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FROM ECOLOGICAL TRANSITION TO ECOLOGICAL TRANSFORMATION: consensus and fault lines

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At a time when there is growing consensus in international policy-making about the urge to act on climate change, debate continues to rage over the approach and mechanisms to adopt for implementing the ecological transition. The events of 2022, including the rising number of environmental disasters during the summer, have served as a wake-up call, heightening the sense of urgency. But ecological transition is a complex matter, raising issues that involve more than just environmental and climate challenges. It is also vital to look at how such a transition interacts with the fight against inequalities, the realities of crises and geopolitical relationships, and the specific growth — or degrowth — model that we collectively wish to put in place.

INTRODUCTION

The climate emergency is without doubt the greatest international challenge of the 21st century. Recognition of this fact has undoubtedly accelerated around the world in 2022, with the proliferation of climate crises, including unprecedented heatwaves, flooding, drought, and megafires, resulting in heavy losses of life and property, and accompanied by fresh warnings from scientists with an announcement that two further planetary boundaries have been exceeded.¹ In France, President Macron has not hesitated to refer to the end of an era of carefree abundance.

Although the first reports warning about climate change date back to the early 1970s and the 50th anniversary of the Meadows report published in October 1972 is fast approaching, public opinion seems at last to accept the analysis and urgency of the situation. Nevertheless, consensus about how the transition should be implemented is yet to emerge.

¹ Research teams at the Stockholm Resilience Centre developed the concept of planetary boundaries in 2009. It aims to make it easier to grasp the risks of brutal global environmental changes resulting from human activities that are likely to impact ecosystems and well-being. It sets out nine boundaries that must be respected if we are to ensure a safe and fair world for humanity to develop. These include ocean acidification, erosion of biodiversity, and disturbance of the phosphorus cycle. In 2022, the scientific community warned about limits that had been exceeded for chemical pollution and freshwater, vital to the prevention of deforestation, while four others of the nine in total have already been exceeded.



Fiera di Primerio - Panoramic view of the city from the bridge. The river is partly dried up - 02 08 2022

INCREASINGLY STRONG CONSENSUS CONCERNING THE DIAGNOSIS: THE URGENT NEED TO ACT AGAINST THE RISKS OF INACTION

Anthropocene: the impact of human activities on the climate emergency

In physical terms, global warming refers to the increase in average temperature at the earth's surface over the course of the 20th and 21st centuries and, in a more general sense, to the resulting disruption of major weather patterns.

The IPCC states that average annual emissions of anthropogenic greenhouse gases in the years 2010-2019 continued to grow, reaching levels greater than those recorded during preceding decades. These net emissions from human activities increased in every sector, from energy to manufacturing, transportation to agriculture. Fossil fuels still account for over 80% of energy use worldwide, a proportion that has scarcely changed in 30 years. The IPCC experts stress that if the targets agreed at the Paris Climate Conference are to be met, drastic action must be taken before 2030, notably the early abandonment of existing fossil-fueled infrastructure (coal-fired power plants, internal combustion cars, etc.) without waiting for them to reach the end of their technical lifetimes.

The risks of inaction are significant, and they are well-known. The IPCC has identified 127 of them across every part of the world and every economic sector

The risks of inaction are significant, and they are well-known. The IPCC has identified 127 of them across every part of the world and every economic sector. They include growing pressure on land and water resources, accelerating food insecurity. In its annual report, the FAO sets out its concerns over failure to make progress in the target of eliminating hunger in the world by 2030.² Another source of concern is the future growth in the number of climate refugees, combined with conflicts rooted in environmental factors. In a report published in 2021,³ the World Bank modeled population movements which could be triggered by the climate emergency. Under the most pessimistic scenario,

based on high greenhouse gas emissions, around 170 million people, and up to as many as 216 million, could be forced from their homes by 2050 for climate-related reasons. Disruption to ecosystems presents a further threat to human survival.⁴ The most recent report from IPBES,⁵ "the Biodiversity IPCC", points to the link between people's ability to survive and the preservation of a certain number of ecosystems. Worldwide, some 50,000 wild

species meet the needs of billions of people, around 10,000 of them providing a food source.

