TRADE AND CLIMATE JUSTICE

Synthesis of the impacts of international trade on the climate. Analysis of alternative trade practices and policies.

Patrick Veillard

OXFAM
Magasins du monde

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ACKNOWLEDGEMENTS

The author would like to thank the people interviewed for sharing their experiences and views, as well as all those who provided feedback. Special thanks go to Véronique Rousseaux for her various corrections and contributions, and to Lorent Fritsche for the layout and graphic design. If you have any comments or questions, please send an e-mail to Patrick.Veillard@omdm.be.

An Oxfam-Magasins du monde publication– March 2021

Responsible editor : Pierre Santacatterina–Rue provinciale, 285–1301 Bierges

FÉDÉRATION WALLONIE-BRUXELLES

Belgium
partner in development

Printed on recycled paper

OXFAM
Magasins du monde

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List of Abbreviations

AECM: Agri-environment-climate Measures

BACA: Belgian Alliance for Climate Action

CAP: Common Agricultural Policy

CBAM: Carbon Border Adjustment Mechanism

CDM: Clean Development Mechanism

CETA: EU-Canada Comprehensive Economic and Trade Agreement

CH_4: methane

CIRAD: Centre de Coopération Internationale en Recherche Agronomique pour le Développement

CO_2: carbon dioxide

COP: Conference of the Parties

CORSIA: Carbon Offset and Reduction Scheme for International Aviation

CSA: climate-smart agriculture

CSP: concentrated solar power

CSR: Corporate Social Responsibility

DC: developing country

DSB: Dispute Settlement Body

ECBF: European Climate and Biodiversity Fund

ECT: Energy Charter Treaty

ETS: European Emissions Trading Scheme

EU: European Union

FCC: Fairtrade Carbon Credits

FCS: Fairtrade Climate Standard

FTA: free trade agreement

FTAO: Fair Trade Advocacy Office

FUGEA: Fédération Unie de Groupements d'Éleveurs et d'Agriculteurs

GATT: General Agreement on Tariffs and Trade

GDP: gross domestic product

GHGs: greenhouse gases

GMO: genetically modified organisms

HREDD: Human Rights and Environmental Due Diligence

ICAO: International Civil Aviation Organization

ICS: Investment Court System

IEA: International Energy Agency

IMO: International Maritime Organisation

IPCC: Intergovernmental Panel on Climate Change

IRENA: International Renewable Energy Agency

ISDS: Investor-State Dispute Settlement mechanism

ITF: International Transport Forum

Mercosur: Southern Common Market (Brazil, Argentina, Uruguay, Paraguay)

MSI: multi-stakeholder initiatives

NAFTA: US-Canada-Mexico Free Trade Agreement

NCP: National Contact Point

NDC: Nationally Determined Contributions

NGO: non-governmental organisation

NOx: nitrogen oxide

NZE: Net Zero Emissions

OCE: Office for Climate Education

SBT: Science Based Targets

SDC: Sustainable Development Chapters

SDGs: Sustainable Development Goals

SME: small to medium-sized enterprises

SUV: Sport Utility Vehicles

TPP: Trans-Pacific Partnership Agreement

TTIP: EU-US Transatlantic Trade and Investment Partnership

Tw: Wet bulb temperature

UN: United Nations

UNEA: United Nations Environment Assembly

UNEP: United Nations Environment Programme

UNESCO: United Nations Educational, Scientific and Cultural Organisation

UNFCCC: United Nations Framework Convention on Climate Change

WFTO: World Fair Trade Organization

WMO: World Meteorological Organisation

WTO: World Trade Organisation

WWF: World Wide Fund for Nature

Executive Summary

Global warming is becoming more and more noticeable and is already having many dramatic consequences, such as extreme weather events (heat waves, storms, fires, cyclones), which are mainly affecting developing countries. In some of these countries, which are often densely populated, temperatures that are unbearable for humans are expected to occur within a few years. Globally, there is a risk that the planet will be tipped into a considerably warmer (+5 to +6°C) and more unstable climate system, with sea levels 10 to 60 metres higher.

Although the effort required is considerable, it still seems possible to limit warming to +1.5°C by the end of the century, for instance by eliminating our dependence on fossil fuels before 2050. The improvement in knowledge and the growing mobilisation of the general public mean that we can hope for a favourable change in practices and legislation over time.

In the climate policies that are gradually being put in place at various levels, there is, however, one major omission: trade. Yet it constitutes a powerful factor in the potential evolution of global emissions. One of the reasons that it is usually ignored is the "embedded" and "diffuse" nature of the impacts of trade on the climate:

- For example, the calculation of developed countries' emissions, which is presented as steadily declining, in fact ignores emissions produced abroad in the production of imported goods and services: these are referred to as 'imported emissions'. It is fairer (although technically more complex) to attribute these emissions to the countries where these goods are consumed (a 'carbon footprint' approach). Calculating in this way, the balance of Belgium's emissions between 1990 and 2017 is not -17% but +20%.
- The same kind of problem arises with regard to transport: national inventories do not include international transport emissions appropriately, even though these are increasing sharply, partially owing to the dynamics of globalisation, which lead to an increasing elongation and fragmentation of supply chains. Just as for the issue above, this matter is absent from the Paris Climate Agreement.
- In addition, there are other complex phenomena, leading to what are known as 'indirect emissions'. Their overall effect is uncertain, but various studies seem to show that greater trade openness increases overall emissions, more specifically through the spread of carbon-intensive consumption practices and growth models.

Despite these effects, the global political agenda remains focused on ever more trade liberalisation. In particular, we are witnessing the multiplication of bilateral trade and investment agreements, such as the EU-Mercosur agreement and the Energy Charter Treaty (ECT), which have disastrous social and environmental impacts and provide increasingly modest and uncertain economic gains.

How can trade and climate be better linked from this point forward? We will explore some of the most recent and promising alternative instruments.

1. **Regulating international transport.** Despite the growth of this sector, it is subject to very little regulation. New technical and operational standards could be set in order to reduce emissions from different modes of transport. One way to improve the effectiveness of these standards would be to integrate them into bilateral trade agreements (e.g. CETA). Another regulatory avenue would be to integrate climate externalities into the cost of transport by increasing fuel taxes.

2. **Relocalising global value chains.** There are many potential benefits of local supply chains: increased interaction between producers and consumers, better margins for producers, lower transport costs... But from a strictly envi-

ronmental point of view, international transport often represents only a small portion of emissions when compared, for example, with the production phase and 'last mile' transport. Even though local distribution channels are worth developing, as the disparity with globalised chains is so great, they are therefore not a miracle solution from the sole point of view of the climate. This is all the more true as it is impossible to relocalise certain types of production, for agronomic reasons for example in the case of tropical plants or of cereals that require too much land.

3. **Revising the model of trade agreements**. More social and environmental standards should be included in free trade agreements. These usually include sustainable development chapters, but they are too vague and non-binding. They should therefore be made more binding and should include sanctions and/or introduce clauses suspending trade benefits for non-compliance with international commitments such as the Paris Agreement, or prohibit the use of private arbitration tribunals. In all cases, the introduction of social and environmental obligations requires thorough and independent impact assessments.

4. **The Carbon Border Adjustment Mechanism (CBAM)**. Taxing imported products according to their carbon content is a priority for the European Commission, in the framework of the Green Deal and its objective of carbon neutrality by 2050. This tax would make it possible to combat "carbon leakage", a phenomenon whereby companies relocate to countries with more permissive environmental legislation. Such a mechanism would for instance allow the European Emissions Trading System (ETS), which is heavily criticised by civil society, to function better. The main difficulty lies in calculating the carbon content of products, which often results from very complex supply chains. One solution would be to limit source taxation to a few high-carbon primary commodities (cement, steel, chemicals, fertilisers, electricity), at least initially. Special conditions could alleviate the tax for developing countries while reallocating part of the revenue to finance their energy transition.

5. **The Climate Club**. Faced with the potential difficulties of implementing the CBAM, economist W. Nordhaus recently proposed a more comprehensive approach: a uniform and moderate tax on all imported products not coming from climate-leading countries. The mechanism would be incentive-based, as these non-member countries would simply have to adjust their climate targets in order to join the club and escape the tax. The main advantage of this approach is the simplicity of putting it into practice. Various economic simulations seem to demonstrate its effectiveness.

6. **Human Rights and Environmental Due Diligence (HREDD)**. As (multinational) businesses are a major source of emissions, any attempt at climate regulation through trade must address their practices. This is the purpose of a growing number of legislative initiatives based on what is known as "due diligence". This type of law obliges multinationals to identify and prevent risks of human rights abuses, and in the event of actual harm, to mitigate and remedy this harm. A growing number of these laws include environmental risks, given the numerous impacts of climate change on human rights. The French "duty of care" law, a pioneer in this field, obliges contracting companies to reduce their direct and indirect emissions throughout their supply chains, on pain of legal action (e.g. two lawsuits in progress against Total). The widespread adoption of this type of legislation is an important issue, both at the European level (with a recent legislative initiative) and at the international level (with an international treaty being negotiated at the UN).

Even though all these avenues are promising to varying degrees, they tend to neglect more marginalised populations, essentially from the countries of the South, particularly in terms of adaptation to climate change. Certain solutions could even have a counter-productive effect on the development of these countries, such as border taxes or the relocalisation of certain production activities. International mechanisms that are supposed to provide aid do exist, such as the Green Climate Fund. But this aid is

often overpriced, provided in the form of loans (and not grants) and difficult for small farmers to access.

Fair Trade is one part of the answer to these problems of climate justice and adaptation to climate change. By guaranteeing better prices and greater economic stability, it allows small producers to establish more resilient production systems with lower emissions (e.g. agroforestry, organic farming, circular economy). Moreover, Fair Trade products are increasingly selected according to environmental criteria and subject to environmental impact assessments. Fair Trade also supports cooperative and redistributive organisational models which constitute an effective alternative on a small scale. It is therefore "ready-to-use" as a genuine tool for supporting the ecological transition at a micro-economic level, and in this way could inspire more global regulatory practices. All of this has the aim of (re)placing trade at the service of the well-being of populations and the planet, or in other words, of converging the world economy into a safe and just space for humanity.

A woman carries drinking water after a cyclone in Calcutta (May 2020, India).

Introduction

Some speak of the greatest challenge ever faced by humanity and the risk of a collapse of civilisation. Others warn of a necessary and urgent change in the model of society. Still others prefer to talk about green growth and purely technological solutions.

Whatever approach we take, the population is becoming less and less indifferent to the climate crisis[1] as it begins to feel its effects directly. Heatwaves, cyclones and other disasters occur one after another, like the recent mega-fires in Australia, Siberia, California and the Amazon. These events illustrate the extent to which climate breakdown has become a concrete emergency, and no longer just an environmental debt to be distantly handed down to future generations.

In fact, for any sufficiently enlightened and informed reader, it is difficult not to alternate between sleepless nights and cold sweats in view of the increasingly gloomy scenarios of climate scientists. When we consider that current disasters are linked to a temperature rise of only 1°C compared to the pre-industrial era, the outlook is simply terrifying. Especially as most political and economic decision-makers are demonstrating a distressing lack of action. The latest Conference of the Parties on climate change (the famous COPs) is one of the best illustrations of this, with the 25th session, for example, not resulting in any concrete progress. As energy expert Michel Lepetit summed up in a recent article, "*procrastination prevails over decarbonisation*".[2] This inertia contrasts with the growing mobilisation of the general public, civil society and scientists,[3] including the numerous climate protests encouraged by new figures such as Greta Thunberg, and the success of the *Youth for Climate, Extinction Rebellion and Climate Action Network* movements (see Box 5).

Amongst this proliferation of action, and despite the seriousness and systemic nature of climate breakdown, there is one policy area that is not often mentioned: trade. What impact does trade have on our modes of production and consumption, and therefore on our greenhouse gas (GHG) emissions? This question is usually avoided, even in the calculation of global emissions (see the question of imported emissions in chapter 2.2).

The purpose of this study is to take a closer look at the relationship between trade and climate, in terms of impact as mentioned, but also in terms of policies and alternatives to the current model. After a first part that summarises the main issues related to the climate emergency, the second part will examine the main sources of emissions that are directly and indirectly related to trade. The last chapter will attempt, in a non-exhaustive way, to evaluate different conceivable policies for reducing trade-related emissions.

1 The British daily newspaper The Guardian has decided to change the language used in relation to environmental issues in all its publications. In the case of the climate, the newspaper uses the terms "climate emergency, crisis or breakdown" rather than "climate change", an expression considered too gentle and passive in view of the catastrophic nature of the phenomenon. France Inter. 22/05/2019. Pour mieux rendre compte de la crise climatique, The Guardian change de vocabulaire. Political scientist François Gemenne believes on the other hand that we should avoid talking about climate change as a "crisis", which is ephemeral in nature and can potentially be overcome, arguing that it is irreversible for our planet and its ecosystems (or at least its consequences over a very long period). Gemenne F. 06/03/2020. Le cygne noir et les cygnes blancs. In this study, we will therefore try to give preferential use to the expressions "climate emergency" and "climate breakdown". Le Monde. 18/03/2020. « De la crise du coronavirus, on peut tirer des leçons pour lutter contre le changement climatique ».

2 Le Monde. 10/07/2020. Changement climatique : « L'inflexion de la trajectoire planétaire en matière d'émissions de CO_2 se fait toujours attendre ».

3 Le Monde. 20/02/2020. L'appel de 1 000 scientifiques : « Face à la crise écologique, la rébellion est nécessaire ».

A climate emergency

The aim of this section is not to go into the detail of the origins, functioning or impacts of climate change. Many sources are indeed readily available for further information on the subject, from the most scientific (such as the latest IPCC report, see Box 1) to the most accessible, or even artistic (see Box 5 for an overview of some of these). Here we will simply list some of the most significant recent developments, whether of a scientific, political or educational nature.

1.1 INCREASINGLY PERCEPTIBLE WARMING

While it was frequently perceived as a phenomenon with distant consequences just 20 years ago, global warming has become a much more real emergency in recent years for a majority of people on the planet, particularly those who are most marginalised. According to the *World Meteorological Organisation* (WMO), the **global temperature** for the years 2015-2019 was 1.1°C above pre-industrial averages and 0.2°C above the 2011-2015 period (see Figure 1).[4] As we know, the phenomenon of global warming is linked to an increase in the concentration of greenhouse gases (GHGs, the main one being carbon dioxide, or CO_2) in the atmosphere, which itself is mainly caused by human activities. Needless to say, the existence of global warming is no longer questioned by the scientific community, nor are its causes.[5]

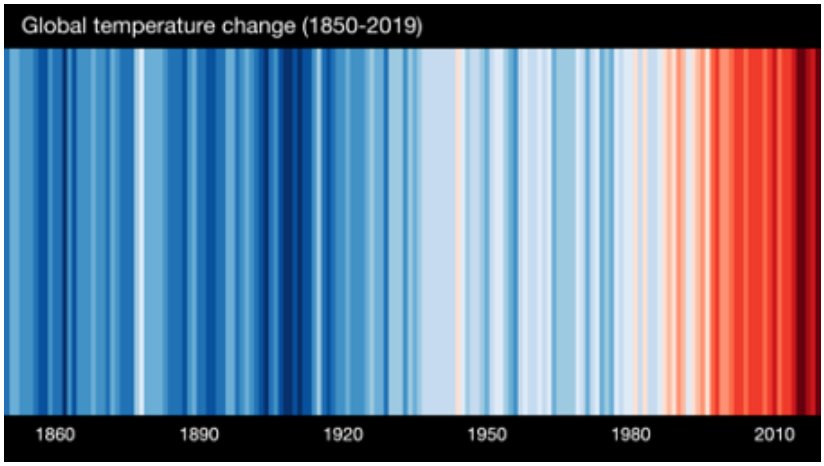

Figure 1. « Warming stripes » representing the evolution of global temperatures from 1850 to 2020 (one stripe per year).

ShowYourStripes.info. Accessed 19/01/2021.

And a **new peak in CO_2** was reached in May 2020 (despite the COVID-19 crisis), equal to 417.2 ppm (parts per million).[6] In fact, GHG concentrations have shown no sign of slowing down in recent years, let alone decreasing, despite the commitments made under the Paris Agreement (see Box 2) or the strong growth in renewable energy.[7] It should be noted that the international scientific community considers that to limit global warming to +2°C by 2100, this atmospheric concentration must not exceed 450 ppm.[8] The GHG concentration was equal to 280 ppm before the pre-industrial era.[9]

4 The pre-industrial reference period is 1850-1900. WMO. 2019. High-level synthesis report of latest climate science information convened by the Science Advisory Group of the UN Climate Action Summit 2019.
5 In 2014, the IPCC estimated the probability that warming is due to human activities to be "greater than 95%", while a study published in 2018 in the journal Science estimated it to be 99.99%. Wikipedia. Controverses sur le réchauffement climatique. Accessed 01/07/2020.
6 This was 2.4 ppm higher than the peak of 414.8 ppm reached in 2019. The Guardian. 04/06/2020. Atmospheric CO_2 levels rise sharply despite Covid-19 lockdowns.
7 Usbek & Rica. 03/12/2019. Climat : la Terre se rapproche de « points de basculement » irréversibles.
8 Intergovernmental Panel on Climate Change. 2015. Climate Change 2014. Synthesis Report.
9 As Belgian climatologist Jean-Pascal van Ypersele explains, if we want to return to a baseline climate for agriculture, ecosystems, etc., we need to return to around 350 ppm. This value would make it possible not to exceed +1°C, a manageable increase for most regions of the world. RTBF. 07/05/2020. La concentration de CO_2 dans l'atmosphère atteint un nouveau record en ce mois de mai 2020 : comment l'expliquer ?

1.2 ALREADY DRAMATIC CONSEQUENCES

Among the consequences of this warming, we are already seeing an increasingly high frequency of **extreme weather events** such as heatwaves, storms, cyclones and fires (e.g. the mega-fires of 2019/20 in Australia, which were heavily covered by the media,[10] see Figure 2). Dramatically, it is usually developing countries that are most affected, even though they are historically the lowest contributors to global warming and receive very little help from developed countries, particularly in terms of adaptation (see Chapter 3 and Figure 3).[11] In Belgium, the average number of days of heavy rainfall has increased from 3 to 6 per year since 1950.[12] Another consequence is the rapid rise in sea levels, currently a little over 3 mm per year according to the WMO. This phenomenon results from the expansion of the oceans (due to their warming) as well as the melting of the ice caps (e.g. the accelerated melting of the Antarctic and Greenland ice caps).[13]

Amongst the impacts to come, a recent study indicated that in the IPCC's worst-case scenario, a third of humanity could be living in **places as hot as the Sahara** is today within fifty years. These 3.5 billion people, living in regions that are currently already very hot (e.g. India, Nigeria, Pakistan), would experience an average annual temperature of over 29°C.[14]

Worse, another study suggests that **temperatures unbearable for humans** may be reached sooner than expected. American and British researchers found that what are known as "wet bulb" temperatures of 35°C Tw[15] had recently been reached for a few hours in Pakistan and the United Arab Emirates.

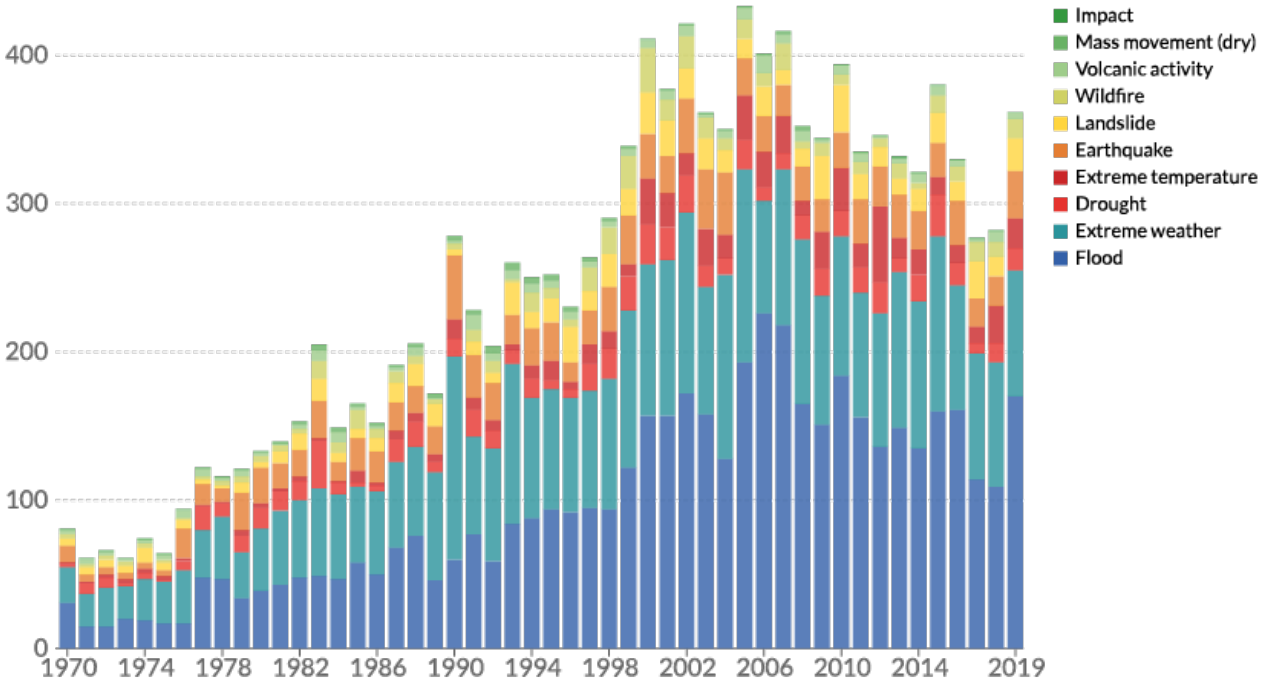

Figure 2. Global reported natural disasters by type, 1970 to 2019.

www.emdat.be - EMDAT. 2020. OFDA/CRED International Disaster Database, UCL, Belgium. - ourworldindata.org/grapher/natural-disasters-by-type

10 Reporterres. 08/01/2020. Incendies : en Australie, le « monstre » est hors de contrôle. Many scientists believe that these giant fires will gradually become the norm, particularly because of climate change and the droughts it causes. Ravaging tens of thousands of hectares (or even 10 million in the case of Australia in 2019), these gigantic blazes are uncontrollable and self-perpetuating, for example by causing the formation of new clouds, which in turn generate lightening that ignites new fires a few hundred kilometres away. Le Monde. 28/01/2020. Arte décrypte le phénomène des méga-feux, « machine infernale de la nature ».

11 Oxfam International. Octobre 2020. 2020 : les vrais chiffres des financements climat. Où en est-on de l'engagement des 100 milliards de dollars ?

12 RTBF. 30/11/2018. COP24 : en Belgique, des effets du réchauffement climatique déjà perceptibles.

13 It should be noted that the melting of the Arctic ice pack does not cause a rise in water levels owing to the Archimedes' principle. Plomteux A. 30/12/2019. Enjeux environnementaux : un système à déconstruire, une alternative à concevoir. Étude LEEP.

14 Le Monde. 04/05/2020. D'ici à 2070, un tiers de l'humanité pourrait vivre dans des endroits aussi chauds que le Sahara.

15 The "wet bulb" temperature (Tw) is a combined measure of temperature and air humidity. Ouest-France. 18/08/2020. 35 degrés de température humide, ce seuil mortel pour l'homme n'est plus une fiction.

At this value, which combines high temperature and humidity, the human body can no longer cool itself through the evaporation of sweat, which leads to overheating and the subsequent failure of vital organs.[16] The problem is that these values were only expected in 2050, and according to the most pessimistic GHG emission scenarios... And the areas affected or destined to be affected include some of the most populated regions of the world, notably in India, South Asia, the Middle East and the Southeast of North America.[17]

Bushfire in the Queensland area (Australia, December 2019).

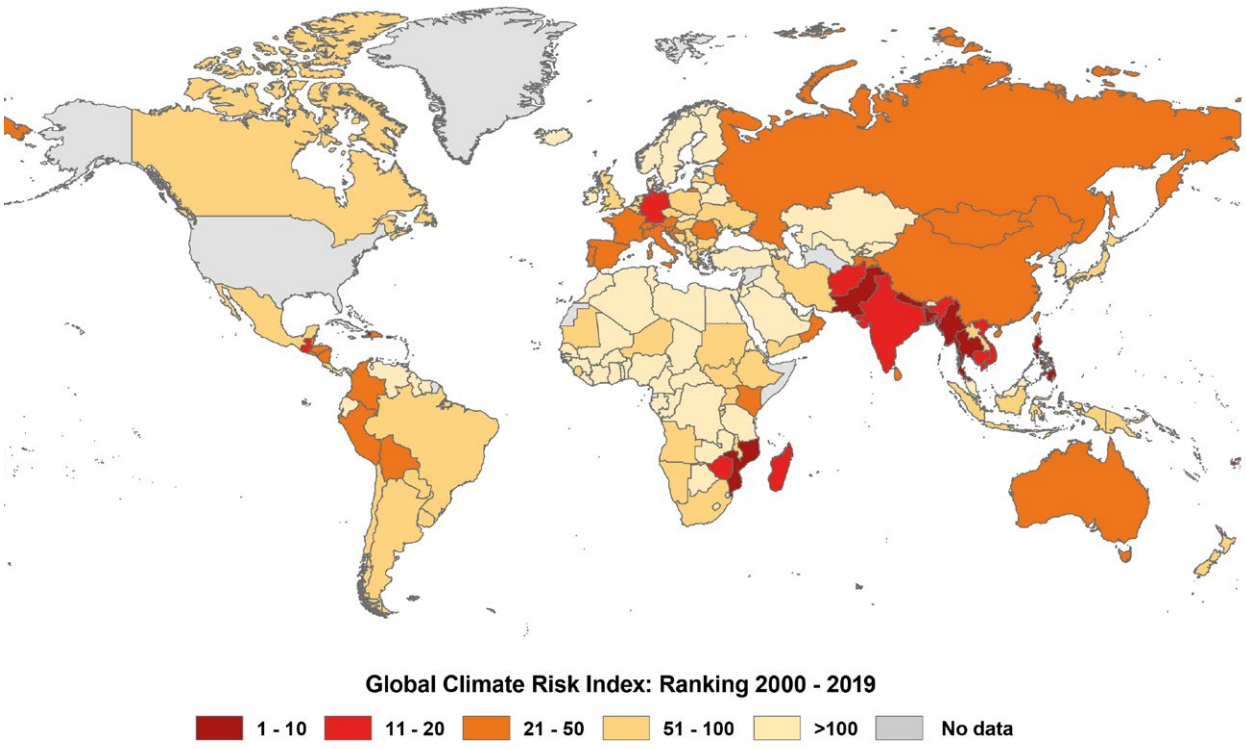

Figure 3. Global Climate Risk Index 2000-2019.

Germanwatch. Janvier 2021. Indice mondial des risques climatiques 2021. Qui souffre le plus des évènements météorologiques extrêmes?

16 The two cooling mechanisms of the human body are heat exchange and sweating. When the external temperature is 35°C, which is also the temperature of our skin surface, heat exchange can no longer take place. The only way to get rid of heat is therefore through sweating. But if the air is also saturated with humidity, this is not possible either. On Earth today, this humid temperature hardly ever exceeds 30°C Tw. Sciences & Vie. Climat en 2100 : vers des zones invivables pour l'homme.

17 Usbek & Rica. 12/05/2020. Climat : des températures invivables pour l'homme atteintes plus tôt que prévu.

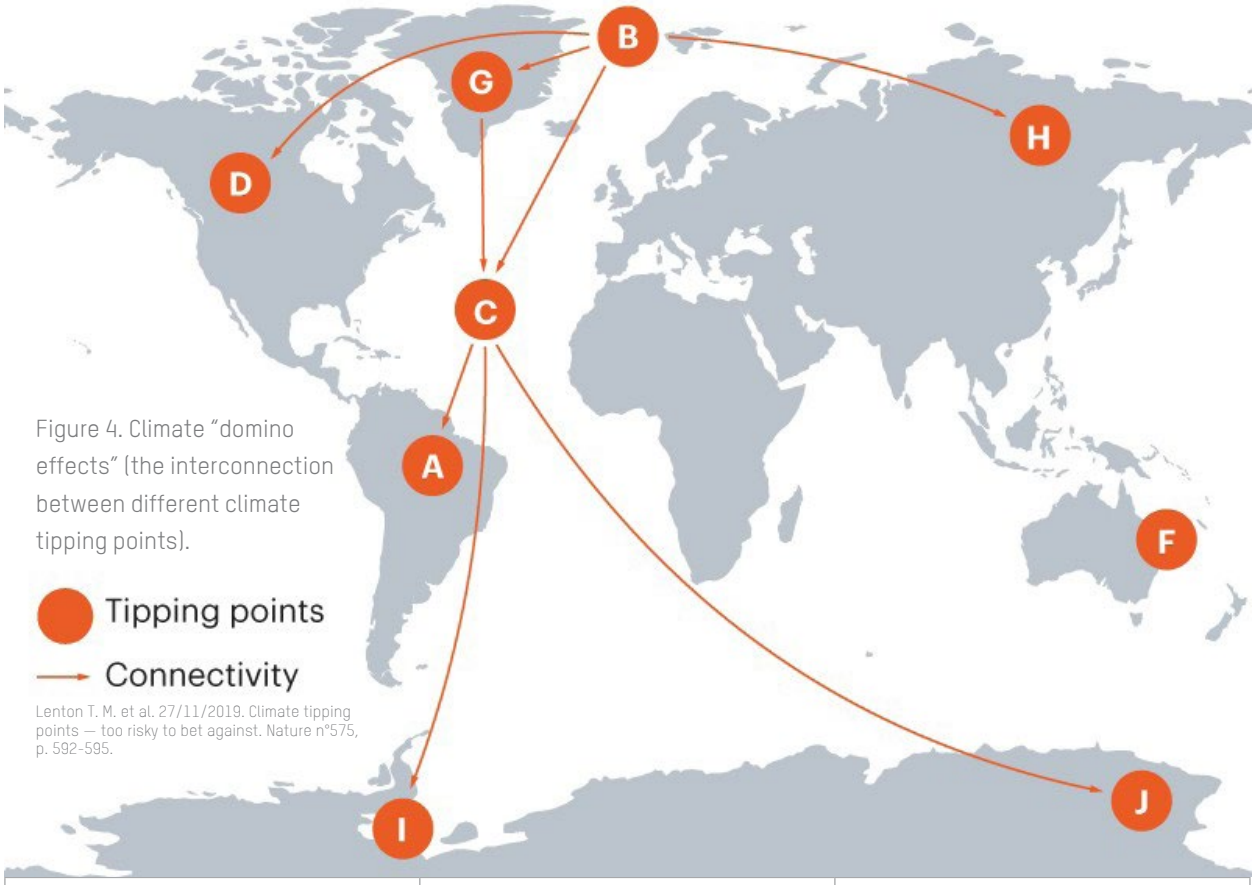

Figure 4. Climate "domino effects" (the interconnection between different climate tipping points).

