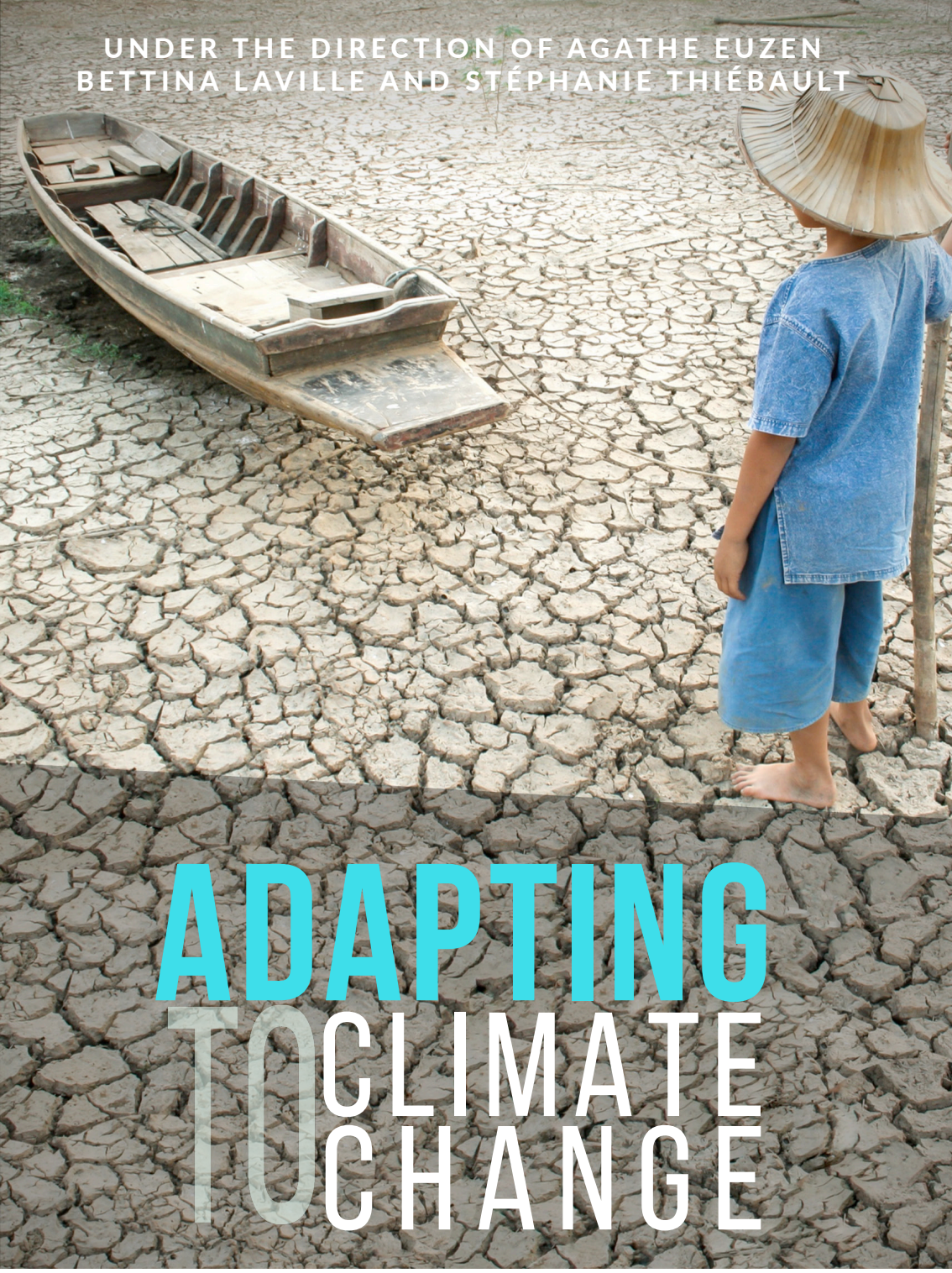
UNDER THE DIRECTION OF AGATHE EUZEN
BETTINA LAVILLE AND STÉPHANIE THIÉBAULT



ADAPTING TO CLIMATE CHANGE

A QUESTION FOR OUR SOCIETIES

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Adapting to Climate Change

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Regionalized climate projection key to adaptation

