FORESIGHT REPORT

WILL WE ALL BE VULNERABLE IN THE FUTURE?

PROTECTING OUR HEALTH FROM SOCIO-ECOLOGICAL RISKS

—

LOOKING AHEAD

DECEMBER 2024

IN PARTNERSHIP WITH sinon virgule

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SANTÉ ASSURANCES & RETRAITE – SOINS & ACCOMPAGNEMENT – LOGEMENT

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A WORD FROM THE CHAIRMAN

Over the last few years, the links between the environment and health have become increasingly well researched and understood, so much so that they are playing a growing role in public debate. However, the approach to these issues is still relatively fragmented. While chemical pollution (such as pesticides, endocrine disruptors and other "forever" pollutants) has received extensive media coverage in recent months, and the damage to health caused by air pollution is now widely known, most of the links between ecology and health remain under-reported, and many issues are still flying under the radar.

This is the case, for example, with the increase in emerging infectious diseases, a consequence, among other things, of global warming and the loss of biodiversity worldwide, despite the fact that many scientists have begun to sound the alert on this issue. Is anyone aware that every year in France, between 1 June and 15 September, 33,000 deaths can be directly attributed to heat? The same is true of the widespread mental health crisis we are experiencing and its links to the current climate situation and the increase in chemical pollution, which are increasingly well documented.

As the leading mutual health and social protection group, Groupe VYV is deeply moved by such examples, which call for a radical change of approach: if we want to be able to respond sustainably to the health challenges posed by humanity's transition into an era of uncertainty and ecological shifts, we need collectively **to move away from the model of a welfare society that merely anticipates and prepares for new risks.**

Thinking in the long term to provide better protection today: this is the ambitious aim that Groupe VYV must pursue. By willingly anticipating uncertain futures, we need to broaden what we consider possible and fully appreciate the socio-ecological risks and challenges to health, social protection and our organisation. This awareness, far from leading us to turn in on ourselves, should open us up to new positions and enable us to continue to assume our role as a major player in social and ecological protection in the 21st century.

Stéphane Junique,
Groupe VYV Chairman

SUMMARY

Will we all be vulnerable in the future? In 2040, what socio-ecological risks, what impact on health and its determining factors[1], and what role for health and social protection stakeholders?

It was on this issue, and with the aim of revealing health vulnerabilities still not widely discussed, that Groupe VYV conducted an ambitious study throughout 2024. Taking full account of the decisive role that the foresight will have in anticipating the impacts of the ecological upheavals underway, this approach was based on the creation of 4 future scenarios, the aim of which was to cover a broad spectrum of health vulnerabilities in order to break with the usual linear projections.

A first scenario, **Green New Deal,** analysed the effects of a now consensual hypothesis: the massive re-industrialisation of France. In doing so, we highlight a possible increase in vulnerability linked to the strenuous nature of work (accidents, chronic illnesses, etc.), as well as the relocation of hazards (soil, water and air pollution, damage to natural environments, etc.) that this process will necessarily involve.

A second scenario, **Technological Inflation**, is based on the assumption of unbridled deployment of technology to meet the social, health and environmental challenges of our time. This can be used to study certain detrimental effects that are often overlooked, such as the weather-related risks associated with the use of climate engineering[2], growing dependence on resource-intensive equipment, the risk of supply disruptions in a world based on just-in-time flows, and possible pandemic outbreaks linked to the ever-increasing movement of goods and people.

1. Health-determining factors are all the factors, from the most individual to the most systemic, which influence the health of populations: biological characteristics and consumption behaviours (diet, smoking, etc.), as well as the type and location of work, the economic and social situation, the state of the natural environment, etc.
2. Voluntary large-scale global climate change (by injecting aerosols into the atmosphere, ocean fertilisation, etc.).

A third scenario, **Agricultural and Civic Revolution**, takes the opposite approach to this status quo by proposing the vision of a territory reconfigured by a massive agro-ecological transition. This scenario enables us to consider the benefits of such a transformation, but also new vulnerabilities linked to the strenuous nature of manual labour due to less use of machines, the decline in the use of cutting-edge technologies in health, planning, etc., exposure to regenerated natural spaces but harbouring new diseases, etc.

Lastly, a final scenario, **Reactionary Decline**, focuses on the consequences of complete ecological inaction, whether physical (the loss of some areas as habitable environments) or social (the rise to power of an authoritarian government, the breakdown of community solidarity or austerity enforced and endured by certain social groups).

Although they are based on a number of plausible reasons, **these scenarios are not intended to predict the future.** By deliberately extrapolating certain trends, the aim is to ensure that a wide range of possibilities are covered, rather than to question the credibility of each scenario or its likelihood of occurring. By grouping such trends together in this way, it is thus possible to identify six major vulnerabilities that will require our attention in the years to come. The first three are mainly related to **the deterioration of the global environmental situation:** exposure to dangerous climatic conditions, increased external aggressions and unprecedented infections. The other three are more related to the social context and **our changing lifestyles,** from new (and strenuous) ways of working, the erosion of community solidarity and creeping social insecurity.

Analysis of each of them shows that **exposure to major vulnerabilities is likely to be relatively consistent across regions** in the coming years, and every social group will be affected. We will all undoubtedly be affected by various risks such as worsening climatic conditions, new diseases, submersion and coastal erosion, regardless of our socio-professional category, geographical location or gender. However, **sensitivity** to these risks (i.e. the ability to cope with them and deal with their consequences) will probably continue to be distributed unevenly across social groups, thus causing an **increase in health inequalities** in the coming decades. For those involved in health and social protection, this observation is a major challenge and translates into a twofold requirement: better protecting people through all the factors that determine health (food, housing, physical activity, etc.), but also guaranteeing access and quality coverage for as many people as possible, including the most disadvantaged (unemployed people, migrants, residents of working-class neighbourhoods or rural areas less well served by healthcare providers, etc.).

Therefore, this document encourages these health and social protection stakeholders to consider **new, particularly radical and ambitious approaches** to meet these health, social and democratic needs. What if, in the future, these stakeholders helped to build a new social security system for food? To rid their regions of pollution. To offer microcredit solutions to certain marginalised populations? To re-wild urban and rural spaces? To manufacture medicines on French soil? To build a health service adapted to the challenges of eco-anxiety[3]? To enable everyone to proactively move to areas less exposed to certain risks? Looking beyond the question of their feasibility, these approaches point to new possible positions for stakeholders in the sector who would like to contribute differently to protecting people's health: participating in the adaptation and dissemination of health-related information, offering healthcare and insurance adapted to the conditions associated with the new ecological era, becoming the driving force behind local solidarity and democracy, improving the liveability and health of the regions, participating in the relocation of people and activities to more protected areas, etc. All these new areas of action must be seized by the stakeholders, not alone but with others, through strategies of influence and alliances contributing to the necessary transformation of social protection.

3 Eco-anxiety is a form of anxiety felt in the face of ongoing or future ecological disasters. Read the article (in French): Éco-anxiété : analyse d'une angoisse contemporaine - Fondation Jean-Jaurès (jean-jaures.org).
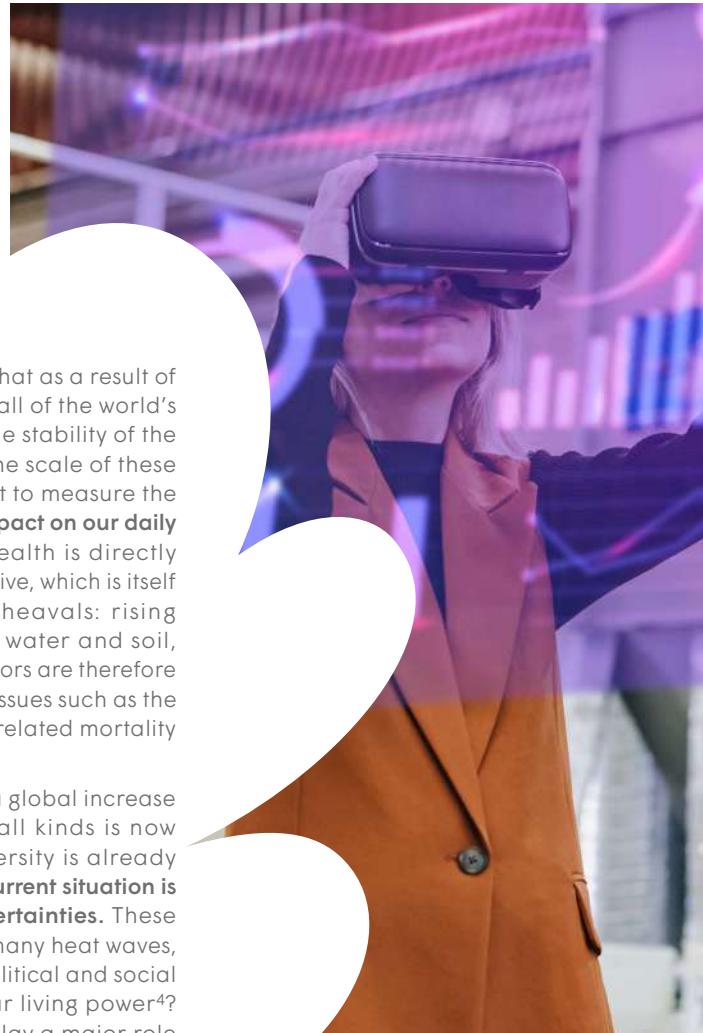
INTRODUCTION

For several decades now, scientists have been warning that as a result of industrial and now globalised human activities, almost all of the world's ecological indicators are now in the red, threatening the stability of the planet and its ability to support human life. Although the scale of these imbalances is sometimes so great that it can be difficult to measure the consequences, **they nevertheless have a very concrete impact on our daily lives, particularly in terms of our health.** After all, health is directly dependent on the quality of the environment in which we live, which is itself profoundly affected by the current ecological upheavals: rising temperatures, deterioration in the quality of the air, water and soil, emergence of new infectious diseases, etc. All of these factors are therefore contributing to the emergence of contemporary health issues such as the rapid increase in chronic diseases, the increase in heat-related mortality and the worsening of people's mental health.
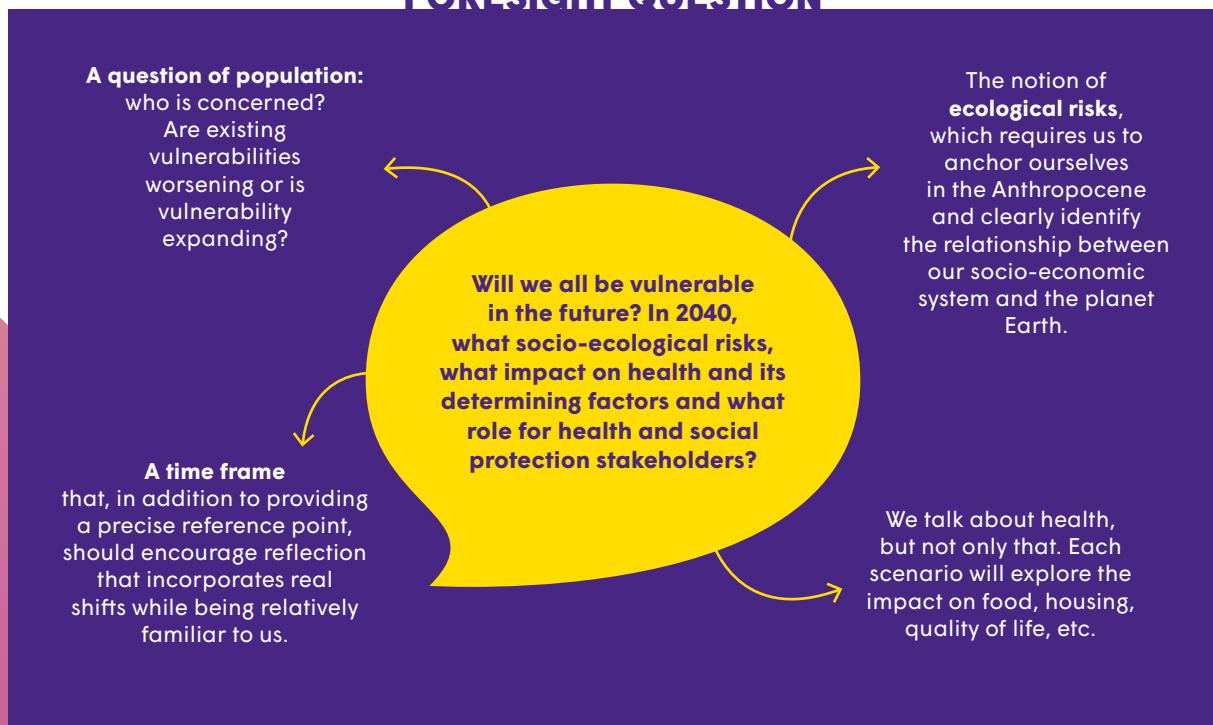
In this light, **a number of certainties can be established:** a global increase in temperatures is already underway, pollution of all kinds is now omnipresent in our environments and global biodiversity is already suffering massive and irreversible losses. **However, the current situation is also characterised by an even greater number of uncertainties.** These uncertainties may be physical (what temperature, how many heat waves, what humidity level?) but also, and perhaps above all, political and social (what regional planning decisions, what changes to our living power[4]? What public health services?). These uncertainties will play a major role in the nature, scale and profile of the victims of the health vulnerabilities that threaten us today. In fact, in a given climate situation, the health of a population will be impacted differently depending on whether its agricultural model is ecological or industrial, whether its urban planning is essentially mineral or green, or whether its health system is universal and functional or selective and run down.

Our task, therefore, is to **analyse varied trends for our societies in order to anticipate a wide spectrum of possible socio-ecological and health situations.** It is with this in mind that foresight (*la prospective*) has come to the fore, an ancient discipline that is once again attracting interest in a global situation characterised by multiple, simultaneous and interconnected crises (climate, demographic, geo-strategic and energy crises). Based on the creation of scenarios that break with a linear logic, it is now proving crucial in helping us answer the question that we must face: *"Will we all be vulnerable in the future? In 2040, what socio-ecological risks, what impact on health and its determining factors and what role for health and social protection stakeholders?"*

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4 Purchasing power broadened to include the ability to access healthcare and
  basic necessities (universal public services, limited inflation, etc.).