Lenton T. M. et al. 27/11/2019. Climate tipping points — too risky to bet against. Nature n°575, p. 592-595.

A. Amazon rainforest. Frequent droughts.	**D. Boreal forest**. Fires and pests changing.	**H. Permafrost**. Thawing.
B. Arctic sea ice. Reduction in area.	**F. Coral reefs**. Large-scale die-offs.	**I. West Antarctic ice sheet**. Ice loss accelerating.
C. Atlantic circulation. In slowdown since 1950s.	**G. Greenland ice sheet**. Ice loss accelerating.	**J. Wilkes basin**, East Antarctica. Ice loss accelerating.

1.3 A RISK OF RUNAWAY CLIMATE CHANGE

One explanation for this faster-than-expected warming could be the phenomenon known as "tipping points" or "**climate domino effects**" (Figure 4). The principle is that at a certain level of global warming, events can trigger or accelerate other phenomena. An example of such a potentially uncontrollable "feedback loop" is the melting of permafrost, frozen ground present in about a quarter of the land mass of the northern hemisphere (e.g. in Siberia or Canada). Its irreversible melting as a result of global warming releases gases that include methane (CH4), a GHG thirty times more powerful than CO_2 (over a period of 100 years). Some regions of Canada have thawed 70 years more quickly than models predicted.[18]

These tipping points were identified by the IPCC over 20 years ago, but the organisation only saw a risk of global destabilisation with warming

18 The melting of the polar ice caps provides another example of a domino effect. This melting causes a reduction in the reflective power (known as the "albedo", namely the proportion of solar radiation reflected back into the atmosphere) of the ice pack, and therefore accelerates its warming. The melting of ice in Greenland and the Arctic could also lead to changes in ocean currents, which, among other things, would disrupt the monsoon season in West Africa and East Asia and cause the Amazon rainforest to dry out, making it more prone to fire.
Usbek & Rica. 03/12/2019. Climat : la Terre se rapproche de « points de basculement » irréversibles.

of +5-6°C. However, their two most recent reports (from 2018[19] and 2019[20]), which take better account of the interconnection between systems, suggest that **these tipping points may be crossed at +1/+2°C** of warming.

Professor Phil Williamson at the University of East Anglia thus judges that "*the prognosis [....] is, unfortunately, fully plausible: that we might have already lost control of the Earth's climate.*"[21]

This hypothesis is strengthened by the latest results of new climate models, which are more accurate than previous ones. These results indicate a more severe warming than previously calculated, whatever the future scenarios and atmospheric CO_2 levels. This apparently relates to a **greater sensitivity of the climate to clouds and aerosols**, whose effect is better taken into account by the new models.[22] The general principle of this other feedback loop is apparently that a warmer climate is more humid, which increases the number of clouds in the atmosphere, with a more pronounced net effect on warming.[23]

Although their likelihood remains uncertain, there are numerous other scenarios of damaging sequences of events. The risk is that of tipping into a considerably hotter planetary state, known as "*hothouse Earth*".[24] A new state of equilibrium for the

Intergovernmental Panel on Climate Change (IPCC)

1

Established in November 1988 at the request of the G7, the IPCC is an autonomous intergovernmental organisation whose mission is to assess the risks and possible consequences of human-induced global warming and to propose potential strategies for adaptation and mitigation. It is part of the *World Meteorological Organisation* (WMO), under the patronage of the *United Nations Environment Programme* (UNEP). The IPCC is made up of scientists from all over the world, as well as representatives of governments (under pressure from the G7, who feared at the time of its creation that climate expertise would be a matter only for scientists, who were suspected of environmental activism).

The IPCC's figures and conclusions are consequently the result of a broad consensus that has a structural tendency to underestimate the speed and effects of climate change. It should be noted, however, that the IPCC does not make its own climate projections, but evaluates those published by the scientific community. Two communities therefore work in parallel within the group: climatologists on the one hand, who try to assess the (future) evolution of the climate, and socio-economists on the other, who try to simulate the evolution of human activities. In 2007, the Nobel Peace Prize was awarded jointly to the IPCC and to former US vice-president Al Gore, the year after his documentary film "An Inconvenient Truth" was released.

Former US Vice President Al Gore, author of the documentary film "An Inconvenient Truth".

19 IPPC. 2018. Global warming of 1.5°C. Special report.
20 IPPC. 2019. Climate change and land. Special report.
21 The Guardian. 27/11/2019. Climate emergency : world "may have crossed tipping points".
22 The Guardian. 13/06/2020. Climate worst-case scenarios may not go far enough, cloud data shows.
23 Usbek & Rica. 17/09/2019. Jusqu'à +7°C en 2100 : de nouveaux modèles prévoient un réchauffement plus sévère.
24 Le Monde. 07/08/2018. La Terre risque de se transformer en « étuve » à cause du changement climatique.

Formation of a giant crater following the melting of permafrost in the Yamal Peninsula (Russia).

Earth would be reached, with a global temperature of +5 to +6°C and a sea level 10 to 60 metres higher than today.[25] Such a state of no return would mean a planet with reduced habitability and considerably impoverished biodiversity, not to mention the many potential (human) victims.[26]

These various findings once again demonstrate the many interconnections within our Earth system (in line with the Gaia hypothesis),[27] including those between climate breakdown and **other planetary boundaries** (Figure 5). The latter, covering various key areas of the Earth system (soils, oceans, atmosphere, biosphere, etc.), are global thresholds that cannot be exceeded without losing the stability and therefore the inhabitability of the Earth.[28] Note that the climate is considered to be one of the least stable of the Earth's systems, having a high degree of inertia[29] and a strong impact on other planetary boundaries.[30] Ocean acidification is another example of one of these boundaries. As with climate change, it is caused by the increasing concentration of CO_2 in the atmosphere and leads to a sharp reduction in biodiversity (e.g. the destruction of the coral reef off the coast of Australia) as well as a reduction in the capacity to absorb CO_2.

25 Futura. 07/08/2018. La Terre transformée en étuve à cause du réchauffement climatique ?
26 Science & Vie. Mars 2020. Voici le vrai visage de Gaïa.
27 Formulated 50 years ago by the English chemist James Lovelock, the Gaia hypothesis, named after the Greek goddess of the Earth, likens the Earth to a super-organism crossed by multiple complex processes, whose interactions keep it in a somewhat precarious equilibrium–in short, a living body rather than a simple planet. This theory is based in particular on the observation that it is a universal property of living beings, called homeostasis, to use energy (in this case from the sun) to keep their internal environment stable (e.g. oxygen concentration in the atmosphere) in a configuration far from chemical equilibrium. Considered radical at the time, this theory whereby "life has succeeded in creating its own conditions of existence" is increasingly popular among scientists and politicians. The Guardian. 27/10/2010. How James Lovelock introduced Gaia to an unsuspecting world.
28 The concept was developed in 2009 by Swedish scientist Johan Rockström, then director of the Stockholm Resilience Institute, who identified nine boundaries: climate change; biodiversity loss; interference with the nitrogen and phosphorus cycles; change in land use; ocean acidification; stratospheric ozone depletion; atmospheric aerosol loading; freshwater use; and chemical pollution. Three of these have already been transgressed: climate change, biodiversity and the phosphorus and nitrogen cycles. In 2012, the British economist Kate Raworth proposed adding eleven inner boundaries (the "social foundation"), corresponding to the essential needs of humans in order to live well, to these nine outer planetary boundaries (the "environmental ceiling"). The whole can be represented as a ring or "doughnut", hence the term "doughnut theory" (a concept taken up by Oxfam-Magasins du monde in its latest awareness campaign).
29 In short, even if emissions were to stop tomorrow, climate disturbance would continue for a long time.
30 The international organisation Global Footprint Network believes, for example, that GHG emissions represent 60% of humanity's ecological footprint. Earth Overshoot Day. 2019. The carbon footprint makes up 60% of humanity's ecological footprint.

1.4 A CONSIDERABLE DECARBONISATION EFFORT

Ultimately, while the 2015 Paris climate agreement aims to limit global warming to below 2°C, or even 1.5°C, above the pre-industrial era by 2100 (see Box 2), this **threshold could be exceeded as early as 2030**, according to the IPCC. The latter also stresses the severe impact of the half-degree difference between the 1.5 and 2°C targets, whether in terms of the increase in extreme weather events, rising sea levels or lower agricultural yields. According to the UNEP, the emission reduction commitments made so far by the signatory states of the Paris Agreement would lead to a world that is 3.2°C warmer in 2100.[31]

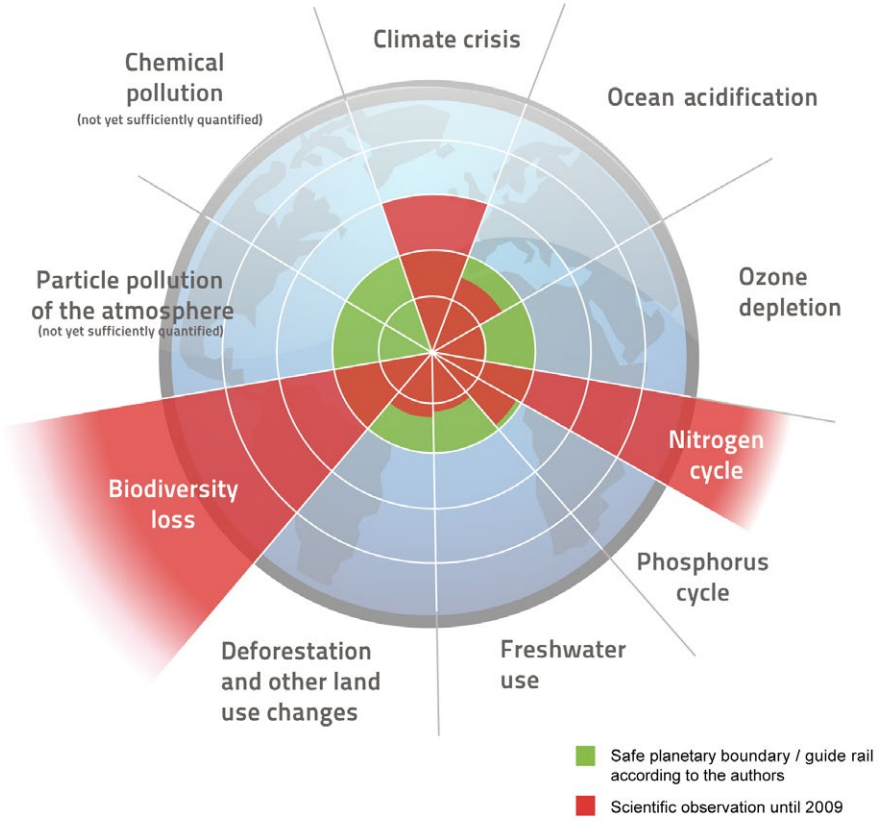

Figure 5. Planetary boundaries and the safe operating space for humanity.

Rockström J., Steffen W., Noone K. et al. 2009. A safe operating space for humanity. Nature, 461 (472–475).

Huge blocks of ice crashing into the ocean due to global warming (Kenai Fjords National Park, Alaska)

31 And these estimates are not based on the most recent climate models, which, as we have seen, demonstrate a greater sensitivity of the climate to increasing concentrations of GHGs in the atmosphere. UNEP. 2019. Emissions Gap Report. Another source of information in this area is the site of the organisation Climate Action Tracker (see box 5).

Climate conferences or COPs

*A COP is a major international conference on the climate, bringing together the States that commited to the **United Nations Framework Convention on Climate Change** (UNFCCC) in 1992 (the date of the Earth Summit in Rio de Janeiro). COP stands for "Conference of Parties", the "Parties" being the signatories of the Convention (196 countries plus the European Union). It is at these COPs, for instance, that the signatory States can ratify agreements on the reduction of anthropogenic GHG emissions, with common or differentiated targets. The most noteworthy of these annual COPs have been those of Berlin in 1997 (the signing of the Kyoto Protocol, committing 37 developed countries to a 5% reduction in their emissions over the period 2008-2012, compared to 1990 levels), Copenhagen in 2009 (a symbol of the flaws in the UN process, as no post-Kyoto agreement was reached) and Paris in 2015.*

The 2015 Paris Agreement: a historic breakthrough

The Paris Agreement adopted at COP21 marked a turning point in the fight against climate change as it committed 196 states to reducing their GHG emissions in order to limit the temperature increase to "*well below 2°C compared to pre-industrial levels*", if possible without exceeding 1.5°C. As well as being ambitious, the agreement is legally binding under international law. Indeed, it requires all parties to set their nationally determined contributions (NDCs) and to update them every 5 years to bring them in line with the 1.5 or 2°C target. In addition to these contributions, all Parties must develop long-term low-carbon development strategies for a transition to climate neutrality (see Box 3). The agreement also includes a financing component, at least 100 billion dollars per year from 2020 to 2025, to enable the most vulnerable countries to adapt to climate change (the so-called *Green Climate Fund*, see Chapter 3.7).

COP 25 in Madrid: a conference to forget

Initially scheduled to take place in Santiago at the end of 2019 but moved to Madrid due to social tensions in Chile, COP25 was very disappointing overall. Despite a record length of negotiations, the conference under the Chilean presidency only resulted in a few technical advances, reinforcing the image of COPs as "*all talk and no action*".[32] Faced with the "bad states" (mainly Brazil, the United States, Australia and Saudi Arabia), large emitters that are very resistant to negotiations, most states adopted a wait-and-see attitude. Only 80 countries pledged to increase their commitments (among them the Marshall Islands, Costa Rica, Chile and Morocco), despite the fact that they only represent 10.5% of global emissions[33] and that a tripling of current NDCs is required to respect the 2°C limit of the Paris Agreement. Among the emerging countries, India and above all China, which is responsible for a quarter of global emissions, remained cautiously on the sidelines. China had nonetheless had a rather good record before and after COP 21, its cooperation with Barack Obama's United States having been decisive in obtaining the Paris Agreement. But despite a proactive policy on renewable energy, the former Middle Kingdom is still very dependent on coal and continues to open new thermal power stations at a rapid pace. The EU was the major power that gave the most reason for hope, by announcing its "Green Deal" objective during the conference. However, it lacked solidarity with the countries of the South, particularly on the issue of "loss and damage", refusing to set up a specific aid fund additional to the existing adaptation funds.

Hopes for COP 26 in Glasgow

All hopes now rest on the UK presidency of COP26. Initially scheduled to take place in Glasgow at the end of 2020, it has been postponed to November 2021 due to the COVID-19 pandemic. Many issues will have to be resolved there, including the carbon market (see Box 15) and the *Green Climate Fund* (see Chapter 3.7). An important condition for its success could be the ability of the EU and China to lead the way, like the US-China partnership in Paris in 2015. They will also need to build strategic alliances with other states, for example in South America. The EU clarifying the content of the future European contribution (NDC) as soon as possible is an important factor, in order to commit China to showing its cards on climate ambition.[34] It is also to be hoped that the victory of Democratic candidate Joe Biden in the US presidential election in November 2020 will give a real boost to the process, given that he brought the US back into the Paris Agreement as soon as he took office in January 2021.[35]

32 Le Monde. 16/12/2019. COP25 : une conférence sur le climat à oublier.
33 Le Monde. 26/10/2019. Climat : après une décennie perdue, les Etats doivent réduire drastiquement leurs émissions.
34 Le Monde. 15/12/2019. La COP25 s'achève sur des avancées quasi insignifiantes dans la lutte contre le changement climatique.
35 Le Monde. 05/11/2020. Elections américaines 2020 : Joe Biden promet le retour des Etats-Unis dans l'accord de Paris sur le climat « dans exactement 77 jours ».

Signing of the Paris Agreement (November 2015, France).

The decrease in GHG emissions figures due to the COVID-19 pandemic illustrates the magnitude of the **decarbonisation effort required**. According to various studies, daily CO_2 emissions are said to have decreased by an average of 17% worldwide at the height of the first lockdown in spring 2020.[36] However, with the easing of lockdowns and/or measures for exiting lockdown, the decrease for the year 2020 as a whole would be more like 7% compared to 2019.[37] Although for some this demonstrates the possibility of change, it can conversely be seen to illustrate the difficulties of seriously tackling the climate emergency, particularly while remaining within the current economic system: if even a drastic and almost universal shutdown of the global economy, with incalculable social consequences, only results in this decrease, what about a long-term decarbonisation effort?

Indeed, scientists agree that staying within the limits of the Paris Agreement (+1.5°C) requires a **reduction in global emissions of 55% by 2030** compared to 2018, i.e. 7.6% per year (Figure 6).[38] The UNEP refers to the years 2010-2020 as a "*lost decade*" for climate action in this respect. According to the organisation, member states "*collectively failed*" during this period: if they had acted in accordance with scientific knowledge 10 years previously, the effort required would have been only 3.3% per year, i.e. approximately half the amount.[39]

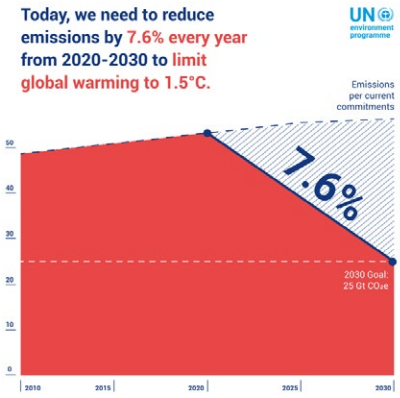

Figure 6. The decarbonisation effort: the gap between required and projected emissions.

36 The Guardian. 19/05/2020. Lockdowns trigger dramatic fall in global carbon emissions.
37 More specifically, the most notable reductions were in the United States (-12%), the EU (-11%) and India (-9%). These good results were largely due to the reduction in road traffic (which accounts for 21% of global CO_2 emissions) and air traffic (which accounts for only 2.8% of global emissions, but which is growing every year). Le Quéré C. et al. 2020. Temporary reduction in daily global CO_2 emissions during the COVID-19 forced confinement. Global Carbon Project Science Highlight.
38 To stay below 2°C of warming, these emissions would have to be reduced by 25%, i.e. 2.7% per year.
39 UNEP. 26/11/2019. Emissions gap report 2019.

Carbon neutrality

3

Carbon neutrality is a **state of balance** to be achieved between human-induced greenhouse gas emissions and their removal from the atmosphere by humans or through their actions, via what are known as carbon sinks. These sinks are defined as systems that absorb more carbon than they emit. The main natural carbon sinks are the soil, forests and oceans, which are estimated to remove between 9.5 and 11 gigatonnes of CO_2 per year.[1] Carbon neutrality is limited to a given zone, such as a company, a region or a country, and is often used as a climate policy target to be achieved.

The concept of carbon neutrality has received and continues to receive a **lot of criticism**, particularly for the vagueness surrounding it and its potential for interpretation.[2] For example, some are concerned that taking negative emissions into account in scenarios where carbon neutrality is targeted may lead to neglecting or delaying efforts to reduce emissions. They argue that such scenarios are not credible because negative emission technologies are not yet proven or are very expensive, and that restoring or enhancing natural carbon sinks has many limitations (see Box 17).[3]

1 Parlement européen. 08/10/2020. Qu'est-ce que la neutralité carbone et comment l'atteindre d'ici 2050 ?
2 Wikipedia. Neutralité carbone. Accessed 07/01/2021.
3 CETRI. 15/12/2020. Cinq ans après l'accord de paris, la « neutralité carbone » nous conduit dans le mur.

1.5 THE CLIMATE: A GROWING OBJECT OF MOBILISATION AND DEBATE

Among the few signs of hope, we can assume that the COVID-19 health crisis has at least made it possible to experiment with new methods of organisation, such as large-scale teleworking or the shortening of supply chains (see Chapter 3.2).[40]

Another positive point is that global warming is becoming the subject of **increasingly strong mobilisation at the global level**, as illustrated by the growing success of the climate protests initiated by Greta Thunberg. This correlates with a higher level of knowledge and awareness regarding climate issues in recent years, which could be attributed to the increased frequency of extreme weather events, in particular heat waves (which often have a more widespread effect than floods or fires, which are fairly local events). Or, on a more national scale, events such as the shock resignation of Nicolas Hulot from his post as the Minister for Ecological and Solidarity Transition in France.[41]

The hope of many environmentalists in this area is to reach what sociologists call a "**sociological tipping point**". This corresponds to a level of awareness in a population that is high enough for the practices advocated by its followers to quickly become the norm.[42] Depending on the type and/or strength of the event, various figures are quoted in the press or scientific literature. The organisation *Extinction Rebellion*, for example, has chosen to use the 3.5% figure made famous by the American political scientist Erica Chenoweth, calculated on the basis of hundreds of non-violence campaigns over the last century.[43] However, this research has been rather disparaged, and the exact dynamics naturally depend on many factors. Other authors, such as the American columnist Malcolm Gladwell, put the figure more in the region of 10%.[44] A recent empirical study published in the prestigious journal Science concludes for its part that a percentage of activists equal to at least 25% is needed to change the social norm (Figure 7).[45]

It is also to be noted that **questioning the reality of climate change** or its anthropogenic origins is becom-

40 Novethic. 17/04/2020. Coronavirus : les émissions de CO_2 vont brutalement chuter en 2020, mais cela ne suffira pas pour respecter l'accord de Paris.
41 Usbek & Rica. 02/01/2019. Lanceurs d'alerte ou survivalistes sectaires : qui sont vraiment les collapsologues?
42 Another definition, both more accurate and more general, would be a point in a social system where a small quantitative change can trigger rapid, non-linear changes. The term was first put forward by the professor of political science Morton Grodzins, and then democratised by authors such as Thomas Schelling and Jean Pierre Dupuy. Bon Pote. 18/04/2020. Climat : point de bascule et optimisme.
43 According to their work, it would require about 3.5% of a population to actively participate in demonstrations in order to secure meaningful political change. ICNC. The Success of Nonviolent Civil Resistance.
44 Milkoreit M. et al. 2018. Defining tipping points for social-ecological systems scholarship — an interdisciplinary literature review. Environmental Research Letters, 13.
45 Centola D. et al. June 2018. Experimental evidence for tipping points in social convention. Science 360(6393):1116-1119.

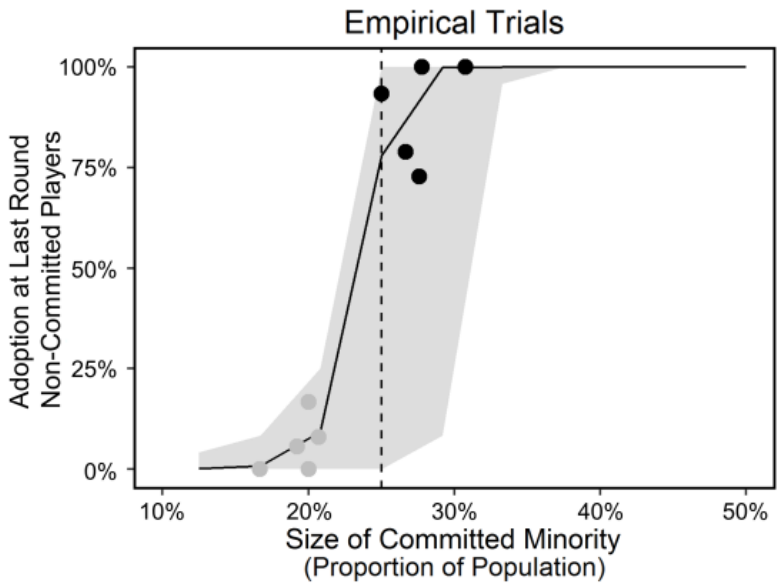

Figure 7. Estimate of the percentage of a population needed to give rise to new social conventions.

ing less and less common among the population, despite the relatively low media coverage of the issue and/or the disproportionate representation of climate sceptics (or "climate deniers" to use the expression of *The Guardian* newspaper).[46] According to a recent survey conducted in some thirty countries, only 7% of those interviewed deny its reality. Nevertheless, 32% doubt its human origin, either because they think it is a natural phenomenon or because they consider that we cannot be sure (up to 52% in the United States, closely followed by Saudi Arabia (51%), Norway (50%) and Australia (43%), all major oil, gas or coal producers).[47] There is therefore still a significant proportion of climate sceptics in all countries, some of whom are among the best known and most powerful in the world, such as Donald Trump or Jair Bolsonaro, two populist presidents opposed to the Paris Climate Agreement.

Young climate activists demonstrate in front of the Swedish Parliament, at the initiative of Greta Thunberg (April 2019, Stockholm).

46 To give an example, a study by the association Reporters d'Espoirs shows that, although it has increased over the last ten years, French media coverage of climate and environmental issues is poor: they are mentioned in only 1% of topics in the TF1 and France 2 television news bulletins, and 3.8% of topics in the national daily press. The newspaper Le Monde alone stands out with 5%. Yet a survey (carried out before the COVID-19 crisis) revealed that 43% of French people questioned placed this subject ahead of purchasing power and health. L'ADN. 08/07/2020. L'environnement, ce sujet qui passionne tout le monde… sauf les médias. For the complete study: Reporters d'Espoirs. 07/07/2020. Comment les médias traitent-ils du changement climatique ?

47 Le Monde. 30/11/2020. Changement climatique : des citoyens inquiets mais encore loin de prendre toutes les mesures nécessaires.

1.6. THE COVID CRISIS: AN OPPORTUNITY FOR THE CLIMATE?

As for the **effect of the COVID-19 pandemic on climate policies**, opinions are mixed. Although there is a strong risk of reverting to a "world after" the crisis, it is also seen by some as an opportunity to link economic recovery plans with the ecological and social transition. Numerous articles have been published calling for a state of climate emergency,[48] a green recovery,[49] relocalisation,[50] or even for aid to be made more conditional on environmental criteria, for example in the aviation sector.[51] In France, for example, the think tank *The Shift Project* (see Box 5) is working on a plan for transforming the economy,[52] while in Belgium, a coalition of scientists and businesses has drafted a plan entitled "Sophia" for transitioning to a more sustainable post-COVID economy (see Box 4).

In Europe, one of the most frequent requests has been to link these recovery plans with the European Commission's so-called "**Green Deal**". This strategy, announced by the new President of the European Commission Ursula Von der Leyen even before the pandemic, aims to "*transform the EU into a fair and prosperous society*". A sort of vast plan for the decarbonised development of the European economy, it aims for carbon neutrality by 2050 in particular, at the same time as promoting social justice.[53] The post-COVID European recovery plan, amounting to €750 billion in the form of loans and subsidies, should make it possible to finance this Green Deal in part.[54] The question is whether the majority of these funds will indeed be used for the transition, excluding for example any investment in fossil fuels.[55]

These sums are likely to be insufficient in any case: according to the European Court of Auditors, it would

Box 4 : The Sophia plan and the Kaya coalition

4

Its name means "wisdom" in ancient Greek. The Sophia Plan is a transition plan for a sustainable recovery in Belgium after the COVID-19 crisis. Developed by more than 100 scientists and 200 sustainable businesses (the Resilience Management Group), the plan details more than 200 measures spread across 15 areas, from food to energy to mobility. In the context of an economic crisis that is only "*in its infancy*", the aim is to build a post-COVID economy that is more resilient in the face of crises, by supporting a strong and ambitious ecological and social transition.[1] The businesses which took part in this collaborative project are members of the Kaya coalition, named after a Japanese economist who developed an equation linking CO_2 emissions to demographic, economic and energy parameters (see Box 9). Faced with the climate challenge, this coalition, created in 2019, advocates the development of a regenerative economy that is more respectful of planetary limits.[2]

1 Groupe One. 12/07/2020. Le Plan Sophia. Un plan de transition pour la Belgique, pour une relance durable post-covid 19.
2 Coalition Kaya. 17/05/2019. Plaidoyer pour une économie régénérative, respectueuse des limites planétaires.