Antoine Bonduelle

Adaptation has long been the domain of North-South solidarity NGOs and international development institutions. The World Bank has quickly become concerned about the inadequacy of its aid programs in countries where the context is changing rapidly. The least developed countries, where the majority of the population is employed in agriculture, were the most affected countries, since this resource is often exploited in marginal conditions, in terms of climate and soil. For these countries in which greenhouse gas (GHG) emissions are low and which are not very affected by mitigation, adaptation was also the issue leading to entry into the negotiations on climate change. Within this new discipline of adaptation, researchers and NGOs focus first on food security, but also on strengthening capacities and knowledge, the empowerment of women and local actors, while the development agencies drive the "master-plan" or even the land registries. Adaptation has become a central part of the service provided by NGOs, to the point that climate vulnerability has become a key criterion for NGO action (Laubin *et al.*, 2017).

Thus, long before adaptation became a subject of debate in the North, these specialists have theorized the leading characteristics of the adaptation framework: shared knowledge, prospective reflection and collective organization to build resilience against unleashed elements, rising sea levels and changes in weather conditions. There is a minimum level of development required to cope with climate

change, but this is not only financial, it also encompasses technologies and collective organizations. The typical example of this evolution, following pressure from NGOs, is the protection against cyclones in Bangladesh, with the significant decrease in the number of victims in more recent events, as a result of many warning systems and collective preparation. Now, detection devices and information channels predict the worst. France, as a rich country, learned this to its cost during the 2003 heatwave: adaptation includes "hardware" (hospitals), but also and above all, "software" (training the general population,mobile phones, warning chains).

Adaptation in France too

This framework is well-formulated by the French state in its plans, in particular for the sectors that have already been identified as the most vulnerable. Typically, foresters and winemakers have long debated the dilemmas of adaptation, the financial consequences of the displacement of the optimal territory for their production, possible technical developments and the adoption of new varieties. Similarly, the agri-food sector has long been seeking to expand its production areas in parallel with globalization. This evolution occurs both in the short term through the diversification of supplies, and in the longer term by seeking potential areas for developing production and by adapting industrial tools and modes of transport. The English-Dutch conglomerate Unilever was built in the last century by extending its production areas as well as its trade opportunities.

The first requirement is the projection of impacts, at the level closest to the practice of professionals or elected representatives. Such projections, which were claimed from the outset in the first IPCC reports, are now available covering the entire French territory, mainland and overseas, produced to an incredible scale, with precision of up to 8-12km^2 per square. This outstanding work, produced thanks to Météo-France, CERFAC and IPSL, makes it possible to downscale, taking local topographies into account. It is essential to integrate slopes in order to protect against a risk of flash floods, or urban

shapes against the heat island effect in cities. These projections are also becoming increasingly relevant for time scales, ranging from the next few decades to a century. They are also essential knowledge for the adaptation decisions of a community or a profession.

From model to regulatory projection

These projections will become a reference with regulatory value. Of course, it is not about providing State guarantees on a climate modelling, since there is inevitably a degree of uncertainty. However, it is about having a reference value for a given time frame, for example, a risk of heatwave, a reference level for tornadoes, or for pollution caused by pollen. This important conceptual revolution switches the base of regulation from past measures (e.g., "flood risk areas" or "snow and wind"), to a calculated value. Such numerical references will be applied in a context of enhanced planning, starting with so-called "plans for regional development, sustainable development and equality of territories (SRADDET) that have arisen from the recent decentralization acts. These plans establish "compatible objectives" and must be "taken into consideration" for decisions on urban planning, housing and climate.

The adaptation chapters of this planning will not only be increasingly aligned with the most recent modelling, it will also be an important reference for insurance companies, in order to encourage or discourage builders and operators.

Two steps are still essential - firstly those of initial public debate, which implies an even more consolidated exchange on these projections, their hypotheses and their data; secondly the capacity building of professionals for integration, training and impetus with the new tools. Even for professions that do not depend directly on the weather or the elements, the construction of the future must be able to cope with future crises, and to integrate impacts of climate change in their context.

With this mainstreaming, initiatives and individual projects are gradually being replaced by regulatory actions and good professional

practices that are integrated and generalized. The energy and ecological transition is starting to be integrated within companies, to reduce emissions and move towards "zero carbon", while integrating the collective adaptation framework. This process includes a significant element of training and collective impetus, where SMEs and artisans will have a role that is as important as that of big businesses and public structures (Mispoulet *et al*., 2014). Indeed, the dependence of stakeholders on energy or on GHG emissions is not the only motivation for companies. There is also their dependence on weather and climate elements in relation to supply chains, both in France and elsewhere, and there is even interest in transition among consultancy firms and construction companies, as well as a dimension of civic solidarity.