FORESIGHT QUESTION

A question of population: who is concerned? Are existing vulnerabilities worsening or is vulnerability expanding?

The notion of **ecological risks**, which requires us to anchor ourselves in the Anthropocene and clearly identify the relationship between our socio-economic system and the planet Earth.

Will we all be vulnerable in the future? In 2040, what socio-ecological risks, what impact on health and its determining factors and what role for health and social protection stakeholders?

A time frame that, in addition to providing a precise reference point, should encourage reflection that incorporates real shifts while being relatively familiar to us.

We talk about health, but not only that. Each scenario will explore the impact on food, housing, quality of life, etc.

The purpose of this document is to present the results of a foresight study based on this issue (the methodological details of which will be presented below). In this respect, it follows on from a first volume devoted to the environmental risks *already* weighing on our societies and, more generally, reflects a desire to conduct long-term reflection on foresight within Groupe VYV.

This second volume, which aims to take a long-term view, is divided into three parts. The first part presents future scenarios encouraging us to broaden our visions of the future, from which health vulnerabilities and the challenges they pose emerge, as identified in the second part. The third and final part, meanwhile, outlines possible answers through new positions to better manage these issues collectively.

We hope that the following pages will convince you of the need to think about tomorrow's risks today, as the surest way to protect ourselves collectively and sustainably by preparing for action. We hope you enjoy reading it.

1

AN INVESTIGATION PHASE

a. In-depth documentary research on health vulnerabilities, their distribution within the population and their possible evolution, and a series of interviews with experts from various disciplines (health, economics, political science, history of social protection, etc.).

b. With a view to the creation of future scenarios, establishment of a conceptual framework based on the concept of health-determining factors taken at their broadest level: educational context, legislative context, cultural and technological context, etc.

Formation of a foresight group composed of about forty representatives of the group's businesses and branches.

2
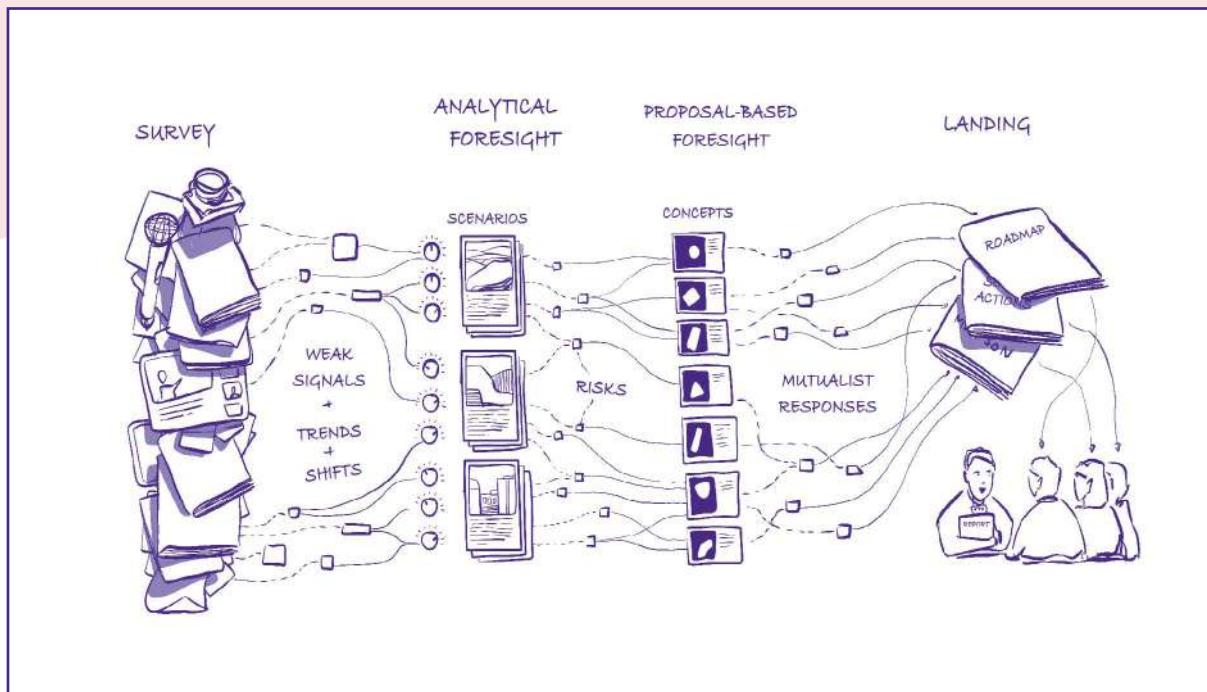
A COLLECTIVE FORESIGHT PHASE

a. Workshop to discover scenarios and identify priority health and social risks (analytical foresight).

b. Workshop to develop solutions and identify new positions for healthcare and social protection stakeholders (proposal-oriented foresight).
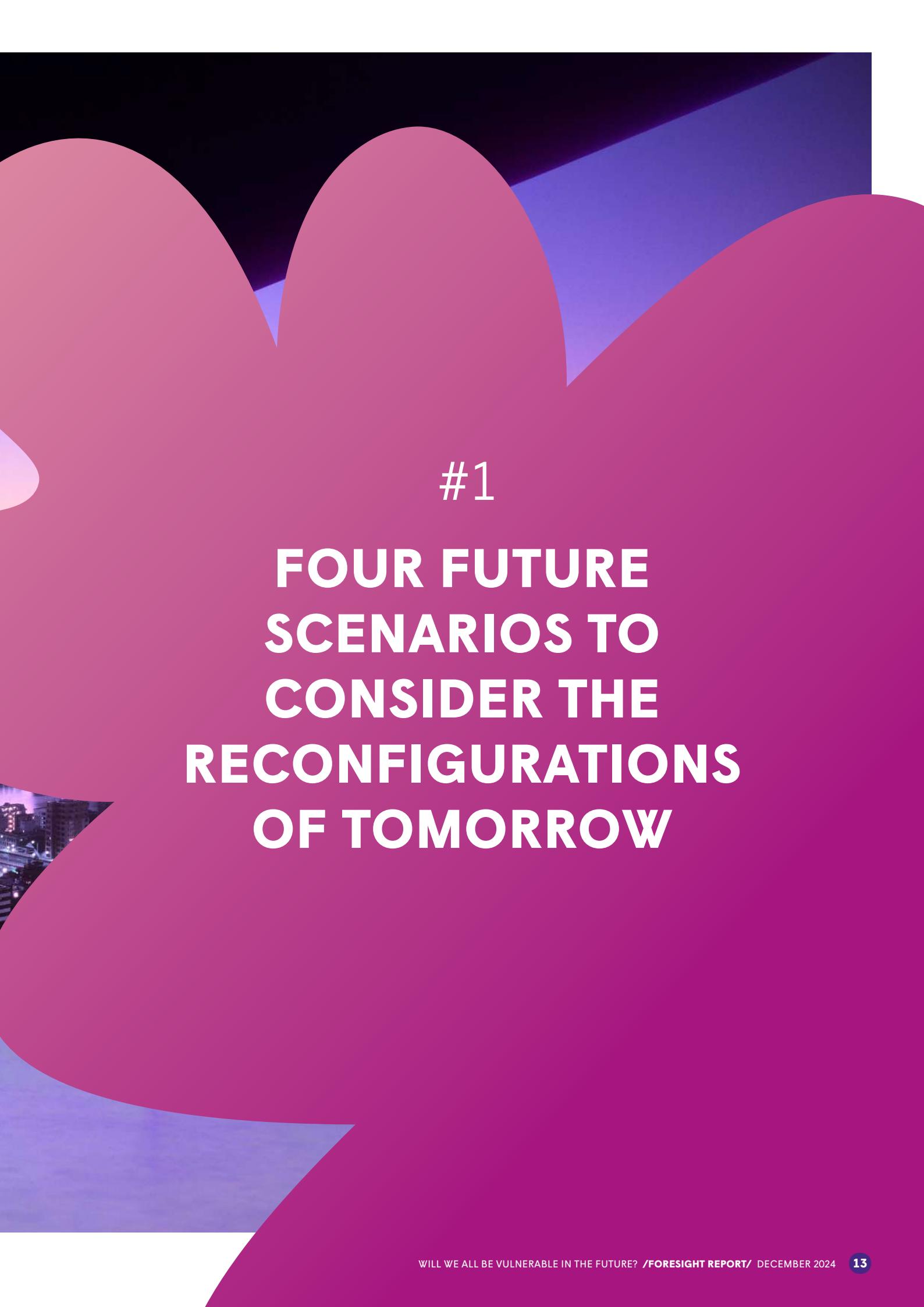
3

A LANDING PHASE

a. Workshop to prioritise possible solutions.

b. Workshop for roll-out within the businesses.

#1

FOUR FUTURE SCENARIOS TO CONSIDER THE RECONFIGURATIONS OF TOMORROW

FOUR FUTURE SCENARIOS TO CONSIDER THE RECONFIGURATIONS OF TOMORROW

Consider what has not yet happened in order to better prepare for it.

Each of the four scenarios presented here, along with their main characteristics, are detailed in a dedicated booklet, along with how they were created.

Designed on the basis of health-determining factors and in-depth documentary research, these scenarios aim to **break with the usual linear health projections in order to bring to light health vulnerabilities that have not yet been studied in depth. To do this, they describe four possible socio-ecological realities in 2040 (i.e. four social, cultural, political and other situations strongly influenced by the new ecological order).**

While their occurrence as such is of course neither certain nor even probable, these scenarios are based on very real trends that point to a future at the crossroads of these different trends. By deliberately extrapolating weak signals and formulating original hypotheses, the aim here is to scan a broader spectrum of possibilities than is usually considered, in order to break with traditional, linear representations of the future. Although they may seem relatively bleak at first glance, it is important to bear in mind that the purpose of these scenarios is to explore the possible impacts of certain trends and to **consider what has not yet happened** (in short, the worst-case scenario) **in order to better prepare for it.**

Without further ado, let us discover the main characteristics of these four scenarios, as well as the specific health vulnerabilities that each has revealed.

Four scenarios to illustrate different trends

	1 GREEN NEW DEAL	**2 TECHNOLOGICAL INFLATION**
In brief	This scenario describes the possibility of a **reindustrialisation of France, rooted in a Green New Deal project:** a Europe-wide recovery plan, based on massive investments in the fields of ecological transition and on a relocation of key industries (energy, transport, basic necessities, etc.).	This scenario envisages a country whose ecological and health strategy is essentially based on the **roll-out of cutting-edge technologies:** advanced epidemiological surveillance, diagnosis assisted by artificial intelligence, digital twins, major climate adaptation projects, climate engineering, etc. Progress in medicine is considerable, but it is also the scene of a sharp intensification of inequalities, and a dependence on fragile globalised supply chains,which brings with it the permanent threat of shortages.
Major trends	- Massive reindustrialisation (particularly with regard to basic necessities) within the framework of a strengthened European Union. - The development of new extraction capacities (minerals, rare earths, metals, etc.). - Moderate but continued growth. - Massive development of renewable energy and nuclear power. - A quest for industrial sovereignty. - A rebalancing of the primary and secondary sectors in relation to the tertiary sector. - Migration intake policies to fill the newly created positions.	- Strong technological roll-out in energy, telecoms, work, healthcare, etc. - Ecological efforts focused on regional adaptation and mitigation through technological innovation (climate engineering, carbon capture and storage). - The pursuit of globalised capitalism with globalised value chains. - An increase in supply disruptions and shortages linked to ecological and geopolitical upheavals. - A strengthening of the service society. - An acceleration of the polarisation of society between those included and those excluded from these developments.
Vulnerabilities revealed	- Increased industrial pollution (atmospheric, chemical, sound, light pollution). - Increasingly strenuous work in the new factories/mines. - Increase in occupational accidents. - Increase in industrial accidents (explosions, toxic leaks). - Rapid depletion/degradation of national resources (raw materials, water, soil). - Loss of social protection related to job losses. - Expansion of the industrial farming sector at the expense of smallholdings. - Increased damage to natural environments.	- Accidents and changes in the weather (short-term) or climate (long-term) related to climate engineering. - Hazards associated with data storage infrastructures (pollution, accidents, use of resources, etc.). - Increased risk of epidemics and pandemics due to the acceleration of trade. - Shortages/forced frugality related to supply chain disruptions. - Difficulty accessing basic necessities due to inflation (scarcity of resources, shortages). - Increased use of digital technology, sedentary lifestyles and isolation.

5 Redefinition of administrative divisions according to ecological realities: watersheds, types of ecosystems, etc.

6 Areas protected from human activity, reintroduction of wildlife species, etc.

3 AGRICULTURAL AND CIVIC REVOLUTION

This scenario describes a society restructured around the **aim of unconditional access for everyone to healthy, high-quality food** produced in conditions that respect workers and living organisms. It is part of a general trend towards frugality, restricted use of technology and a significant reduction in international trade and the distances that goods have to travel.

- A radical transformation of agricultural practices with a big return to the fields for all social groups.
- A collective effort to be more frugal, notably involving a reduction in the use of machines and advanced technologies.
- A movement of political and administrative decentralisation, centred on a slightly federated bio-regionalism[5].
- A strong return to local lifestyles in the regions, with new demographic balances and the development of local cultures.
- Re-wilding policies[6] throughout the country.

- Higher work intensity due to the limited use of machinery.
- Increase in new infectious diseases (Lyme, etc.) due to the expansion of wilderness areas and a life close to nature.
- Uncontrolled proliferation of alternative health practices.
- Increased exposure to the elements (extreme temperatures and weather events) due to the increase in outdoor work.
- Forced adaptation of infrastructure and housing due to the decline of modern construction techniques and lack of resources.
- Reduction in the use of advanced technologies in healthcare (digital, complex operations, etc.).
- Increase in material inequalities (resources, labour, etc.) between regions.
- Medication supply disruptions.

4 REACTIONARY DECLINE

In this scenario, inadequate climate policies have led to a **generalised ecological and political collapse:** many regions become uninhabitable, an authoritarian and reactionary government comes to power and some regions (particularly French overseas territories) are largely abandoned to their fate.

- A failure to pursue ambitious ecological policies (ZAN law, Ecophyto plan, etc.) and a global ecological inaction.
- Loss of habitability of the regions linked to multiple ecological collapses and frequent extreme weather hazards.
- Forced frugality, a strong resentment towards the body politic and the election of a reactionary government.
- A prioritisation of sovereign issues (security, border defence) and the practice of reactionary ecology based on the defence of regional identity.
- Strong inequalities and an increase in social tensions.