48 See for example: Le Monde. 22/05/2020. « Nous invitons les 193 Etats membres de l'ONU à déclarer l'état d'urgence environnemental et climatique ».
49 See for example: La Libre. 14/04/2020. 180 personnalités réclament un plan de relance verte pour un monde durable.
50 See for example: Le Soir. 15/04/2020 « Le Covid-19 montre l'urgence de relocaliser dès maintenant les systèmes alimentaires ».
51 By mid-May 2020, a total of $123 billion in aid had been made available to airlines by governments according to the International Air Transport Association (IATA). Air France-KLM, for example, has received about 12 billion euros, in return for commitments to improve its profitability and environmental performance (in particular the scrapping of short domestic flights with an equivalent train journey of less than 2.5 hours). Le Monde. 23/04/2020. Coronavirus : la France et les Pays-Bas se portent au secours d'Air France-KLM.
52 The Shift Project. 06/05/2020. Crise(s), climat : vers un plan de transformation de l'économie française.
53 Inspired by US President F. D. Roosevelt's "New Deal" during the Great Depression, the Green Deal was adopted by all EU member states (with an opt-out for Poland) in December 2019. It includes, among other things, measures on eco-taxation, mobility, building insulation, investment in renewable energies, circular economy or agricultural policy (linked to the recent "Farm to Fork" strategy). Note that a similar "Green New Deal" has been promoted since 2018 by the green wing of the US Democrats, most notably Congresswoman Alexandria Ocasio-Cortez. This plan is considered more ambitious (100% renewable energy by 2030) but has been brought to a much less successful conclusion than its European equivalent. EEB. 28/05/2020. How green is the EU's recovery plan?
54 Entitled "Next Generation EU", the plan will invest funds across three pillars: 1. Support to Member States with investments and reforms, 2. Kick-starting the EU economy by incentivising private investments, and 3. Addressing the lessons of the crisis. Through this plan, the ecological transition could benefit from €310 billion in subsidies and €250 billion in loans. Actu Environnement. 27/05/2020. À saisir : plan de relance européen pour financer la transition écologique. This plan was the subject of long and painful negotiations between the Member States, in particular between the countries known as the "Frugal Four" (Netherlands, Austria, Sweden, Denmark), who were hostile to debt mutualisation and to any significant increase in the EU budget, and those hostile to making aid conditional on respect for the rule of law (Hungary, Poland). Le Monde. 16/11/2020. La Hongrie et la Pologne bloquent le plan de relance européen.
55 According to a 2017 study by the Climate Action Network and the think tank Overseas Development International, the EU and 11 of its member states continue to invest no less than €112 billion per year in fossil fuels, including €4 billion in direct subsidies. CAN. September 2017. Phase-out 2020. Monitoring Europe's fossil fuel subsidies. According to another more recent report, the fossil fuel subsidies of G20 countries were equal to $127 billion in 2018, and only 9 countries had reduced these subsidies. Climate Transparency. 2019. Brown to Green. The G20 transition towards a net-zero emissions economy.

Extinction Rebellion activists demonstrate in front of the Royal Palace in Brussels (Belgium, 12 October 2019).

be necessary to invest **€1115 billion per year between now and 2030** in order to achieve the 40% emission reduction target (which was recently revised to -55%,[56] as requested by civil society, in an attempt to stay below the 1.5°C limit of the Paris Agreement).[57] To reach these staggering sums, some people are calling for heavier carbon taxes to be imposed on the most polluting companies, along the lines of the "Climate-Finance Pact" by economist Pierre Larrouturou and climatologist Jean Jouzel.[58]

1.7 WINNING THE WAR FOR THE CLIMATE

The success of these various recovery plans, and of climate policies more generally, will depend, as always, on the **balance of power** that the progressive camp may or may not have been able to establish. It is clear that the stakeholders of the old economy and their lobbies–agribusiness, fossil fuels, aeronautics, retail, etc.–have everything to lose in a rapid and radical transition of the system. Having based their wealth and power on the current model, they are well aware that they are on the wrong side of history. Rather than directly opposing a growing share of public opinion, civil society, scientists, etc., they are therefore seeking to gain time.

But as US Congresswoman Alexandria Ocasio-Cortez says, "Climate delayers are the new climate deniers".[59] It is therefore very much a question of mobilising and uniting to win "the war for the climate", in the words of Nicolas Hulot, which is an essential condition for the survival of millions, if not billions, of people.[60] As Greta Thunberg summed up at a UN climate conference in September 2019: "*Entire ecosystems are collapsing. We are in the beginning of a mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. […] Change is coming, whether you like it or not.*"[61]

56 Le Monde. 16/09/2020. Climat : l'ambition européenne revue à la hausse.
57 Thissen R. 19/02/2020. Le « green deal », au service de la justice climatique ? Analyse CNCD.
58 The two Frenchmen propose the financing of a European Fund for Climate and Biodiversity (EFCB) via a levy on the profits (before tax) of companies operating in the European Union. This federal tax would vary between 1 and 5%, depending on the evolution of the companies' carbon footprints, while craftspeople and small to medium-sized enterprises (SMEs) would be exempt. Its budget of €100 billion per year would be allocated, among other things, to projects for adapting to global warming in Africa or to assistance with the insulation of buildings in Europe. Le Taurillon. 17/03/2019. Que propose le pacte-finance climat ?
59 Le Monde. 22/03/2019. Alexandria Ocasio-Cortez, l'étoile montante de la gauche américaine.
60 Le Monde. 30/06/2019. Nicolas Hulot appelle à l'unité dans la « guerre » pour le climat.
61 Swissinfo. 23/09/2019. Greta Thunberg à l'ONU: « Vous avez volé mes rêves et mon enfance ».

5

Examples of organisations and resources, including educational resources, dealing with the climate question.

350.org
350.org is an international environmental NGO, founded in 2007 in the United States by journalist, author and environmental activist Bill McKibben. Its work focuses on the fight against global warming. It is best known for its opposition to the Keystone oil pipeline project and its campaigns for disinvestment from fossil fuels. Its name refers to the 350 parts per million (ppm) threshold for CO_2 in the atmosphere, which has been defined as the level that must not be exceeded if excessive global warming is to be avoided (the level exceeded 415 ppm in 2020).

Atlas de l'anthropocène [Atlas of the Anthropocene]
This atlas by political scientist François Gemenne brings together a range of data on the ecological crisis (on climate change, but also on the erosion of biodiversity, soil deterioration, etc.). The book seeks to define and illustrate the concept – fluid because it is still recent – of the Anthropocene, a new geological period characterised by the advent of Humankind as the main force of change on Earth, surpassing geophysical forces.

Belgian Alliance for Climate Action (BACA)
Launched at the end of 2020 by The Shift and WWF, the Belgian Alliance for Climate Action brings together a series of private (profit and non-profit) stakeholders who wish to reduce their emissions and increase their climate ambitions based on the principle of "Science Based Targets" (SBT). In addition to networking and providing support for the implementation of climate policies, the platform aims to organise debates, training and workshops on climate issues.

Climate Action Tracker
Climate Action Tracker is a website that has been providing independent scientific analysis of governments' climate action since 2009, relating it to the objectives of the Paris Agreement. By integrating this action into a climate model, it deduces the likely temperature increase by the end of the century (presented as a thermometer). Data from 32 countries are taken into account, representing 80% of global emissions and 70% of the world's population.

Climate Voices
Founded in 2018, the association Climate Voices aims to inform, raise awareness and provide tools to different audiences in an innovative way regarding the issues of climate breakdown and ecological and social transition. More specifically, it seeks to support and build bridges between 15-30 year olds from different continents. Through various multimedia narratives, it paints the portrait of a generation trying to live and adapt to the greatest challenge humanity has ever faced.

Coalition climat
The Coalition Climat [Climate Coalition] is a Belgian non-profit organisation that brings together more than 70 civil society organisations (environmental and development cooperation NGOs, trade unions, youth organisations, citizens' movements) around the theme of climate justice. It lobbies political decision-makers for strong measures and mobilises a broad public, through various forms of action, to create a just society that respects the climate. Launched in 2008, it has for example coordinated the following campaigns: "Claim the Climate", "Climate Express" and "Jobs4Climate".

Extinction Rebellion
Extinction Rebellion (often abbreviated to "XR") defines itself as a decentralised, autonomous, and non-partisan international movement using non-violent direct action to pressure governments to act on the ecological and climate emergency. Founded in May 2018 by British environmental activists, it has rapidly acquired an international dimension by spreading its branches all over the world, including Belgium. In addition to its civil disobedience protests, the movement develops awareness-raising tools and campaigns (e.g. the video "The Gigantic Change"). XR is regularly described as "radical" by both the press and its activists, although some on the left consider it too timid. ▸▸▸

La fresque du climat

La Fresque du climat (The Climate Collage) is a French association founded in December 2018 with the aim of raising public awareness around climate change. This awareness-raising is achieved through a collaborative serious game in which participants co-construct a collage summarising the mechanisms of climate change as explained in the IPCC reports. The Fresque du climat game was designed in 2015 by Cédric Ringenbach, engineer and former director of the Shift Project (see below) from 2010 to 2016.

Office for Climate Education

The Office for Climate Education (OCE) is a foundation hosted by the French foundation "La main à la pâte" to promote climate change education in developed and developing countries. It provides primary and secondary school teachers with free, interdisciplinary educational resources, as well as professional development opportunities and support in the field, all based on IPCC reports and expertise. The OCE became an official UNESCO centre in 2020 with the aim of organising strong, international, scientific, educational and operational cooperation for climate change education.

The Drawdown Project

"Drawdown" refers to the future point in time when atmospheric concentrations of greenhouse gases stop rising and start to decline on an annual basis. Initiated in 2017 by the American scientist Paul Hawken, Project Drawdown ranks around 100 solutions for reducing emissions and limiting planetary warming, including a calculation of their cost. The list, which includes only existing and technologically viable solutions (e.g. offshore wind turbines, combating food waste), was compiled by more than 200 researchers, scientists, decision-makers, business leaders and activists.

The Shift Project

The Shift Project is a think tank founded in the wake of the 2008 crisis by a group of French energy experts, including engineer Jean-Marc Jancovici. Its objective is to enlighten, influence and have an impact on the structuring choices concerning the energy and climate transition in France and Europe. It aims to be a force for proposals and projects that respond to the twin constraints of carbon, namely climate change and the depletion of fossil energy resources. The association has a team of salaried staff but also works with a large network of volunteer experts, self-appointed "The Shifters".

Youth for Climate

The Youth for Climate movement was formed in Belgium at the beginning of January 2019, following a call by two students, Anuna De Wever and Kyra Gantois, to participate in school strikes for the climate. It is part of the more global initiative of Fridays for Future, initiated by Sweden's Greta Thunberg in August 2018 outside the Swedish parliament. The movement gathered thousands of people at several demonstrations in Belgium and France during the spring of 2019, although it has since lost some steam with the pandemic and successive lockdowns.

The loading of a container ship in the port of Rotterdam (Netherlands).

2. Impact of trade globalisation on the climate

2.1 TRADE, THE MAJOR MISSING ELEMENT IN CLIMATE POLICIES

TTIP, CETA, EU-Mercosur, etc. Free trade and the broader concept of commerce have been out of favour for many years among a growing number of European citizens. The year 2016 was undoubtedly a turning point. First there was the strong opposition in Europe, particularly in Wallonia, to the EU-Canada free trade agreement (FTA) CETA,[62] following strong opposition to its American "big brother" TTIP.[63] Then came the arrival of the populist Donald Trump as President of the United States, a convinced protectionist who quickly withdrew his country from the TTIP and its Pacific counterpart the TPP.[64] These various events contributed to a more structural trend towards **de-globalisation**, or at least a slowdown in the growth of world trade. And it is highly likely that the COVID-19 health and economic crisis will have further contributed to this deceleration.[65]

Despite this context, there is one area where this questioning of free trade remains barely visible: that of the environment in general and the climate in particular. As soon as we talk about global warming and the potential profound transformations that it implies, it is as though trade issues become taboo, especially for our decision-makers. As summarised in a recent report by the

62 The Comprehensive Economic and Trade Agreement (CETA) between Canada and the EU was signed on 30 October 2016. Pending ratification by the Canadian parliaments and those of the twenty-eight EU member states, the agreement was provisionally implemented for over 90% of its provisions. A clause stipulates that in the event of rejection by one of the parliaments, the agreement will apply provisionally for three years.
63 Transatlantic Trade and Investment Partnership. See: Oxfam-Magasins du monde. 30/06/2016. Prise de position sur la question du TTIP.
64 The Trans-Pacific Partnership Agreement (TPP) is a multilateral free trade treaty signed on 4 February 2016 that aims to integrate the economies of the Asia-Pacific and Americas regions. Following the withdrawal of the United States from the agreement in February 2017, it was amended and then ratified by the members of the original agreement (Australia, Canada, Japan, Mexico, New Zealand, Singapore and Vietnam).
65 Le Monde. 01/01/2017. 2016 : l'année où le libre-échange a vacillé.

Fondation pour l'Homme et la Nature and the *Veblen Institute*, "*our modes of trading and the commercial policy that governs them* ***remain unthought of in the ecological and social transition***".[66] There are numerous examples of this. In the run-up to COP21, the European Commission explained for instance that it did not want any "*explicit mention of trade*" in the Paris Agreement. One of the consequences was that the paragraph that committed states to "*limiting or reducing greenhouse gas emissions from fuels used in international aviation and maritime transport*" was deleted.[67] The UNFCCC also sanctifies the supremacy of trade openness in Article 3.5, which states that "*measures taken to combat climate change [...] should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade*".[68] As another example, at the last UN Environment Assembly (UNEA4) in March 2019, many countries, most of all the United States, refuted any interference of international agreements on sustainable development (e.g. the Paris Climate Agreement) with trade negotiations.[69]

It is thus a consistent pattern: **international trade law takes precedence** systematically over environmental law and the climate emergency. This hierarchy seems inconsistent if one considers that it is impossible to drastically reduce GHG emissions without affecting the very organisation of the global economy, and therefore international trade. But as we shall see in this chapter, most decision-makers continue to favour an approach based on trade liberalisation and the proliferation of trade agreements, which they believe are essential for growth, innovation, employment and the development of green technologies.[70] However, commerce and continuous growth in the trade of goods and services are potentially a powerful factor in increasing of global emissions, as we shall see.

2.2 IMPORTED EMISSIONS

A first myth that must be quickly deconstructed is that of the **apparent reduction in emissions** in Western countries. The figures that the latter put forward, for instance during UN negotiations, may seem exemplary. The EU officially reduced its emissions by 17.5% between 1990 and 2011, which makes it look like a model pupil at the global level. However, apart from the fact that these figures are partly linked to economic crises or downturns, they only take into account emissions produced on European territory, and

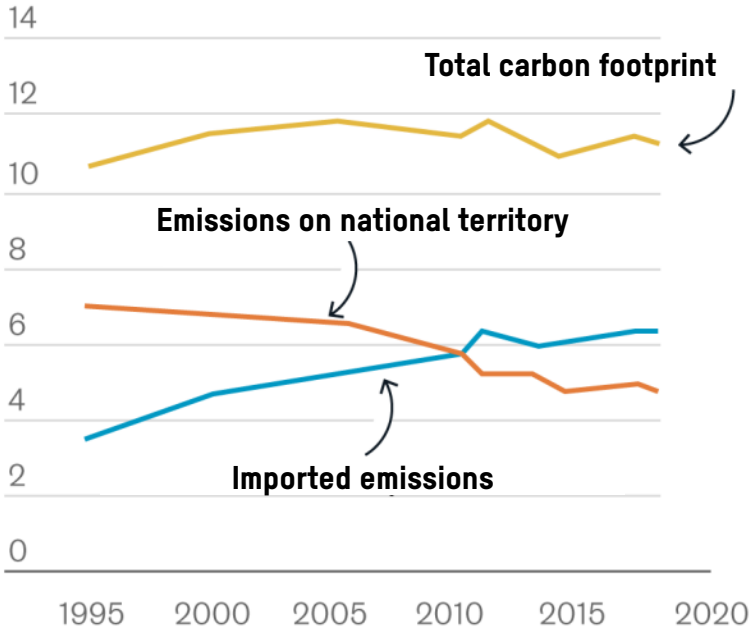

Figure 8. Evolution of imported emissions relative to total carbon footprint. Example of France

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Haut Conseil pour le Climat. Octobre 2020. Maîtriser l'empreinte carbone de la France.

66 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
67 Le Monde. 22/02/2016. Au nom du climat, rénover les règles du commerce mondial.
68 Info Compensation Carbone. 13/09/2017. Commerce et climat, les frères ennemis.
69 Veillard P. 09/06/2020. Le commerce équitable et les politiques de consommation et de production durables.
70 See for example the European Commission's strategy "Trade for All". CE. 14/10/2015. Le commerce pour tous. Vers une politique de commerce et d'investissement plus responsable. COM/2015/0497.

not those emitted abroad in the production of imported goods and services.[71]

Because imports are often substantial and growing, these imported emissions can significantly alter a **country's net emissions balance**. French MP Delphine Batho recently stated that "*emissions in France decreased by 18% between 1995 and 2015*", but that over the same period "*imported emissions increased by 93%*" (Figure 8).[72] UNEP refers to this as *"reducing domestic emissions by exporting them to producing countries*", mainly emerging economies such as China and India (the main contributors to the rise in global emissions).[73]

An alternative approach, although more difficult in terms of methodology and access to data, is to calculate **emissions on the basis of consumption**. With this "carbon footprint" approach (see Box 6), consumption-related emissions are calculated by totalling emissions from the production and the use of goods over their entire life cycle, and are allocated to the importing country. For a mobile phone, for example, this means including the oil used to extract the rare metals. Or for a beef steak, the forests cut down in order to produce the soy consumed by the cattle. Calculating in this way, Belgium's emissions balance between 1990 and 2017 is not -17% but +20%.[74]

Carbon footprint[1]

6

The carbon footprint is the quantity of greenhouse gas whose emission relates to the overall consumption of goods and services. This relationship can be direct, for example the oil or gas used to heat a home, or indirect, for example through the purchase of an item that was produced using energy from fossil fuels. It is important to assess our role in global warming in this way in order to avoid underestimating some aspects of it, so that we can aim to reduce our overall impact. However, the accuracy of the calculation is limited by the need for information on trade and on the emissions associated with the manufacture of many products. Note the distinction between carbon footprints and national greenhouse gas inventories, the latter measuring emissions in a given territory using a "territorial" approach.

1 PW GIEC. Avril 2018. Empreinte carbone : de quelles émissions sommes-nous responsables et comment les réduire ?

Due to the expansion of international trade, the current calculation method based on territorial production has thus led to a **growing bias in the perception of responsibilities** of nations for emissions, to the disadvantage of producing countries. For example, China's per capita emissions have "officially" recently exceeded those of the EU. But when imported emissions are included, an individual in Europe still pollutes more than an individual in China (8.1 and 6.1 tonnes per year per capita respectively).[75]

This "**carbon leakage**" from the North to the South raises questions about the consideration given to the place of trade in climate negotiations and the distribution between countries of efforts to reduce emissions. In order to fight global warming more effectively and equitably, it seems essential to place more responsibility for imported emissions on consumer countries, while respecting the principle of special and differential treatment for developing countries.[76]

2.3 DIRECT EMISSIONS FROM INTERNATIONAL FREIGHT TRANSPORT

Another "blind spot" in these trade and climate issues is international transport. In separating the locations of production and consumption, the growth in world trade[77] automatically leads to an increase in the transport of goods and therefore in GHG emissions. This is the

71 RAC France. Avril 2013. Les émissions importées. Le passager clandestin du commerce mondial.
72 Le Monde. 02/06/2019. Le casse-tête de la taxe carbone aux frontières de l'UE.
73 UNEP. 26/11/2019. Emissions gap report 2019.
74 Saw-B. 2019. Les verrous économiques de la transition.
75 Le Monde. 26/10/2019. Climat : après une décennie perdue, les Etats doivent réduire drastiquement leurs émissions.
76 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
77 Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'Union européenne : aspects économiques. Policy paper n°245.

direct contribution of trade to global warming.[78] However, these emissions are not accounted for because national inventories are, once again, linked to the principle of territory-based production. According to the *International Energy Agency* (IEA), international freight transport represented 43% of total transport emissions, namely 6% of all global emissions in 2010.[79]

These figures may seem modest when compared, for example, to those of industry (21%), agriculture (24%) or energy (25%).[80] However, the **growth rate** of emissions from freight transport is by far the highest of all sectors, mainly due to the continuous growth of trade.[81] These emissions thus increased by 75% between 1990 and 2013, according to the *International Transport Forum* (ITF). And the organisation predicts an increase of 290% by 2050, of which just over 40% would be due to maritime and air transport.[82]

Maritime transport alone comprises almost 90% of global freight transport and, according to the *International Maritime Organisation* (IMO), could experience an emissions increase of 50 to 250% by 2050, depending on growth forecasts. By this date, pollution from maritime transport could reach 17% of global emissions, compared with around 3% today.

Area of rainforest destroyed in the Amazon (Brazil, January 2010).

One of the reasons for this evolution is the **increasing fragmentation of value chains** around the world. Indeed, many more intermediate goods are traded today than in the past, and more than final goods. As a result of globalisation, in particular China's transformation into the "workshop of the world", global exports of intermediate goods are now much higher than those of final goods (they were equal in value in 1993, between 7 and 8% of world GDP, compared to 15% vs. 11% today). We are thus not only seeing an increase in the scale of world trade (from regional to global), but also in its complexity and fragmentation. This lengthening of production chains leads to additional transport costs and makes the traceability of products' environmental impact much more complex.[83]

This is even more problematic as **measures to limit international transport emissions** are very modest, at best. In fact, like that of imported emissions, this issue is missing from the Paris Climate Agreement, which leaves it to the relevant international organisations to govern these matters. Yet the agreements currently on the table at the *International Civil Aviation Organization* (ICAO) and the *International Maritime Organization* (IMO) do not envisage emission reductions compatible with the Paris Agreement. At the IMO, a provisional agreement from April 2018 provides for a reduction of at least 50% in GHG emissions compared to 2008 by 2050, which

78 Le Monde. 11/09/2019. « Il faut intégrer le coût environnemental au commerce des marchandises ».
79 These figures are obtained by assuming that all maritime transport, heavy road vehicles and two thirds of air transport are dedicated to goods. The International Transport Forum puts forward similar figures: they state that international freight transport represents 30% of the transport sector's emissions, i.e. 7% of global emissions. CEPII. Le commerce peut être un levier dans les négociations climatiques. Accessed 15/07/2020.
80 Youmatter. 25/11/2019. Quels secteurs émettent le plus de CO_2 en France et dans le monde ?
81 CAS. 2010. Le fret mondial et le changement climatique. Perspectives et marges de progrès.
82 OECD. 2015. Aligning policies for a low-carbon economy.
83 Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'Union européenne : aspects économiques. Policy paper n°245.

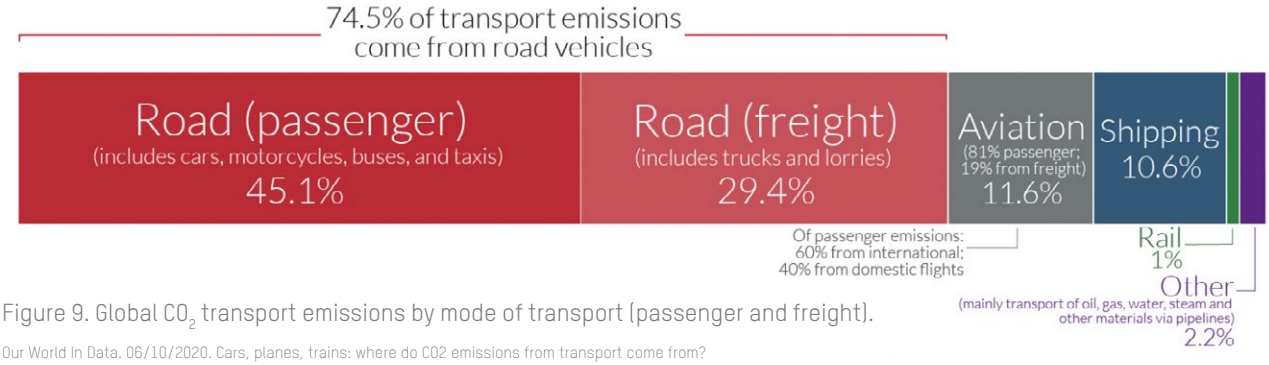

Figure 9. Global CO_2 transport emissions by mode of transport (passenger and freight).

Our World In Data. 06/10/2020. Cars, planes, trains: where do CO2 emissions from transport come from?

remains insufficient to limit the temperature rise to 1.5°C.[84] As for the ICAO, although it has obtained an agreement (known as CORSIA)[85] whose objective is to limit the sector's emissions to the 2020 level, this has the major disadvantages of being voluntary (in the initial period) and of focusing primarily on offsetting emissions (see Box 17) rather than on reducing them.[86]

However, we must put **the importance of international transport into perspective** in terms of the total emissions associated with a product or service. It is production methods that usually have the greatest impact on the overall carbon footprint. A video by France TV éducation explains that transport represents only 4% on average of a food product's carbon footprint, and that of this 4%, 80% of emissions are generated within the country of consumption, with only 20% generated by international transport.[87]

"Flygskam" or flight shame

7

In the wake of the school climate strikes initiated by Greta Thunberg in 2018, the term "flygskam", meaning "flight shame", has emerged in Sweden. It expresses the guilt an individual feels about travelling by plane, a mode of transport known for its climate impact. Air travel is indeed the most polluting mode of transport if compared per passenger per kilometre travelled: twice as polluting as the car, and up to 40 times more polluting than the train.[1]

According to the *International Energy Agency* (IEA), the aviation sector accounted for 3.4% of global emissions in 2017. To this must be added the emission of other shorter-lived gases, whose contribution to the greenhouse effect is not as accurately assessed. These include nitrogen oxides (NOx), water vapour and fine particles that affect atmospheric chemistry and the formation of high clouds, which indirectly cause climate warming.

Despite the tremendous halt brought about by the COVID-19 crisis, total emissions from the sector are expected to soar in the coming years. A doubling in traffic is expected between now and 2037: 8.2 billion passengers worldwide compared to 4.1 billion in 2017. According to the European Parliament and in a "business as usual" scenario, the share of air transport in global emissions could rise to almost 22% by 2050.[2]

1 Le Monde. 13/05/2019. Climat : une étude de la Commission européenne propose de taxer le kérosène des avions.
2 AEE. 29/09/2016. Le transport aérien et maritime sous le feu des projecteurs.

84 Le Monde. 12/04/2018. Le transport maritime, maillon faible du climat.
85 CORSIA stands for "Carbon Offsetting and Reduction Scheme for International Aviation". Adopted on 6 October 2016, this agreement is mainly based on aircraft operators purchasing carbon credits from other sectors via a trading exchange. It provides for a first phase (2021-2026) based on voluntary action, followed by a mandatory regime for the 2027-2035 phase (except for the least developed countries, small island states and landlocked developing countries). This regime is accompanied by other measures for reducing emissions that are more technical or operational (e.g. new technologies, flight optimisation, use of sustainable alternative fuels). To date, only 81 states, representing 77% of international aviation activity, have volunteered. CAE. 2017. Commerce et climat : pour une réconciliation.
86 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne
87 France TV. Consommer local pour sauver la planète ?

Even within the category of transport, the environmental performance of the logistics system or the modes of transport used for the last few kilometres often plays a more important role than the total distance travelled. For example, maritime transport in particular has a much better carbon efficiency than road transport, cf. the large volumes transported, the long distances travelled and the high load factors. Setting other potential social or environmental impacts aside, concentrating production in the most efficient locations can therefore also be a source of carbon efficiency.[88]

Aerial view of a wind farm in Noordoostpolder, the Netherlands.

2.4 INDIRECT EMISSIONS

The direct impact of international trade on the climate via the transport of goods is relatively simple to understand and, as we have seen, is most often synonymous with increased emissions. But there is also a whole series of **indirect impacts**, linked to the increase in trade and the (differentiated) development of economies, which are more ambiguous and more difficult to assess. We are talking here about a combination of scale effects, composition effects and technical effects.

- **The scale effect** is linked to the fact that trade tends to increase economic activity overall and, consequently, the global volume of emissions.
- The **composition effect** corresponds to the relocation of production sites brought about by trade liberalisation. The production of goods or services may be delocalised, or, on the contrary, relocalised, according to the comparative advantages of each country. The effect on GHG emissions can be negative or positive, depending on the emissions intensity of the production location.
- The **technological effect**, often emphasised by the promoters of current trade policy, is due to trade openness facilitating the diffusion of technologies, including those that are more environmentally friendly.

