
– Director of the Group Finances Caisse des dépôts

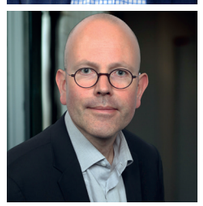
Jean-Michel BEACCO
Treasurer of the Board –
Managing Director,
Institut Louis Bachelier

Nathalie AUFAUVRE
Managing Director
of Financial Stability
and Operations,
Banque de France

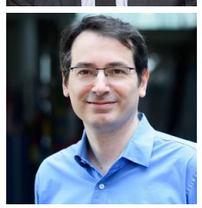
Nicolas BLANC
Director of the Strategy,
Foresight and Institutional
Relationships
& Executive Management
Strategy, Partnerships
and Communication, AFD

Vincent CAUPIN
Director of the Department
Diagnostics Economic and
Public Policies & Executive
Management Innovation,
ResearchbKnowledge, AFD

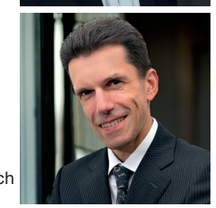
Mohammed HAFNAOUI
Deputy Chief Executive
Officer, CDG Développement,
Groupe Caisse des Dépôts
et de Gestion Maroc



Patrick JOLIVET
Deputy Head of Economics
and Forecasting Department,
French Environment and Energy
Management Agency



Damien NAVIZET
Head of the Climate Division, French Development Agency



Joel PROHIN
Head of the Fixed Income
Asset Management Division,
Caisse des Dépôts

BUDGET

Financial transparency

*The accounts as at **31/12/2019** have been certified unreservedly by our auditor, Ecovis represented by **Mr. Yalep.** These financial statements were presented and approved **on the 24th of April 2019 by** the **Board of Directors** and approved by the General Meeting on the same date.*

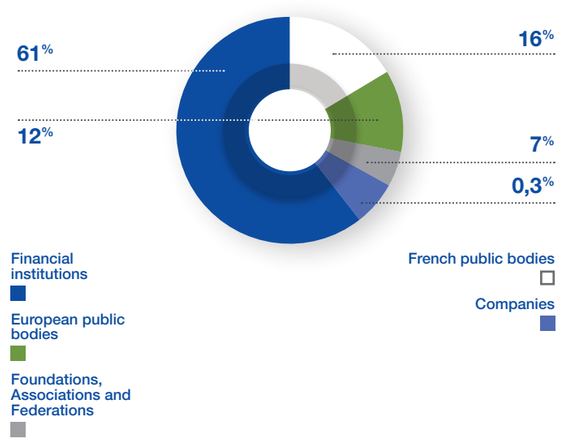
Where do the resources come from?

48
financial partners, including **7** financial institutions, **5** local authorities, **22** companies, **8** NGOs **3** European and **7** French public bodies

3,25
million euro budget

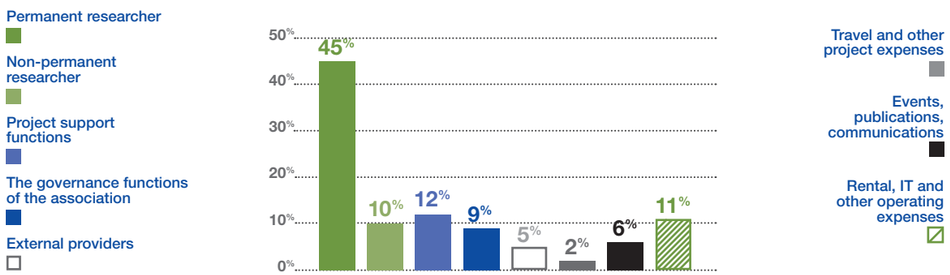
60%
core funding, to explore issues of universal interest

FUNDING DISTRIBUTION ACCORDING TO ORGANIZATION TYPE

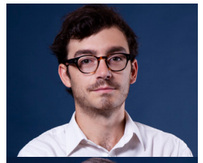


Where do the resources come from?

2019 EXPENSE DISTRIBUTION



TEAM

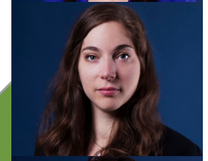


Thomas BONVILLAIN
Research fellow Agriculture and Forestry

Michel CARDONA
Senior Advisor Finance

Damien DEMAILLY
Strategy and Communication Director

Marion FETET
Research fellow Taxation



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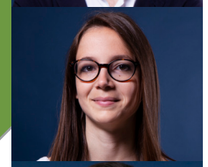
Project Manager Agriculture and Forestry

Romain HUBERT
Project Manager Finance

Benoit LEGUET
Managing Director



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Office Manager

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Project Manager Adaptation

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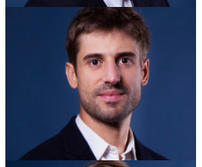
Project Manager Agriculture and Forestry

Hadrien HAINAUT
Project Manager investment

Louise KESSLER
Director of Economy Program

Simon MORBOIS
Financial and Administrative Director



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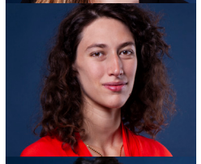
Clothilde TRONQUET
Research fellow Agriculture and Forestry

Malika BOUMAZA
Partnerships Manager

Aurore COLIN
Research fellow Territories



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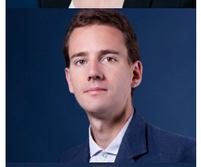
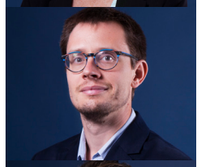
Anuschka HILKE
Senior Project Manager - Finance and Investment



Maxime LEDEZ
Research fellow investment

Morgane NICOL
Director of Programmes



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Project Manager Carbon pricing Project Manager

Charlotte VAILLES
Project Manager Business and industry

Text: Damien Demailly - **Project management:** Amélie Fritz - **Creative direction:** Caroline Le Mignot - **Photos :** © iStock / GoodLifeStudio. Photothèque I4CE.

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