- Intensification of weather hazards (temperatures and extreme events) through lack of mitigation.
- Deterioration of health services due to a decline in public investment and sluggish growth.
- Increase in tensions between individuals (struggle for access to resources, community conflicts).
- Significant deterioration in mental health.
- Supply disruptions (materials, products and energy) related to weather hazards hitting key infrastructures.
- Inflation linked to supply disruptions and lower imports.
- Difficulty of access to advanced technologies in healthcare and loss of legitimacy of traditional knowledge.

Why these scenarios?

As explained previously, these scenarios make it possible to study health vulnerabilities that have not yet been studied in depth. They have therefore been designed with a view to raising questions to reveal these vulnerabilities, key among which are as follows.

New Green Deal Scenario

Now supported by a broad swathe of the political spectrum, the proposal to reindustrialise the French economy is rarely analysed from the perspective of its potential health consequences. However, the harmful effects of industrial activities are now well known: various forms of pollution, risk of accidents (infrastructure and work-related), depletion of local resources, etc. By hypothesising large-scale reindustrialisation, this scenario raises a number of questions that remain to this day in the blind spot of economic and health decision-makers: what would be the hazards associated with the relocation of certain manufacturing and extraction capacities? What would be the most affected regions and populations? What would be the consequences for strenuous labour and the rate of accidents at work? By outlining what a reorganised region could be like, based on intensive and local manufacturing and a sharp rise in employment in the primary and secondary sectors, this scenario highlights the emergence of risks that are still poorly understood.

Technological Inflation Scenario

In recent years, proposals for responses to current ecological and health issues have largely revolved around the roll-out of new cutting-edge technologies: carbon capture and storage techniques, hydrogen-powered aircraft, statistical monitoring of pandemic risks, digital twin, etc. In these analyses, little consideration is given to the health consequences of this large-scale technological roll-out: what are the implications of a widespread dependence on advanced technologies in healthcare that depend on flows (of resources, energy, etc.) that can be interrupted at any time? What vulnerabilities are emerging from an increasingly digitalised society? What are the physical and mental consequences for populations (sedentary lifestyle, anxiety, etc.)? How are the risks of industrial accidents changing as technologies become more complex and ubiquitous? This scenario allows these questions to be addressed head-on by considering the possibility of a strong development of advanced technologies against a backdrop of intensification of current economic trends (growth, globalisation, inequalities, etc.). It thus makes it possible to take a step back and critically analyse these health issues, which have not yet been studied in depth.

These scenarios make it possible to study health vulnerabilities that have not yet been studied in depth.

Agricultural and Civic Revolution Scenario

The role of diet in people's health is now widely recognised: a healthy and varied diet is an essential part of a healthy lifestyle. But the food sector is, more broadly, at the crossroads of many other health-determining factors: the quantity and quality of the food that ends up on our plates, the working conditions of farmers, the quantity of chemicals resulting from one production method rather than another (industrial or small-scale), the use of land that promotes or hinders the flourishing of rich biodiversity, etc. While food is often the focus of discussions about health, the food system as a whole is rarely considered from a health perspective. This scenario, based on the hypothesis of a radical transformation in our food production methods coupled with a renewal of local democratic practices and a transition to frugality, makes it possible to do just that. In doing so, it raises many public health issues: what are the impacts on occupational health (agricultural and industrial) of reducing the use of advanced technologies (and in particular industrial farming)? How are regional inequalities in health evolving against a backdrop of reduced regional trade? What are the health risks posed by a reduction in the amount of built-up land in favour of a return to nature? These questions, in turn, reveal health vulnerabilities that are still largely overlooked.

Reactionary Decline Scenario

The health consequences of ecological disruption are now increasingly well known: hyperthermia, new infectious and chronic diseases, disasters, etc. On the other hand, the health consequences of the political and geographical upheavals that these disruptions could cause have not been studied in depth. To remedy this, this scenario is anchored in the hypothesis of a rapid and widespread intensification of ecological risks. In doing so, it addresses issues related to the uninhabitability of regions (which regions will be concerned? How to deal with the resulting forced displacement? What will be the health issues specific to displaced populations? And what will be the consequences of enforced frugality due to multiple ecological crises?) But also those related to the rise to power of a reactionary government (what will be the consequences of the State's disengagement in certain places and for certain people? Who will be the first to be affected by this disengagement, in what way, and how can the continuity of their care be ensured? How can we prevent the rise of tensions between individuals against a backdrop of increasingly scarce resources, shortages and growing inequalities? How can we address the psychological consequences of such social disintegration? These questions all constitute blind spots in health discussions on the adaptation of populations to ongoing ecological disasters, which result in various vulnerabilities.

#2

OUR VULNERABILITIES IN 2040: COMMON LESSONS AND CHALLENGES

OUR VULNERABILITIES IN 2040: COMMON LESSONS AND CHALLENGES

Once established, our four future scenarios revealed a wide variety of socio-ecological health vulnerabilities. These have been grouped together in an attempt to answer the foresight question "Will we all be vulnerable in the future?" Particular attention has therefore been paid to analysing the distribution of health vulnerabilities and their impacts, and this has made it possible to identify a number of challenges for those involved in health and social protection.

Six major vulnerabilities identified for population groups

The socio-ecological vulnerabilities revealed by our different scenarios can be grouped into 6 major vulnerabilities, themselves belonging to two major trends.

The first consists of an **alteration of the ecological situation** and includes three major vulnerabilities. The first relates to exposure to hazardous (extra)ordinary climatic conditions (heat waves, new humidity conditions, extreme events, less marked differences between seasons). The second concerns the multiplication of external aggressions (pollution, disruption, etc.). The third, finally, lies in the emergence of new infectious diseases (new pathogens, pandemics, Lyme disease, etc.). Overall, the imbalance in our natural environments is thus causing a form of gradual shrinkage of habitable and healthy regions.

The second trend is our **changing lifestyles,** characterised by three other major vulnerabilities. On the one hand, the new rise of more strenuous ways of working (agriculture, industry, outdoor work, etc.). On the other hand, an erosion of traditional community solidarity (withdrawal into oneself, sluggish growth affecting the health system, new competition for resources, etc.). Finally, a creeping insecurity in society (inflation, enforced frugality, supply disruptions). Combined, these vulnerabilities generate a progressive loss of the capacity to protect oneself against the effects of the deteriorating ecological situation.

# SIX MAJOR VULNERABILITIES IDENTIFIED FROM THE SCENARIOS

SCENARIOS
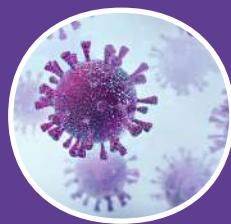
VULNERABILITIES

Intensification
of extreme weather
conditions

Multiplication
of pollution
and disruption

Emergence
of new
infectious diseases

ALTERATION OF THE ECOLOGICAL SITUATION

New rise
of strenuous ways
of working
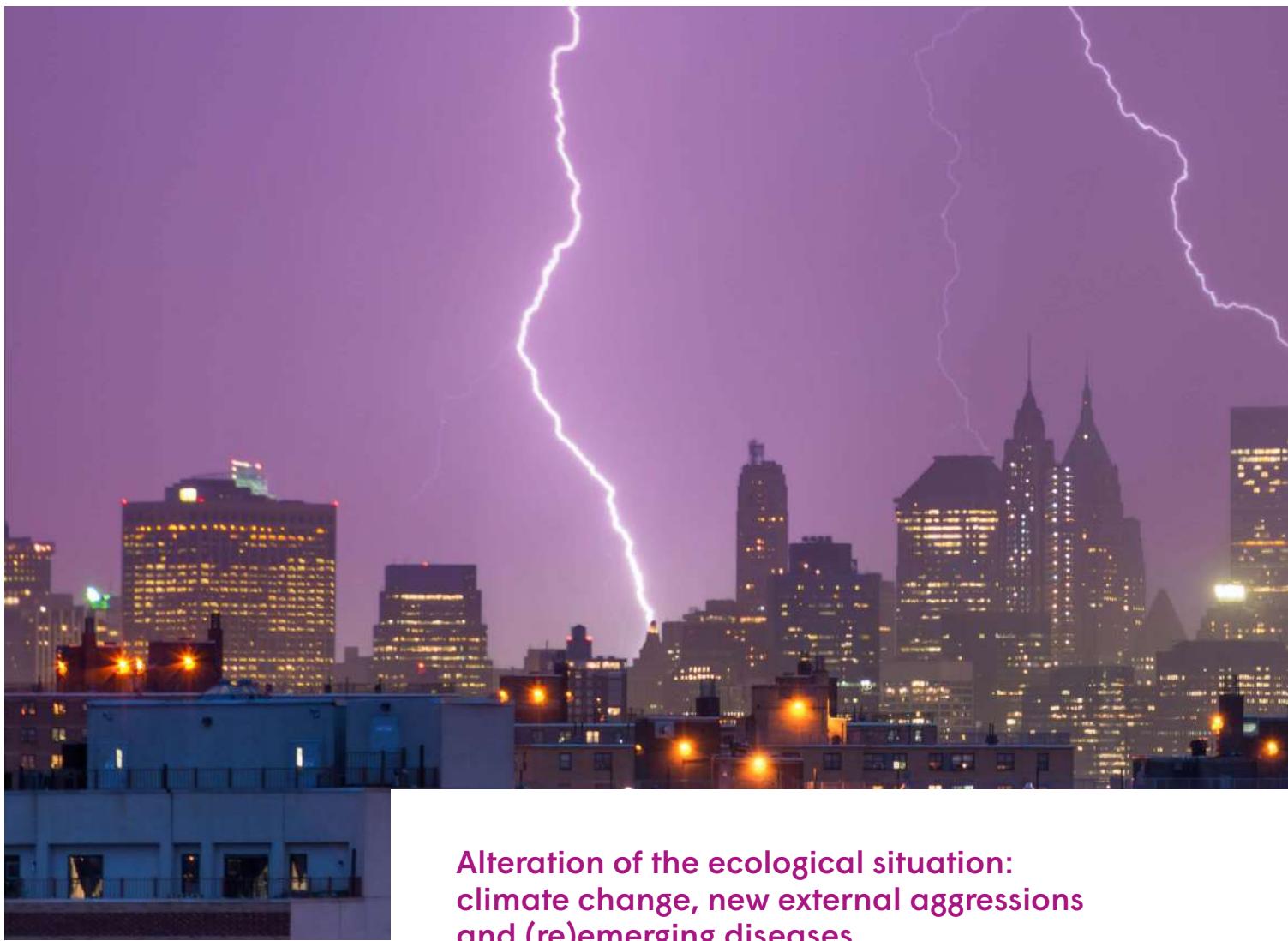
Erosion
of community
solidarity

Insecurity
in society
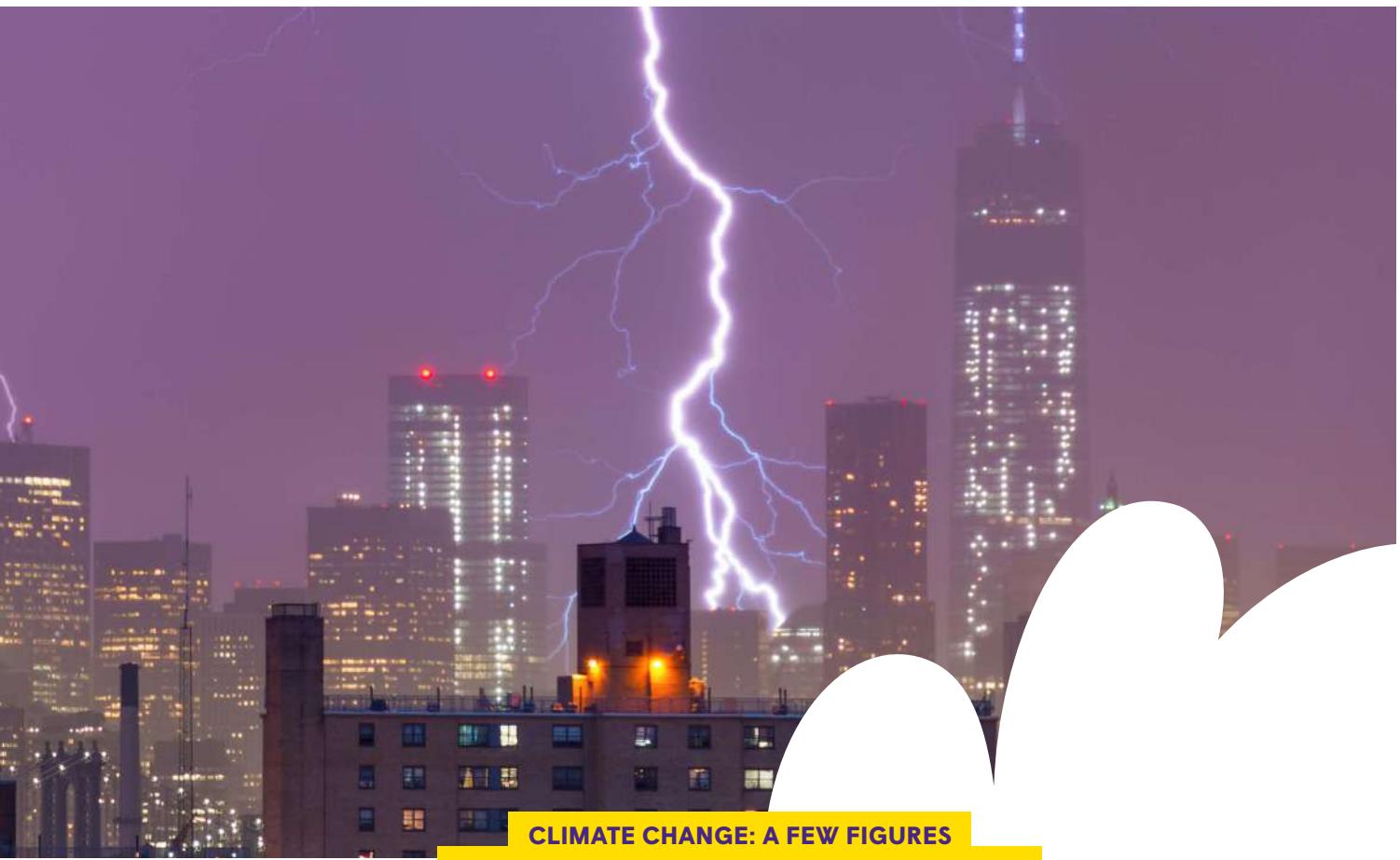
CHANGING LIFESTYLES

Alteration of the ecological situation: climate change, new external aggressions and (re)emerging diseases

A number of the vulnerabilities arising from our future scenarios are evidence of the upheaval of a global ecological situation that was previously relatively stable.