² FAO, *The State of Food Safety and Nutrition in The World*, 2021.

³ World Bank, *Groundswell Part 2: Acting on International Climate Migration*, 2021.

⁴ For example, the 2020 WWF global Living Planet index shows an average 68% fall in monitored vertebrate species population between 1970 and 2016.

⁵ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, created in 2012.



Interconnected environmental crises

A number of scientific reports published in 2022 by the IPCC and IPBES stress the interdependency of environmental crises:

- the health of the ecosystems we depend on, along with all other species, is deteriorating faster than ever. Biodiversity is a central plank of the international agenda with the 2021 IUCN World Conservation Congress and the COP15 on biodiversity scheduled for December 2022 in Canada;
- oceans are suffering from their climate-regulating role and are getting warmer, more acidic and less productive. Glaciers and the cryosphere are melting faster than ever, and the permanent Arctic ice pack is shrinking, contributing to a rise in sea levels;
- the vicious circle formed by overuse of land coupled with the climate emergency creates a systemic threat to the planet.

The health impacts of these crises are also of increasing concern, with countless reports citing the effects of plastics and microplastics and indoor and outdoor air pollution as well as infectious diseases, mental health issues and other consequences of the climate emergency. Because they trigger instant anxiety about our individual health, these effects magnify the importance accorded to the crises that produce them.

Ecological transition is not simply about environmental and climate policies

Concepts such as a “just transition” and “climate justice” are a growing feature of national and international public debate.

Climate injustice towards Southern countries

The concepts of climate justice and just transition are rooted in recognition of a form of structural inequality: countries with the most industrialized and developed economies are historically more responsible for the climate emergency, whereas the first to suffer its consequences are the most fragile countries. This phenomenon of “double inequality” is synonymous with the inversely proportional distribution of risks and responsibilities. It is estimated that close to 80% of the current and future impacts of the climate disturbances will be concentrated in countries with developing economies. Annual costs of adaptation to climate change in these countries are currently thought to be around \$70 billion, and are predicted to rise to between \$140 and \$300 billion by 2030, and \$280 to \$500 billion by 2050.

A third form of inequality also needs to be acknowledged on the international scale, centering on the under representation of the most vulnerable countries, particularly in international negotiations.

“End of the month vs. end of the world”: from consensus to the new class struggle?

The idea of double inequality is increasingly applied to households and individuals rather than simply to states, highlighting households' unequal contribution to greenhouse gas emissions as a function of income. The lifestyles of the richest individuals are singled out for special condemnation, most recently for totemic issues, such as the use of private jets, which crystallize tensions.

According to a study by the World Inequality Lab led by Lucas Chancel, the richest 10% of the global population are responsible for close to 48% (47.6%) of global CO₂ emissions.⁶ Faced with this reality, many members of civil society and international bodies such as the IPCC stress the need for the richest to make a greater contribution to ecological transition and its financing.

Little consensus exists regarding the approach and path to follow. Which interconnections could be made between ecological transition and the fight against inequalities? Which growth or degrowth models should we adopt for the future?

The climate emergency also raises the question of territorial inequalities. Not all regions are equally impacted by, or vulnerable to, the climate emergency and the consequences of ecological transition. This applies particularly to regions that are heavily reliant on fossil-fuel energy. For example, in Europe a large number of jobs depend on coal mining, especially in Poland and Romania.