Despite well-documented theoretical mechanisms, the **overall impact** of these various indirect effects on the climate is rather difficult to assess. In general, trade increases total emissions if there is a powerful scale effect, in other words if trade facilitation has a strong impact on global production and growth (leading to higher energy consumption and GHG emissions). Two factors tend to exacerbate this scale effect: above-average growth in the production of highly polluting goods (e.g. steel, cement, aluminium, livestock) and the lack of international agreement on the management, disposal and movement of waste.[89]

With regard to the composition effect, intuitively we may assume that it is negative overall: the international division of labour encouraged by trade agreements tends to relegate the most polluting and emitting sections of production chains to the countries with the lowest climate standards, which are often veritable "pollution havens" (or "carbon havens" in the case of the climate).[90] This phenomenon of "ecological dumping" (or "carbon leakage") is not so clear, however. On the one hand, the specialisation of countries according to their comparative advantages, induced by trade openness, potentially permits a more efficient use of natural resources and therefore, ultimately, fewer emis-

88 CAE. 2017. Commerce et climat : pour une réconciliation.
89 Steel, cement, aluminium and livestock are typically goods whose use increases during the early stages of a country's development. Here this applies to emerging countries, whose growing middle class is increasingly "consuming" housing, public infrastructure and processed food products, including meat.
90 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.

sions.[91] On the other hand, there are many reasons for delocalisation other than environmental standards, especially for businesses consuming the least energy: the availability and cost of labour, the stability of institutions and the market, the proximity of resources, the quality of infrastructure and public services, etc.[92]

As for the technological effect, trade can certainly be a powerful vector for the development of green technologies, particularly renewable energies, as demonstrated by the rapid fall in the cost of wind and solar energy in recent years.[93] But their share in the world energy mix remains very low compared to fossil fuels, 1.5% and 81.4% respectively in 2015 according to the IEA.[94] Moreover, trade openness can also favour the spread of technologies that encourage the development of "brown" energy. In this way, in its first year of application CETA would have led to a 63% increase in imports of fossil fuels into Europe, including the infamous oil sands, which have a disastrous environmental impact.[95] Finally, and most importantly, the reduction in costs induced by the technological effect frees up financial resources, leading businesses and consumers to spend more, and thus increasing the flow of goods through a rebound effect (see Box 8).[96]

The rebound effect

8

The "rebound effect" refers to the phenomenon whereby improvements in the technological quality of a good lead to an increase in its consumption. This means, for example, that gains in a product's energy efficiency do not lead to as great a reduction in environmental impact as hoped (they may even result in an increase), due to increased use of the product.

It has thus been observed that the improved performance of aircraft in terms of kerosene consumption (due, among other things, to the use of lighter materials in their construction) has not resulted in an overall reduction in emissions but rather an increase, due to an explosion in air traffic. This is known as a direct rebound effect.

A more specific example is that of a project for energy-efficient stoves in Sudan: their massive distribution is said to have increased energy consumption for cooking by 40%.

Indirect rebound effects can also be observed, for instance when savings on one product free up purchasing power for other types of expenditure. There are many other potential rebound effects, which are difficult to itemise and even more difficult to quantify.[1] Some authors who have undertaken the exercise conclude that in the majority of cases studied, the increase in efficiency due to technological innovations has led to an increase in consumption that more than outweighs the initial gains (a rebound effect of over 100%).[2] The British economist Stanley Jevons, who highlighted the rebound effect as early as 1865, spoke of a "consumption unleashed by technological acceleration" due to the lower costs brought about by the latter.

The rebound effect contradicts what is known as the "Environmental Kuznets Curve". This much-criticised theory assumes that the level of pollution follows an inverted U-shaped curve in accordance with economic development: the initial rise in pollution linked to industrialisation is followed by a fall once primary needs are met and homo economicus becomes more willing to address the issue of environmental degradation.

1 Wallenborn G. 2018. Rebounds are structural effects of infrastructures and markets. Frontiers in Energy Research, n°6, article 99.
2 Magee C., Devezas T. 2017. A simple extension of dematerialization theory: Incorporation of technical progress and the rebound effect. Technological Forecasting and Social Change 117, p.196-205.

91 Economists Gene Grossman and Alan Krueger demonstrated in 1993, for example, that a consequence of NAFTA (the free trade agreement between the United States, Canada and Mexico) would be a reduction, through a compositional effect, in the level of pollution in Mexico, which has a comparative advantage in agriculture and labour-intensive industry. Wikipedia. Effets du commerce international sur l'environnement. Accessed 22/07/2020.
92 Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'Union européenne : aspects économiques. Policy paper n°245.
93 In a 2019 report, the International Renewable Energy Agency (IRENA) states that since 2010 the cost of energy has fallen by 82% for solar photovoltaics, 47% for concentrated solar power (CSP), 39% for onshore wind and 29% for offshore wind. This decrease in costs is said to be the result of improved technologies, economies of scale, competition in supply chains and the growing experience of developers, in particular. Finally, the agency explains that, on average, it is cheaper to set up new solar photovoltaic and wind power installations than to keep many coal-fired plants in operation. IRENA. 2019. Renewable Power Generation Costs in 2019.
94 Connaissance des énergies. 26/09/2017. Les chiffres clés de l'énergie dans le monde.
95 According to the Fondation pour l'Homme et la Nature and the Veblen Institute for economic reform, most of these imports concern Canadian tar sands, which emit up to 49% more GHGs than conventional oil and have catastrophic effects on biodiversity. Libération. 31/07/2019. Quelles mesures du CETA sont mauvaises pour l'environnement ?
96 German NGO Forum Environment & Development. 2009. Climate and Trade. Why climate change calls for fundamental reforms in world trade policies.

Ultimately, the question of whether trade openness has a positive or negative effect on climate change is very difficult to settle from the point of view of economic science, given the high number of parameters, country situations and sectors involved.[97] Nevertheless, various studies seem to show that of all these indirect impacts, it is the scale effect that predominates and that greater trade openness increases overall emissions, more specifically by spreading the carbon-intensive growth model and consumption practices of the North to the South.[98] Simply put, it is not only car factories that are relocating, but also the desire and means to buy one's own car! One of these studies estimates that open borders increase global emissions by around 5% compared to an autarkic situation, i.e. with no international trade.[99] This figure may seem high (it is comparable to the emissions of Russia) and low at the same time, given that the share of international trade in the global gross domestic product (GDP) has now reached 30% (compared to around 5% in the 1950s) and that the total volume of goods and services traded has increased ninefold between 1980 and 2014.[100] The authors of another recent study estimate that more than 30% of GHG emissions can be attributed to international trade (also and "incidentally" linked to 68% of raw material extraction and 30% of biodiversity loss).[101]

9

The "myth" of decoupling

In 2009, the British economist Tim Jackson published the book ***Prosperity without Growth?*** The Transition to a Sustainable Economy. This book, which has received a high level of attention worldwide, is considered by many to be one of the most significant books on environmental economics of the last twenty years.

One of the key concepts explored is that of **decoupling**, which is the disconnection between the growth rate of a pressure on the environment (e.g. CO_2 emissions) and that of its driving force (e.g. GDP growth). In contrast to a large majority of liberal economists, Jackson argues that an absolute decoupling of economic growth from its environmental impact is impossible. In his view, contemporary societies and economies could eventually achieve a relative decoupling between growth and consumption/pollution, with the rate of the latter becoming slower than that of the former as technological innovation proceeds. But he considers that absolute decoupling, which would see GDP growth increase while its environmental impact decreased, is out of reach (even more so if it must be sufficient to fall below planetary boundaries, see Figure 10).[1]

To better understand these different notions, it is useful to refer to the **Kaya equation**, named after the Japanese economist who developed it in the 1990s (and adopted by a coalition of sustainable businesses in Belgium, see Box 4):

$$CO_2 = population . \frac{PIB}{population} . \frac{énergie}{PIB} . \frac{CO_2}{énergie}$$

This equation breaks down the growth of emissions (CO_2, the left-hand term) into four growth rates: population, GDP per capita (i.e. purchasing power), energy intensity (i.e. energy consumption per unit of GDP) and carbon intensity (i.e. the level of emissions per unit of energy consumption).

Using this equation, the fight against climate change can be summarised as a **race between two sets of variables**: the population and the level of wealth on the one hand, which increase emissions related to economic activity, and technology on the other hand (energy and carbon intensities), which allows them to be reduced. If we assume that it is difficult to act on the first group (this touches on two taboos, that of demographic control and degrowth), technology is the only thing left that can save us. This is the whole premise of green growth.

1 OFCE. 2012. Faut-il décourager le découplage ? Revue de l'OFCE, n°120, p. 235-257.

97 Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'UE : aspects économiques. Policy paper n°245.
98 See these two publications, for example: Cole M., Elliott R. 2003. Determining the trade-environment composition effect: the role of capital, labor and environmental regulations. Journal of Environmental Economics and Management, n°46, p.363-383.
Managi S. 2004. Trade liberalization and the environment: carbon dioxide for 1960-1999. Economics Bulletin n°17, p.1-5.
99 Shapiro J.S. 2016. Trade costs, CO_2 and the environment. American Economic Journal: Economic Policy, vol. 8, n°4, p. 220-254.
100 CEPII. Le commerce peut être un levier dans les négociations climatiques. Accessed 16/07/2020.
101 Wiedmann T., Lenzen M. May 2018. Environmental and social footprints of international trade. Nature Geoscience, vol. 11, p. 314-5.

In terms of energy intensity, we can, for example, develop systems that consume less energy (e.g. building insulation), or, as far as carbon intensity is concerned, we can replace fossil fuels with renewables.

In 2007, the IPCC carried out a historical analysis to better understand the **overall dynamics of emissions** over the last four decades. It calculated that the 1.9% annual growth in world emissions between 1970 and 2004 was explained by population growth of 1.6%, growth in GDP per capita of 1.8%, a decrease in energy intensity of 1.2% and a decrease in carbon intensity of 0.2%. In short, advances in energy efficiency and the "decarbonisation" of the energy consumed were totally insufficient to make up for the increase in population and in income per capita.[2]

In the light of these past dynamics and future projections concerning population and income, the IPCC considers the challenge of absolute decoupling to be "daunting" (even more so if it is to bring resource use to within planetary boundaries, see Figure 10). Indeed, decoupling through technology has **many limits**, whether these are rebound effects or the delocalisation of environmental impacts, as we have seen, or indeed more physical or financial limits, cf. for example the huge amounts of materials and land needed to roll out renewable energy, the cost of the energy transition, or the huge emissions associated with the digital sector. According to The Shift Project, the digital sector accounts for 6 to 10% of global electricity consumption and 4% of CO_2 emissions, connected with the growth of video traffic, the Internet of Things, artificial intelligence and digital cryptocurrencies (e.g. the bitcoin or Facebook's libra, whose algorithms are extremely greedy in terms of computing resources).[3]

Faced with this uncompromising logic, Tim Jackson sees no solution other than **moving beyond the logic of (green) growth** and redefining our vision of prosperity, work, personal fulfilment and collective success.

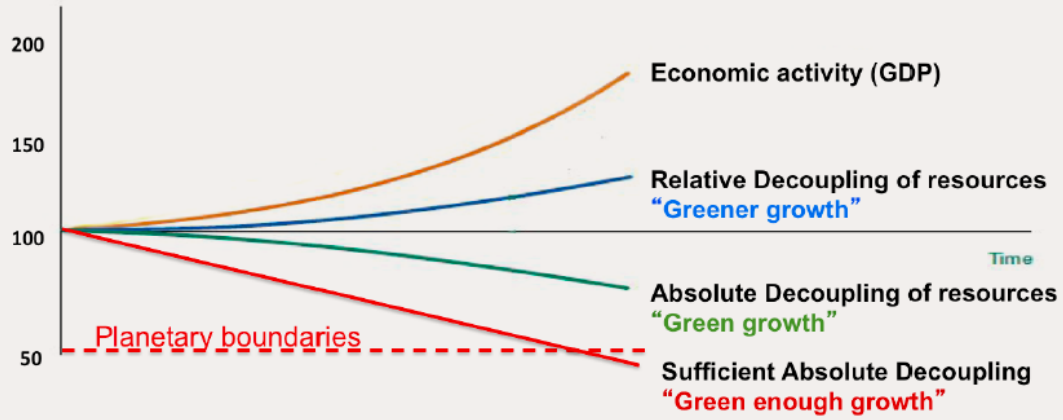

Figure 10. Decoupling between resource use and growth.

Raworth K. 2017. Doughnut economics: seven ways to think like a 21st-century economist.

2 IPCC 2007. Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.
3 Le Monde 27/09/2019. Après la « honte de l'avion », la « honte du numérique » ?

2.5 INCONSISTENCY BETWEEN TRADE AND ENVIRONMENTAL POLICIES

Beyond these direct and indirect effects of trade on the climate, there is also a fundamental problem of **inconsistency between climate and trade policies**. The latter very often interfere with and stymie decisions that are beneficial to the fight against climate change. States have agreed to adopt binding international trade rules in order to facilitate trade and promote investment, whether at the multilateral level through the *World Trade Organisation* (WTO) or bilaterally through free trade agreements (FTAs).[102] At the same time, environmental rules essentially remain defined at the national level, with no truly binding international mechanism.[103]

An example at the multilateral level is **the case of the Canadian province of Ontario**. In parallel with its decision to ban coal-fired power plants, the province introduced a preferential feed-in tariff for wind and photovoltaic electricity in 2012 for companies primarily using local labour and materials. This scheme, which created 20,000 jobs, was found not to conform to trade rules by the WTO Dispute Settlement Body (see Box 11) and had to be dismantled. A similar ruling was also made against India in a case filed by the United States in 2013.[104]

Another example, this time at the bilateral level, is the **Keystone XL pipeline** in the United States. This project for transporting oil from the Canadian tar sands to the Gulf of Mexico was rejected in 2016 by former President Barack Obama, under pressure from citizens and in the absence of "*national interest*". But the multinational corporation *TransCanada* subsequently decided to sue the US federal government, invoking NAFTA, the North American Free Trade Agreement, and its investor-state dispute settlement mechanism (ISDS, see Box 11). *TransCanada*, whose share price fell sharply following Obama's decision, which it considers to be "*arbitrary and unjustified*", is claiming $15 billion in compensation.[105]

These examples illustrate the extent to which the "dilution of sovereignty in trade globalisation" [106] is leading to reduced room for manoeuvre for states and local authorities in terms of the ecological transition. As summarised by Nicolas Hulot, the former French Minister for Ecological Transition, "how can we keep our appointment with history if democratically developed policies of general interest can be challenged through a court of special jurisdiction in the name of their impact on economic activity?".[107]

Merely the launch of negotiations or the prospect of a trade agreement can have a profound **upstream influence** on public policy. The TTIP and CETA negotiations, for example, led the EU, under pressure from the US and Canada, to abandon the Fuel Quality Directive which aimed to reduce transport emissions and planned to penalise oil sands, which are much more polluting. Such negotiations provide an opportunity for many lobbies, such as those in the aviation, automotive and extractive sectors, to press for the dismantling of environmental regulations, which are perceived as "*barriers to trade*".[108]

Furthermore, trade agreements present the fundamental risk of a **downward harmonisation** of environmental or social standards. The majority of negotiations currently underway are in fact concerned with non-tariff aspects, i.e. the harmonisation of standards in order to facilitate trading (e.g. car emission standards or toy safety standards), as customs duties in world trade are now quite low (often less than 5%).[109] Given the generally lower level of regulation in non-EU countries (especially in agriculture and food), there is a great risk that the EU will lower its ambitions, for example on the climate, in the name of "all for trade" and increased trading.

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102 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
103 It should be recalled that the Paris Climate Agreement does not include, unlike its predecessor the Kyoto Protocol, a sanction mechanism in the strict sense. In particular, the national contributions of each country, i.e. their precise commitments on emissions reduction, are not binding in nature. Nevertheless, each signatory state is obliged to establish a contribution, to implement it and, above all, to revise it upwards every five years. Le Monde. 14/12/2015. L'accord obtenu à la COP21 est-il vraiment juridiquement contraignant ?
104 Le Monde. 22/02/2016. Au nom du climat, rénover les règles du commerce mondial.
105 Le Monde. 22/02/2016. Au nom du climat, rénover les règles du commerce mondial.
106 Saw-B. 2019. Les verrous économiques de la transition.
107 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
108 Alternatives Economiques. 10/12/2015. Commerce ou climat : la Commission européenne a fait son choix.
109 On average, customs tariffs are now only 3.4% in the United States, 5.5% in the European Union, 4.6% in Japan and 0.2% in Singapore. They are scarcely higher in emerging countries: 9.6% in China, 10% in Russia, 7.6% in South Africa, 13.7% in India and 13.5% in Brazil. This situation is quite different from that only ten years ago, when Oxfam International published its report "Rigged Rules and Double standards" denouncing the significant differences in trade protection between countries of the North and of the South, the former keeping very high tariff barriers, while demanding that developing countries open their borders. Oxfam 2002. Rigged Rules and Double Standards: trade, globalisation, and the fight against poverty. Make trade fair.

World Trade Organisation (WTO) vs. Free Trade Agreements (FTAs)

10

The **rules of world trade** are defined within the WTO, formerly the General Agreement on Tariffs and Trade (GATT). GATT, which came into force in 1948, was responsible not only for defining these rules, but also for hosting trade negotiations between member countries with a view to promoting **trade liberalisation**. Created at the end of the 8th round of multilateral negotiations in 1994, the WTO is a sort of institutionalised and strengthened GATT. It is the first truly binding international organisation, since it has a Dispute Settlement Body (DSB), responsible for judging cases of unfair competition and obstacles to freedom of trading. Today its scope of application is very broad: trade in goods and services, intellectual property rights, agriculture, etc.

Despite these various competences, the **WTO is now substantially weaker than before**. The multilateral negotiations known as the Doha Development Agenda were suspended in 2006 due to numerous North-South differences: developed countries are pushing for the liberalisation of the services and industrial goods sectors, while developing countries (DCs) want better access to the markets of wealthy countries for their agricultural products and textiles, while also having the possibility to protect their agriculture and infant industries. An agreement was reached in December 2013 in Bali, but this agreement only covers 10% of the Doha Agenda. This agreement also nearly failed, mainly because of India, which was keen to maintain its food security programme. In the end, the subcontinent negotiated a "peace clause" with the United States. In 2018, US President Donald Trump threatened to leave the organisation if it was not reformed. "*The global consensus, based on the underlying wisdom of sacrificing some sovereign policy space to allow predictable, rules-based trade, has never been weaker*" former Australian negotiator Dmitry Grozoubinski wrote recently.[1] The conclusion, bitter for many, is that the WTO is virtually paralysed in its two main functions, the settlement of trade disputes and the negotiation of new rules.

One of the consequences of this weakening of multilateral trade is that trade agreements have become **mainly bilateral or regional**. Over the last decade there has been an explosion in the number of such agreements. The WTO identified 303 in force on 17 January 2020. As Oxfam International already pointed out in 2007,[2] the main problem with these FTAs is the balance of power that they create: they move from a multilateral framework, in which developing and emerging countries can join together and negotiate with (relatively) greater ease, towards relations involving one country (or several) against overly powerful trading blocs. Usually negotiated in secret, these agreements allow the most industrialised (groups of) countries to force negotiations in their favour, especially in sensitive sectors such as agriculture. We are thus witnessing a chess game between the great powers, in particular between the USA and China, in an attempt to secure areas of economic and political influence.

1 Grozoubinski D. 23/08/2020. Business, government must engage on international trade policy. Lowy Institute.
2 Oxfam International. 2007. Signing Away The Future: How trade and investment agreements between rich and poor countries undermine development.

Investor-state dispute settlement (ISDS) mechanism

11

The ISDS, which received media coverage in 2015 during mobilisations against the TTIP trade deal between the EU and the USA, is a mechanism for protecting investors that is included in many trade and investment agreements. This instrument allows a multinational company to sanction and/or prevent the implementation by a government of any legislation, for example concerning the environment or people's rights, that is contrary to its interests as an investor. The fact that conflicts between a country and a multinational company are settled by a private arbitration body is considered by many social movements as particularly undemocratic, and detrimental to human rights and sustainable development.

There were plans to include such a mechanism in CETA, the agreement between the EU and Canada. However, in view of numerous strong objections, the European Commission replaced it with the Investment Court System (ICS). This system contains some modest steps forward, bringing it closer to a public justice system. New features include the appointment of permanent arbitrators (with 5 to 10 year terms) who receive a "retainer fee" to ensure their availability, the creation of an appeal process and the adoption of a code of conduct. Following a politico-media storm in autumn 2017 that saw Wallonia oppose Belgium's signing of CETA, the European Court of Justice verified and approved the compatibility of the ICS with European law.

Despite the changes, the system still has the flaw of being largely pro-business. Its defenders point to the need to protect (and therefore attract) investments, to which civil society objects that existing legislative frameworks, i.e. national ones, are usually sufficiently developed to ensure this protection.[1] Moreover, the ICS remains a system of special jurisdiction in which only companies can file complaints and where national courts have no say. Indeed, private investors retain the possibility of referring directly to the arbitration court without first having to exhaust the remedies available in national courts (unlike any citizen, who must first refer to national courts before going before a supranational court, such as the European Court of Human Rights).[2]

Finally, it should be noted that even in its amended form, this system for protecting investments leads to a form of "regulatory freeze", i.e. it prevents public authorities from implementing policies that are too detrimental to investors for fear of legal action.

1 Cermak M. 10/07/2015. TTIP : retour sur les enjeux d'un vote mouvementé et les choix des eurodéputés belges.
2 E&F. Juillet 2019. Arbitrage : les raisons de cette « justice d'exception » et les moyens d'en sortir.

Demonstration against TTIP and CETA in front of the European Parliament in Strasbourg (France, 15 February 2017).

This is all the more problematic given that new agreements negotiated by the EU, such as CETA, include what are known as "**regulatory cooperation**" mechanisms, which allow the work of harmonising regulatory frameworks to continue once an agreement has been signed. There is a risk of this type of mechanism considering any regulation only in terms of its binding or limiting nature for trade (under the influence of industrial lobbies, for instance), bypassing any wider democratic and societal debate.[110]

These various trends are very worrying insofar as for many years now there has been an **increase in the number of bilateral free trade agreements** (FTAs), which create a power balance that is detrimental to weaker (groups of) countries (see Box 10).

From all points of view, it would seem essential for these agreements to include **minimum standards** on the environment and on labour rights. Such standards do exist in the new generation of EU agreements (for example with Korea), via sustainable development chapters (SDCs), but these chapters are not binding and are limited to reiterating the environmental commitments made elsewhere by the states.[111]

Similarly, the ability to better assess the ***ex-ante* impact of trade agreements**, particularly at the climate level, would be necessary. One positive point is that the EU's FTAs have been subject to such general impact assessments regarding sustainable development since 2002.[112] In practice, however, the signing of treaties is not conditional upon the results of these assessments, with some treaties even being signed before the impact assessment has been completed.[113]

110 CEO. 08/04/2015. TAFTA/TTIP – Coopération réglementaire : coopérer pour moins réglementer.
111 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
112 European Commission. Sustainability Impact Assessments. Accessed 22/07/2020.

113 E&F. Juin 2020. Accords de libre-échange : une marche a (pour)suivre ?

World trade today[1]

12

Trade – the economic activity of buying and selling goods and services – worldwide has changed significantly in recent decades. What is referred to as globalisation has seen a **scaling up of production volumes** as well as a profound change in **production areas** and the **very nature of the products traded**: nowadays, most of these come from multinational firms (80,000 parent companies, linked to some 780,000 subsidiaries and sub-subsidiaries around the world) which break down the different stages of production in different locations, according to their comparative advantages. For example, manufacture may take place in countries with low labour costs (mostly in the South), while innovation and marketing (and thus added value) are generally conducted in rich/industrialised countries. The result is that almost 80% of trade today can be attributed to trade in intermediate goods and industrial components between links in the same production chain. Other consequences include the "catching up" of a series of emerging countries – veritable "factory countries" – and the strong growth in South-South trade. Whereas North-North trade between developed countries accounted for more than two-thirds of world trade in the early 1990s, it now accounts for less than half, while South-South trade has grown from less than one-fifth to more than one-third of world trade over the past decade.

Faced with the decentralisation of the world resulting from this rise in power of emerging countries, and amidst the correlative crisis of trade multilateralism, **the EU is trying to remain competitive** through an aggressive trade policy. To this end, since the beginning of the 2000s it has increased the number of what are known as "new generation" bilateral treaties, which have a very broad scope, encompassing matters such as intellectual property rights, trade in services, investment, competition and public procurement (e.g. the most recent treaties with Canada, Japan, Singapore and Vietnam). The COVID-19 crisis, by intensifying a global trend towards deglobalisation, identitarian closure and relocalisation, has furthermore led the Commission to adopt a model known as "*open strategic autonomy*". The idea behind this convoluted expression is for the EU to strengthen "*the defence of its own interests*" (e.g. self-sufficiency in certain crucial health products) while continuing to work with its partners and allies to deliver "*solutions to key global challenges*" such as the climate emergency. At a purely commercial level, this means defending multilateral rules while protecting against unfair practices, in other words, striking a balance between a Europe that is "*open for business*" and a Europe "*that protects its people, companies and standards*." [2]

As for the former emerging country that is China, it has now become the world's second economic power after the United States, and a **new cold war**, this time commercial and technological, is being played out between the two countries. Suffering from a large trade deficit ($380 billion in 2019), Washington has imposed a series of taxes on Chinese imports in recent years (on a total of more than $250 billion of imported goods as of the end of August 2019), on the pretext of espionage in the new technologies sector among other things. China has retaliated by taxing American products in turn (to the amount of $110 billion), while devaluing its currency to boost its exports. A preliminary agreement was negotiated at the beginning of 2020, synonymous with a truce and committing China to buying $200 billion's worth of additional American products by 2022. But in the context of major global economic crisis following the COVID-19 crisis, it is not certain that China can honour this commitment. It is likely that this trade war will only result in losers, with the collateral victims of the European Union and developing countries in first place.[3]

1 Veillard P. 23/11/2015. Tout ce que vous avez toujours voulu savoir sur le commerce (sans jamais oser le demander).
2 CE. 16/06/2020. Une politique commerciale revisitée pour une Europe plus forte. Note de consultation.
3 Le Soir. 11/06/2020. La pandémie pèse sur l'accord commercial Chine-USA, reconnaît Pékin.

2.6 LIBERALISATION WITH SMALL AND UNCERTAIN ECONOMIC GAINS

If only these various impacts on the climate served to create more wealth (ideally in the service of employment and reducing inequalities)... But the **link between trade liberalisation and GDP growth** today appears to be increasingly fragile, taking away an additional argument used by the supporters of free trade (without even considering the imperfect, to say the least, nature of GDP as an indicator of well-being). Indeed, some studies suggest a growing disconnection between global production and flows of goods and services, with the latter having had a tendency to slow down sharply since the global financial crisis of 2007-2009.[114] This could be a sign that the expansion of global value chains has reached a ceiling and that the economic gains from new trade agreements will be subject to diminishing returns.[115]

Counter-intuitively, the proliferation of bilateral trade agreements can also create many **barriers to trade**. One of these is what the Indian economist Jagdish Bhagwati refers to as the "*spaghetti bowl*" phenomenon, namely a piling-up and complication of original rules that can prove counterproductive and lead to costs constituting a form of implicit customs duty.[116] Another negative impact is that known as "trade diversion": the increase in trade between two economic blocs induced by a free trade deal partly replaces trade previously carried out with the rest of the world, thus reducing the deal's potential economic benefits.[117] Finally, it should be noted that the economic impact studies upon which the European Commission bases its justification for negotiating new agreements are based on mathematical models that are necessarily imperfect and, more importantly, on assumptions that are often simplistic and particularly optimistic.[118]

HMM Algeciras, the world's largest container ship, in a Zeeland inlet in June 2020.

114 Jean S. Juillet 2016. Pas de printemps pour le commerce mondial. Confrontations Europe n°114.
115 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
116 Wikipedia. Spaghetti bowl effect. Accessed 06/01/2021.
117 The Conversation. 15/01/2017. Les traités commerciaux favorisent-ils le commerce mondial ?
118 As part of the TTIP negotiations with the US in 2015, the EU highlighted an impact study that it had commissioned. Despite very optimistic assumptions about the effect of the agreement on reducing non-tariff barriers, this study predicted only 0.5% additional growth over 10 years, i.e. 0.05% per year, a rate considered statistically negligible. La Libre Belgique. 08/02/2015. Nous n'avons pas besoin du TTIP!