To date**, the most well-known of these changes are linked to the profound destabilisation of the global climate** caused by the intensification of human activities since the industrial era, and particularly over the last few decades. These destabilising factors will have various manifestations, many of which can already be seen today: an increase in episodes of extreme heat, droughts and fires, floods and submersion, increasingly frequent and violent storms, etc. Although the risks associated with these destabilising factors are present in our various scenarios, their severity in the coming years will depend on many factors: our collective ability to reduce the ecological impact of human activity, the roll-out (or not) of climate engineering experiments aimed at deliberately manipulating the global climate, and the level of preparedness of cities, housing and regions. **Against this background, population groups will be affected in the same way.** First of all because some regions are more exposed than others, such as coastal areas (facing flooding), southern regions (facing rising temperatures), and the most arid areas (facing droughts and fires). Secondly, because people do not have the same material and financial ability to adapt to this situation. Thus, while some social groups have the means to finance alterations to their homes (air conditioning, thermal renovation, etc.) or even to move house, others will have no choice but to endure the hazards in a home that cannot protect them.

CLIMATE CHANGE: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

Extreme weather events killed

195,000

people between 1980 and 2021 in Europe[7].

Their frequency is likely to be **multiplied by 2** by 2050[8].

Each year in France, **33,000 deaths are directly attributed to the heat** between 1 June and 15 September[9].

In the summer of 2022, **around a hundred municipalities without drinking water** had to be supplied with water by tanker lorries.

2 billion m³ **of water will be in short supply in 2050** if demand remains stable[10].

Forecasts by Météo France predict **2x more drought in 2050** compared to the period 1976-2005[11].

Crop losses related the proliferation of pests **could increase globally by 10 to 25%** for each degree of warming[12].

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7 Libération (2023). En 40 ans, les catastrophes météo ont tué 195 000 personnes en Europe. (In French)
8 Météo France (2023). Vagues de chaleur et changement climatique. (In French)
9 Santé publique France (2023). Fortes chaleurs et canicule : un impact sur la mortalité important nécessitant le renforcement de la prévention et de l'adaptation au changement climatique. (In French)
10 Ministry of Ecological Transition (2023b). Sécheresse : à quoi s'attendre et comment s'adapter ?
11 Ibid.
12 Deutsch, C. et al. (2018): "Increase in crop losses to insect pests in a warming climate", Science, 361(6405), pp.916-919.

Similar observations can be applied to another type of alteration of the ecological situation: **the increase in external aggressions linked to an increase in industrial hazards and pollution.** Chemical pollution indoors (forever pollutants, endocrine disruptors), outdoors (atmospheric pollution) and in our food (pesticides), noise and light pollution associated with urban areas, risk of accidents associated with new industrial facilities, depletion of local resources (water, soil, raw materials) caused by the latter, etc. While some of these aggressions are common to all our different scenarios, their intensification will be particularly favoured by the increasing trend towards industrial activities and weak regulation concerning the use and release of hazardous products into the environment, a trend that can already be observed today.

Despite increasing precautions and regulations, pollution is growing very rapidly in our living environments, due to the boom in industrial manufacturing and technical innovations that increase the durability and power of the chemical compounds used. Often insufficient, regulations generally come into play in response to health problems that have already been caused and do not take into account the multitude of risk factors to which populations are exposed (cocktail effect between different pollutants, combined effects of atmospheric and noise pollution, etc.). **The associated health consequences are numerous, and are already beginning to emerge, or even to become widespread: cardiovascular and respiratory diseases, cancers, mental health issues, etc.** These conditions, which are generally chronic, are increasingly affecting previously unaffected populations (such as young people) and are factors in comorbidity. They have been increasing at an unprecedented rate in recent years and, once again, are unevenly distributed within populations according to socio-professional and geographical criteria. Residents of large cities are thus more exposed to atmospheric, noise and light pollution; those in the countryside to pesticides; factory workers to toxic products involved in manufacturing processes; women to pollutants contained in cosmetics, etc. Furthermore, some people have a greater ability than others to reduce these exposures (by changing their job or place of residence, by buying certain consumer products rather than others) or to deal with the consequences (by following an appropriate but expensive medical treatment, by getting diagnosed in time, etc.).

POLLUTION: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

Chemical pollution is estimated to cost between **52 and 84 billion** **euros** to European healthcare systems annually[13].

80% of groundwater is **contaminated** with pesticides, and more than **25%** exceeds the quality threshold [14].

2,405 premature deaths are caused by road noise each year in France[15].

The mortality rate from **cancer is 10 times higher among workers and employees** than among managers[16].

Large cities and highly industrialised regions are most affected by **multiple** sources of serious pollution[17].

Women are still often responsible for managing the household (...), **thus exposing themselves to toxic substances** usually found in **household cleaning products**[18].

48,000 deaths in France **are linked air pollution** every year[19].

13 Office français de la biodiversité (2023). Biodiversité dégradée, mauvaise santé assurée. (In French)
14 Ibid.
15 Ademe (2021). Le coût social du bruit en France. (In French)
16 Cour des Comptes (2008) Rapport public thématique: "La mise en œuvre du Plan Cance". (In French)
17 France Stratégie (2022). Inégalités environnementales et sociales se superposent-elles ? (In French)
18 Zota & Shamasunder (2017). Beauty products, environmental chemicals, health disparities. Am. J. Obstet Gynecol.
19 Santé publique France (2021). Pollution de l'air ambiant : nouvelles estimations de son impact sur la santé des Français. (In French)
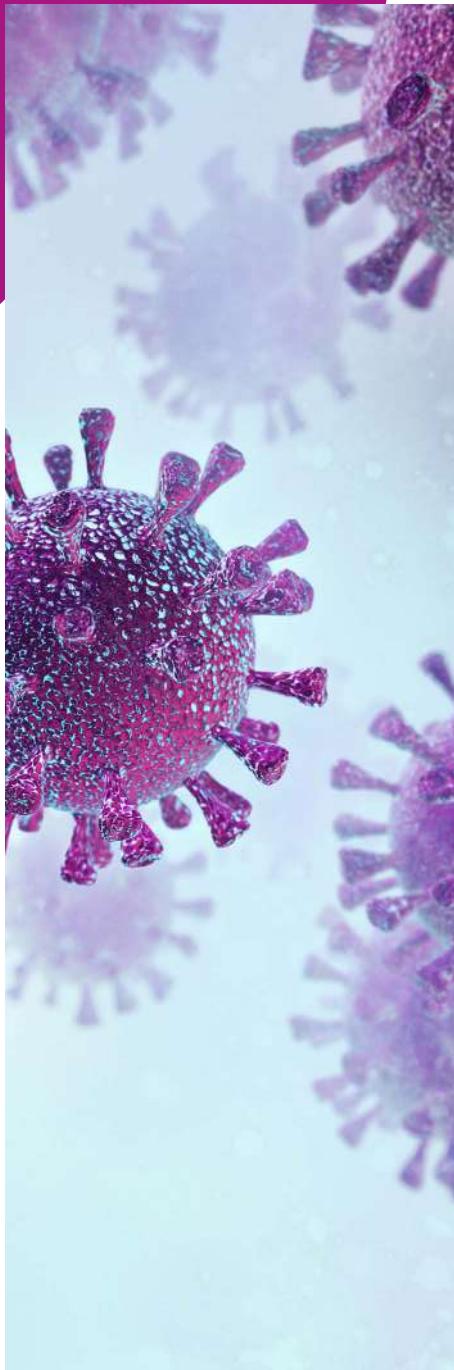
A final type of health vulnerability linked to ecological destabilisation concerns **the increase in the spread of infectious diseases.** These may already exist (experiencing a resurgence or increase), may be new or may have been previously absent from France. There are many reasons for their emergence, some of which are directly linked to the global increase in temperatures, which leads certain disease-carrying species (such as mosquitoes and ticks) to move into new regions. Still others are linked to the massive loss of biodiversity worldwide, which favours the proliferation of vector species (due to the disappearance of their predators) and thus increases the likelihood of contact between infected individuals and humans[20]. Brought to the attention of the general public during the Covid-19 pandemic, these diseases that can be transmitted from animals to humans, known as zoonoses, constitute a growing health risk for all populations. The WHO estimates that they are responsible for 700,000 deaths per year worldwide, a figure that is expected to increase as global ecological imbalances continue. However, there are disparities between social groups in their ability to protect themselves (access to vaccines, purchase of suitable clothing, etc.) and to deal with the consequences (access to healthcare, sufficiently early diagnosis, access to expensive treatments, etc.).

INFECTIOUS DISEASES: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

In 2023, in France, there were **2,019 cases of Dengue, 30 cases of Chikungunya** and **9 cases of Zika,** diseases that had been virtually absent from France until then[21].

Between **26,146 and 68,530 cases of Lyme cases were recorded between 2009 and 2021 in France** (presenting an upward trend)[22].

Zoonoses (diseases that can be transmitted from animals to humans) are estimated to be responsible for more than **2 billion infections** each year[23].

20 When greater biodiversity reduces the risk of infection, it is called a dilution effect.
21 Santé publique France (2023). Donnés de la surveillance renforcée de ces trois maladies. (In French)
22 Institut Pasteur (2023). Maladie de Lyme. (In French)
23 Inserm (2021a). Zoonoses : Réconcilier l'humain et l'animal. (In French) Inserm, le magazine, 49.

Changing lifestyles: increasing instability and decline of collective protection mechanisms

This other category of major vulnerabilities is related to profound changes in our lifestyles, which have their origins in fundamental social and ecological trends that are likely to intensify in the coming years.

The first of these changes concerns the changes in our ways of working resulting from the new global ecological and political situation. These can range from a massive relocation of the extraction and manufacturing industries to a transition towards forms of frugality that severely limit the use of advanced technologies. Both of these possibilities respond to various imperatives, and in particular to the need to reduce national dependence on globalised value chains (and therefore vulnerable to ecological and geopolitical disruptions), as well as to that of a drastic reduction in the socio-ecological impacts of the French economy (greenhouse gas emissions, pollution, waste, etc.). While they are a desirable trend in many ways, their health consequences should not be underestimated. The relocation of manufacturing necessarily implies a strengthening of the primary (extraction) and secondary (processing) sectors, which is likely to increase the risk of workplace accidents and chronic illnesses related to the strenuous nature of the work. The path of frugality amplifies these risks through the generalised reduction in the use of machinery in many industries and, in particular, in the agricultural sector, which would see a sharp increase in its labour needs. In both cases (which may overlap), there are numerous health risks: musculoskeletal, respiratory and cardiovascular disorders, occupational accidents, etc. While those already working in the industrial and extraction sectors (in which underprivileged and migrant populations are currently over-represented) will probably be the first to be affected, some forecasts predict a generalisation of manual labour that could expose populations currently unexposed to these risks.

STRENUOUS AND HAZARDOUS WORK: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

In 2019, **783,600** **workplace accidents with at least one day of sick leave** were recorded in France, of which **39,650** gave rise to a **recognition of permanent disability,** and **790** were fatal[24].

According to DARES[25], the **risk** of serious **accidents** in the workplace is particularly high in construction, agriculture and extraction industries[26].

Out of **51,422** **occupational illnesses** identified in 2018 by INSEE, **2/3** affected **workers** and **22%** affected **employees.** Only **2%** affected **middle management,** and **4%** affected **senior managers**[27].

Workers have a **7x higher risk** **than senior managers of becoming disabled** as a result an accident in the workplace, and **4.6x** **higher** to suffer **an accident resulting in death**[28].

A position with difficult **working conditions has a** **1.4x** **higher likelihood** than a position with average working conditions **of being held by an immigrant** rather than a non-immigrant[29].

24 DARES (2022). Quels sont les salariés les plus touchés par les accidents du travail en 2019 ? (In French)
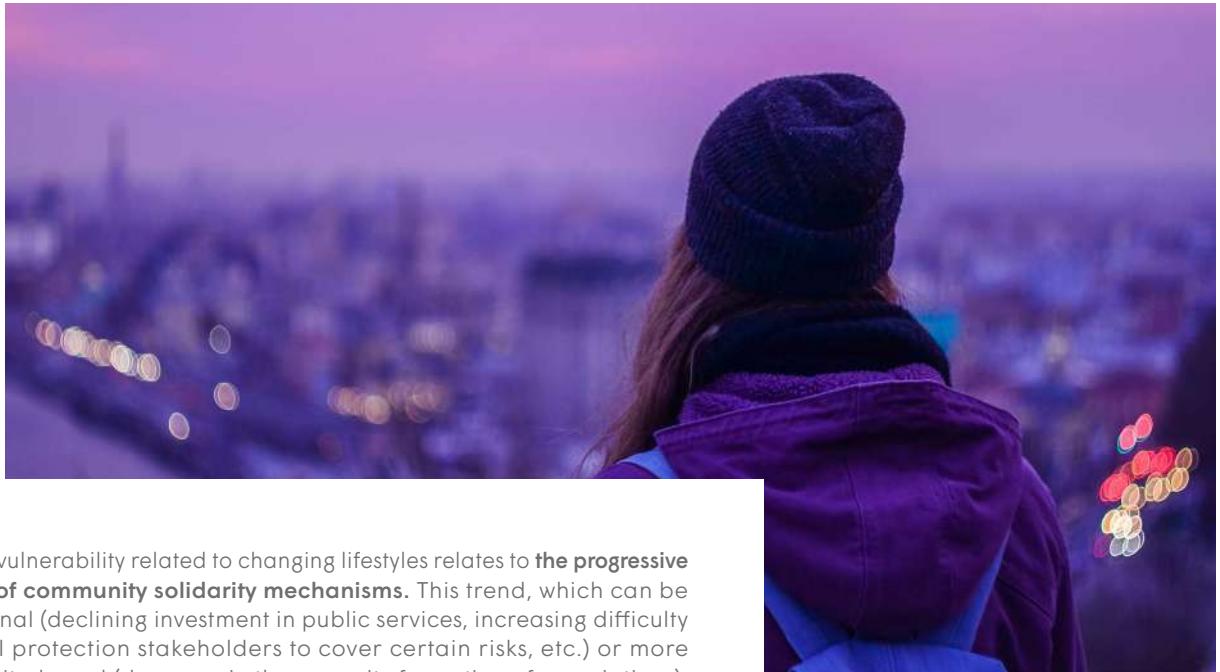
25 Direction de l'animation de la recherche, des études et des statistiques.