A “systemic” vision of inequalities in the face of the climate emergency

More recently, questions of intersectionality, driven by academic research in the US, have entered the climate debate. These questions examine links between climate inequalities and inequalities based on gender (women are more exposed to climate risks)⁸, ethnicity (driven by the movement for environmental justice)⁹ and intergenerationality (denouncing

debts passed on to future generations by past and current generations).¹⁰

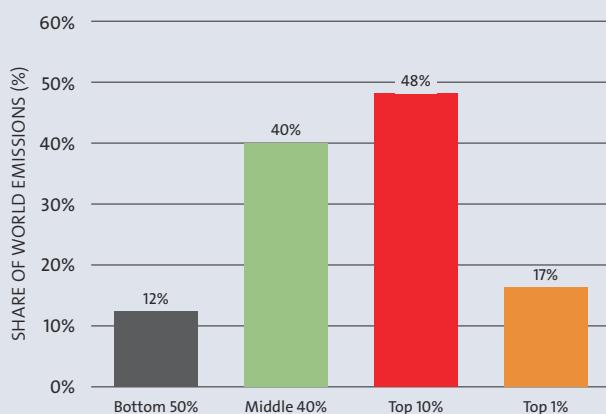
Aside from agreeing on the facts, little consensus exists regarding the approach and path to follow. The nature of actions to take sparks fierce debate. Which interconnections could be made between ecological transition and the fight against inequalities? Which growth or degrowth models should we adopt for the future? Should we talk about ecological transition or ecological transformation?

THE CHALLENGE NOW FOCUSES ON IMPLEMENTATION MECHANISMS

Origins and evolution of the concepts of ecological transition and ecological transformation

Science provides us with an endless stream of proof, but there is nothing new in the basic reality itself, or in the demands from certain civil society actors for a change in models. Back in 1972, the Meadows report formulated the concept of ecological transition to describe a shift from a growth model judged unsustainable to a balance described as global. Historically, the idea of transition linked to the notion of sustainable development as called for in the Brundtland report, “transition to sustainable development,” which was then taken up by international policymakers. The concept of transition implies a change of state, a system-wide reconfiguration over the long term.

Global carbon inequality, 2019⁷



Interpretation: 50% of the least wealthy individuals are responsible for 12% of world carbon emissions. Personal carbon footprints include emissions from domestic consumption, public and private investments as well as imports and exports of carbon embedded in goods and services traded with the rest of the world.

⁶ Lucas Chancel, *Climate Change & the Global Inequality of Carbon Emissions*, World Inequality Lab, 2021.

⁷ *World Inequality Report*, World Inequality Lab, 2022.

⁸ The UN states that pre-existing inequalities make women 14 times more likely than men to die during a natural disaster.

⁹ The concept of environmental racism is used by several actors, primarily from civil society environmental bodies such as the NRDC.

¹⁰ A recent study funded by the NGO Avaaz found that 45% of young people in 10 countries state that eco-anxiety impacts their daily lives: Elisabeth Marks et al., “Young People’s Voices on Climate Anxiety, Government Betrayal and Moral Injury: a Global Phenomenon”, *The Lancet Planetary Health*, 2021.



In today's parlance, ecological or green transition is the preferred term used by national and international bodies to cover all public environmental policies. In France, it received the official imprimatur of the state with the establishment in 2012 of the National Council for Ecological Transition, and the 2017 decision to replace the Environment Ministry with a Ministry for Ecological Transition. As a far-reaching structural change that encourages the emergence of new ways of producing, consuming and trading, transition is not a process to be underestimated. Some people rather use *transformation*, as it evokes fundamental changes to social and economic structures. Although it is true that both terms are employed today, sometimes in a very similar manner, certain academic specialists identify transformation as a more macro-level approach that goes beyond the fight against global warming and the protection of the environment. Comité 21, in reference to Karl Polanyi's *The Great Transformation*, explicitly chose the term for its eponymous prospective report published in 2020¹¹ to distinguish the process (transition) from the true destination.