2.7 EXAMPLE OF THE EU-MERCOSUR FREE TRADE AGREEMENT

The trade agreement between the EU and the Mercosur countries (Brazil, Argentina, Uruguay and Paraguay), signed on 28 June 2019, is arguably the most emblematic case of the contradictions described above.[119]

Concluded after more than twenty years of negotiation, this agreement creates one of the world's **largest trade areas**, with a population of no less than 780 million and 25% of the world's GDP. Nicknamed the "cars for cows" agreement, it aims to simplify administration, remove non-tariff barriers and progressively lower customs duties on a wide range of products, mainly agricultural on the Mercosur side (e.g. beef, poultry, ethanol) and industrial on the EU side (e.g. automobiles, chemicals, textiles). It means, for example, that 90% of Brazil's exports will enter the EU duty free, a considerable increase from the current 24%.[120] According to the Brazilian government, it would allow Brazil's GDP to increase by around €20 billion in fifteen years, and its exports to increase by €88 billion between now and 2035.[121]

In addition to the manifold potential damaging effects on European agriculture and on industry in the Mercosur countries, the agreement is **highly problematic from a climate perspective**. This is due, among other things, to the nature of the goods traded: essentially agricultural products with high emissions, in particular livestock and soy from South American countries.[122] The latter can be considered a "double penalty" for the climate: as well as the emissions linked to their industrial production methods (fertilisers, manure, livestock belching), they lead to major changes in land use, in other words deforestation, particularly through the practice of burning. And as we know, less (Amazonian) forest usually means not only carbon going up in smoke, but also less absorption of CO_2 through photosynthesis. In this respect, it is useful to remember that 80% of global deforestation is due to agricultural activities[123] (2/3 for livestock alone in the case of the Amazon).[124] All in all, the NGO Grain has calculated that the agreement could result in a 34% rise in emissions compared with the current level of trade between the two blocs (and this only takes eight key agricultural products into account, not including soy).[125]

Ideally, the agreement ought to make the reduction in customs duties conditional on there being no link between products imported by the EU and deforestation. But it contains **no guarantee of a traceability system** allowing the conditions under which Mercosur food is raised or sourced to be checked. And there are many violations of the systems in place. For example, a recent investigation by a consortium of investigative media outlets showed that the Brazilian company JBS, the world's leading meat company, was sourcing cattle directly from an illegal farm that had been convicted of deforestation. In order to do this, it simply transferred the cattle to a legal farm by lorry, before shipping the meat to the EU.[126] This lack of control is also problematic in the case of soy, given its link to deforestation and the high volumes exported to the EU (see below).[127] In general, the mechanisms included in the EU-Mercosur agreement regarding border controls are very weak, with the stipulated checks being infrequent and at the expense of the exporting parties, via approved intermediaries. This raises many questions in terms of health, given the types and volumes of pesticides, hormones, antibiotics, animal meal, etc., used in agriculture in the Mercosur countries (not to mention the unfair competition that this entails for European farmers).[128]

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119 The term Mercosur is short for "Mercado común del Sur" (Southern Common Market). The agreement reached in June 2019 concerns the trade component of a wider association agreement that also includes a political and cooperation component, as yet not completed. E&F. Février 2020. Les dessous de l'accord commercial UE-MERCOSUR.
120 Climate Tracker. 08/07/2019. Cars for cows : "the EU's worst trade agreement for the climate".
121 Le Monde. 29/06/2019. Au Brésil, l'accord commercial entre le Mercosur et l'Europe affole les ONG environnementales.
122 The EU-Mercosur agreement could lead to an increase of more than 70% in beef imports by 2032, which would sharply decrease prices in the sector and place European farmers in an even more precarious situation. LSE. July 2020. Sustainability impact assessment in support of the association agreement negotiations between the European Union and Mercosur.
123 Le Monde. 07/09/2015. 80 % de la déforestation est due à l'agriculture. It should be remembered that cocoa is another raw material that is a major source of deforestation, particularly in West Africa, the world's largest production area. See for instance: Brack D. 12/06/2019. Towards sustainable cocoa supply chains: regulatory options for the EU.
124 Guéneau S. 2018. Durabilité des chaînes globales de valeur du soja et de la viande de boeuf en Amazonie : conséquences d'une gouvernementalité néolibérale ». Brésil(s), 13.
125 Grain. 25/11/2019. L'accord commercial UE-Mercosur va intensifier la crise climatique due à l'agriculture.
126 The Guardian. 27/07/2020. Revealed : new evidence links Brazil meat giant JBS to Amazon deforestation.
127 Note once again that this is totally inconsistent with the EU's desire to strengthen its action to protect and restore forests. Greenpeace. Quelle est la position de Greenpeace sur l'accord de libre-échange entre l'UE et le Mercosur? Accessed 25/07/2020.
128 To provide an example, 74% of the plant-protection products used in Brazil are banned in Europe. E&F. Février 2020. Les dessous de l'accord commercial UE-MERCOSUR.

Press conference on the EU-Mercosur agreement at the G20 summit in Osaka (Japan), June 2019.

Defenders of the trade agreement put forward the **deterrent argument**: they believe that it would have prevented Brazilian President Jair Bolsonaro from withdrawing from the Paris Agreement, one of his election promises.[129] However, the willingness of the populist president to show any ambition in this area is doubtful. As Greenpeace points out, since coming to power in January 2019, "*Bolsonaro's government has dismantled environmental protections, tolerated armed incursions into the lands of indigenous peoples and overseen a dramatic increase in the rate of deforestation in the Amazon*".[130] And indeed, a report from the Brazilian Institute for Space Research indicates that the rate of deforestation increased by 88% between June 2018 and June 2019,[131] bringing the Amazon rainforest close to a "point of no return" synonymous with a conversion to savannah.[132]

In reality, nothing in the EU-Mercosur agreement obliges a signatory country to respect **social or environmental clauses**. The latter are included in the sustainable development chapter, which is excluded from the sanction and dispute settlement mechanism.[133] In concrete terms, this means that in the event of a violation of the Paris Agreement by one of the parties, no trade sanctions can be applied.[134] This is clearly a missed opportunity, given that trade leverage could be a powerful means of influencing public policies in Mercosur countries, for example regarding deforestation. As an example, the European Commission's impact assessment recommends improving anti-deforestation policies by renewing and extending the moratorium on soy grown on land cleared after 2006 to other Brazilian regions in addition to the Cerrado.[135]

In this context, several European decision-makers have announced their **opposition to the ratification** of the agreement as it stands, often under pressure from NGOs and agricultural unions (e.g. in France, Ireland, Luxembourg and Slovakia).[136] The most prominent of these was undoubtedly the French president Emmanuel Macron who, faced with the surge of fires in the Amazon in summer 2019 and the lack of any reaction from Mr Bolsonaro, had a virulent battle with the Brazilian president that was publicised in the media. But as is often the case with the French politician, this opposition is likely to remain a communications exercise or a political manoeuvre. Like most European countries, France is in fact a major

129 Bolsonaro's presidential election campaign focused on the "three Bs": Beef, Bible and Bullets. This extremely conservative programme means a tougher security policy, an attachment to religious conservatism, and strong support for the cattle sector, synonymous with expanding the agricultural frontier through deforestation. Ghiotto L., Echaide J. Analysis of the agreement between the European Union and the Mercosur. A report for The Greens/EFA in the European Parliament.
130 Le Monde. 29/06/2019. Au Brésil, l'accord commercial entre le Mercosur et l'Europe affole les ONG environnementales.
131 Furthermore, the release of this information led to the dismissal of the institute's director by Bolsonaro. Ghiotto L., Echaide J. Analysis of the agreement between the European Union and the Mercosur. A report for The Greens/EFA in the European Parliament.
132 Scientists estimate that this "point of no return" is somewhere between a 20% and 25% reduction in forest area compared to the 1950s. This tipping point, which will trigger an irreversible process of "savannah-isation", is in fact said to nearly have been reached. This would very obviously have dramatic consequences from a climate and biodiversity perspective, and also at the agricultural level, as the Amazonian rainforest plays a very important role in the (regional and even global) water cycle. Reporterre. 30/08/2019. « La forêt amazonienne pourrait rapidement devenir une savane ».
133 The very language used in the sustainable development chapter should arouse suspicion, the devil often being found in the detail. Article 6 on Trade and Climate Change, for example, states that "The Parties shall also cooperate, as appropriate, on trade-related climate change issues bilaterally, regionally and in international fora, particularly in the UNFCCC." The phrase "as appropriate" leaves considerable room for manoeuvre for states to avoid fulfilling concrete commitments in this area. Ghiotto L., Echaide J. Analysis of the agreement between the European Union and the Mercosur. A report for The Greens/EFA in the European Parliament.
134 CNCD. UE-Mercosur : un accord incohérent avec le Green Deal.
135 Bricmont S. 22/07/2020. L'accord UE-Mercosur, une réalité dès novembre ?
136 In Belgium, see the position of the Plate-forme UE-Mercosur

importer of soy, on which its (exporting) agriculture depends heavily in order to feed its livestock (given that alternative protein plants – legumes such as peas, beans or lupins – are little developed or uncompetitive compared to the agricultural model of the Mercosur countries).[137] More recently, the European Parliament itself adopted an amendment opposing the ratification of the agreement as it stands, making the future of the treaty even more uncertain.[138]

However, this episode can be credited with highlighting the **links between climate, deforestation and trade**, which, as we see, cannot be dealt with separately. Logging and indiscriminate fires are the first steps in expanding agricultural frontiers and thus increasing the area devoted to the exportation of products to, for example, EU countries. It is clear that the EU-Mercosur trade agreement will exacerbate these effects, which are devastating for the environment in general and the climate in particular, for an economic impact that is moreover derisory (0.1% gain in GDP for the EU by 2032, according to the impact assessment commissioned by the European Commission).[139] As Nicolas Hulot emphasises, "*the signing of this type of agreement demonstrates the absence of a systemic and global approach to the fight against climate change" and is "completely at odds with declared climate ambitions*".[140]


John Fleetwood / Shutterstock.com

Deforestation caused by cattle farming in the Amazon rainforest.

2.8 EXAMPLE OF THE ENERGY CHARTER TREATY (ECT)

The number of trade and investment instruments that are detrimental to social and environmental justice seems endless. After fighting the TTIP, CETA, EU-Mercosur and other agreements, civil society (in Europe) has recently encountered the sudden appearance of a new evil: the **Energy Charter Treaty** (ECT). This acronym probably means nothing to you, so little is it known among the general public. It is, however, well known to transnational companies, which are increasingly using it to sue states that threaten their investments. Dubbed "*the life insurance of fossil fuels*" by French MEP Manon Aubry, it is another example of the contradictions and legal-political barriers in the fight against the climate emergency.

The ECT entered into force in 1998 in the absence of any real public debate and establishes a **legal framework for trade and investment** in the energy sector between 53 contracting parties (including Belgium and almost all EU Member States, with the notable exception of Italy). The objective of this treaty was originally to protect, and therefore attract, foreign investors in the energy sector, more specifically for Western Europe after the Cold War. It aimed more specifically to secure the supply of Western European countries by developing the energy potential of Central and Eastern European countries, in a context of uncertainty surrounding energy supplies (cf. the Gulf War and the rise in economic power of Asia, a major energy consumer).[141]

Its most important provisions (which are still in force) concern trade in energy materials and products, their

137 In 2019, Brazil (46%), Argentina (43%) and Paraguay (4%) together accounted for 93% of the EU's soybean flour imports. Committee for the Common Organisation of Agricultural Markets. 2019. EU Oilseed Complex Trade 2019/20.
138 Ouest France. 07/10/2020. L'accord UE-Mercosur « ne peut pas être ratifié tel quel », selon le Parlement européen.
139 LSE. July 2020. Sustainability impact assessment in support of the association agreement negotiations between the European Union and Mercosur.
140 Euractiv. L'accord UE-Mercosur plombe la lutte pour le climat.
141 CNCD. Mai 2020. Réformer le traité sur la charte de l'énergie. Note politique #27.

transit and, above all, the settlement of disputes between investors and states, the infamous ISDS **arbitration clause** (see Box 11). It is mainly through the latter that, twenty years after its entry into force, the ECT is proving to be an extremely dangerous instrument for the energy transition (see Box 13). It in fact allows any private company, investor or shareholder to sue a public authority through private arbitration tribunals for any action or regulation that may have affected their investments. This can involve both direct cases of expropriation (e.g. nationalisation) and indirect ones. In practice, the latter concerns virtually all types of legislative or regulatory measures (e.g. increases in the minimum wage, increases in air quality standards), as soon as they have the effect of substantially reducing the profits of a private investor. Very often, the compensation claimed is not only for investments already made but also for losses on expected profits.

Energy giant *Vattenfall*, for example, has sued Germany for environmental restrictions on a coal-fired power plant, and for its nuclear phase-out. For its part, the British company *Rockhopper* has claimed 350 million euros from Italy for banning oil and gas drilling near its coast. The amounts at stake are so substantial that the threat alone can be enough to make states bend. This is the case in France, which included the non-extension of oil concessions in its draft 2018 bill, a bill that was ultimately amended and emptied of its substance following a threat of arbitration. It is particularly the major oil, gas and coal companies that have made massive use of the ECT, for example for oil drilling bans, rejection of pipeline projects, taxes on fossil fuels, and moratoria and phase-outs of controversial energy. In total, more than €51.6 billion is said to have already been paid out of taxpayers' money for the 128 known cases, making this treaty **the instrument used most by private investors** in arbitration tribunals. And that's without counting the out-of-court settlements reached between states and companies in order to avoid a court ruling.[142]

Another very dangerous component of the ECT is referred to as the "survival clause", which prolongs the effects of the treaty for 20 years after the withdrawal of a contracting party. Investors can therefore continue to sue a state even if it is no longer a party to the ECT (e.g. Italy, which withdrew in 2016, but which has been taken to court by *Rockhopper*, as noted above). In any case, at this time the number of signatories is not decreasing. On the contrary, the ECT has entered an **expansion phase** and threatens to lock more and more countries into energy policies that benefit the private sector.[143] More specifically this concerns some thirty developing countries, whose leaders often have little awareness of the financial and political risks of joining.[144]

The ECT thus represents a **major obstacle to the energy transition**. Since its entry into force in 1998, the cumulative emissions protected by the ECT have been estimated at 57Gt CO_2, which is almost double the remaining EU carbon budget for the 2018-2050 period, i.e. to meet the +1.5°C warming limit set by the Paris Agreement.[145] The ECT is therefore clearly incompatible with the latter, as well as with many of the EU's other commitments, such as the Green Deal, which among other things states that "*a power sector must be developed that is based largely on renewable sources, complemented by the rapid phasing out of coal and decarbonising gas*".[146]

Faced with these blatant contradictions, we are witnessing a **growing mobilisation** of both civil society[147] and the European Parliament to repeal the ECT at best, or at worst amend it. Among other initiatives, MEPs adopted an amendment on 7 October 2020 demanding that investments in fossil fuels cease to be protected by the ECT. Some Mem-

142 E&F. Janvier 2020. Climat et énergie : La Belgique et l'Union européenne sont-elles schizophrènes ? Analyse du Traité sur la Charte de l'énergie (TCE).
143 It should be noted, however, that Russia's departure in 2009 was a serious setback to the expansion of the ECT, with some commentators, such as Mathilde Dupré from the Veblen Institute, even seeing it as "an attack on its raison d'être". Although Moscow has not given an official reason for this withdrawal, it is undoubtedly linked to the Yukos affair, which obliged the country to pay $50 billion to five of the former shareholders of the oil group, in compensation for the expropriation to which they were victim in 2003. Le Monde. 08/12/2020. Le traité sur la charte de l'énergie, une menace pour les objectifs climatiques de l'Union européenne.
144 CEO, TNI. June 2018. "One treaty to rule them all". The ever-expanding Energy Charter Treaty and the power it gives corporations to halt the energy transition.
145 Openexp. September 2019. The Energy Charter Treaty. Assessing its geopolitical, climate and financial impacts.
146 Commission européenne. 11/12/2019. Communication de la Commission au Parlement européen, au Conseil européen, au Conseil, au Comité économique et social européen et au Comité des régions. Le pacte vert pour l'Europe. COM(2019) 640.
147 More than 280 civil society organisations sent a letter to the European authorities on 10 December 2019, during a meeting on the modernisation of the ECT. Lettre ouverte sur le traité sur la Charte de l'énergie (TCE).

Open-pit coal mine (Brandenburg, Germany).

ber States are in favour of this, including France, Spain and Luxembourg, who envisage leaving the Treaty in the opposite event and have reportedly asked the European Commission to prepare an exit plan.[148] But the EU's current negotiating mandate does not mention such an exclusion, only that "*the Modernised ECT should reflect climate change and clean energy transition goals*".[149] It should be noted, however, that it indicates "a right to regulate for states in the face of investors" and that it proposes "*a revision of the ISDS*" with a view to creating a public court system of the ICS-type.

One of the problems encountered is that any change to the treaty requires unanimity. Yet Japan announced at the start of the negotiations in October 2019 that it would oppose any modernisation of the treaty. For Yamina Saheb, an analyst specialising in energy and climate policy who has worked for the ECT secretariat, "*the only way out is to take the EU out of the treaty and adopt a European agreement to put an end to intra-European proceedings*".[150] Progress could also come from the **European Court of Justice**, which ruled in March 2018 that intra-European ISDS proceedings launched on the basis of bilateral treaties violate EU law, as they sideline EU courts. Its "legal sword" may therefore soon be raised over the ECT and the resulting lawsuits filed by investors.[151]

148 In a first sign of openness, albeit slight, in a letter dated 2 December EU Trade Commissioner Valdis Dombrovskis stated his intention "to propose (...) withdrawal from the ECT if the fundamental objectives of the EU, including alignment with the Paris Agreement, are not achieved within a reasonable timeframe". Le Monde. 08/12/2020. Le traité sur la charte de l'énergie, une menace pour les objectifs climatiques de l'Union européenne.
149 Council of the European Union. 02/07/2019. Negotiating directives for the modernisation of the Energy Charter Treaty.
150 Novethic. 07/09/2020. Le traité sur la charte de l'énergie, signé il y a plus de vingt ans, menace la transition énergétique européenne.
151 CEO, TNI. June 2018. "One treaty to rule them all". The ever-expanding Energy Charter Treaty and the power it gives corporations to halt the energy transition.

A brief overview of the (energy) transition

13

It is difficult not to repeatedly refer to the term **transition** when talking about the climate and the environment today: ecological, energetic, political, economic, even anthropological transition... Almost everyone lays claim to it, in fact, well beyond the original Transition Towns movement and its founder Rob Hopkins. And like many of its predecessors (such as sustainable development), the concept naturally tends to be overused. But it nevertheless remains an important vector for awareness and mobilisation. Unlike collapsology, for example, "*it brings together and motivates" people, by "advocating a major break with the organisation of our societies, yet without invoking violence or revolution*".

The mother of all these transitions is the energy transition. The correlation between energy consumption and economic activity, as measured by the GDP indicator, is indeed almost perfect (see Figure 11). Yet we know that more than 80% of the world's energy mix is still fossil-based (oil, gas, coal), and moreover that this is still widely subsidised. Incredible as it may seem, and despite the emergence of movements calling for disinvestment in fossil fuels (e.g. *DivestInvest*), according to the IMF subsidies for fossil fuels are even increasing (6.5% of global GDP ($5.2 trillion) in 2017, up by $500 billion from 2015). According to a WWF study, the Belgian state distributes at least €2.7 billion in tax benefits for fossil fuels every year.[1] It should also be noted that these subsidies are one of the reasons why international transport is so cheap, permitting the globalisation of production chains and all the associated social and environmental impacts.

The important question therefore is how to **decarbonise our economies**. In reality, the possibilities are limited: we must increase the share of renewable energies (or those ▸▸▸

View of the largest coal-fired power plant in China (Shanghai).

1 WWF. February 2019. Fossil fuel subsidies: Hidden impediments on Belgian climate objectives.

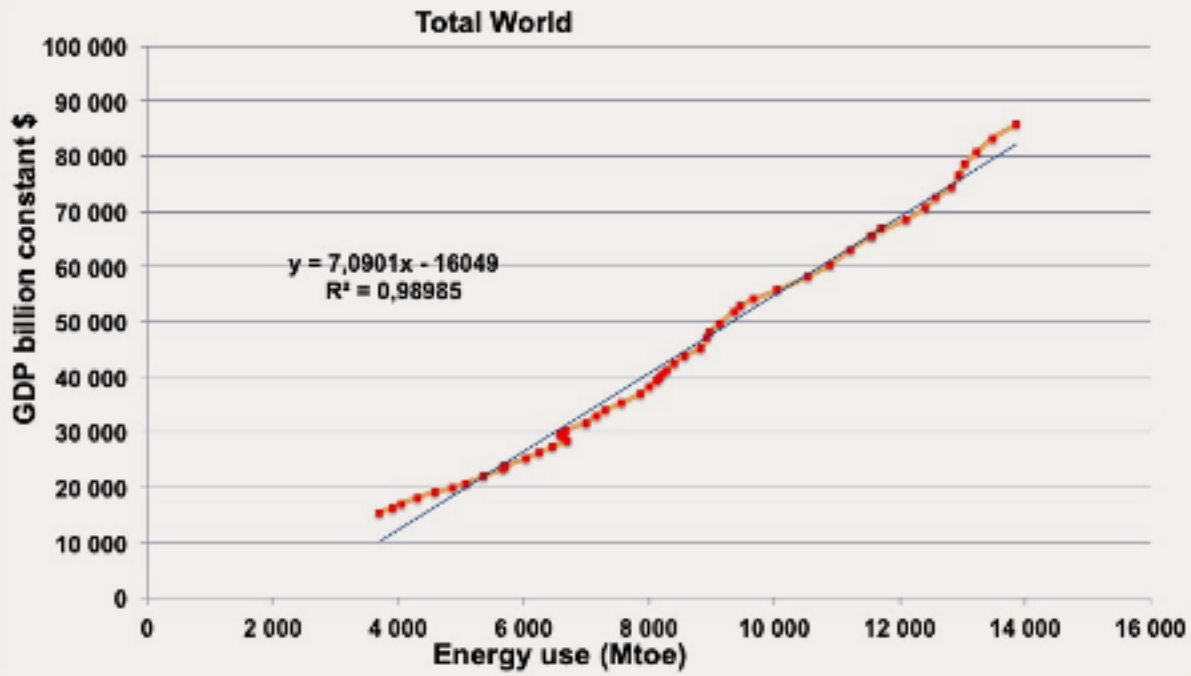

Figure 11. Correlation between GDP and energy consumption at the global level.

The Shift Project. Étude du lien entre PIB et consommation d'énergie. Accessed 19/01/2021.

▸▸▸ considered as such) while reducing global demand. The latter can be achieved by improving energy efficiency (reducing the energy consumption of a product or service for the same service provided, e.g. building insulation) or by changes in lifestyle (energy sobriety) (see the Kaya equation in Box 9).

Although the share of **renewables** in the global energy mix remains a minority (5% in 2019), some signals are positive. For example, the think tank *Ember* recently revealed a symbolic first for Europe: electricity production from renewable sources was higher than that from fossil fuels in the first half of 2020.[2] However, this news must be qualified by the fact that electricity still represents a modest share of the world's final energy consumption (18.5% in 2015, compared to 9.4% in 1973, while it must reach at least 40% in 2050 for a successful transition). One of the keys in this area is said to be offshore wind power, which is much more stable in its electricity production (due to offshore wind speeds) than solar or onshore wind power. This makes it possible to supply the electricity grid almost permanently, replacing traditional means such as gas, coal or nuclear power, and thus to mitigate one of the major weaknesses of renewable energies, the intermittency of the supply.

As for the **option of nuclear energy**, although it emits very little greenhouse gas it remains highly controversial, including among environmentalists. Its opponents denounce its danger, its prohibitive cost in the long term (cf. the question of dismantling power plants and managing radioactive waste, particularly long-lasting), its vulnerability to climatic hazards (cf. shutdown of power plants during periods of drought, as river water is either too scarce or too warm to cool them down) and the time needed to roll it out. However, this energy has the enormous advantage of being controllable (i.e. its production can be adjusted according to variations in electricity demand), unlike renewables, which makes it rather complementary to the latter in a global electricity mix. In any case, a key issue for the nuclear sector in Europe is that of green taxonomy, i.e. the way in which the European Commission classifies different energies, sustainable or not.

2 Le Monde. 22/07/2020. En Europe, les énergies renouvelables, première source d'électricité au premier semestre.

It should further be noted that a large part of the **energy transition is involuntary**. This is linked to the increasing scarcity of oil supplies and the growing difficulty of the "oil majors" in discovering reserves that are exploitable at reasonable cost (in particular the European companies *BP, Shell and Total*, even resulting in doubts concerning their future). In its latest annual Energy Outlook report, BP states moreover that global oil consumption is not expected to increase any further, even in the absence of new measures to combat global warming. This would mean that the 100 billion barrels per day reached in 2019 would truly be the historical peak in oil consumption. The peak in conventional oil was already reached in 2008, but the boom in US shale oil (oil obtained by hydraulic fracturing with catastrophic environmental effects) had so far been compensating for this. However, the latter came to a sudden halt in 2020 with the COVID-19 crisis. The risk (or opportunity, as the case may be) of "forced weaning" of the world economy from oil was recently highlighted by *The Shift Project*. A report by the French association points to the gradual drying up of most conventional oil fields (e.g. North Sea, Maghreb, Russia) and the decreasing investment in exploration by oil companies, linked to the fall in demand and prices following the COVID-19 crisis.

A cynical mind would see these developments as the main reason for the advances in **climate policy** in recent years, including the global commitment to decarbonising the economy represented by the Paris Agreement of 2015. The fact that the EU is particularly at risk of scarcity could thus explain its growing leadership role, cf. its 2050 carbon neutrality target adopted in December 2019 as part of its Green Deal and, more recently, its ambition for 2030 upped to -55% emissions (from -40% previously). It has been joined by China, which recently announced a carbon neutrality target for 2060 and a peak in its emissions before 2030. Even though the "*world's biggest polluter*" continues to build new coal-fired power plants (a new site is inaugurated every fortnight on average), this news could indicate a renewed momentum in climate multilateralism, which was seriously undermined by the Trump years.

In any event, faced with the combined threat of peak resource production and global warming, there are serious doubts about our ability to achieve the energy transition without a **more systemic rethink of our societal models**. Going beyond the myths of technological rescue and green growth, it does seem increasingly obvious that a cultural and behavioural transition is needed, and this at a collective and societal level, not just at an individual or consumer level. On this last point, calculations by consulting firm *Carbone 4* indicate that individual behavioural changes (such as small everyday gestures like buying a water bottle, equipping one's home with LED lights, or, more ambitiously, eating vegetarian food or no longer travelling by plane) can at best reduce one's carbon footprint by 25%. This figure, while not negligible, clearly indicates that even "heroic" individual behaviour is far from sufficient, and that enormous changes must be initiated at the societal and cultural levels, as well as within companies and states.[3] The objective is therefore, above all else, to drastically reduce our global energy consumption. Remember that in order to comply with the Paris Agreement and limit the rise in global temperatures to +2°C, our annual carbon footprint must be reduced to 2 tonnes of CO_2e per capita. The fact that it is currently at about 12 tonnes per capita in a developed country like France demonstrates the considerable task to be accomplished, as well as the enormous "burden" left to new generations.

3 Carbone 4. Juin 2019. Faire sa part ? Pouvoir et responsabilité des individus, des entreprises et de l'état face à l'urgence climatique.

3. What tools are needed to better link trade and climate justice?

As we can see, the global catastrophe towards which we are heading at full speed is intimately, even ontologically, linked to the globalisation of production chains. Faced with this situation, it seems essential to mitigate the impacts of global trade. And this must be done while taking account of social aspects, in particular while improving the living conditions of the most marginalised populations and countries, as advocated by many approaches such as that of the Sustainable Development Goals (SDGs, Figure 12), the Just Transition or Doughnut economics (Figure 13) (see also Box 14). In this chapter, we will try to present some of the possible and proposed solutions to these issues. The idea here is obviously not to provide an exhaustive list, but to paint a picture of the most recently discussed tools, for example at European level in the context of the Green Deal or the new trade strategy.[152]

Figure 12. The 17 United Nations Sustainable Development Goals (SDGs).

152 Le Soir. 09/06/2020. Le Covid pousse l'UE à revisiter sa stratégie commerciale: ni « business as usual » ni « mort de la mondialisation ».

14

Three approaches to reconciling social and ecological concerns

The Sustainable Development Goals (SDGs)

In September 2015, the United Nations member states agreed on a new roadmap for sustainable development, following on from the Millennium Development Goals (MDGs). A list of 17 Sustainable Development Goals (SDGs) was established, along with 169 targets to help monitor progress. These goals seek to address the challenges facing the world, including those linked to poverty, inequality, the climate, environmental degradation, prosperity, peace and justice. The 17 SDGs are all interlinked and as such need to be tackled in a coherent manner. Goal 12 is particularly relevant to the Fair Trade movement as it focuses on the issues of sustainable production and consumption.

The Just Transition

The concept of Just Transition was first formulated in the 1990s by Tony Mazzocchi, president of the American "Oil, Chemical and Atomic Workers Union", in the context of retraining workers made redundant for environmental protection reasons. It is defined by the UN as "*the creation of decent work and quality jobs in relation to the implementation of climate change mitigation policies*".[1] With this approach, using the slogan "*No jobs on a dead planet*", the international trade union movement is seeking to leave behind its defensive position and become a force for proposals. A typical example is the retraining of coal workers for employment in the wind farm sector. The concept has since been taken up by many movements (for example the alter-globalisation movement) and organisations (from UNEP to the ILO to the EU and its member states). The UN Special Rapporteur on extreme poverty and human rights, Olivier De Schutter, advocates going beyond the "mere" protection of workers and communities affected by ecological transformation, by using Just Transition as a tool for sustainable economic development and the fight against inequalities. He thus proposes a series of what he calls "triple-dividend" actions in the areas of energy, construction, food and mobility, in order to reduce our ecological footprint at the same time as creating job opportunities for people with low skills and facilitating access to goods and services that are essential for the exercise of fundamental rights. In other words, using the ecological transition as a tool for social justice and social justice as a driving force for the ecological transition.

Doughnut economics

Proposed by British economist Kate Raworth in 2012, the doughnut theory defines the social and environmental boundaries within which she believes all human activity should take place. The inner ring (or "social foundation") delineates the essentials for a decent life (food, health, education, etc.), while the outer ring (or "environmental ceiling") corresponds to the maximum pressure that humanity can exert on the Earth's life-support systems (ecosystems, climate, etc.) without endangering its survival.[2] The concept is the subject of the latest awareness campaign by Oxfam-Magasins du monde.

1 UNFCCC. 21/04/2020. Just transition of the workforce, and the creation of decent work and quality jobs. Technical paper.
2 Raworth K. 2017. Doughnut economics: seven ways to think like a 21st-century economist.