26 DARES, op. cit.

27 Observatoire des inégalités (2023). Rapport sur les inégalités en France. (In French)

28 - 29. Ibid.

Another vulnerability related to changing lifestyles relates to **the progressive erosion of community solidarity mechanisms.** This trend, which can be institutional (declining investment in public services, increasing difficulty of social protection stakeholders to cover certain risks, etc.) or more community-based (decrease in the capacity for action of associations), has the consequence of leaving a growing part of the population without a safety net when faced with the hazards of everyday life. While the most vulnerable populations (people excluded from employment, migrants, underprivileged social classes) will be the first to be affected, this situation will undoubtedly have consequences in the long term for public health as a whole. Indeed, despite the currently limited nature of this erosion, it may gradually become more widespread, threatening the stability of the healthcare and welfare system as a whole. Moreover, the health conditions of the different social groups are not isolated, but are interconnected. This is evidenced by the abolition of state medical aid, the health consequences of which would affect the entire population, and not only the populations directly concerned[30].

EROSION OF COMMUNITY SOLIDARITY: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

According to CESE[31], between 2005 and 2020, **the share of subsidies decreased by 41%** in the budget of associations in favour of market logic, which contributes to weakening the economic balance of associations and weighs on the sustainability of some of them[32].

The Association of Mayors of France and the Mutualité Française association estimate, in their latest health and social survey, that in France, **87% of the population lives in a medical desert,**

and **6.7 million French people do not have a general practitioner,** i.e. **11%** of the population[33]. In 2021, the French Health Insurance Agency estimated that nearly 6 million French people did not have a general practitioner, i.e. around 11% of the population[34].

A French Senate commission of inquiry report warned in 2022 about **the advanced decline of accident and emergency services in France,** in particular due to financial targets competing with the lengthy time required for treatment, pushing many healthcare professionals to resign due to a loss of sense of purpose and worsening working conditions[35].

30 Report on State Medical Aid C.Evin and P.Stefanini §1.2.2.2: "The withdrawal of healthcare would have a threefold impact: a deterioration in the health of the people concerned, possible consequences for public health and increased pressure on healthcare establishments."
31 Economic, Social and Environmental Council
32 CESE (2024). Opinion "Renforcer le financement des associations : une urgence démocratique". (In French)
33 La Gazette des communes (2024). Déserts médicaux : toujours moins de médecins généralistes. (In French)
34 Nos services publics (2023). Rapport sur l'état des services publics - Santé. (In French)
35 French Senate (2022). Hôpital : sortir des urgences - Rapport. (In French)
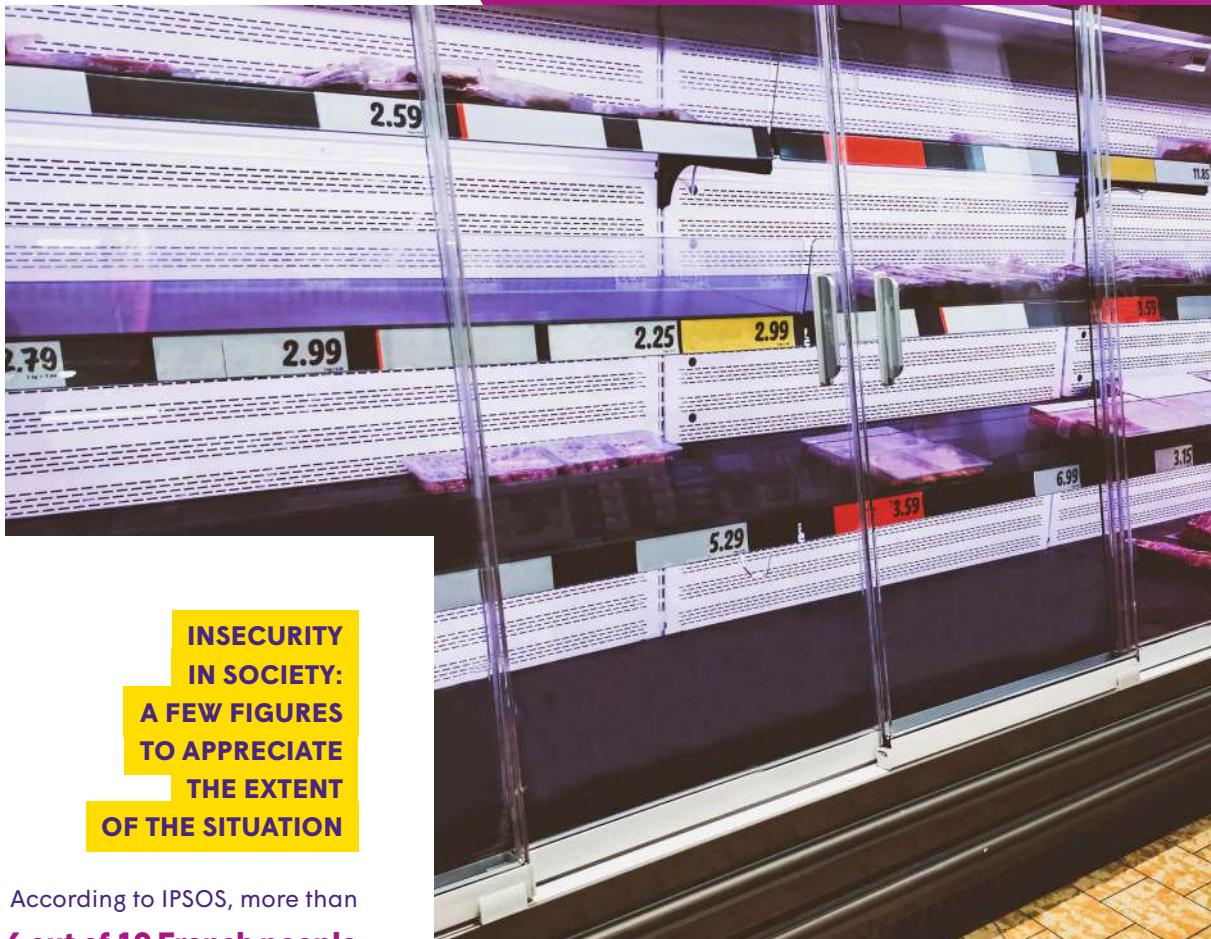
INSECURITY IN SOCIETY: A FEW FIGURES TO APPRECIATE THE EXTENT OF THE SITUATION

According to IPSOS, more than **6 out of 10 French people have already foregone at least one medical procedure** in the **last 5** years, **40%** of which were due to **financial difficulties**[37].

In its 2023 report on poverty in France, **Secours Catholique reported a marked increase in poverty in 2022** compared to the previous year, in a climate **of high inflation on food and energy**[38].

58% of beneficiaries **of basic welfare benefits** had at least **1** chronic illness in 2018. **26%** of them are at **risk of depression,** compared to **10%** of working people[39].

One last vulnerability, finally, concerns **the increasing difficulty, for many people, to meet their basic needs for material and financial reasons.** This situation of enforced frugality is already having health consequences (malnutrition, difficulty accessing healthcare, stress, etc.) for many people, particularly among underprivileged or migrant populations. It is also likely to intensify over the next few years, for several reasons: ecological reasons, such as the destruction of production infrastructure due to weather hazards, increased soil degradation that impacts food production and the rapid depletion of resources (raw materials, water, etc.), and economic and social reasons (supply disruptions, inflation, reduction in imports, power cuts, etc.). Thus, over time, people who have been spared the effects of this trend until now may suffer the health repercussions. This is evidenced, for example, by the sharp increase in the use of food assistance mechanisms in recent years by people who were previously not exposed to food insecurity[36]. Residents of large cities, which are highly dependent on just-in-time supplies (of food, energy, etc.), and people dependent on continuous healthcare and the importing of vital medicines are also likely to be among the first affected.

36 Drees (2021). Aide alimentaire : une hausse prononcée des volumes distribués par les associations en 2020. (In French)

37 IPSOS (2024). Santé : un accès aux soins de plus en plus difficile en France. (In French)

38 Secours Catholique (2023). Notre « État de la pauvreté en France 2023 ». (In French)

39 Drees (2021). Bénéficiaires de minima sociaux : un état de santé général et psychologique dégradé. (In French)

Increasing incidence of exposure, widening health inequalities

In light of the vulnerabilities revealed so far by our foresight study, it is possible to provide initial answers to our initial question: Will be all be vulnerable in the future?

Firstly, **it seems possible to state that the general trend is towards the widespread exposure to hazards of a socio-ecological nature,** regardless of the socio-professional category, geographical location or even the gender of the populations concerned. However, this increase will take different forms and intensities depending on the situation: while some will see their living environment more exposed to extreme weather events, others will be more affected by an increase in the strenuousness of their work or by growing difficulty in meeting their basic needs: food, access to healthcare, etc.

Then, beyond this widespread exposure, **existing health inequalities** seem to be intensifying due to differences in the material and financial abilities to deal with these new risks. Thus, while some of the more affluent members of the population will have little difficulty, at least initially, in adapting their homes to a new ecological situation, or even in moving, others will be forced to remain in housing that is unable to protect them. The same applies to protection against the increasing number of disruptions and pollutions, against which some populations will be largely defenceless while others will benefit from sufficiently early diagnoses, access to appropriate treatments and the ability to change their living environment (work, neighbourhood, region, etc.).

These considerations echo the definition of vulnerability given by the economist specialising in health and environmental issues, Éloi Laurent, for whom **vulnerability is a result of the interaction between two variables: exposure to a health risk and sensitivity to this risk,** which refers to the material, financial and social ability to deal with it. In line with this terminology, the initial conclusions of our approach thus seem to confirm that, while exposure to socio-ecological health risks is becoming more widespread, albeit to varying degrees, the existing disparities in terms of the ability to cope with them (sensitivity) are likely to increase, leading to a rise in health inequalities. A situation of increasing vulnerability of population groups which also threatens the stability of a system based on solidarity. These various issues therefore call for a resolute and ambitious response from those involved in health and social protection.

A series of challenges for health and social protection stakeholders

The worsening of the health vulnerabilities described so far poses a number of challenges for those involved in health and social protection, which can be categorised according to the needs they address.

The first category includes the set of challenges that relate to people's **physical and mental health needs when faced with various threats.** These challenges relate to increased exposure to weather hazards, industrial hazards and pollution, the growing threat of infectious diseases that are emerging, resurging or increasing in areas previously unaffected, the improvement or maintenance of healthcare, the maintenance of decent working conditions, or the adoption of healthy lifestyles in environments that make this increasingly difficult.

A second category covers the support of **social needs.** These challenges stem from the **need to meet the basic requirements of the population against a backdrop of uncertainty and loss of social ties:** protecting climate migrants and the unemployed, guaranteeing access to basic necessities, guaranteeing universal access to healthy food, rebuilding strained social relations, etc. They may also be related to a need to support the adaptation of the economy to this new socio-ecological situation, in particular through support for businesses and public authorities, the development of individual cross-disciplinary skills, and the protection of essential sectors of the economy in the event of technical interruption.

The third category, meanwhile, responds to **democratic needs:** against the backdrop of a growing authoritarian tendency, the challenges classified here aim to **preserve forms of collective decision-making.** These can apply to business management, the allocation of strenuous jobs, the organisation of regions or the use of scarce resources that are the subject of conflicts over their use.

Finally, the last category brings together the challenges addressing the **needs of the social protection system** against a backdrop that puts it under increasing pressure every day: slowing economic growth, growing ecological and health crises, accelerated population ageing, etc. The aim of these challenges is to support its transition to a more stable, resilient and accessible system for the entire population.

These challenges now constitute areas for consideration with a view to the emergence of new proposals from those involved in health and social protection with regard to increasingly vulnerable populations. As a result, they give rise to a number of possible responses and positions for these stakeholders, which will be set out in detail in part 3.