Transition, transformation: whatever the terms used and the vision underpinning them, tackling the ecological question and attempting to provide solutions demand a 360° approach to the problems facing us, requiring us to consider their social and economic ramifications. Social, because environmental policies cannot stand apart from the issue of fighting inequalities, as illustrated by the "just transition" concept mentioned above; economic, because we need to create a new model of society if we are to achieve a sustainable balance in a world where resources, fossil fuels in particular, are finite.

Green growth, sufficiency, post-growth, degrowth: which models for future use?

Several development models are currently being suggested in an attempt to reconcile economic, social and environmental challenges from a sustainable perspective. Their ideological roots and operational implications can sometimes be radically opposed.

To start with, the concept of green growth seeks to solve a twofold challenge: increase economic opportunities worldwide at a time when the global population is expanding, while simultaneously protecting the

¹¹ Comité 21, *La Grande Transformation. Freins, leviers, moteurs* [The Great Transformation. Obstacles, Levers, Drivers], May 2020.

environment and climate. The concept is widely used by international bodies, institutions and public authorities to describe policies and reforms put in place to deliver sustainable growth, often based on new investments and technological innovations.

Other concepts challenge, more or less vehemently, the reality of continuing with a world of non-stop growth. The sufficiency (or sobriety) and degrowth approaches, despite their differing ideological roots, both advocate values and behaviors in stark contrast to current modes of consumption, centering on a certain form of frugality, or even a dramatic reduction of consumption and needs.

Sufficiency aims above all at moderation, or a form of voluntary simplicity, while also more broadly calling into question the value of our individual and collective needs. This idea is gaining wider traction, not just among committed campaigners and ecologists: it featured for the first time in the latest IPCC report, and in 2021 the International Energy Agency included it in its scenario for zero net emissions by 2050. In France, national energy and environment agency ADEME has developed several scenarios for reaching carbon neutrality by 2050, one of them based on sufficiency.¹² It also crops up more frequently in government messaging and strategies: increasing numbers of governments are exhorting their citizens to adopt “sober” behaviors and uses as a result of the Russian invasion of Ukraine and energy supply tensions.

The degrowth model advocates a more radical approach that directly challenges the very idea that it is possible to sever the link between increasing GDP and greenhouse gas emissions. More closely aligned with campaigning groups, it is nonetheless experiencing an uptick in interest, particularly in France. Several initiatives, such as the launch of the Observatory of Post-Growth and Degrowth in France in 2022, and publication of the Prophil report *Post-Growth for Business*, advocate for the emergence of new, more disruptive models. The IPCC also refers to degrowth in its most recent report, but only for information purposes and without flagging it as a deliverable solution for meeting climate targets.

We still have a long way to go on the pathway to ecological transformation as the economy undergoes fresh upheaval, with trade-offs and, sometimes, contradictory injunctions persisting. These tensions are exacerbated by the crisis in Ukraine and its geopolitical and energy implications.

Crisis of the decision-making process itself

While ecological transition brings countless conflicts (social, political, territorial, generational, etc.) to the surface, a crisis of decision-making is making it harder still to organize it in a democratic manner.

In the words of French demographer Alfred Sauvy, “*democracy does not unite [...] Quite the opposite, it is the art of dividing.*” But the art of civil conversation and peaceful dissent appears to be in crisis with the decline of representative democracy. The latter is afflicted by a “performance crisis” (Yascha Mounk¹³) even as the fault lines multiply: societies across the OECD countries are characterized by a climate of suspicion focused on political and economic elites, leading to a weakening of the social contract.

Deciding on just and socially accepted mechanisms for ecological transformation becomes even harder when the decision-making processes themselves are subject to criticism. In response to this, there is a clear preference for local actions, including via initiatives in favor of participatory democracy, while the clamor for transparency grows ever more widespread and insistent.

¹² *Transition(s) 2050*, ADEME. See the Frugal Generation scenario in particular.

¹³ In *The People vs. Democracy* (2018), political scientist Yascha Mounk analyzes liberal democracy’s “performance crisis” and the rise of so-called populist movements in a number of countries.