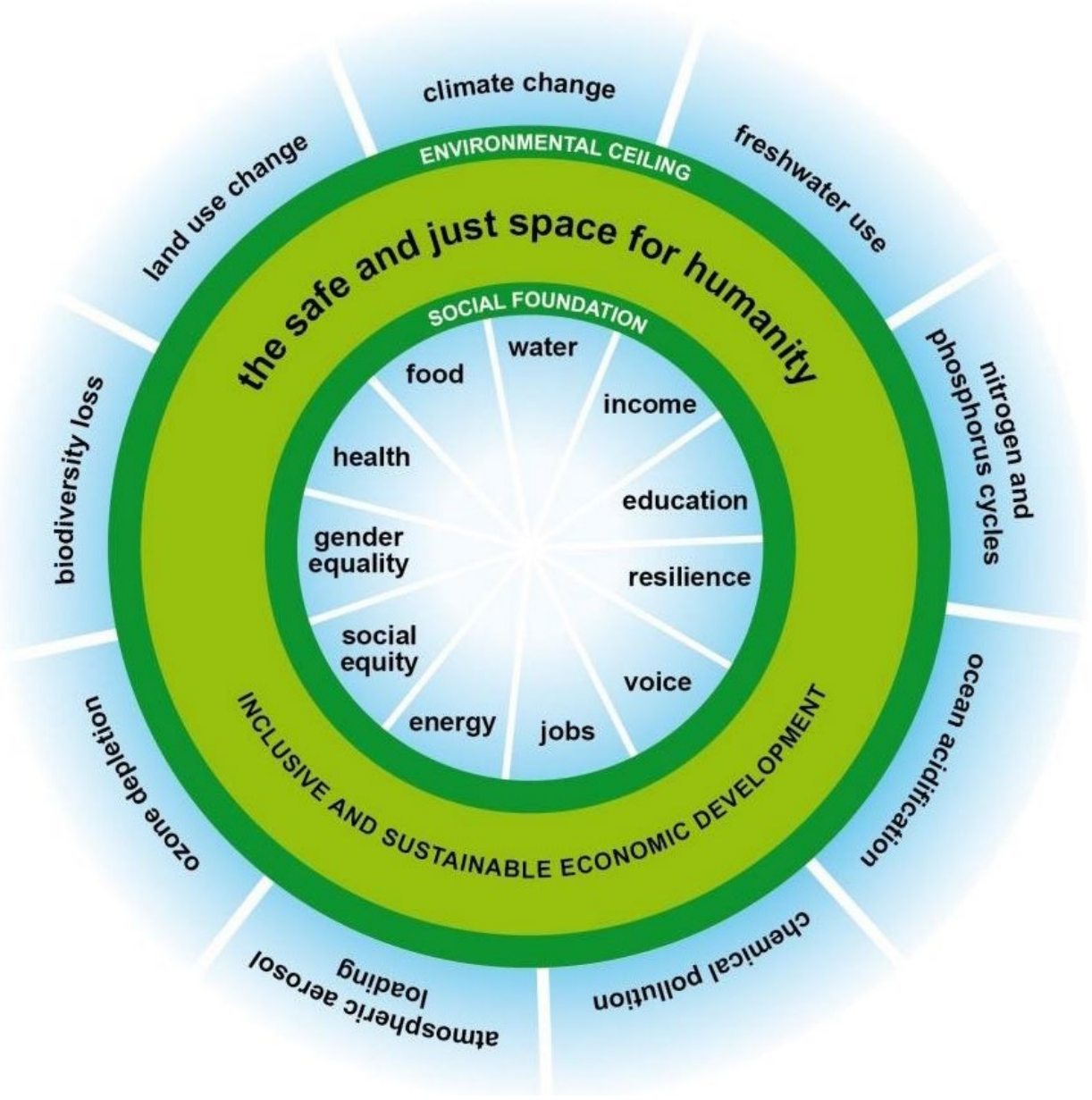

Figure 13. The safe and just operating space for humanity as represented by Kate Raworth's Doughnut theory.

3.1 REGULATING INTERNATIONAL TRANSPORT

One of the most direct solutions is undoubtedly to tackle direct emissions, i.e. emissions from international transport. As we have seen, this is a high-growth sector and threatens to rapidly become one of the largest sources of emissions worldwide. Despite this, there is very little regulation in this area, with any mention of it having disappeared from the Paris Agreement in 2015, for example.

Yet there is some room for manoeuvre, including through the definition of new **technical and operational standards**. In the aviation sector, it is possible to reduce emissions at source by modifying engines, lightening aircraft, developing biofuels or new motor technologies, or by re-optimising the different phases of flight. In the maritime sector, substantial avenues for improvement are offered by improvements to propulsion systems and boilers, speed reduction, route optimisation, new fuels (e.g. liquefied natural gas), etc. An OECD report in March 2018 thus calculated that a 12% reduction in the average speed of ships could lead to a 27% reduction in fuel consumption and therefore emissions.[153]

More anecdotally, several **sailing cargo ship transport** companies have emerged in recent years, such as the Breton company *Trans Oceanic Wind Transport* (TOWT). This start-up uses old sailing ships for the time being to transport fair trade and organic products between Europe and South America, but it plans to launch its new cargo ships in 2022, capable of transporting 1,000 tonnes of freight at a speed close to that of conventional container ships.[154]

Traditionally, the preferred route for agreeing on emissions reductions has been through **international bodies**, the IMO for the maritime sector and the ICAO for aviation. But history has not been on their side (cf. the difficulty and slowness of reaching a consensus), just like in the failure to integrate international aviation into the European carbon market (see Box 15).[155]

An alternative approach is to integrate these standards into bilateral **trade agreements**. For example, an agreement such as CETA could include a freight transport chapter, with binding commitments to reduce emissions and rules on fuel types or speed.[156] Or even to consider unilateral measures, as China has done in the waste sector.[157] The United Kingdom, for example, has set a target to ban the most polluting ships from British waters in 2025, which should encourage manufacturers to quickly adopt low-carbon technologies.[158]

There are also many opportunities to integrate climate externalities into the cost of transport, for example in view of the weakness (or absence) of fiscal policies in the aviation sector. A recent study by the European Commission shows that a levy amounting to 33 euro cents per litre of kerosene would reduce CO_2 emissions by 10%, simply by reducing demand.[159] Such a carbon tax (see Box 16) applied to the freight transport sector would probably have similar effects. However, its coverage would need to be extended as globally as possible, in order to limit the loss of competitiveness of companies that would be subject to the tax.

3.2 RELOCALISING GLOBAL VALUE CHAINS

In the face of the climate challenge, another solution to reduce the impact of international trade seems to be called for: tackling the lengthening and increasing fragmentation

153 Carbon 4. 12/06/2019. Ralentir les bateaux pour limiter les émissions de GES du secteur maritime.
154 Carenews Info. 25/05/2020. L'entreprise bretonne qui veut révolutionner le transport maritime par « la force du vent ». The company recently transported 12 tonnes of organic Colombian coffee for the fair trade organisation Javry, saving around 20 tonnes of CO2. This is a first that the Belgian company plans to repeat, as it aims to transport 50% of its coffees using sailing ships by 2025, at the same time as guaranteeing an affordable final price and fair remuneration for the coffee farmers. Javry. Ecosierra Bio. Accessed 04/01/2021.
155 CAE. 2017. Commerce et climat : pour une réconciliation.
156 If replicated with a number of trading partners, this type of initiative would carry weight with the IMO and could have a knock-on effect on other players. Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
157 In 2017, China decided to close its borders to waste imports (24 different categories, including textiles, metals, and unsorted waste), which had a domino effect on whole series of Southeast Asian countries. Zero Waste France. 21/11/2019. Exports de déchets et retours à l'envoyeur : analyse d'une crise mondiale des déchets.
158 Institut Jacques Delors. 17/07/2019. Verdir la politique commerciale européenne: oui, mais comment? Policy paper n°241.
159 Several governments have expressed support for such a tax at European level, including Belgium and the Netherlands. Sweden has already taken this step. Since 1 April 2018 it has applied a climate tax of €6 to €39 on tickets, depending on the destination. In one year the number of passengers decreased by more than 4%, including a decrease of more than 5% on domestic flights. Le Monde. 13/05/2019. Climat : une étude de la Commission européenne propose de taxer le kérosène des avions.

The "Grayhound", a sailing boat chartered by the Breton company TOWT for transporting freight.

of global value chains by relocalising production as much as possible. The COVID-19 crisis has already intensified and accelerated a strong trend towards deglobalisation, which has been reflected in a revision of the European trade model, for example (see the concept of "open strategic autonomy" explained in Box 12).[160] Indeed, a growing number of stakeholders are advocating "buying local" and short supply chains, in an approach that combines increased sovereignty and resilience with a reduction in the environmental impact of patterns of production and consumption.[161]

It is true that there are many potential **advantages of buying local**, particularly at the socio-economic level: the (re)creation of links between producers and consumers, the possibility for the latter to regain control over their consumption, a potential reduction in transport costs, higher margins and better recognition for the work of producers.[162] But these apparent benefits hide a wide variety of situations and, most importantly, from a strictly environmental or climate point of view it is not always feasible or even desirable to shorten these supply chains.

Taking the **example of food**, the French agro-economist Nicolas Bricas reminded us in a recent article in *Agrobiosciences* how little the local nature of production is a guarantee of sustainability in itself. "*Food transport is not very destructive of the environment. In France, it represents less than 14% of emissions from food systems, while agricultural production accounts for two-thirds. Shortening the supply distance will hardly change this*

160 CE. 16/06/2020. Une politique commerciale revisitée pour une Europe plus forte. Note de consultation.
161 According to a recent survey by the Belgian development agency Enabel, Belgians equate the notion of responsible consumption with the purchase of products that: 1) are in season (49%), 2) have reduced packaging/waste (46%), 3) are local (39%). Fair trade (15%), organic (9%) or ethical (6%) products come far behind. These responses are symptomatic of a strong "cultural shortcut" among consumers, who equate local with sustainable, as if the latter necessarily presupposed the former. TDC. 15/09/2019 Enquête d'opinion sur la consommation responsable.
162 Open Ressources. Juin 2020. La tribune du mois.

percentage. Moreover, production can be local but highly emitting, for example in heated greenhouses".[163] There are a lot of statistics that illustrate these seemingly counter-intuitive facts, of German lettuces produced in heated greenhouses in winter compared to lettuces grown outdoors in Spain during the same period,[164] or a similar comparison between French and Spanish tomatoes (see Figure 14).[165]

One of the reasons why short supply chains are **not an environmental panacea** is that transport over short distances can produce more CO_2 emissions than using optimised global transport routes. As an illustration, the emissions per kilometre of a trans-oceanic cargo ship are 100 times lower than those of a 3.5 tonne van. Without minimising other positive effects (e.g. respect for seasonality, sale of "imperfect" produce), it is therefore appropriate not to systematically adhere to the fashion for going local. The latter is not always synonymous with environmental sustainability, particularly because of the difficulties entailed in terms of logistics, storage and adapting to variations in demand.[166]

Other components must therefore be tackled in addition to the proximity of production, such as methods of production, volumes and types of packaging, incentives to (over)consumption, methods of repairing and recycling, etc. From this point of view, it seems essential to **link local production with other elements**. For example, a calculation using the *Parcel* tool at the scale of France shows that combining relocalisation with 50% organic farming and a 50% reduction in the consumption of meat products would reduce GHG emissions by 50%, while also reducing the costs of water decontamination. This would provide enough food for the entire population, using half the area of agricultural land.[167]

It should also be remembered that relocalising production can prove very difficult, not only economically (the main reason for delocalisation), but also **technically**. Without even mentioning tropical products such as bananas, coffee or cocoa, the agronomist Marc Dufumier points out that cereals, for example, "*require vast areas of cultivation in order to feed cities and peri-urban areas*". According to Nicolas Bricas, half of the French population (in the Parisian basin, the Grand Est, the Mediterranean arc, etc.) live in departments that do not have enough agricultural land to feed them. The economist denounces a form of "*vegetalisation of debates*", which "*reduces the question of food autonomy in cities to that of vegetable supply*". In his view, "*we are condemned to obtaining our supplies over longer distances and indirectly, not necessarily from the other side of the world, but at least from a few departments further away*".[168]

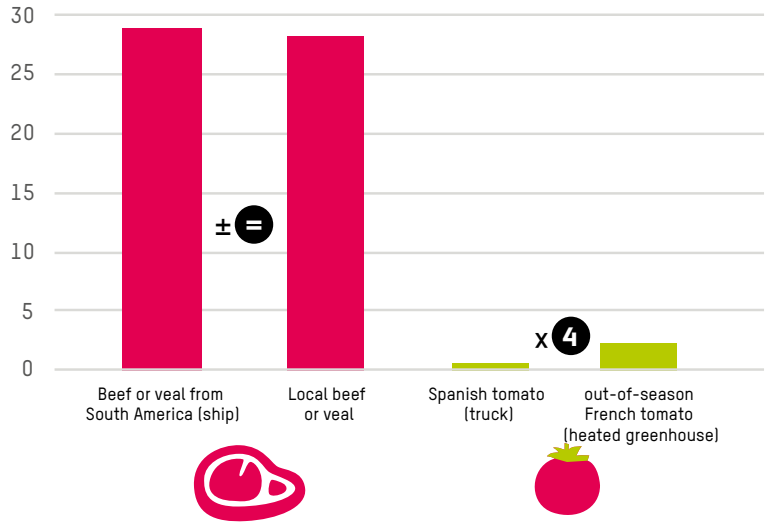

Figure 14. Carbon footprint of food (kg CO_2e per kg of product) according to its origin.

La Fourche. 26/06/2020. L'empreinte carbone des produits alimentaires.

163 Agrobiosciences. 12/12/2019. Le tout local est-il un piège ?
164 ADEME. Juin 2017. Alimentation–Les circuits courts de proximité.
165 The carbon impact of French tomatoes (out of season and in heated greenhouses) is almost four times greater than that of Spanish tomatoes (in season and imported). ADEME. Février 2015. Agribalyse. Une méthode et une base de données pour l'analyse du cycle de vie (ACV) des produits issus de l'agriculture.
166 Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'UE : aspects économiques. Policy paper n°245.
167 PARCEL is a web tool developed in France by Terre de Liens, the Fédération Nationale de l'Agriculture Biologique (FNAB) and BASIC. It makes it possible to calculate, for a given territory, the area of agricultural land needed to feed the local population, as well as the agricultural jobs and the ecological impacts associated with possible changes in agricultural production methods and/or diets. https://parcel-app.org.
168 Agrobiosciences. 12/12/2019. Le tout local est-il un piège ?

In **non-food sectors** such as textiles, the relocalisation of production can also be very complex, although often for different reasons (e.g. deindustrialisation), and there are counter-examples (1083 jeans or *Le Slip Français* underwear, again in France). Ultimately, a product that is created entirely in a distant country and only makes one trip to the importing country may have a small ecological footprint compared to a local product. Most of the products in WFTO's integrated supply chains are made using traditional techniques and from local raw materials (which are often also environmentally friendly, e.g. jute or hemp), and then transported in a single journey, in contrast to the tens of thousands of kilometres often covered by fast fashion garments (e.g. cotton cultivation in India, spinning in Pakistan, dyeing in China, assembly in Tunisia).[169]

Urban food garden in Havana (Cuba), a form of relocalisation of food production as a result of the US blockade.

3.3 REVISING THE MODEL OF TRADE AGREEMENTS

A third possible approach is to change the format of free trade agreements so that they include more social and environmental standards.

As we have seen, the agreements recently negotiated by the EU (e.g. with Vietnam, Canada) do include **sustainable development chapters** (SDCs). But they are almost unanimously criticised for their vague and non-binding nature. Ideally, these SDCs need to be associated with a mechanism for resolving disputes, accompanied by trade sanctions. But this is not the approach advocated by the European Commission, which, like several EU member states, favours cooperation with signatory countries and more generally considers that trade policy should not be involved in other public policy objectives.[170] However, such binding chapters within bilateral agreements could constitute a space for experimentation and consensus-building, with a view to a subsequent transposition to the multilateral level. On this point, the UN could potentially be equipped with a dispute settlement body similar to that of the WTO, with options to file a complaint and impose a financial penalty in the event of environmental litigation.

Another solution regarding existing or future agreements would be to introduce **clauses suspending trade benefits** in the event of non-compliance with international commitments, for example the Paris Agreement. Meanwhile, no new negotiations would be started with countries that have not ratified these same treaties.[171] France, Luxembourg and Spain made a proposal along these lines in March 2019 at the EU Environment Council, but this has had no noticeable effect, for instance in the context of negotiations with Japan or Singapore. In any case, such a clause would only sanction the most deviant countries, e.g. those that leave the Paris Agreement or refuse to progressively increase their national contributions. Indeed, this agreement does not directly spur countries into making real efforts, being relatively silent on more operational matters, for example on the subjects of (fossil) energy subsidies, intellectual property or public investments in the energy transition.[172]

169 It should be noted that in France, for example, a product can be labelled "Made in France" if the country is the location of the "last substantial process" and if at least 45% of the added value is produced there. This relative flexibility can lead to numerous abuses, not to mention deliberately ambiguous labelling such as "Designed in France", "Packaged in France" or "French creation". Mr Mondialisation. 16/10/2020. Pourquoi le Made in France n'est pas toujours écologique.
170 For example, Canada traditionally includes binding chapters in its trade agreements, but this was never an option for CETA, due to the lack of European political will. Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
171 Bricmont S. 24/07/2020. Trade Policy review.
172 Powershift. April 2020. Anchoring climate and environmental protection in EU trade agreements. Exemplary elements.

An alternative approach would be to prevent investors from appealing to investment arbitration tribunals (ICS) on measures relating to the fight against climate change. The introduction of such a "**climate veto**" has been proposed, for instance, by a commission of experts appointed by French President Emmanuel Macron to assess the climate impact of CETA.[173] In the same vein, any EU trade agreement with a third country that is a member of the ECT could be subject to a convention preventing the dispute settlement system from being activated.[174] Ideally, clear and precise review and rescission clauses should similarly be included in these agreements, and, conversely, sunset clauses removed.[175]

In all events, the inclusion of social and environmental obligations in free trade agreements requires **robust and independent impact assessments** to be conducted, both *before* and *after* their negotiation. The EU-Mercosur agreement is a perfect counter-example in this respect, as the first draft of the report was only published four months after the official announcement that negotiations had ended.[176] Yet it is on the basis of such studies that inclusive, transparent and effective public consultations can be conducted, particularly with civil society.[177] If these agreements are ultimately ratified, the monitoring of various indicators will make it possible to verify the accuracy of the predicted impacts, which are furthermore highly uncertain and controversial. The French Citizens' Climate Convention has proposed, for example, that GHG emissions should constitute a key indicator for monitoring trade policies.[178] Eventually, the content of an agreement could be revised if its impact proves too negative.[179]

3.4 CARBON BORDER ADJUSTMENT MECHANISM

Another approach to turning international trade into a tool for combating the climate crisis would be to tax imports of products according to their carbon content. Such an approach, known as the Carbon Border Adjustment Mechanism (CBAM), is increasingly being discussed at the European level. President of the European Commission Ursula Von der Leyen has made it one of her policy priorities as part of the Green Deal and its 2050 carbon-neutrality target.[180]

As well as constituting a new clean resource for the EU,[181] the main objective of such a mechanism is to combat polluting activities being transferred beyond European borders, the notorious "***carbon leakage***" problem. This leakage is the consequence of carbon pricing policies being introduced within the EU (mainly via a carbon market, known as the "European Union Emissions Trading System" or ETS, see Box 15). By reducing their competitiveness, a high carbon price can lead many industries (e.g. cement factories, which are high emitters) to relocate to areas with more permissive regulations, which in the end only shifts the climate problem elsewhere.[182] The CBAM, equivalent to a customs duty on carbon, makes it possible to balance the price of imported products with those of domestic products and thus a priori to avoid this leakage. In the long term, and as part of the global climate fight, such a system could ideally lead the EU's trading partners to align themselves by introducing equivalent carbon pricing policies (which would exempt them from CBAM).

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173 Les Echos. 08/09/2017. Le CETA pourrait avoir un impact négatif sur le climat.
174 Euractiv. 08/10/2018. L'inclusion de l'Accord de Paris dans le CETA compromise.
175 These sunset clauses allow the effects of certain provisions to be prolonged for several years after the potential rescission of an agreement. Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
176 The European Commission was incidentally the subject of a complaint about this from associations, who considered that it was not complying with its legal obligations to ensure that the agreement would not lead to social, economic or environmental degradation or human rights violations. Institut Veblen. 15/06/2020. Accord UE / Mercosur : 5 organisations déposent une plainte auprès de la médiatrice de l'UE.
177 Powershift. April 2020. Anchoring climate and environmental protection in EU trade agreements. Exemplary elements.
178 Le Monde. 13/07/2020. Les principales propositions de la convention pour le climat passées au crible.
179 Institut Jacques Delors. 17/07/2019. Verdir la politique commerciale européenne: oui, mais comment? Policy paper n°241.
180 Commission Européenne. 11/12/2019. Le pacte vert pour l'Europe.
181 An agreement on the next budget and the post-COVID "Next Generation EU" recovery plan (negotiated between the Parliament, the Commission and the Council on 10 November 2020) anticipates several sources of EU revenue: this carbon adjustment tax at the EU's borders, and also a tax on plastics (by 2021), a digital tax, and a contribution from the Emissions Trading System (by 2023). Greens-EFA. 11/11/2020. Un budget mieux adapté aux enjeux du climat, de la biodiversité et de l'état de droit. These funds could be used to repay the funds from the post-COVID recovery plan presented on 27 May 2020. Commission Européenne. 27/05/2020. Plan de relance pour l'Europe. Other players, such as MEP Yannick Jadot, would like the fund to be specifically dedicated to financing the Just Transition and the decarbonisation of not only the European economy but also the economies of the least developed countries. Jadot Y. 07/10/2020. Draft report. Towards a WTO-compatible EU carbon border adjustment mechanism. 2020/2043(INI).
182 However, the link between environmental regulation and loss of competitiveness has yet to be confirmed. In 1991, the economist Michael Porter put forward the hypothesis that more environmental constraints could, on the contrary, have a stimulating effect on investment and innovation, which in the long term would provide profits to companies. Reducing the use of expensive chemicals or lowering the cost of waste disposal could, for example, improve their competitiveness. Institut Jacques Delors. 05/12/2019. Verdir la politique commerciale de l'UE : aspects économiques. Policy paper n°245.

The EU Emissions Trading System (ETS)

15

Behind the obscure acronym ETS lies one of the EU's main tools for tackling the climate emergency, its carbon market. Launched in 2005 as part of the Kyoto Protocol, this market instrument is based on the (ultimately relatively simple) "polluter pays principle": it sets an authorised emissions cap for a range of companies in the form of allocated allowances. Companies that exceed this limit are obliged to buy allowances on the carbon market from those that have managed to reduce emissions below their reduction target (Figure 15). Since 2012, this cap has been reduced each year to bring down the total level of emissions in Europe. The ETS covers 32 countries (the 27 EU member states plus Great Britain, Iceland, Liechtenstein, Norway and more recently Switzerland), in the most energy-intensive sectors (power plants, industry, airlines), accounting in total for around 45% of EU emissions. Note that in the aviation sector only intra-European flights are covered, as the attempt to integrate intercontinental flights in 2012 failed, due to opposition from the United States, China, India and Russia, which threatened Europe with a trade dispute and retaliation, for example in terms of aircraft orders.

Like carbon taxes (see Box 16), this carbon exchange theoretically makes it possible to increase the cost of certain polluting activities, such as refining or metallurgy. According to its promoters, it more specifically allows emissions to be reduced in areas where costs are lower, while also spurring companies to invest in clean technologies. But this mechanism has seen many limitations and criticisms. Indeed, despite a promising start, the price per tonne of CO_2 has fallen and been stagnant at a low level for a long time (still around €5 per tonne in 2018), which has not spurred industry into making the efforts expected. One of the reasons for this, apart from weak economic activity, is the over-allocation of free allowances to companies, a measure put in place to preserve their competitiveness and avoid carbon leakage to less regulated countries. The ETS, which the French association Attac dubs a "polluter-paid" system, has thus reportedly enabled the manufacturers covered by the carbon market to earn 27 billion euros between 2008 and 2014.[183] The mechanism was nevertheless reformed by the ETS Directive of March 2018, which increased the quantity of allowances set aside as well as the reduction rate of the emissions cap for the 2021-2030 period. The soaring prices that were subsequently observed (e.g. €25 per tonne in February 2019) were counteracted for a time by the COVID-19 crisis, but the price had recovered to €22 per tonne by April 2020. This trend raises hopes that the market is finally playing its role as an incentive to reduce emissions, despite the apparent lack of connection up until now.

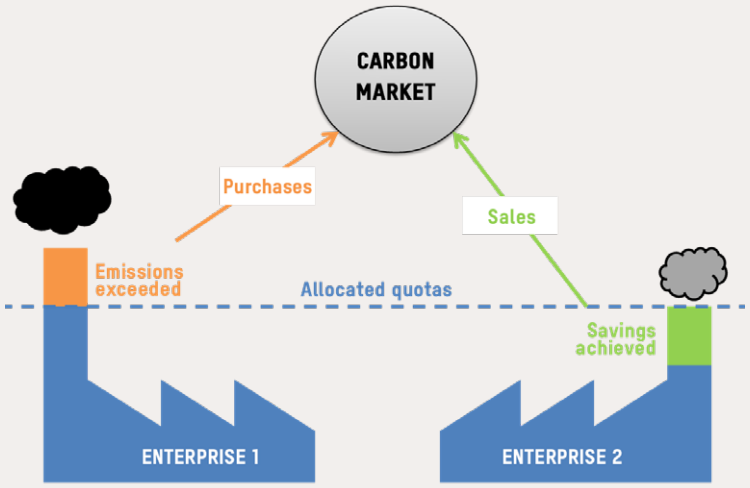

Figure 15. How the EU Emissions Trading System (ETS) works. .

EcoCO2. 02/06/2015. Echanges de quotas d'émission de C02 en Europe : baisse des émissions.

Civil society is particularly critical of offset credits, which allow manufacturers to compensate for their emissions by financing sustainable projects, generally in the South (see Box 17). More generally, the alter-globalisation movement is critical of the very principle of carbon pricing, a form of commodification of nature that risks becoming a model for other markets for "ecosystem services" related to biodiversity, water and soil.[184]

183 Euractiv. 15/03/2016. Les quotas gratuits rapportent des milliards d'euros à l'industrie européenne.
184 Attac France. 27/02/2013. Il est temps de mettre fin au marché du carbone européen.

Although the approach seems attractive on paper, it nevertheless comes up against numerous **political and legal obstacles**. The idea, which was first put forward more than 10 years ago by France and the European Commission among others, has been met with reluctance by many member states, including Germany, which is afraid of the risks of a trade war.[185] Indeed, the introduction of such a mechanism presents a major risk of being rejected by the WTO on the grounds of being discriminatory.[186] In order to respond to the inevitable objections and risks of trade retaliation, the Commission will have to carefully balance its proposal, demonstrating for instance its necessity in terms of international trade law (its objective being to avoid carbon leakage), its fairness (the absence of discrimination in relation to domestic carbon pricing) and its transparency (a clear and recognised process for calculating the CO_2 emissions contained in the targeted products).[187]

This last point presents a major **technical difficulty** as most products today come from complex, globalised and fluid supply chains. An accurate calculation of their carbon content requires a whole range of information to be obtained, including the origin of the raw materials, the production processes used and the environmental regulations in the countries of production. Carbon audits or environmental labels could be used (if regularly updated), but they remain unreliable, and above all, they could penalise certain stakeholders such as SMEs and small suppliers.[188] For these different reasons, a European CBAM should probably be limited, at least initially, to a limited number of sectors such as cement, steel, chemicals, fertilisers and electricity. These are primary goods with a high carbon footprint (they account for 94% of the EU's industrial emissions), with simpler and more localised production processes, and for which more reliable databases and methods of calculating carbon content are available, for instance via the ETS and various ISO standards.[189] This EU carbon border adjustment mechanism would ultimately be an external transposition of the ETS, since it would allow similar carbon pricing to be applied to imports and domestic production.[190]

185 Euractiv. 23/03/2018. Paris pour une taxe CO_2 aux frontières de l'UE.
186 Le Monde. 11/09/2019. « Il faut intégrer le coût environnemental au commerce des marchandises ».
187 Acceptability to the WTO would be based on two general exceptions in GATT Article XX, paragraphs b ("measures necessary to protect human, animal or plant life or health") and g ("measures relating to the conservation of exhaustible natural resources"). Institut Jacques Delors. Juin 2020. Verdir la politique commerciale de l'UE. Une proposition d'ajustement carbone aux frontières de l'Union Européenne. Policy paper.
188 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
189 Jadot Y. 07/10/2020. Draft report. Towards a WTO-compatible EU carbon border adjustment mechanism. 2020/2043(INI).
190 Le Monde. 02/06/2019. Le casse-tête de la taxe carbone aux frontières de l'UE.