CHALLENGES IDENTIFIED* BASED ON THE VULNERABILITIES GROUPED INTO 4 CATEGORIES OF NEEDS

VULNERABILITIES

HEALTH NEEDS

- Protecting the most vulnerable from heatwaves
- Supporting inhabitants of regions that have become uninhabitable
- Supporting the ageing of people exposed to chemical pollution
- Protecting populations from new infectious diseases
- Protecting workers from the effects of more strenuous work
- Protecting French people from the increased risk of pandemics
- Protecting French people from the effects of overexposure to technology
- Protecting residents from industrial hazards
- Protecting agricultural workers from strenuous work and pollution
- Protecting rural people from new infectious diseases
- Protecting local residents from hazards related to data centres
- Regulating the use of alternative health practices
- Containing the resurgence of old diseases (measles, cholera, etc.)
- Making housing a bulwark against ecological and health hazards
- Addressing declining mental health in populations
- Encouraging physical activity in difficult weather conditions

SOCIAL NEEDS

- Supporting the ecological transition of public and private stakeholders
- Protecting key sectors in the event of a technical interruption (pandemic, flood, etc.)
- Protecting climate migrants
- Ensuring access to healthy food for all
- Ensuring access to basic goods and services
- Providing social security coverage for people out of work
- Rebuilding relationships and social cohesion
- Facilitating the transition to more frugal lifestyles

DEMOCRATIC NEEDS
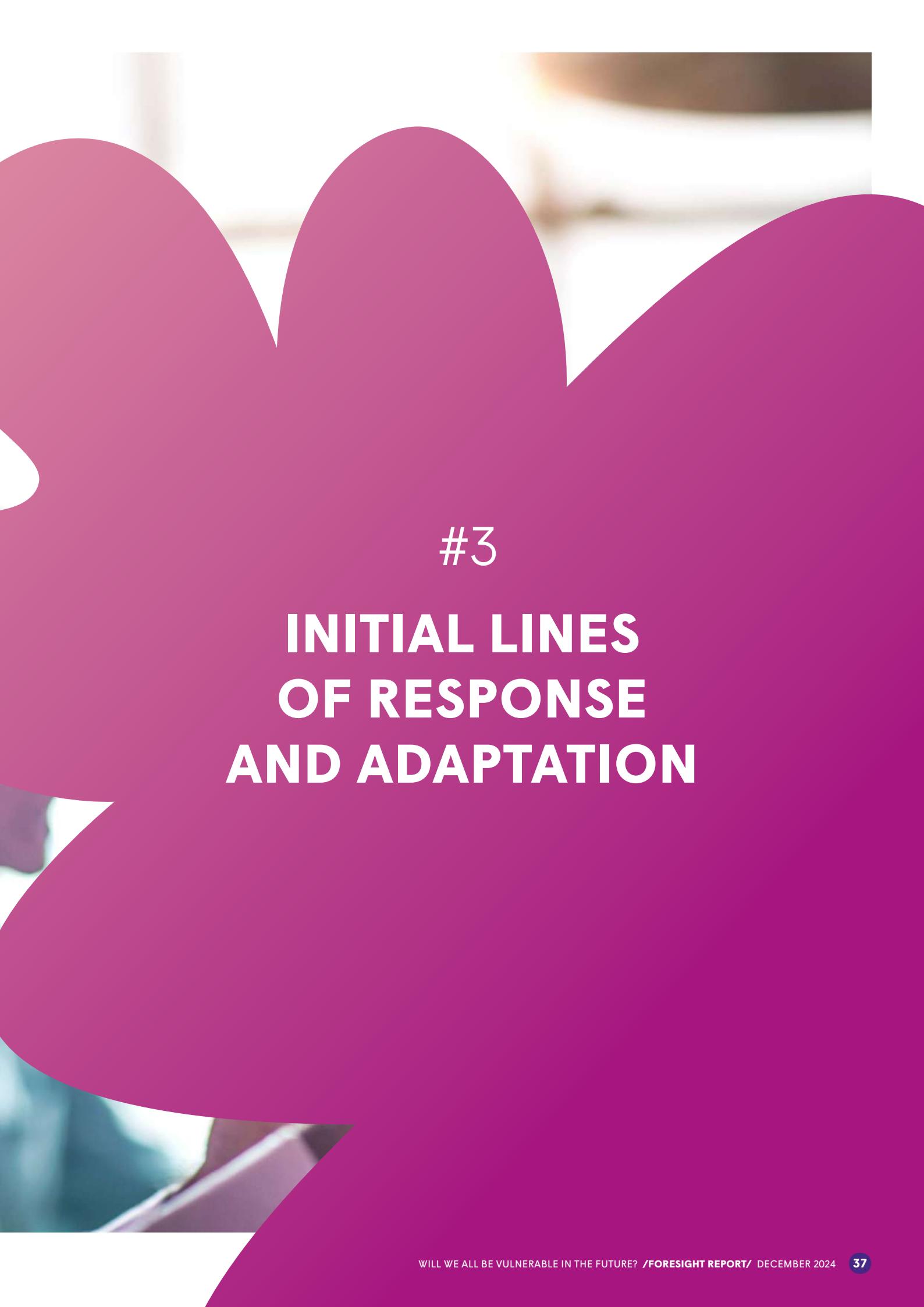
- Supporting the fair allocation of the most strenuous and least desirable jobs
- Supporting the socio-ecological transition of companies
- Maintaining forums for democratic decision-making and mutual aid
- Guaranteeing solidarity against the backdrop of increased competition

SOCIAL PROTECTION NEEDS

- Adapting social protection to an ageing population
- Promoting accessibility of the health system
- Adapting social protection to increasingly frequent crises
- Promoting the establishment of a sustainable social protection system
- Promoting preventive health

These challenges identified during the workshops are not intended to be exhaustive.

#3

INITIAL LINES OF RESPONSE AND ADAPTATION

INITIAL LINES OF
RESPONSE AND ADAPTATION

After identifying priority vulnerabilities for individuals and major challenges for social protection, we will now examine how we can respond to these issues. Initially, we will report on certain proposals that have emerged from this foresight study, which constitute original responses to the vulnerabilities identified above. In the second phase, we will look at the new positions outlined by these proposals. **The various options proposed should not be taken as recommendations, but rather as possibilities for consideration by health and social protection stakeholders of all kinds.** The aim here is not, therefore, to assess their feasibility or economic potential, but simply to consider the new opportunities that these possibilities open up.

## *What if in the future…?* Ambitious new ways to expand social protection
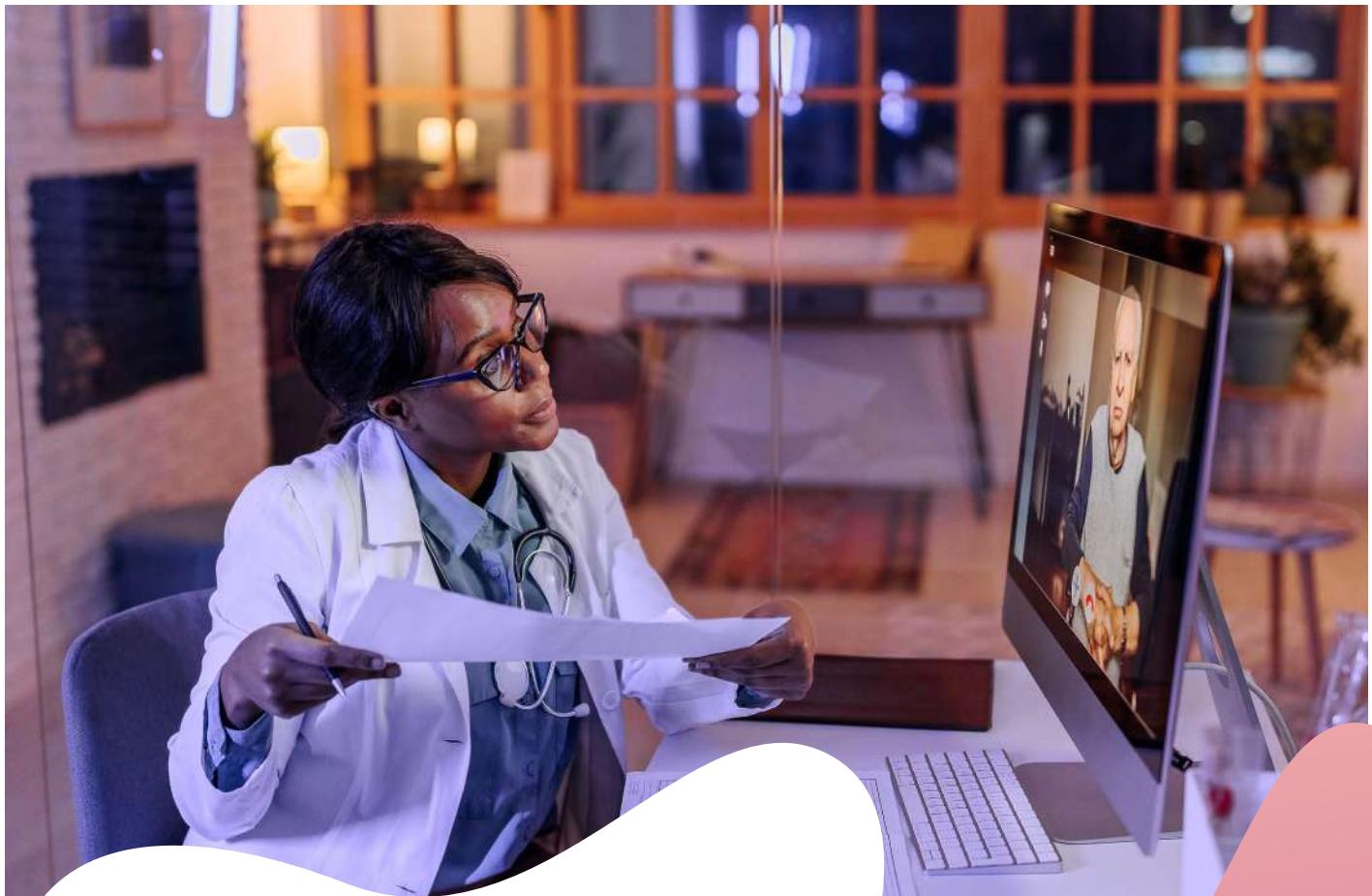
Work has been carried out to devise solutions to better protect people and offer quality coverage to populations affected. Here we deliberately explore "avenues" that are particularly "disruptive".

What if, in the future, all the inhabitants of the region had access to a mutual food assistance programme?

In response to the challenge of healthy food that is produced and distributed in a virtuous manner and accessible to as many people as possible, mutual food assistance schemes seem to be a promising idea. Building on several experiments, such an initiative would make it possible to act on the health-determining factors of food both on the production side, by selecting and supporting producers who respect certain social and ecological standards, and on the consumption side, by promoting access to these products for people in financial difficulty.

What if, in the future, supplementary health insurance companies participated in the production of medicines and medical devices?

The issue of access to medicines and medical devices against the backdrop of an increasingly unstable supply may also be the subject of disruptive proposals from supplementary health insurance providers. In particular, the latter could address the pressing issue of relocating all or part of their production, for example by providing support for the opening of new production channels, including in the form of cooperatives. In doing so, they could support the transition to a more frugal and sustainable supply, while promoting better uses and recycling practices.

What if, in the future, healthcare and social protection stakeholders offered microcredit solutions to the most vulnerable members of society?

The issue of financial inclusion, particularly through helping people who cannot afford it to access credit through official channels, is also fertile ground for exploration by stakeholders in the sector. Some economic stakeholders have already addressed the issue, such as Crédit Agricole with its Grameen Foundation. In the future, this practice could be revamped and rolled out more widely with a view to increasing the means of action available to vulnerable people, while supporting the development of health-promoting projects.

What if, in the future, stakeholders in housing, healthcare and regions joined forces to support those who want to proactively "leave" an area that has become less habitable?

Faced with the progressive uninhabitability of certain regions, the mass displacement of populations (both external and internal migration) is likely to become more widespread, with numerous health consequences (vulnerability to hazards, high demographic concentration in certain regions, difficult access to healthcare infrastructures, etc.). Faced with such a situation, the stakeholders concerned will have a key role to play in supporting people to resettle, for example by designing dedicated services and providing appropriate advice.

What if, in the future, all healthcare companies participated in local clean-up initiatives to reduce risks?

Currently largely confined to a preventive role in health and the environment, health stakeholders could, in the future, take on a much more active role in the maintenance of the living environments on which the health of populations depends. The funding, participation and even organisation of clean-up operations in certain environments could be considered.

What if, in the future, the health sector actively worked towards the rewilding of urban and rural areas?

The reintroduction of animal and plant species into human-dominated, "anthropised" (urbanised or agricultural) areas is, according to many experts, a key issue from a health perspective. Such measures support the restoration of ecosystems that are currently in decline, making a positive contribution to reducing the risk of the proliferation of disease-carrying species, improving air quality and even locally reducing temperatures. Health stakeholders could take an active role in these initiatives by directing their investments towards them, by supporting those wishing to take part and by playing a preventive and educational role in the related health issues.

What if, in the future, health insurers invested in agricultural land to develop sustainable food production capacity?

In the future, health and social protection insurers, long-term investors by nature, could play a key role in maintaining food security at a regional level by leveraging land in the regions to promote an increase in production capacity. To this end, land already owned could be reused and new investments could be directed towards land already being used or to be redeveloped.

What if, in the future, all stakeholders in the sector used their own land to develop renewable energies[40] and restore biodiversity?

Similarly to the previous proposal, the land owned by all public and private organisations could be used for the roll-out of renewable energies and the creation of areas for the reintroduction and free evolution of biodiversity. In doing so, they could play a key role in the local implementation of national ecological strategic plans, such as the ZAN[41] law and the national Biodiversity and Low Carbon strategies, by giving them a health focus that is currently lacking.

40 Renewable Energy
41 Zero net artificialisation (a target set for 2050 by the 2021 French Climate and Resilience Act).

What if, in the future, the occupations most exposed to climate change (agriculture, construction, public works, etc.) were the subject of special prevention measures?

Health and social protection stakeholders could also play a central role in supporting the occupations most exposed to weather hazards by carrying out preventive actions regarding changes to the resulting health risks and the behaviours to be adopted as a result. The creation of a dedicated watchdog has also been raised. Its role would be to monitor and support occupations undergoing change due to the new ecological situation, in order to meet the local and specific needs of workers.

What if, in the future, healthcare provision was enhanced by an increase in the number of community health centres and integrative medical training courses?

The transformation of healthcare practices has been identified as a key issue in the sector's adaptation to the new ecological situation, particularly with regard to the reduction of medication prescriptions (polluting and resource-intensive) and the shift from a curative approach (treating after the fact) to a preventive approach. In order to keep pace with these developments, the health sector could strengthen its support for the creation and development of community health centres*, i.e. centres based on the fight against health inequalities and empowerment of patients, promote integrative health practices (combining conventional and alternative practices) and design training and prevention content around these issues.

What if, in the future, the basements of housing owned by health and social protection stakeholders were renovated and turned into cool communal living spaces?

Faced with the proliferation of external aggressions of an ecological and health-related nature (extreme weather events, various forms of pollution, emerging diseases, etc.), the issue of adapting housing is also a central one. One of the solutions put forward concerns the renovation of underground spaces owned by stakeholders in the sector: naturally cooler and more insulated, these could be used as collective living spaces protected from the elements during events that make outdoor activities difficult (extreme heat, pollution peaks, etc.).

What if, in the future, specific expertise for dealing with forms of eco-anxiety became widespread?

Finally, to address the rapid decline in the mental health of the population, particularly in relation to the increased perception of ongoing ecological damage, health and social protection stakeholders could focus part of their activity on research and training for professionals in these areas, or even on the creation of specialised inter-disciplinary care centres.

* *"Community health is an integral part of public health, constituting a strategy within health promotion initiatives. Its specific feature is that it is population-based rather than individual and that it promotes and implements a global and local vision of health." definition on santé.gouv.fr*

New strategic positions for health and social protection stakeholders

As we mentioned earlier, the various options presented previously are not intended to be integrated into any kind of action plan. Nevertheless, they **give an idea of the range of possibilities available to health and social protection stakeholders** wishing to address the vulnerabilities revealed so far. In doing so, they provide an opportunity for these stakeholders to reinvent themselves by adopting new positions. These strategic positions are now all potential areas of response for current and emerging professions in the sector.