Overcoming polarization

Overcoming polarization in political debates is another condition which is often neglected, for the passage from early, initiating action to a generalization of the role of professionals and communities. Climate policy must lose its controversial or divisive nature and become a consensual public policy. Taking a historical analogy, it is no longer about debating the risks of contagious diseases or water pollution - rather it is about constructing and managing public sanitation systems.

This generalization of adaptation objectives and references across all professions is now the subject of a broad consensus, demonstrated by a unanimous vote by trade unions and professional organizations in the French CESE (Economic, Social and Environmental Council) (Bonduelle *et al.*, 2014). This article calls for commitment and initiatives from and for each profession, but also for common, binding rules. Such unanimity is also found in Parliament and in most City councils on mitigation. It is now a question of honing and then developing activities that are accessible for all. This is the objective of this new generation of services and practices, starting with the dissemination and exploitation of regional modelling.

But one more requirement is needed: the maturity of political debate. This has been theorized by the sociologist Anthony Giddens (Giddens, 2009), who insists that the climate is too serious to be left to parties or groups whose agenda is not only the climate. In order to overcome such "green divisions", major organizations and public authorities must integrate ten conditions. It is useful to summarize them here:

- A self-confident government that ensures conditions in the long term, both as facilitator and arbitrator.
- The convergence of public policies on adaptation and mitigation, and other social welfare policies, in particular through replacing the outdated GDP as a framework of common objectives.
- An economic convergence of ecological modernization, in particular through an advanced technical and fiscal framework.
- Putting climate at the forefront of the policy agenda, so that the danger of climate change is of equal relevance as, for example, the budget.
- A prevailing positivity in decisions and debates, in order to link climate to the transformation of ways of life and economies that is ultimately beneficial.
- Overcoming left-right divisions and achieving a convergence of political agendas which is, according to Giddens, the only way to make decisions that are radical enough for the issue of climate change.
- An acceptance of remaining uncertainty and risk in essential political decisions, because there is even greater danger in the absence of strong action.
- The need for development and protection for the rest of the world, which constitutes a significant obligation for policy in developed countries.
- An awareness of consumption excesses and "over-development", especially in terms of the impossibility of tackling climate change without taking into account inequality issues.
- Lastly, specific to adaptation, specific anticipatory policies must be imposed, in addition to the general climate framework.

In France, most of these points are still far from being a central part of the proposals and actions coming from political forces and major unions. Consensus on the science -or even on the zero-carbon objective in the medium-term- gives way to greater hesitation from the perspective of governance. The same applies for consensus on the sense of urgency and the levels of the ongoing transition. Similarly, equity in action, both between economic sectors, communities, and between generations, and especially between regions of the world, is not even a subject of real discussion (Michelot, 2016).

One interesting thing about adaptation (beyond international aid and geopolitical action) is that the best action is of a selfish nature. With few exceptions, such as flood impacts on neighbours downstream in a river valley, adaptation actions will benefit those who perform them, often with secondary benefits if they are thought of early. Therefore, in theory, if stakeholders have a good idea of what their future will hold, and they are prepared to take control of their future, they will build a system that is resilient to shocks and adapted to the world of the future. Adaptation is therefore the first climate sector where political conditions could be brought together for ambitious actions, overcoming the controversial or polarized framework of so many public policies.

References

Bonduelle A., Jouzel J., 2014, *Adapting France to the challenges of global climate change,* Economic, Social and Environmental Council, Official Journals www.lecese.fr

Giddens A., 2009, *The Politics of Climate Change*, Polity Press, Cambridge UK

Laubin V., Munos O., 2017, *Adapting to Climate Change: the pioneering approach of CARE France*, CARE France www.carefrance.org

Michelot A., coord., 2016, *Justice Climatique, enjeux et perspectives [Climate Justice, challenges and perspectives]*, preface by Jean Jouzel, Droit et Développement Durable, Bruylant www.larciergroup.com

Mispoulet P. and Yon-Araud R., 2014, *Energie et prospérité, les entrepreneurs au cœur de la transition [Energy and prosperity, the central role of entrepreneurs in the energy transition]*, preface by Gaël Giraud; GESEC GIE/les petits matins éditions