A carbon tax for domestic markets

16

Carbon markets and carbon border adjustment come under the broader category of **environmental taxation instruments** (or ecotax), which also includes carbon taxes. The latter follows the principle of a CBAM but is generally applied at the national (or regional) level and is aimed at domestic products. Based on the "polluter pays" principle and again like a CBAM, it consists of taxing products or services according to their carbon content, i.e. the GHG emissions they generate throughout their life cycle. In practical terms, it is both difficult and costly to calculate the CO_2 content of each product "downstream". For this reason, all countries that have now introduced a carbon tax have adopted an "upstream" approach, by directly taxing fossil fuels, whose carbon content is more precisely known.[1] The most polluting products and services, such as SUVs or flights in private jets,[2] would be heavily taxed in these countries due to their high carbon footprint, as recommended in the latest Oxfam report on carbon inequality.[3]

The principle of a carbon tax is now the subject of a relative **consensus among economists**, most of whom consider it to be an effective instrument for combating global warming. Although Keynesian economists believe that it should be combined with subsidies and regulation, they are aligned with liberals on the need for a "price signal", the primary purpose of which is to guide households and companies towards less polluting modes of consumption and production. Christian Gollier, Director General of the *Toulouse School of Economics*, considers that the carbon tax is still the "*most cost-effective lever for reducing CO_2 emissions at the necessary scale and speed*", particularly in comparison with standards (e.g. for thermal insulation or car emissions), which in his view prove more expensive for the consumer in the end.

Nevertheless, this "green tax" is often **misunderstood and unpopular** among members of the public, as illustrated by the Yellow Vests crisis in late 2018 in France. As you may recall, this highly publicised crisis, which strongly undermined the power of President Emmanuel Macron, started with an increase in fuel tax. The aim was to direct users towards a more sustainable form of mobility while also contributing to the energy transition budget. In reality, it quickly became clear that the tax increase would almost exclusively benefit the general state budget, that it would be ineffective in terms of reducing car use and, most importantly, that it would mainly affect the inhabitants of peri-urban and rural areas, who are most dependent on cars and often in the most precarious situations.

These demonstrations, like many others before them in France (e.g. the "Bonnets Rouges" in 2016) or elsewhere, illustrate the need for a **fairer carbon tax**, from the perspective of combating inequalities but also of effectiveness, as the majority of a population must accept such measures before it is possible to implement them. The problem with this type of taxation is that it generally has a greater impact on low-income households. For example, for the poorest 20% of French households, energy expenses represent 15.7% of their budget, compared to 6.5% for the richest 20%. Social compensation is even more necessary given that substitute solutions, like changing a vehicle for a cleaner model or replacing a boiler, are often not very accessible. The unequal nature of these taxes is exacerbated by the fact that some of the most polluting businesses often benefit from exemptions, just as in the aviation and maritime sectors.

How well a carbon tax is accepted also depends on the **transparency of allocation** of tax revenues: the

1 The advantages of the downstream approach include universal coverage (all products can in theory be taxed, regardless of their origin and raw materials, including imported products), the possibility of communicating the amount of the tax at the point of sale (thus allowing the consumer to direct their purchases), and the potential for application to GHGs other than CO_2. Despite these many advantages, the complex carbon accounting it requires cannot compete with the simplicity of the "upstream" approach. This is made even more true by the fact that most industrialised countries already have the administrative infrastructure necessary for collecting upstream tax (e.g. excise duties on energy products). Wikipedia. Taxe carbone. Accessed 03/11/2020.

2 SUVs, or "Sport Utility Vehicles", are intermediate in design between a saloon car and a 4x4. Increasingly popular, they now account for more than 40% of car sales worldwide, compared to 18% in 2010. Highly polluting because they are very heavy and not very aerodynamic, they have constituted the second largest source of growth in CO_2 emissions over the last ten years, wiping out any gains made by electric cars. Le Monde. 16/10/2019. Les SUV sont une source majeure d'émissions de CO_2 et de réchauffement mondial.

3 Oxfam International. 21/09/2020. Combattre les inégalités des émissions de CO_2. La justice climatique au cœur de la reprise post covid-19.

public must be informed of how the proceeds will be used. The example of California shows that budgetary opacity is not insurmountable, since it allocates 60% of the revenue from its carbon market to mobility and housing, and does this in a fully transparent way. Lastly, it is essential to properly link this type of taxation with other environmental policy tools (including regulatory instruments), with other European countries in the case of the EU, and also with trade protection standards (e.g. a CBAM at the European level, which some people consider moreover to be fairer than a national carbon tax).

Following the formation of the new government in September 2020, the question of a **Belgian carbon tax** was put back on the table by Climate Minister Zakia Khattabi. This proposal caused quite a stir, even within the Vivaldi coalition, as many politicians were frightened by the prospect of a new tax and its potential electoral consequences. In response to the outcry, it was made clear that the tax would be "*neutral from a budgetary point of view*", its revenues being "*returned to the population and to businesses*", and that it would include "*policies to support companies and the purchasing power of households*". According to the Governor of the National Bank, Pierre Wunsch, "*this policy is essential for Belgium if it wants to reach its climate targets and structure the decarbonisation of its economy*". Clearly, without CO_2 pricing much more coercive measures will be needed, such as bans and more binding standards.

"Yellow Vests" demonstration in front of the Arc de Triomphe in Paris on 8 December 2018.

But for many stakeholders, such a CBAM would necessarily have to include **exemption conditions and specific treatment for least developed countries** and small island developing states. Not only because they do not have the same resources and technologies to reduce their carbon intensity, but also and most importantly in order to respect the Paris Agreement's principle of common but differentiated responsibility.[191] It is also crucial that part of the revenue from the mechanism be used to support the energy transition of these countries, under the supervision of an independent agency, by contributing to a dedicated fund included in the financial instruments for development aid.[192]

3.5 THE CLIMATE CLUB

Faced with the technical, legal and political difficulties of a carbon border adjustment mechanism, in 2015 the economist William Nordhaus proposed a more comprehensive approach that he called the "Climate Club". Its principle would be for a club of climate-leading countries to apply a **uniform and moderate tax to all imported products** (whether carbon-intensive or not) from countries not belonging to the club (considered "free-riders"). The mechanism would be incentive-based, as these non-member countries would simply have to adjust their climate targets in order to join the club and escape the tax. Common climate policies for club members could include a harmonised (upwards) carbon tax, or indeed a unified carbon market (the EU market, of which Switzerland, Liechtenstein, Iceland and Norway are also members, could for example merge with the very similar Canadian and New Zealand systems). The proceeds of the tax could be used to finance climate change mitigation and adaptation policies in the least developed countries.[193]

The main advantage of this approach would be its **simplicity of implementation** (for instance compared to the CBAM), while remaining relatively effective against carbon leakage. Nordhaus argues that only the use of moderate trade sanctions, such as he advocates, is likely to make a stable and ambitious climate coalition work. The WTO would probably allow this, as the international organisation provides an environmental exception for tariffs that pursue a legitimate, transparent and non-discriminatory objective.[194] Simulations by economists indicate that such an approach could reduce emissions by more than 40% by 2030, at only a moderate cost to global GDP.[195] This would represent a real change of scale in the implementation of climate policies, bringing efforts to a level deemed necessary to avoid runaway climate change and the damage associated with it.

191 It should be noted that this CBAM could be an opportunity for oil exporting countries in the Middle East to make the transition to solar energy production and export. Le Monde. 09/07/2020. « Les pays exportateurs de pétrole du Moyen-Orient disposent des plus riches viviers de ressources en énergie solaire du monde ».
192 Institut Jacques Delors. Juin 2020. Verdir la politique commerciale de l'Union européenne. Une proposition d'ajustement carbone aux frontières de l'Union Européenne. Policy paper.
193 CAE. 2017. Commerce et climat : pour une réconciliation.
194 Le Monde. 11/09/2019. « Il faut intégrer le coût environnemental au commerce des marchandises ».
195 The club would include the current three largest CO_2 emitters, the United States, the EU and China, who would form a single market for tradable emissions allowances, by aligning themselves with the EU's emissions reduction targets (-40% compared to 1990, revised upwards since). CAE. Janvier 2017. Changement climatique et commerce : quelques simulations de politique économique. Focus du CAE n°15. It should be noted that this approach would be much more effective and less costly than a general increase in customs duties aimed at stabilising international trade at its current level (a measure which, according to the calculations of the French Economic Analysis Committee, would cost 1.8 points of world GDP, while reducing emissions by only 3.5 % by 2030). CAE. Janvier 2017. Changement climatique et commerce : quelques simulations de politique économique.

Carbon offsetting: a sham?

17

At the end of 2020, the election of Joe Biden as US President was a first piece of good news on the climate front. According to the analysis centre *Climate Action Tracker*, the new president's climate plan alone could allow the rise in temperature to be reduced by around 0.1°C.[1] Other good news followed, including successive commitments by China, Japan and South Korea to become carbon neutral by 2050 (2060 for China), thus aligning with the objectives of the 2015 Paris Agreement.[2] At the last UN climate summit in New York in September 2019, 66 states had already declared their adherence to the objective of carbon neutrality by 2050, joining 10 regions, 102 cities and 93 businesses. This objective of achieving carbon neutrality is stated in Article 4 of the Paris Agreement: "*Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, [...] and to undertake rapid reductions thereafter [...], so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century*".

But what exactly is carbon neutrality, otherwise known as "**net-zero emissions**" (NZE)? Simply defined, it is "*a state of balance to be reached between emissions of human origin and their removal from the atmosphere by humans or through their actions*". The idea here is to offset the emissions that cannot be reduced (or are too costly to reduce), either by restoring, safeguarding or increasing the absorption capacity of natural carbon sinks (forests, soils and oceans), or by using various "negative emissions" technologies (e.g. carbon capture and storage techniques).

The most widely used option today for achieving carbon neutrality is **carbon offsetting**. According to this principle, an individual, an economic player, a public authority or even a state can offset its emissions by financing projects to reduce other emissions or to sequester carbon somewhere else in the world (in reality, usually in developing countries). A classic, almost clichéd example is that of offsetting one's emissions from air travel by funding a reforestation project in Africa. But many other types of projects and sectors exist, ranging from energy efficiency to renewable energy to waste management. In addition to the market for voluntary offsetting, there are institutional mechanisms linked to the Kyoto Protocol which commit the states that have signed it. One of these is the *Clean Development Mechanism* (CDM), which allows signatory states and the companies "belonging" to them that exceed their carbon quotas to buy back emissions in the form of credits guaranteed by the UN. The CORSIA agreement, established on 6 October 2016 under the auspices of ICAO, is another offsetting scheme, this time for international aviation, allowing it to buy carbon credits from other sectors via trading exchanges.

To be effective and to be validated, an offset project must result in real, measurable, verifiable and additional emission reductions, which can be summarised using four conditions: 1) every carbon credit delivered must be guaranteed to be unique (one credit = 1 tonne of CO_2 avoided); 2) the amount of CO_2 "avoided" must be measurable; 3) these avoided or captured emissions must be verified; 4) the project must be "additional", i.e. it would not have been possible without the funding. There are many labels to guarantee these criteria, the two considered the most reliable being the *Voluntary Gold Standard* (WWF) and the *Verified Carbon Standard* (Verra). In Belgium, as elsewhere in Europe, there are now a large number of organisations offering offsetting services to businesses, such as *CO_2logic*, *Graine de vie* and *Farming for climate*, to name but a few.

Despite these guarantees, carbon offsetting is the subject of **many criticisms**, not only regarding its applications but also regarding the very principle behind it. Even in a governmental mechanism such as the CDM, the guarantees turn out to be weak, especially where the additionality of projects is concerned. According to the German research centre *Oko-Institut*, ▸▸▸

1 Climate Action Tracker. 07/11/2020. Biden's election could bring a tipping point putting Paris Agreement 1.5 degree limit "within striking distance".
2 CNUCC. 29/01/2016. Rapport de la Conférence des Parties sur sa vingt et unième session, tenue à Paris du 30 novembre au 13 décembre 2015.

▸▸▸ which analysed more than 5,000 CDM projects in March 2016, 85% of them had a "*low probability*" of ensuring the promised emission reductions and the additionality of the project. Worse, the authors note that carbon offsetting may in some cases "*provide an incentive to governments not to implement domestic policies to address emissions*".[3] In another report from 2009, the NGO *Friends of the Earth* cites the example of 200 hydroelectric projects financed by the CDM in China. There are serious doubts about the additionality of these projects, given that China has been investing heavily in this type of infrastructure for years. At a social level, the CDM has reportedly led to numerous human rights and land rights violations, displacement, conflict and increased destruction of the local environment.[4] These are clearly forms of land grabbing, insofar as the creation of carbon rights can conflict with the land rights of affected communities. From a moral point of view, it seems unacceptable to suggest offsetting a journey by plane (a non-basic need) by asking farmers to stop clearing a plot of land (a potentially vital need). This touches on a problem that goes beyond issues of application, as this system "*legitimises a transfer of responsibility from the richest to the poorest*". According to Friends of the Earth, this way of delegating responsibility for behavioural change to others goes against the principle of differentiated responsibility. Finally, many authors, such as Jean-Marc Jancovici in France, emphasise the extent to which carbon offsetting is fundamentally biased because it places future (and therefore partly hypothetical) absorption on an equal footing with current emissions. In other words, burning a tonne of oil is a definite action, but reabsorbing the corresponding emissions by planting a forest is much less so, cf. the many uncertainties surrounding the storage capacity of forests (not to mention carbon capture technologies, whose effectiveness and viability are far from proven).

On this last point, there is for instance a high risk of seeing a newly planted forest go up in smoke, a risk that is accentuated with global warming due to increased drought and the weakening of trees. It should also be remembered that a tree takes time to grow and therefore to reach its full carbon storage potential (30 years on average). This storage potential also depends on a large number of factors, such as the species, the climate, the concentration of CO_2 in the atmosphere, the type of ecosystem, etc. Moreover, artificially planted forests are much less efficient than natural forests at storing CO_2. Despite these many risks, some scientists claim that the level of CO_2 in the atmosphere could be reduced by 25% by planting 1000 billion trees. Others consider these calculations to be unrealistic, and point out that stopping the burning of fossil fuels and protecting existing forests are still the best solutions for combating global warming.

Ultimately, regarding these issues of offsetting, the co-founder of the organisation *all4trees* Jonathan Guyot considers that "*talking about a **contribution** from companies instead of carbon offsetting could help the debate*". Rather than simple reforestation, Alain Karsenty, an economist at the French Agricultural Research Centre for International Development (CIRAD), believes that it would be "*much more judicious for companies to pay farmers to conserve wooded areas, carry out natural regeneration and develop agroforestry, or even thermal renovation with the State, rather than carry out large-scale tree planting.*"

3 Öko-Institut. March 2016. How additional is the Clean Development Mechanism? Analysis of the application of current tools and proposed alternatives. Le Monde. 06/03/2019. Le principe de compensation carbone est-il efficace ?
4 Attac France. 27/02/2013. Il est temps de mettre fin au marché du carbone européen.

Organic coffee growing using agroforestry in the Ecuadorian Andes.

3.6 HUMAN RIGHTS AND ENVIRONMENTAL DUE DILIGENCE

Seeking to address the climate impacts (and wider social and environmental impacts) of global trade without specifically targeting its main stakeholders, **multinational corporations**, is arguably unrealistic. As many of them are richer and more powerful than states,[196] they naturally have a considerable influence on the dynamics of globalisation and trade, and ultimately on issues of climate justice. For a country like France, it is estimated that emissions from supply chains account for 70% of industrial emissions and up to 80% of emissions from the consumer goods sector.[197] While reducing these indirect emissions is a crucial issue for (multinational) companies, it can prove very difficult to achieve, as the fragmentation of their value chains into many different production sites and suppliers – sometimes far away and including a myriad of subcontractors – makes any social or environmental monitoring complex[198] (to say nothing of the weakness of legislation in many developing countries).[199]

Responses to this need for greater regulation of supply chains have long been limited to "soft law", such as **corporate social responsibility** (CSR), **standards of conduct**[200] or **multi-stakeholder initiatives** (MSIs). These types of initiatives, which correspond to different levels of self-regulation, focus mainly on transparency, dialogue, information, etc. MSIs in particular assume that the publication and sharing of knowledge by companies, the dissemination of good practices, the construction of joint projects (e.g. trade union training programmes for factory workers) and

196 For example, a study by the British NGO Global Justice Now showed that in 2016, the world's top 10 companies (e.g. Walmart, Apple, Shell, Exxon, Toyota) were richer than the planet's 180 "poorest" countries combined (including Ireland, Israel, Indonesia and South Africa). Walmart, the world's largest corporation, had greater financial influence than Spain, Australia or the Netherlands. 13/09/2016. Les 10 plus grosses multinationales au monde pèsent davantage, financièrement, que 180 États.
197 Novethic. 21/01/2021. Transformation, reporting, biodiversité... Les tendances de la RSE pour 2021.
198 WEF 2021. Net-Zero Challenge: The supply chain opportunity.
199 As an example, it is estimated that only 15% of the direct suppliers of French companies report their CO_2 emissions. Novethic. 21/01/2021. Transformation, reporting, biodiversité... Les tendances de la RSE pour 2021.
200 An example of such voluntary standards is provided by the OECD Guidelines for Multinational Enterprises, first formulated in 1976.

increased trust between stakeholders will generate substantial progress.[201] This is not entirely false, insofar as global supply chains can involve a huge number of suppliers, sometimes uncooperative and/or more powerful than a multinational company, necessitating multi-sectoral initiatives including trade unions, international organisations and civil society.[202]

But you don't need to be an expert to realise how little progress has been made so far with voluntary approaches such as these. The persistence of repeated human rights violations within these chains is enough to illustrate this, for example factory accidents like that of Rana Plaza in Bangladesh in 2013. It is in this context that legislative advances have been made in recent years around the concept of **Human Rights and Environmental Due Diligence** (HREDD). According to this principle, companies have a responsibility to identify and prevent possible human rights and environmental violations related to their activities, particularly in third countries with weaker social and environmental legislation. If such violations are found, they must be mitigated and reparation provided to the victims (see Figure 16).[203] These obligations apply not only to the company itself, but also

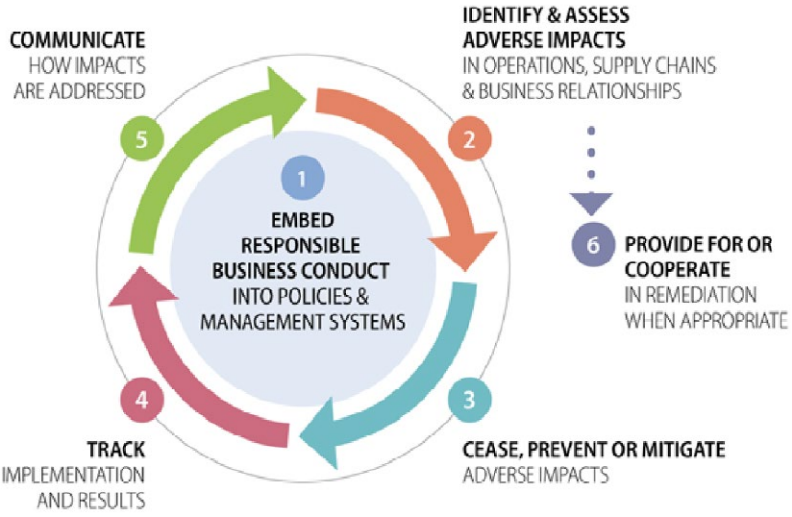

Figure 16. Due diligence process and supporting measures.

OCDE. 2018b. Guide de l'OCDE sur le devoir de diligence pour une conduite responsable des entreprises.

to its entire sphere of influence, including its subsidiaries, its suppliers and their subcontractors. The concept has recently gained considerable prominence in international policy debates, for a number of reasons: the growing demands of civil society for regulation and transparency; the operational nature of HREDD for companies (i.e. its ease of implementation compared with other types of legislation); and the proliferation of normative frameworks, including at the international level.[204] Concerning this last point, the United Nations' "Guiding Principles on Business and Human Rights", developed in 2008 by the UN Special Representative John Ruggie, has served as a more specific reference and starting point for many initiatives.[205]

The best known of these is the **French "duty of vigilance" law**, which has imposed a duty of care on large parent companies since February 2017, for all activities carried out by their subsidiaries, subcontractors and suppliers, regardless of the sector of activity and the risk.[206] Companies are required to develop a vigilance plan, make it public and report regularly on its implementation.[207] The law requires them to proactively implement their plan, on pain of heavy fines. However, it only creates an obligation of means, not of results. This means the contracting company must pay

201 An example of a multi-stakeholder initiative is the Dutch Agreement on Sustainable Garments and Textile. Concluded in July 2016, this agreement brings together professional associations, trade unions and NGOs, under the auspices of the Social and Economic Council of the Netherlands (in the simultaneous roles of coordinator, funding body and arbitrator). Dutch Ministry of Foreign Affairs. 10/03/2016. Agreement on sustainable garment and textile.
202 AFEP. Février 2020. Options européennes pour la diligence raisonnable des entreprises sur la chaîne d'approvisionnement.
203 Veillard P. Décembre 2015. Travail décent et textile équitable. Impact du commerce équitable sur la durabilité des chaînes textiles. Analyse de contexte globale.
204 Veillard P. 18/04/2019. Le textile socialement responsable : quoi de neuf ?
205 These principles are part of the "Protect, Respect and Remedy" framework, which is based on three pillars: 1) the state duty to protect human rights when third parties, including companies, infringe upon them; 2) the corporate responsibility to respect human rights; and 3) the need to improve access to effective remedy for victims of human rights abuses. While these guidelines are a first step in the right direction, they have some shortcomings: their scope is limited in terms of cross-border abuses and remedy mechanisms and, most importantly, their application is voluntary. ONU. 21/03/2011. Principes directeurs relatifs aux entreprises et aux droits de l'Homme : mise en œuvre du cadre de référence « protéger, respecter et réparer » des Nations Unies.
206 One of the weaknesses of this law is that it only applies to (very) large companies: French companies with at least 5,000 employees in France, and companies with headquarters elsewhere in the world who have more than 10,000 employees in France. In practice, it is said to apply to about 300 companies.
207 The plan should specifically include: 1) a mapping of risks intended to identify, analyse and prioritise them; 2) procedures for regular assessment of the situation of subsidiaries, subcontractors or suppliers with whom an established business relationship is maintained; 3) appropriate actions to mitigate risks or prevent serious infringements on human rights or the environment; a mechanism for alerting and collecting reports relating to the existence or realisation of risks, defined with the representative trade union organisations; 4) a system for monitoring the measures implemented and assessing their effectiveness. Novethic. Devoir de vigilance. Accessed 10/12/2020.

damages to the victims only in the event of there being no plan, an insufficient plan or failures in its implementation.[208] Even though it is limited to a few large companies and the burden of proof still falls on the victims, it is undoubtedly the world's most ambitious attempt to regulate multinational companies,[209] and contributes to the transition towards more binding national and international regulatory frameworks.[210]

Indeed, **legislation in this area** (or attempted legislation) has multiplied in parallel, but with very variable scope and requirements. Examples include the UK Modern Slavery Act 2015 (very weak, as it merely requires a declaration of the risks and measures relating to modern slavery) or more recently, in May 2019, the Child Labour Due Diligence Law in the Netherlands (requiring risk identification and an action plan). Both of these only cover specific social issues, unlike the French law, which encompasses both social and environmental concerns. In terms of draft legislation, the German government is considering a law targeting at least 50% of German companies that employ more than 500 workers, while in Finland the government has committed to introducing such a law in the near future. According to the European Commission, 11 member states have developed due diligence legislation, or are about to/planning to do so.[211] Recently in Switzerland – a tax haven by any standards – an initiative launched by a collective of NGOs, religious institutions and trade unions almost resulted in a law: the popular vote was won but was not validated by a majority of cantons, as is required. It will therefore be replaced by a counter-proposal from the federal government, which is much less ambitious (comprising transparency obligations and a specific duty of care for mineral extraction and child labour).[212] In Belgium, civil society organisations called for a law in an open letter published in April 2019,[213] and then specified the elements considered essential by the coalition in a memorandum published in December 2020.[214] Lastly, at the EU level, the European Commissioner for Justice, Didier Reynders, announced a legislative initiative for 2021 intended to make due diligence mandatory for all European companies, with the stated aim of including sustainable corporate governance in the European Green Deal.[215]

As can be seen, these various initiatives all have a human rights-based approach as their starting point, in line with the United Nations' guiding principles. The **connection with the climate** and the environment in general may seem tenuous at first glance, or even non-existent. In reality, the IPCC ruled in 2018 that warming beyond the Paris Agreement's 1.5°C target would entail risks of serious and irreversible damage to human rights.[216] The French duty of care law thus includes environmental risks, which obliges the parent companies of large transnational groups to implement measures to reduce their direct and indirect emissions, as well as those of their subsidiaries and their subcontracting chains.[217] In March 2020, moreover, the association Notre Affaire à Tous published a legal study comparing the climate vigilance of 25 French multinationals, which showed that none of the companies were really complying with the obligations resulting from the law.[218] This study follows two lawsuits brought against *Total* by the association: one for its oil activities in Uganda, affecting nearly 100,000 people (who were fully or partially displaced from their land before receiving even

208 FCRSE. Juillet 2017. Loi française relative au devoir de vigilance des sociétés mères et entreprises donneuses d'ordre. Questions fréquemment posées.
209 HIVA KU Leuven. 2018. Belgium and the sustainable supply chain agenda: leader or laggard? Review of human right due diligence initiatives in the Netherlands, Germany, France and EU, and implications for policy work by Belgian civil society.
210 The UN has been working for several years to develop a binding international treaty on human rights violations by multinational companies. Specifically, it was in June 2014 that developing countries voted in favour of Resolution 26/9, initiated by Ecuador and South Africa, creating an open working group with the mission of developing an instrument. Successive drafts have since been submitted for negotiation each October in Geneva. They are still subject to strong opposition from developed countries, which are home to most multinationals. This includes the EU, despite strong pressure from its civil society. CNCD. 14/10/2019. Un traité international pour les entreprises et les droits humains.
211 ECDPM. 30/11/2020. Vers une stratégie européenne pour des textiles équitables et durables. Document de réflexion n°264.
212 Novethic. 30/11/2020. Les suisses votent "presque" pour la responsabilisation des multinationales.
213 CSI. 22/06/2020. Vers l'obligation de diligence raisonnable dans les chaînes d'approvisionnement mondiales.
214 CNCD. 01/12/2020. Devoir de vigilance des entreprises : la société civile belge publie son mémorandum.
215 This announcement was followed by a public consultation, launched in October 2020 and coming to a close in February 2021. LLB. 27/10/2020. Lancement d'une consultation européenne pour des entreprises plus durables.
216 IPCC. 2018. Global Warming of 1.5°C. Special report.
217 Ideally, the crux of the matter must also be targeted: bank financing for fossil fuels. A recent decision by Australia's National Contact Point (NCP for the OECD Guidelines for Multinational Enterprises) could have significant implications. The NCP has formally decided to accept a complaint against ANZ Bank from survivors of the Australian mega-fires in late 2019. This decision by the NCP establishes the connection between financial investment in fossil fuel companies or infrastructure and its impact on the climate. This is rare enough to be noteworthy, as this type of approach is usually aimed at companies that are more directly responsible for emissions (e.g. "Carbon Majors" such as Total or Shell). BHRRC. 30/11/2020. Corporate accountability and the just transition: Frameworks for holding corporations accountable for climate change. Note the Frenchwoman Lucie Pinson's remarkable work in this field with her NGO Reclaim Finance. She recently received the Goldman Environmental Prize for having convinced dozens of financial players to divest from coal. Le Monde. 30/11/2020. La militante anticharbon Lucie Pinson reçoit la plus haute distinction pour l'environnement. According to the NGO, international banks provided $2.7 trillion in financing to 2,100 fossil fuel companies between 2016 and 2019, with the volume increasing each year. Reclaim Finance. 18/03/2020. Banking on climate change 2020 : le financement aux énergies fossiles par les banques internationales.
218 Notre Affaire à Tous. 01/03/2020. Vigilance climatique : Notre Affaire à Tous interpelle 25 multinationales françaises suite à son rapport comparatif identifiant leurs nombreuses défaillances.

the slightest compensation);[219] the other, brought jointly with a collective of associations and communities, for its failure to comply with its duty of vigilance on climate issues. According to Paul Mougeolle, the association's representative, the oil multinational, which is responsible for 1% of global emissions, "*has agreed to include the climate issue in its second vigilance plan*", but contrary to this has "*not changed its business model*", which means it is still "*out of line with the 1.5°C trajectory*". [220]

Beyond the objects of these lawsuits themselves, they provide an opportunity for these associations to test the 2017 duty of vigilance law and potentially **set a precedent**. Nothing is simple, however, since in the case concerning Total's oil activities in Uganda, the first case to be decided on the basis of this law, the judges considered that the dispute fell within the jurisdiction of the commercial courts.[221] This ruling is highly problematic, as the latter are courts of special jurisdiction, composed of judges elected by their peers and specialised in the technical aspects of commercial litigation. Yet the law deals with external issues of human rights protection and the protection of the planet, matters that cannot be reduced to a purely commercial dispute relating to the internal management of the company. French civil society therefore believes that this decision is contrary to the spirit of the law, harmful to its application and, above all, sets a very bad example at the international level.[222] The collective reminds us of the statement made by the governor of the Bank of England at the last Davos Forum: "*Firms that align their business models to the transition to a carbon-neutral world will be rewarded handsomely; those that fail to adapt will cease to exist*".[223]

An image from the "Hold Business Accountable" campaign led by a civil society coalition promoting EU HREDD legislation.