1

PARTICIPATE IN THE ADAPTATION AND SHARING OF HEALTH KNOWLEDGE

This focus area is an invitation to health and social protection stakeholders to take an active role in the evolution of health knowledge required in this era of instability and upheaval. Considering the socio-ecological disruption described so far, new projects for structuring knowledge on health and its determinants are opening up: a better understanding of the ecological, social and economic parameters of the emergence of epidemics, the links between ecological damage and mental health, the links between physical, mental and social health, the possible links between conventional and alternative knowledge, etc. These projects make it necessary for stakeholders to invest in research and development activities and to support experimental and interdisciplinary initiatives that are currently under-promoted.

Show the range of possibilities available to health and social protection stakeholders.

2

OFFER HEALTHCARE AND INSURANCE MORE IN LINE WITH THE NEW ECOLOGICAL SITUATION

The revival of knowledge in health has led, among other things, to a greater understanding of the new illnesses that characterise our era: new infectious diseases, the proliferation of chronic diseases (including in populations that were previously relatively unaffected) and disorders related to extreme temperatures, mental and cognitive disorders related to isolation and anxiety, etc. Faced with these challenges, health and social protection stakeholders have a major role to play in adapting their healthcare provision on an ongoing basis and with a view to eco-design[42]: new insurance policies to protect against the inability to work during heatwaves, development of healthcare centres adapted to these new illnesses, production of medicines at risk of supply shortages, etc.

3

STRENGTHEN HEALTH PROMOTION AND PREVENTION[43] IN LINE WITH NEW ECOLOGICAL RISKS

This foresight study has once again reinforced the need to develop a culture of health promotion and prevention: making citizens more responsible in conjunction with the legitimate holders of health knowledge seems more necessary than ever to involve them in maintaining the factors that determine their own health, by giving them the means to act under their own initiative to protect themselves against the vulnerabilities described above. Health and social protection stakeholders have an active role to play in this effort by promoting behaviour adapted to these new risks, providing educational content on the links between ecological damage and worsening health, taking part in prevention initiatives on ageing well, etc.

4

SUPPORT CHANGES IN THE WORLD OF WORK AND THE EMERGENCE OF NEW PROFESSIONS

The changes in work described in our approach are expected to be considerable. They are accompanied by increased and widespread strenuousness over the next few years: exposure to new pollutants, renewal of the primary and secondary sectors, increased use of manual labour, prolonged exposure to weather hazards, etc. But also by the emergence of new professions and economic sectors dedicated to socio-ecological risks, as well as the associated training needs. Health and social protection stakeholders, who are already active in supporting employers and employees, will be able to take action to minimise the health risks in the world of work, help to distribute the burden more fairly and support the emergence of these new professions: by participating in research into these new ways of working, by supporting career changes in new sectors, by training for new jobs, by supporting employers, etc.

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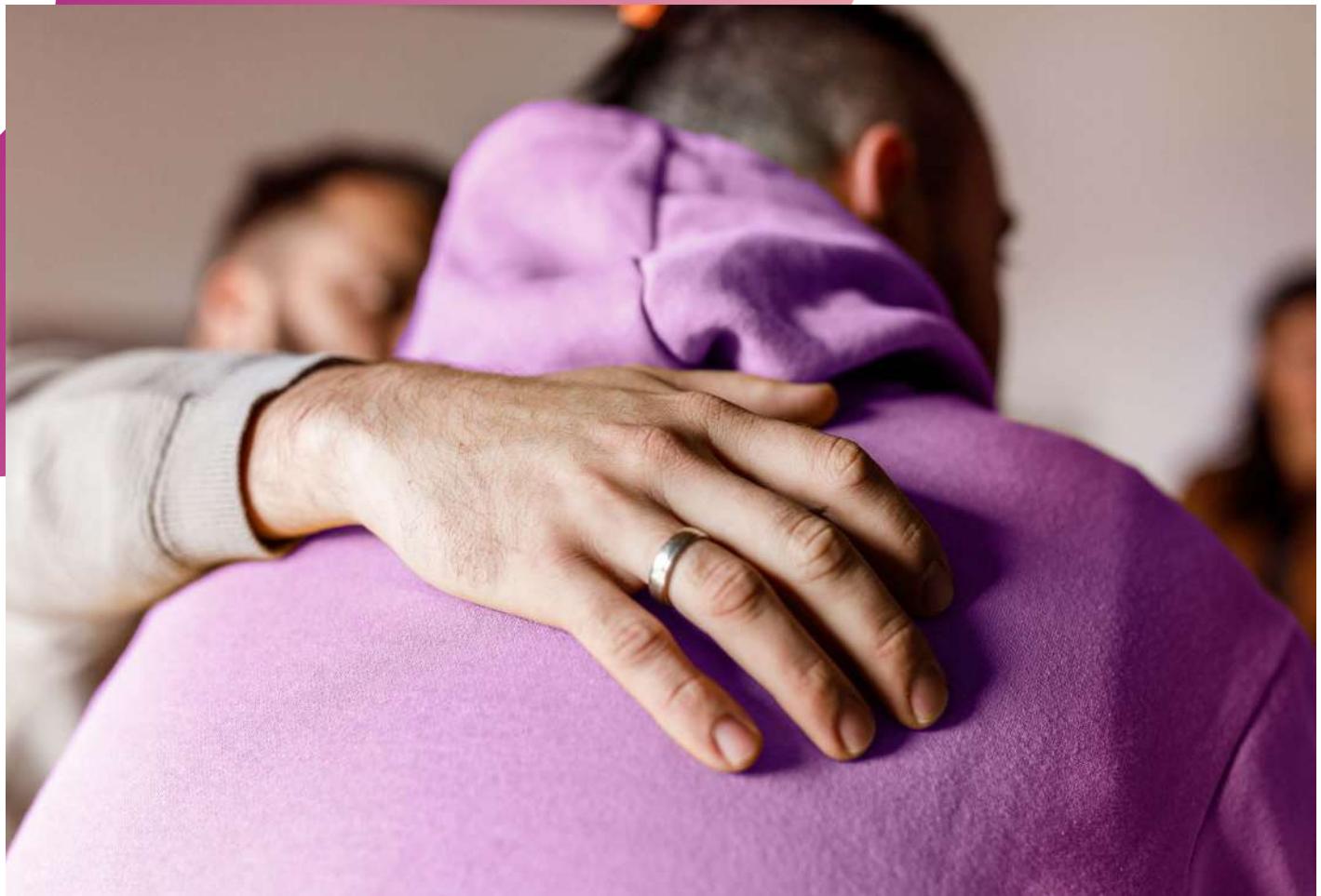
42 *Eco-design consists of integrating environmental protection from the design stage of goods or services.*

43 *Whereas health prevention refers to all the measures implemented with the aim of improving public health, health promotion aims to "enable individuals to better control health-determining factors and thus improve their health" (WHO)*

5

FACILITATE ACCESS TO HEALTHCARE, HOUSING AND EMPLOYMENT FOR "MARGINALISED" AND FRONTLINE POPULATIONS

Marginalised populations (climate migrants, long-term unemployed, homeless people, residents of working-class neighbourhoods, etc.) already encounter difficulties in satisfying the major health-determining factors of access to healthcare, housing and employment, and are likely to see their numbers grow in the coming years. To address this situation, health and social protection stakeholders can help reduce the vulnerability of these people in various ways: by supporting their inclusion (through employment and involvement in associations and community activities), by providing housing where necessary, or by giving them access to funding through microcredit mechanisms.

6

FIGHT AGAINST THE ECONOMIC AND HEALTH INSECURITY OF AS MANY PEOPLE AS POSSIBLE BY FACILITATING ACCESS TO HEALTHCARE AND BASIC NECESSITIES

Purchasing power that is sustainably constrained for a large part of the population, increasingly frequent supply disruptions and, more generally, situations of enforced frugality that are on the rise are some of the factors contributing to a creeping sense of insecurity in society. Health and social protection stakeholders can help reduce the health consequences of such a situation by treating it at source, for example by designing the least expensive supplementary health insurance policies possible, or by supporting the development of community health centres.

7
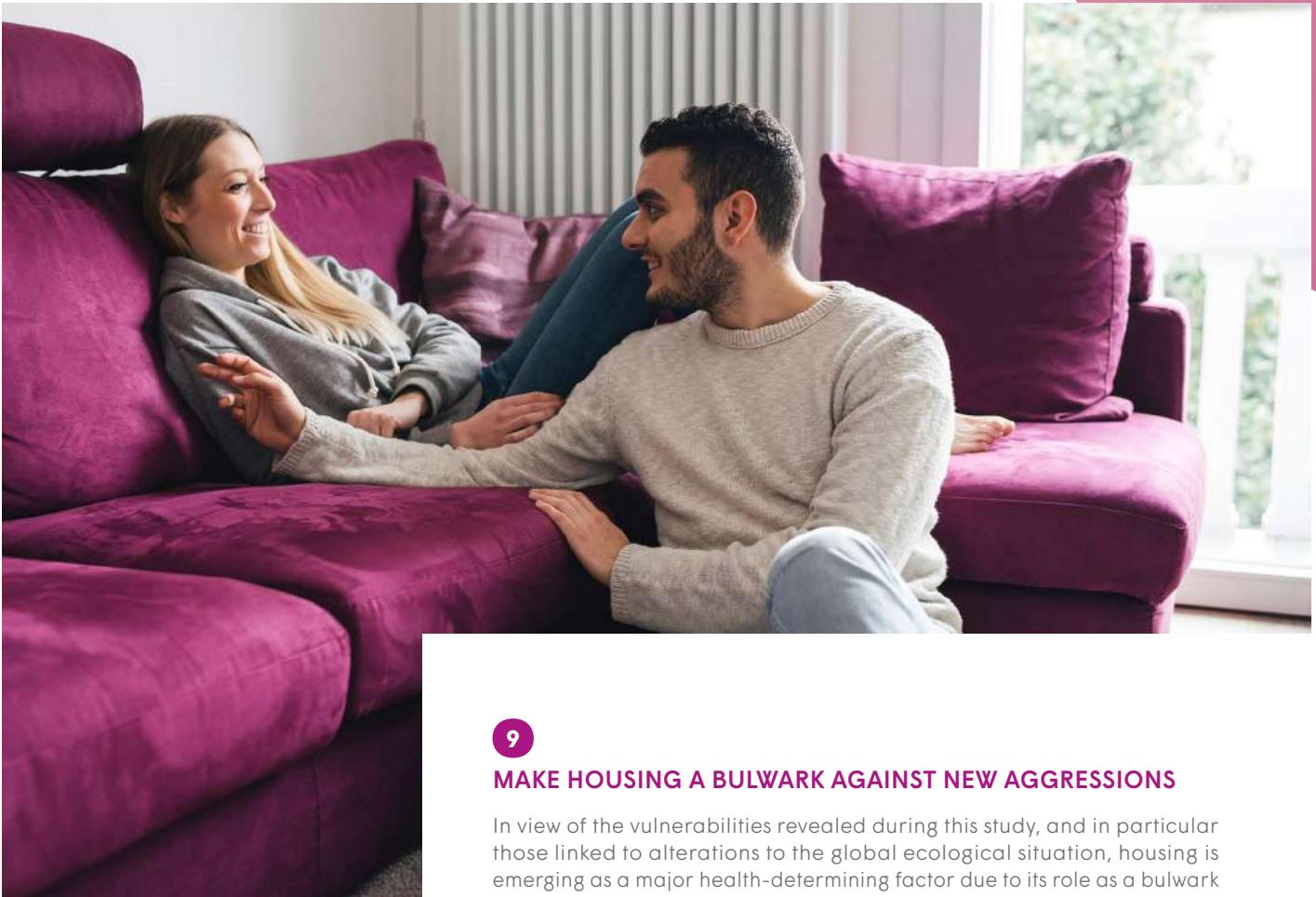
WORK TOWARDS HEALTHY FOOD FOR HUMANS (CONSUMERS AND FARMERS), ANIMALS AND ECOSYSTEMS

Diet is a major health-determining factor, the quality of which offers stakeholders in the health and social protection sectors the opportunity to position themselves at several levels: production, to support the development of healthy and sustainable agriculture according to socio-ecological criteria, and consumption, to promote access to high-quality food for all. Various courses of action are emerging: the development of healthcare-food based supplementary health insurance policies, production channels, the repurchase of farmland, the development of urban agriculture, the promotion of a less meat-based diet, etc.

8

BECOME A DRIVING FORCE FOR LOCAL SOLIDARITY AND DEMOCRACY

This strategic position recognises the need to support the development of solidarity mechanisms at the regional level to address the vulnerabilities described earlier, which cannot be fully addressed by major adaptation projects. It is thus in direct continuity with the original mutualist spirit, which is based on collective protection against localised health risks, in a spirit of collective decision-making and the promotion of a dynamic local political life. This positioning offers the possibility of a revival of this spirit, by creating a space for responses that can accommodate a variety of initiatives, such as partnerships with local authorities for the development of local social protection, the organisation of democratic decision-making forums, the management of conflicts over the use of resources, and support for the adoption of more frugal lifestyles.

9

MAKE HOUSING A BULWARK AGAINST NEW AGGRESSIONS

In view of the vulnerabilities revealed during this study, and in particular those linked to alterations to the global ecological situation, housing is emerging as a major health-determining factor due to its role as a bulwark against these aggressions. Recognising this reality opens up a new way of approaching the issue for health and social protection stakeholders, who have the opportunity to strengthen this role and make it accessible to as many people as possible, for example by supporting the immense challenge of adapting housing (insulation, funding equipment, etc.) and by certifying those that effectively meet this new requirement ("health labels").

10

ENCOURAGE THE RELOCATION OF PEOPLE AND ACTIVITIES FROM AREAS THAT ARE DIFFICULT TO LIVE IN TO LESS EXPOSED ZONES

To mitigate the health consequences of the progressive uninhabitability of certain regions (exposure to weather hazards, difficult access to basic necessities, dangerous migration routes, etc.), health and social protection stakeholders can play a role, for example by developing activities to assess habitability, strategic future-oriented capacities to anticipate long-term changes in regions, by designing rehousing insurance offers or even by offering coverage in the event of a loss of housing.

11

IMPROVE THE HABITABILITY AND HEALTH OF REGIONS

Alongside a support role in resettlement, health and social protection stakeholders can act as guarantors of the habitability of areas where this is still possible. To this end, various activities can be reinvented and developed, such as the implementation and support of initiatives to clean up the natural environment, participation in the revegetation of cities, or assistance in the development of measurement tools or the use of new digital tools* for the environmental health of regions.

see Digital Roadmap and Data for Ecological Planning of the General Secretariat for Ecological Planning

11 NEW STRATEGIC POSITIONS FOR HEALTH AND SOCIAL PROTECTION STAKEHOLDERS

ACCESS TO HEALTHCARE

- Fight against the economic and health insecurity of as many people as possible by facilitating access to healthcare and basic necessities.
- Facilitate access to healthcare, housing and employment for "marginalised" and frontline populations.

WORK

- Support changes in the world of work and the emergence of new professions against the backdrop of a changed climate and ecological situation.

FOOD

- Work towards healthy food for humans (consumers and farmers), animals and ecosystems.

LIVING ENVIRONMENT
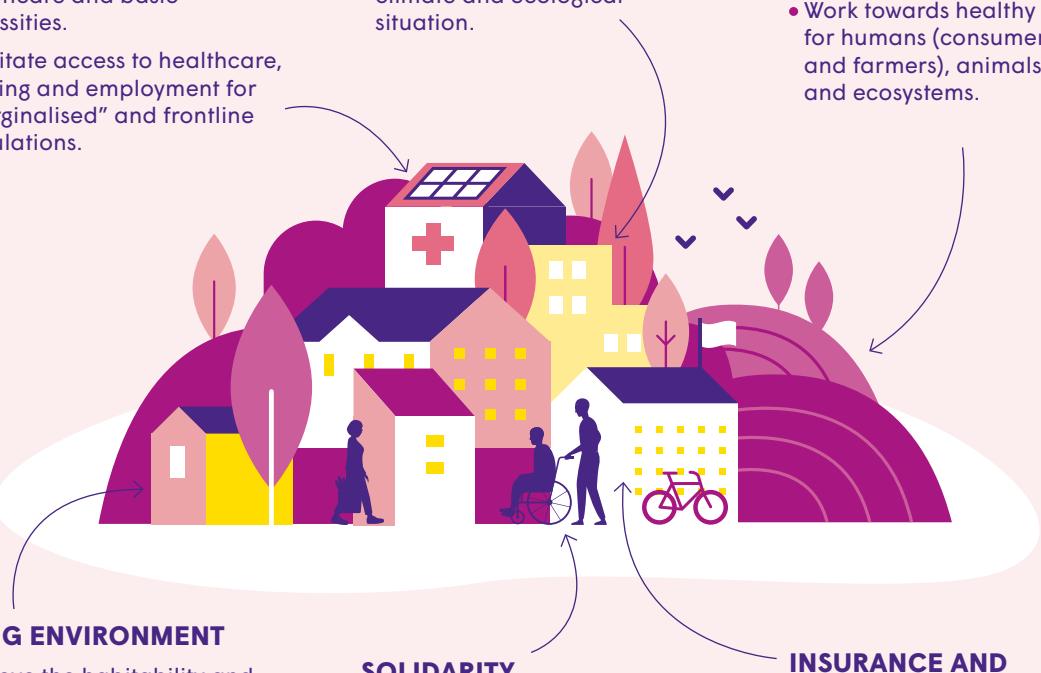
- Improve the habitability and health of regions.
- Make housing a bulwark against new aggressions.
- Encourage the relocation of people and activities from areas that are difficult to live in to less exposed zones.

SOLIDARITY

- Become a driving force for local solidarity and democracy.

INSURANCE AND PREVENTION

- Offer healthcare and insurance more in line with the new ecological situation.
- Strengthen health promotion and prevention in line with new ecological risks.
- Participate in the adaptation and sharing of health knowledge.

CONCLUSION

The vulnerabilities revealed during this study, as well as the proposed positioning, **outline a new stance for health and social protection stakeholders, and in particular mutualist stakeholders:** a stance characterised by the integration of long-term foresight and the reaffirmation of the need to consider health in all its social and environmental determining factors.

As such, two approaches to health seem able to serve as a compass for stakeholders wishing to transform their practices.

The first is that **of planetary health.** Theoretical and experimental development of this approach has been ongoing for several years. It is based on the observation (also revealed by our scenarios) that the progressive deterioration of the world's natural balances and the accompanying increased destabilisation of the health of populations have a common cause: human activities guided by economic models that are blind to natural limits (to the exploitation of resources, to the degradation of environments, etc.). This approach encourages us to **rethink our activities in order to take into account their ecological and health consequences and to include actions that promote health as part of a large-scale socio-ecological transformation target.** To this end, the search for joint environmental and health benefits, i.e. actions that promote both health and the quality of living environments (transition to sustainable mobility, subsidies for the production of healthy food, etc.), is proving to be a promising and motivating target. In doing so, the planetary health approach encourages us to make the link between the health of individuals and that of their living environments, in line with the aim of taking the health-determining factors into account in a comprehensive manner.

The second approach is that **of community health.** Based on the principles of health promotion described by the WHO, the aim is to **give people the power to act on all the factors that determine their health.**

Supported by numerous health practitioners and activists since the 1970s, this approach calls for full consideration of the links between social inequalities and health inequalities: unequal exposure to risks, different ability to face them, unequal access to information and healthcare, etc. All these factors too often go unnoticed in public health practices and policies, and community health calls for them to be dealt with head-on by involving those most concerned: the citizens themselves. Numerous "community health centres" have thus sprung up in recent years to put these principles into practice, in particular through the support of people excluded from the healthcare system through health mediation, the involvement of patients in the management of healthcare facilities (presence on the board of directors, organisation of workshops, etc.) or political advocacy in favour of better funding for alternative health practices. With these characteristics, community health now seems to offer fertile ground for the renewal of social protection practices called for by our approach, with its emphasis on strengthening local solidarity and reducing health inequalities.

These opportunities, as well as all the avenues mentioned in this foresight study, are conducive to a profound transformation of health and social protection in which mutualism in general and Groupe VYV in particular will have a role to play. In light of this, the group will undoubtedly aim to act as closely as possible to its areas of legitimacy, according to a principle of reality and by forming alliances with other stakeholders.

Acknowledgements

G R O U P E

vyv

The VYV Group in brief

The leading mutual health and social protection stakeholder in France, Groupe VYV works to ensure that healthcare is accessible to all.

Because it considers health as a whole, it acts on the majority of factors that impact health. To do this, it is the only group to combine three complementary sectors: insurance & pensions, healthcare & support and housing.

Its network of branches and establishments, spread throughout the country, enables it to support public and private employers as closely as possible to their needs and to provide coverage for **11 million people.**

With the support of their **10,000 local elected representatives and activists** in the regions and their 45,000 employees, the mutual insurance companies and entities of Groupe VYV are committed to promoting, in all their solutions, cooperation and dialogue with their target groups, accessibility for all, local roots and environmental responsibility.

sinonvirgule in brief

sinonvirgule is a consultancy and advisory firm specialising in ecological restructuring. Since 2021, it has been studying the consequences for our modern lifestyles of humanity entering a new era of instability and upheaval: the Anthropocene. Through the tools of research, futurology and design, it seeks to reveal new perspectives for the organisation of our societies that are compatible with maintaining the Earth's ability to support the life of all living things.
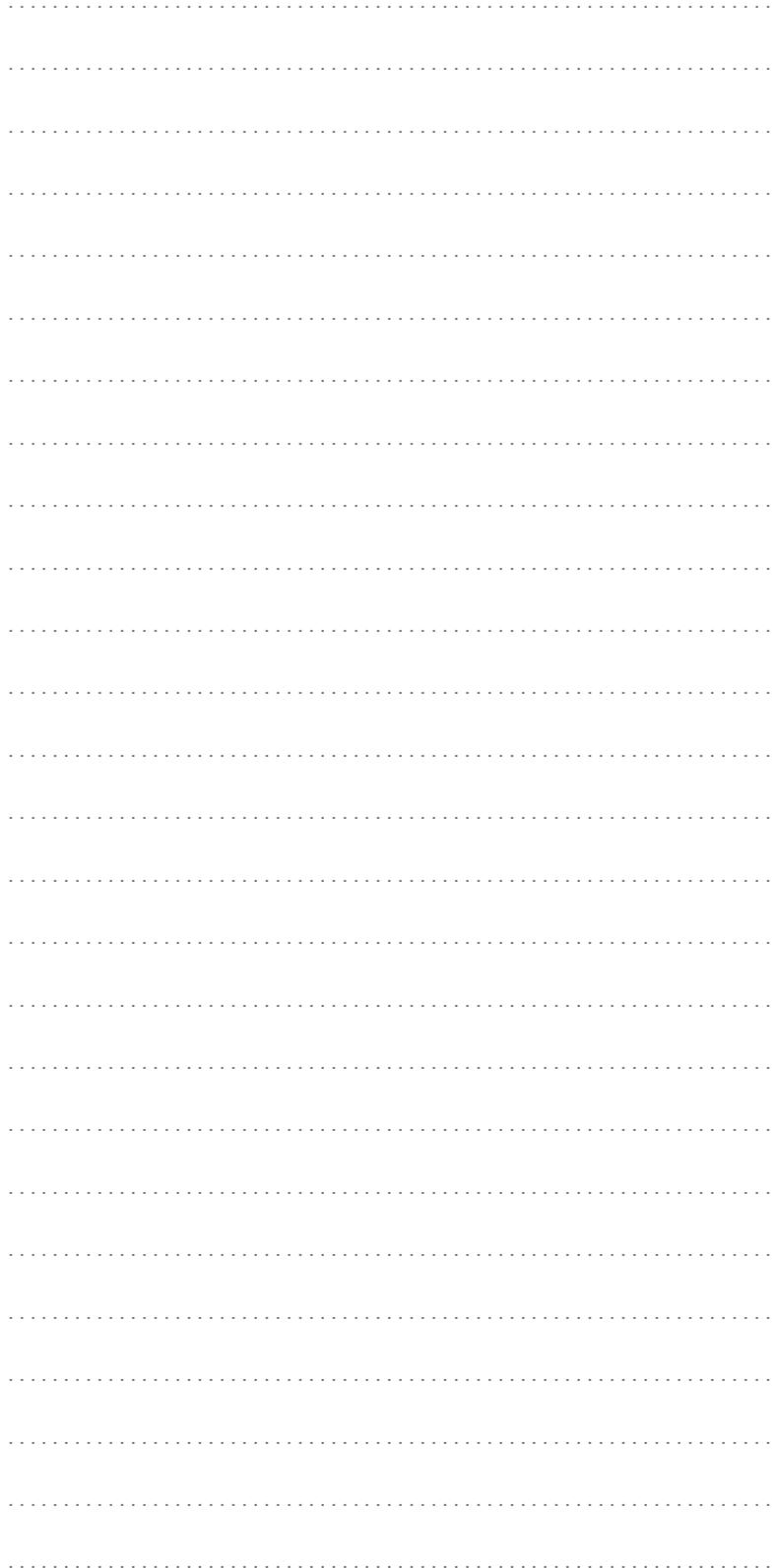
sinonvirgule supported Groupe VYV throughout this foresight study by providing its expertise in conducting the survey and analysis phase, facilitating the cross-functional foresight group and compiling the lessons learned from the study for the group's activities.

Bibliography

- Ademe (2021). Le coût social du bruit en France. (In French)
- ARIA (2023). Incidents et accidents technologiques survenus en 2022.
- C.Evin and P.Stefanini (2023). Rapport sur l'aide médicale de l'État.
- CESE (2024) Opinion "Renforcer le financement des associations : une urgence démocratique".
- Cour des Comptes (2008). Public thematic report "La mise en œuvre du Plan Cancer".
- DARES (2022). Quels sont les salariés les plus touchés par les accidents du travail en 2019 ?
- Deutsch, C. et al. (2018). *Increase In Crop Losses To Insect Pests In A Warming.*
- Climate. *Science*, 361(6405), pp.916-919.
- Drees (2021). Aide alimentaire : une hausse prononcée des volumes distribués par les associations en 2020.
- Drees (2021). Bénéficiaires de minima sociaux : un état de santé général et psychologique dégradé.
- e*message (2023). Bilan 2022 sur l'accidentologie du BARPI : ce qu'il faut retenir.
- France Stratégie (2022). Inégalités environnementales et sociales se superposent-elles ?
- Inserm (2021a). Zoonoses : Réconcilier l'humain et l'animal. (In French) Inserm, le magazine, 49.
- Institut Pasteur (2023). Maladie de Lyme. (In French)
- IPSOS (2024). Santé : un accès aux soins de plus en plus difficile en France.
- *La Gazette des communes* (2024). Déserts médicaux : toujours moins de médecins généralistes.

- *Le Monde,* (2019). 2,5 millions de Français vivent à moins d'un kilomètre d'une usine Seveso.

- *Libération* (2023). En 40 ans, les catastrophes météo ont tué 195 000 personnes en Europe.

- Météo France (2023). - Vagues de chaleur et changement climatique.

- Ministère de la Transition écologique (2023b). Sécheresse : à quoi s'attendre et comment s'adapter ?

- Nos Services Public (2023). Rapport sur l'état des services publics - Santé.

- Observatoire des inégalités (2023). Rapport sur les inégalités en France.

- Office français de la biodiversité (2023). Biodiversité dégradée, mauvaise santé assurée. (In French)

- Santé publique France (2021). Pollution de l'air ambiant : nouvelles estimations de son impact sur la santé des Français.

- Santé publique France (2023). Fortes chaleurs et canicule : un impact sur la mortalité important nécessitant le renforcement de la prévention et de l'adaptation au changement climatique.

- Secours Catholique (2023). Notre "État de la pauvreté en France 2023".

- Secrétariat général à la planification écologique (2023). - Feuille de route numérique et données pour la planification écologique.

- French Senate (2022). Hôpital : sortir des urgences - Rapport. (In French)

- Zota & Shamasunder (2017). *Beauty Products, Environmental Chemicals, Health Disparities.* Am J. Obstet Gynecol.

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