219 According to many first-hand accounts, these populations find themselves without means of subsistence, causing mass famine and school drop-out. Les Amis de la Terre France, Survie. Octobre 2020. Un cauchemar nommé Total. Une multiplication alarmante des violations des droits humains en Ouganda et Tanzanie.
220 Actu Environnement. 28/01/2020. Contentieux climatique : Total assigné en justice pour manquement à son devoir de vigilance.
221 Actu Environnement. 02/03/2020. Vigilance climatique : 25 multinationales françaises hors la loi selon Notre Affaire à tous.
222 It should be noted that the Court of Appeal did not rule on the merits of the case, i.e. whether or not Total complied with its duty of vigilance obligations. Faced with this decision, Friends of the Earth France, Survie and their Ugandan partners plan to appeal to the Supreme Court. Les Amis de la Terre France. 10/12/2020. Affaire Total Ouganda : la cour d'appel de Versailles renvoie au tribunal de commerce.
223 Actu Environnement. 28/01/2020. Contentieux climatique : Total assigné en justice pour manquement à son devoir de vigilance.

3.7 WHAT ABOUT FAIR TRADE?

The various avenues listed above, while interesting and promising to varying degrees, focus primarily on climate change mitigation in developed countries. They tend to neglect issues of adaptation, as well as the primary victims of climate change, namely the **most marginalised populations**, predominantly coming from countries of the so-called South.[224] While their responsibility is historically low or even non-existent, their living conditions are already strongly impacted and will be even more so in the future, particularly in terms of food security (see Box 18).[225] Some of the policies presented above could also have a counter-productive effect on development in the South, such as border taxes or the relocalisation of certain industrial sectors, which could potentially mean reduced access to the markets of the North.

A number of **international mechanisms** exist that are supposed to help these populations and countries cope with immediate climate dangers, for instance the UN's Green Climate Fund. But a recent report by *Oxfam International* on the "true figures of international climate finance" shows that out of the $100 billion annual pledge made in Copenhagen in 2009,[226] only $59.5 billion of public funding was declared by developed countries in 2017/18 (annual average).[227] Worse, almost 80% was provided in the form of loans and instruments other than subsidies, contributing to the rising debt burden of many countries.[228] Among other problems identified by the NGO are that a large share of the funds replaces official development assistance (cf. the issue of additionality, a situation that is likely to worsen with the COVID-19 crisis), that only 14% is provided to the least developed countries,[229] and that the percentage allocated to adaptation (25%) is still too low (Figure 17).[230] Moreover, climate finance and insurance programmes are still not very accessible to small-scale farmers and their organisations. According to the UN and the *Climate Policy Initiative*, small farms of less than 5 hectares receive only 1.7% of total public climate finance, even though they represent about 95% of all farms and feed one third of the world's population. This is all the more prob-

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How the environmental crisis is exacerbating the poverty and vulnerability of small agricultural producers

- Climate-related risks, including those related to livelihoods and to supplies of food and water, are expected to increase dramatically with climate breakdown.
- Populations who depend on agriculture, and particularly women, are disproportionately affected by the adverse consequences of the climate crisis.
- Small agricultural producers face droughts, floods, increases in temperature and variations in rainfall patterns that affect their crop yields and the quality of produce.
- Without adaptation, global warming could reduce global agricultural yield growth by 30% by 2050, affecting more than 500 million smallholder farms worldwide.
- According to forecasts, the environmental crisis is expected to push more than 100 million people in developing countries below the poverty line by 2030.[1]

1 Mouvement équitable. 28/11/2019. Il n'y a pas de résilience climatique sans justice économique ! Position du Mouvement du Commerce Équitable pour la COP 25.

224 We might also consider, as does sociologist Bernard Duterme of CETRI, that most of the environmental policies currently proposed in the West are part of a "liberal, technocratic and neo-colonial ecology" that "widens the North-South divide" by "putting natural capital on the market, valuing ecosystem services, privatising or conserving resources, patenting living things, free trade in soil, water, air, biodiversity... and the supposedly efficient management that this entails". CETRI. Entretien Bernard Duterme : « Il faut décoloniser d'urgence une écologie supposée universelle ».
225 Pinault L. 02/12/2015. Commerce équitable et changement climatique. Analyse Oxfam-Magasins du monde.
226 CCNUCC. 30/03/2010. Rapport de la quinzième session de la Conférence des Parties tenue à Copenhague du 7 au 19 décembre 2009.
227 Belgium has pledged an annual contribution of €50 million for the period 2013-2020, which the CNCD considers to fall far short of what is needed. On the basis of the country's financial capacities, and its degree of historical responsibility for climate change, the platform calls for this contribution to increase over time, with the aim of reaching at least €500 million per year. CNCD. Financement climat : la Belgique doit prendre ses responsabilités. Accessed 01/12/2020.
228 Worse, 40% of the financing of these loans was non-concessional, i.e. loans granted to developing countries at very unfavourable rates compared to the market. Le Monde. 20/10/2020. Climat : les pays riches surévaluent leur aide aux pays en développement, selon Oxfam.
229 Le Monde. 12/12/2020. L'accord de Paris sur le climat, qui fête ses cinq ans, a-t-il tenu ses promesses ?
230 OI. 2020. Les vrais chiffres des financements climat : où en est-on de l'engagement des 100 milliards de dollars ?

lematic as they need thousands of billions of dollars each year for measures such as soil conservation, irrigation, crop rotation, and the use of seeds better adapted to new climatic conditions.[231]

Beyond the aspects of global emissions mitigation, a key question therefore arises: that of the **contribution of trade to climate justice and adaptation to climate change**. How can these issues be further integrated into matters of trade in a coherent and sustainable manner, both at a regional and international level?

One answer is undoubtedly to be found in fair trade, an economic model that has been tried and tested for several decades now. At first glance, fair trade does not necessarily bring climate to mind, or even the environment in a broader sense. Probably with good reason, since the approach has historically focused on the socio-economic aspects of sustainable development, primarily decent prices and wages for marginalised farmers and workers. But it is precisely these commitments (prices based on production costs, pre-financing, long-term commercial relations, etc.) that provide agricultural producers with the economic stability that is essential for forecasting production and **adapting to climate breakdown**. Indeed, as the French agronomist Marc Dufumier reminds us, faced with an increasingly uncertain climate, "*farmers must implement more resilient production systems that allow them to restore their income levels and the productive potential of their farms as quickly as possible after each destructive climatic episode*". [232]

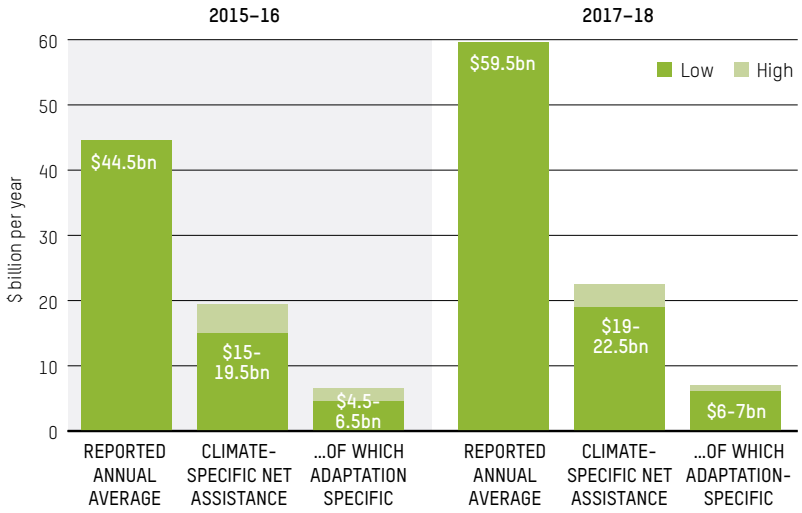

Figure 17. Comparison of climate finance reported by developed countries (annual average) and actual climate-specific assistance as estimated by Oxfam (annual averages 2015-2016 and 2017-2018).

Ol. 2020. Les vrais chiffres des financements climat : où en est-on de l'engagement des 100 milliards de dollars ?

The sector has also experienced a strong "greening" since the beginning of the 2000s, against a background in which the concept of sustainable development has taken-off, which also makes it a particularly relevant **mitigation tool**. Some authors speak of a "*fourth era of fair trade*", in which it has gradually been integrated into the broader concept of sustainable trade.[233] Little by little, environmental criteria or principles have been included, for instance in the 2001 definition of Fair Trade in the WFTO principles (in 2019, the content of principle 10 was revised and it was renamed "*Climate Crisis and Protecting our Planet*"),[234] in the specifications of the *Fairtrade International* label (which has also created its own system of fair trade carbon credits, see box 19) or more recently in the "International Fair Trade Charter".[235] At the same time, environmental impact studies have multiplied, labels that were historically organic have developed fair trade and sustainable versions (e.g. *Ecocert Equitable, Naturland Fair*), the WFTO has launched its "People and Planet" initiative on circular economy production,[236] while various stakeholders have been developing a range of products and a discourse focused on small-scale

231 CPI, IFAD. November 2020. Examining the climate finance gap for small-scale agriculture.
232 Dufumier M. 2015. Soutenir une agriculture paysanne pour faire face au changement climatique. Bulletin Equité n°18, Fédération Artisans du Monde.
233 Ramonjy D. 2012. Dictionnaire du commerce équitable. Développement durable, p. 86-94, éditions Quæ.
234 WFTO. 20/09/2019. Fair trade calls climate emergency, revises principles.
235 WFTO. International Fair Trade Charter.
236 WFTO. People and planet initiative.

farming in the North (e.g. *Ethiquable, Oxfam-Magasins du monde*).[237]

With these various developments, the added value of fair trade in terms of the climate becomes all the more apparent: it guarantees **economic conditions favourable to the ecological transition** for small producers and workers. By allowing a fairer distribution of wealth, it gives them the means for this transition, while supporting the development of production methods that are more environmentally friendly and resilient to climate change, such as agroforestry, organic farming or the circular economy. Again, fair trade supports these practices by restoring economic stability and visibility to small producers. The UK branch of Fairtrade gave a series of examples in this area in a 2018 blog post, ranging from training in integrated pest management or agroforestry for climate change adaptation, to reinvesting the Fairtrade Premium in reforestation projects, to various biodiversity protection programmes.[238] In addition, it should be remembered that a majority of fair trade products are also organic (e.g. more than 70% of Fairtrade products distributed in Belgium are organic, a figure that has been rising steadily over the past few years).[239]

This way of operationalising and supporting the transition is a **fundamental and distinctive element of the fair trade approach**. For example, Christophe Alliot, from the French analysis bureau BASIC, compares the *Fairtrade* and *Rainforest Alliance* standards in the coffee sector. He explains how much the economic logic relied on by *Rainforest Alliance* is based solely on increasing productivity, and therefore proves less able to "empower" the smallest producers towards more diversified and more resilient systems of agricultural production.[240] These systems clearly require significant resources, which small-scale farmers usually do not possess, due to their low remuneration, poor access to finance and the unfair nature of trading practices in global supply chains. This encourages them to turn instead to short-term strategies such as increased use of chemical inputs (e.g. pesticides against coffee rust, rather than agroforestry). In the longer term, these strategies not only involve a continuous increase in production costs, but also generate significant hidden economic, social and environmental costs, like water or soil pollution, deforestation or health problems resulting from agricultural practices. All these practices ultimately contribute to exacerbating the impact of climate breakdown on these same populations.[241]

Poster for the 2019 Fair Trade Fortnight organised by the French Fair Trade Platform.

237 Veillard P. 2020. Pour un commerce équitable plus soutenable. Dossier de campagne Oxfam-Magasins du monde.
238 FTF. 04/06/2018. 8 ways Fairtrade farmers protect the environment.
239 Fairtrade Belgium. Opter pour le bio. Accessed 02/12/2020.
240 BASIC. 2019. Café : la success story qui cache la crise. Etude sur la durabilité de la filière du café.
241 CEF. Commerce équitable et climat : même combat ! Consulté le 30/11/2020.

Fair trade carbon credits

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Due to the lack of a regulatory framework, carbon credits in the voluntary market (see Box 17) vary greatly in quality and value, for which reason guarantee systems have been developed to improve their reliability. In the usual "jungle" of standards, there is a system developed by *Fairtrade International* in 2015, the ***Fairtrade Climate Standard*** (FCS). This standard allows agricultural producers who contribute to climate change mitigation to sell Fairtrade Carbon Credits (FCCs) to buyers who want to offset their emissions. The FCS is not limited to agricultural producer groups that are already Fairtrade certified alone, but is open to all those within the organisation's geographical reach. *Fairtrade International* provides information and training to help them produce and sell FCCs through three types of projects: renewable energy, energy efficiency and reforestation. The standard also applies to project facilitators, traders and end buyers of FCCs. Developed in collaboration with the *Gold Standard*, the FCS is complementary to the latter, in that it adds typical Fairtrade certification criteria on to it, including a minimum price, a fair premium, respect for democratic rules and transparency and requirements regarding working conditions.

As we see, *Fairtrade* has taken its own criteria and adapted them to the different players that make up the carbon market. Does this way of making **carbon offsetting fairer** necessarily make it more "acceptable"? As we saw above, offsetting poses obvious problems, not least of which is its reversible and impermanent nature (e.g. carbon stored in the form of wood that ends up burning or decomposing), unlike avoided emissions. The FCS clearly does not solve this "existential" limitation of offsetting. Moreover, like other schemes, it gives buyers of FCCs the "right to pollute" at a relatively low-cost, so they can continue their CO_2-emitting activities with a clearer conscience. The other issues arising here are those of land value and the financialisation of nature. As a group of NGOs reminded us ahead of COP 22 in Marrakech in 2016, land cannot be "reduced to carbon sinks" in a bookkeeping entry. "*It is fundamental to around a billion people in the world who are working towards food sovereignty, an inalienable right of people who have already been harmed enough.*"

The FCS is not comparable to practices such as "*Climate Smart Agriculture*" (CSA). The latter is an "empty shell" that allows agro-industrial players to offset their emissions through very permissive criteria (e.g. the use of GMO seeds and their herbicides).[1] In particular, its lack of strict exclusion criteria allows multinational agribusinesses such as *Monsanto, Walmart* or *McDonald's* to have their own CSA programmes, serving their financial and communications interests. But despite stricter standards and principles, one cannot help but think that the FCS also contributes to the "*pressure on land*" and "*rush towards offsetting*" endorsed by the Paris Agreement.

1 Maes. S. 02/12/2015. L'Agriculture intelligente face au climat : un concept qui pose question. The organisation promoting it, the Global Alliance for Climate Smart Agriculture (GACSA), is also riddled with influential players in the GMO and nitrogen fertiliser sectors. Maes. 02/12/2015. L'Alliance mondiale pour une Agriculture intelligente face au climat : un terreau fertile pour le secteur des engrais azotés. Despite its criticism of GACSA, Oxfam International made a strategic decision to join the more open African branch (Africa CSA Alliance), in order to press for a stricter definition of CSA favouring agricultural development projects that are more environmentally and socially responsible. Maes. 02/12/2015. Agriculture intelligente face au climat : positionnement et stratégie d'Oxfam International.

Conversely, and in summary, fair trade allows a better distribution of wealth and gives small-scale producers the means to invest in more sustainable and resilient production methods. Let us remember that it thus constitutes a form of **internalisation of the social and environmental costs** in the price and commercial practices of buyers, in contrast to, for example, development cooperation programmes, which are more redistributive in nature. While there are of course significant costs in both cases (of certification vs. of programme management), one advantage of the fair trade model, which is perhaps more significant than it might appear, is that it restores dignity to producers and workers, who are directly paid for their work through the price and their wages, and not simply subsidised or given social assistance (cf. on this subject the dependence of many European farmers on Common Agricultural Policy (CAP) aid for their income, see Box 20).

Poster for Oxfam-Magasins du monde's 2018 campaign "Let's put an end to chocolonialism", highlighting in particular the link between a living wage and deforestation.

Finally, a large proportion of fair trade stakeholders are **social** or **"mission-based" businesses**, which "*link economic viability with contribution to the common good*",[242] with the "*distributive design*" that is dear to Kate Raworth embedded in their DNA.[243] A number of them are, for example, cooperatives owned and managed by producers whose statutes put social and/or environmental aims above the maximisation of profits and the distribution of dividends to shareholders.[244] According to a recent study by the WFTO and *Traidcraft Exchange*, 92% of WFTO member organisations thus reinvest all of their profits in their social or environmental impact, in connection with models of governance, management and reinvesting profits that are very different from those of conventional businesses.[245]

Of course, the fair trade approach can be criticised for its micro-economic nature, i.e. that it focuses essentially on local development (e.g. at the level of the farm and producers' cooperatives in the case of agriculture). In light of this, however, it is important to remember all the political work of the fair trade movement, which, through organisations such as the European Fair Trade Advocacy Office (FTAO), also presses for greater **regulation** at a **more macro-economic** level, including at the level of trade (e.g. greater supply chain transparency, reduced taxation for fair trade and sustainable products, the fight against unfair trade practices, mandatory due diligence standards for human rights and the environment, see above). More specifically regarding the climate question, in 2019 the fair trade movement called for the UNFCCC Parties to "*address the issues of unfair trading practices, power imbalance in value chains and sustainable production and consumption*" at the COP25 climate negotiations in Madrid. In its statement, it reminded the parties of the links between "*inequality and climate change*" and how "*fairer ways of sharing the value along supply chains*" are essential in order to combine "*social and ecological objectives*" while "*more equally sharing the burden of changing our unsustainable production patterns*".[246]

WFTO poster for World Fair Trade Day 2020.

242 Prophil. 13/09/2017. Les entreprises à mission. Panorama international des statuts hybrides au service du bien commun.
243 Sahan E. 29/09/2020. « Le modèle des entreprises équitables est une pièce maîtresse d'une économie du donut ». Analyse Oxfam-Magasins du monde.
244 TDC. 09/06/2020. Le commerce équitable, un outil majeur pour la transition écologique solidaire.
245 Another telling figure is that 85% of them report sacrificing financial objectives in order to pursue social or environmental objectives, while also maintaining commercial viability. Examples of such fair trade companies: Chako (Tanzania) collaborates with its workers to develop recycled products from waste paper and glass; Ojoba (Ghana) has developed permaculture training workshops and installed solar ovens and rocket stoves in order to reduce the use of firewood in shea butter production by 80%; Prokritee (Bangladesh) offers products made from textile industry waste. WFTO. January 2020. Creating the new economy. Business models that put people and planet first.
246 Mouvement équitable. 28/11/2019. Il n'y a pas de résilience climatique sans justice économique ! Position du Mouvement du Commerce Équitable pour la COP 25.

For a fairer and more sustainable agricultural policy

20

The example of the European **Common Agricultural Policy** (CAP) is symptomatic of the problems of agriculture and the climate, but also of the opportunities. There are some figures to illustrate this. On the one hand, agriculture (including forestry and land-use change) accounts for about a quarter of global emissions, including 50% of methane (CH4) emissions and 70% of nitrous oxide (N20) emissions, two powerful GHGs. On the other hand, the CAP remains the EU's main policy in terms of its budget – €379 billion from 2021 to 2027, which is 32% of the European budget. In view of the social and environmental emergency, ideally this policy should therefore contribute to a massive reorientation of agriculture towards more agroecological practices, which guarantee lower emissions and also a better income for farmers. But there is a problem: the very latest version of the CAP makes no move in this direction!

The reform, proposed two years ago by the former Juncker Commission and subject to a surprise fast-track vote in October 2020, in fact resembles a **status quo**, following intense pressure from agricultural lobbies on the three main parliamentary groups (EPP (Conservatives), S&D (Socialists) and *Renew Europe* (Liberals)). The way in which agribusiness lobbies, in particular *Copa-Cogeca*, have managed to impose their agenda like this was denounced by the NGO *Corporate Europe Observatory* in a recent report.[1] Despite many promises of greening, the revised version has more or less kept the same basic tools, including income support payments per hectare. This type of aid encourages expansion and favours intensification of production, whereas it should instead be conditional on the creation of jobs and the sustainability of production methods (less than 20% of beneficiaries receive 80% of the aid in Europe, while in Belgium 27% of the largest farms receive 65% of the budget). A proposal has been made to include annual payments for environmentally friendly practices, an innovation called "eco-schemes", in the first pillar (75% of the total budget). But according to a coalition of Belgian environmental NGOs, their effectiveness has not been demonstrated and the proposed budgets remain too limited. If we add to this an aid ceiling that is optional and too high, agri-environment-climate measures (AECM, second pillar) left to the goodwill of member states, as well as a weakened conditionality chapter (i.e. linking aid to environmentally friendly practices), we arrive at a very meagre social and environmental balance sheet. As summarised by the French *coalition Pour une autre PAC*, "*as the decade of our last chance dawns [...], allocating at best 15% of the total CAP budget to remunerating agricultural practices that are good for the environment [...] is by no means a satisfactory result*".

Ultimately, the positions of the Parliament and the Council show a lack of vision and above all a major **inconsistency with other EU objectives**, namely the Green Deal and the *Biodiversity* and *Farm to Fork* strategies. According to Amaury Ghijselings, Food Sovereignty Research Officer at the CNCD-11.11.11, it would have been better to "*turn our backs on business as usual*" and promote "*a real transition towards sustainable food systems where agroecology becomes the rule and not the exception*".

Despite this, another historical trend has been retained in this reform, that of renationalisation, with each state having to provide a **strategic plan** specifying the modalities for operationalisation of the CAP, for example in order to set the greening criteria for eco-regimes. While the continuation of this trend presents strong risks of social and environmental dumping, it allows certain countries or regions to take a leading role in the agroecological transition. Several players in Belgium, including the agricultural union FUGEA, are therefore at the forefront of efforts to ensure that Walloon policy "*gives greater support to its farmers in their transition to sustainable practices*".

1 CEO. 12/10/2020. CAP vs. Farm to Fork. Will we pay billions to destroy, or to support biodiversity, climate, and farmers?

Conclusion

*On 8 December 2020, a Belgian civil society coalition placed hundreds of boots in front of the headquarters of the European Commission in Brussels. The aim was to symbolise a "Europe at the beck and call of the lobbies" ("**Europe at the boot of the lobbies**", to literally translate the French expression), favouring "large-scale industrial agriculture for export", leading to "the continued disappearance of small-scale farmers, the acceleration of global warming and the destruction of biodiversity".[247] This demonstration alone sums up many of the issues discussed in this study. On the eve of the five-year anniversary of the Paris Agreement, a few days before a decisive European summit on the EU's climate policy, the protest denounced both a new version of the CAP synonymous with the status quo (see Box 20) and the recently concluded EU-Mercosur treaty that will lead to increased deforestation and the disappearance of European small-scale farmers (see Chapter 2.7).*

In short, it sums up the **inconsistencies between the EU's agricultural, trade, environmental and development policies**: what is the point of setting more ambitious climate objectives (cf. the new -55% emissions target for 2030 finally wrested from the summit,[248] or the Green Deal) on the one hand, if, on the other hand, we shackle ourselves with climate-damaging agricultural and trade policies? As recently summed up by Olivier De Schutter, UN Special Rapporteur on extreme poverty and human rights, "*It makes no sense to ask companies to change their production methods and the population to become responsible consumers if, on the other hand, we encourage the low-cost model through trade practices that promote environmental and social dumping.*"[249]

Despite the various citizens' movements and a public opinion that is increasingly concerned with environmental issues, it seems that a large proportion of political decision-makers are stuck in the same "program", that of the **export-led economy, sacrosanct (green) growth** and the **myth of decoupling** (see box 9). In the area of trade agreements, behind the trees of TTIP and CETA lies a forest of free trade agreements which the Commission is still negotiating, in a seemingly unperturbed and proactive way, with countries ranging from Vietnam to Ecuador, to Tunisia and Japan.[250] For the EU, this can be at least partly explained by its post-war origins, with trade being one of the main foundations for constructing a common market as a vehicle for peace.[251] But the systematic, asymmetric and undemocratic nature of current trade negotiations raises questions. As though extending the EU's "trade DNA" to external relations were an end in and of itself, no matter what its effects on society as a whole.[252]

Regarding the climate question more specifically, these agreements accentuate global warming and climate injustice through increased direct and indirect emissions. But international trade is probably not to blame in and of itself, given that local trade may prove less virtuous than longer-distance trade, for example (see Chapter 3.2). Rather, the blame lies with the **neoliberal form of trade**, which is synonymous with social and environmental dumping, downward harmonisation of standards, lengthening and fragmentation of supply chains, unsustainable production and consumption patterns,

247 FIAN Belgium. 10/12/2020. L'Europe à la botte des lobbys, on en a plein les bottes !
248 After lengthy negotiations, an agreement was finally reached between the 27 member states on a revised target of a reduction of at least 55% in emissions by 2030 compared with 1990 levels, versus -40% previously, in order to achieve carbon neutrality by 2050. Le Monde. 12/12/2020. Réactions partagées après l'accord européen sur la baisse des émissions en 2030.
249 CAL. Octobre 2020. La crise, une fenêtre d'opportunités – Un entretien avec Olivier De Schutter. Espace de libertés n°492.
250 Le Monde. 07/10/2016. Ces accords que négocie l'Europe et dont on ne parle jamais.
251 Cf. the idea of making conflicts "materially impossible" by building a single market with no tariffs, first in the coal and steel sectors, then in all economic areas. Le Monde. 12/12/2020. Guerre commerciale : l'Europe s'arme enfin.
252 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.

Demonstration on 8 December 2020, in front of the headquarters of the European Commission in Brussels

a concentration of power in a handful of multinationals with little accountability, widening inequalities, particularly in less developed countries, and so on (see Chapter 2.7). It is clear that amplifying these phenomena again and again with a liberalisation agenda from another century, in order to "*go looking for growth* ",[253] but with increasingly weak and uncertain economic benefits (see chapter 2.6), can only worsen the global ecological and social situation.[254]

In view of these policies of unbridled free trade, it therefore seems essential and urgent to review the philosophy and **architecture of international trade rules**. In other words, it is absolutely necessary to go beyond the dogma of free trade to turn trade into a genuine tool for regulation – and no longer just for liberalisation – that serves the ecological and social transition. As mentioned in Chapter 3 of this study, many instruments can be used to make trade more "climate compatible", ranging from genuinely binding sustainable development chapters to carbon border adjustment mechanisms, to the strengthening of standards on emissions from international transport, the internalisation of social and environmental costs in fair prices, laws on corporate duty of care, or the relocalisation of certain production activities. In developing these policies, which are generally focused on mitigation objectives, it is essential to keep in mind the issues of differentiated responsibility, climate justice and adaptation to the climate crisis for less developed countries.

The climate emergency is also an opportunity to put a more fundamental debate on the political agenda on the **very nature and objectives of trade**, which has so far been little explored due to how much the neoliberal gospel predominates. Among other things, this debate should address such key

253 These words were from conservative MEP Tokia Saïfi (EPP Group), at the time of the controversy surrounding the ratification of CETA in October 2016. This sense of the need for new trade and investment agreements to contribute to growth and to avoid identitarian closure and an economic downturn in the EU seems to be quite widespread in the European sphere in Brussels. Le Monde. 01/01/2017. 2016 : l'année où le libre-échange a vacillé.
254 Le Monde. 01/01/2017. 2016 : l'année où le libre-échange a vacillé.

issues as the need to reduce the volume of trade. This could involve banning certain consumer goods (e.g. fossil fuels, diesel/petrol cars) as well as reducing intra-group trade by multinationals (cf. their tax, social and environmental optimisation strategies).[255] Given the impossibility of an absolute decoupling between emissions and GDP (see Box 9), the explosive issue of degrowth should also be broached. From the perspective of sustainable development on a global scale, should trade not be included in a contraction and convergence scenario, as advocated by Olivier De Schutter? The idea behind this approach is for the economies of the North to contract (or at least remain stationary), in order to reduce their environmental impact, while those of the South continue to grow, with the aim of reducing poverty.[256] Fair and sustainable trade, a model that has been tried and tested on the ground for several decades, could in this respect inspire all our trade relations with the South, particularly in its dimension of economic support for the ecological transition.

Of course, such a comprehensive overhaul of our economic system – which is fed on growth, productivism and consumerism – necessitates more than a "mere" revision of trade rules and demands a complete rethink of our economic, fiscal, social and other policies. Trade rules and practices nevertheless play a structuring role in the organisation of international economic activities, which implies (re)subjecting them to broader social and environmental objectives, with respect for social and planetary boundaries, as defined for instance by doughnut theory.[257] Such a readjustment in the hierarchy of norms should make it possible to move from **free trade to fair trade**. In other words, to find a third way, between the identitarian protectionism of the extreme right and the blind free trade of the liberals, as Thomas Piketty advocated in a recent article in the newspaper *Le Monde*: "*We must turn our backs on the ideology of absolute free trade that has guided globalisation until now and adopt a new development model based on explicit principles of economic and climate justice. This model must be internationalist in its ultimate objectives but sovereignist in its practical details, in the sense that each country, each political community, must be able to set conditions for continuing trade with the rest of the world, without waiting for the unanimous agreement of its partners.*" [258]

Poster for Oxfam-Magasins du monde's 2020 campaign on the donut economy.

255 Institut Veblen, FNH. Octobre 2019. Mettre le commerce au service de la transition écologique et sociale. 37 propositions pour réformer la politique commerciale européenne.
256 Gemenne B. 29/08/2017. Le commerce équitable vu par Olivier De Schutter. Analyse Oxfam-Magasins du monde.
257 Raworth K. 2017. Doughnut economics: seven ways to think like a 21st-century economist.
258 Le Monde. 11/07/2020. Thomas Piketty : « Pour reconstruire l'internationalisme, il faut tourner le dos à l'idéologie du libre-échange absolu ».


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