

Realized for the World Urban Forum of Cairo (Egypt) in november 2024  
on the theme "It All Starts at Home : Local Actions for Sustainable Cities and  
Communities"

Summary of group works  
2023- 2024

# PLANETARY BOUNDARIES : INCLUDING TO TERRITORIAL POLICIES THE EFFECTS OF ANTHROPIC PRESSURE ON THE EARTH'S VIABILITY





For this 12th edition, the French partnership for Cities and Territories (PFVT) has relied on and extended the prospective works gathered across the years. The following elements are based on recommendations and projections for 2050, produced by the group that previously worked on “Cities and Biodiversity” & “Resilience” in preparation for the last Forum in Katowice, in 2022. Relying on these projections, and together with international experts, the youth and all parties involved, we’ve attempted to envision a desirable future with the key steps to transition toward a model both respectful of planetary boundaries and responding to people’s essential needs, in African and European territories.

#### Previous recommendations to recall:

Biodiversity to fight climate change

- Preserve the existing biodiversity
- “Avoid, Reduce, Compensate” principle
- Challenges across topics and fields

Biodiversity to promote democracy

- Acceptability of policies
- Grow awareness about challenges related to biodiversity

1. Include reasoned resource consumption and resilience to the pathways for 2030
2. Diversify funding and ensure improve the efficiency of public spending meant for the transition
3. Improve the tracking and performance assessment of public policies and projects
4. Organize capacity building through training
5. Grant technology a reasonable place
6. Promote a positive vision of a decarbonated future

## Editorial

### Beyond “sustainable development”: resilience and sober energy consumption ahead

The latest scientific data lead to formulate two observations: first, that the UN’s SDGs and the 2030 Agenda haven’t proved sufficient to trigger the significant change needed to protect the environment; then, the concept of “sustainable development” keeps feeding despite itself the illusion that natural resources are free and inexhaustible, an idea that needs to be corrected in order to consider that physical limits of our planet conditioning its livability for us. And even though climate change has now been granted a proper place in the public debate, its interconnected parameters are no less important to consider: extinction of the living, chemical pollution, soil artificialization, perturbation of the bio-, chemical and geographical cycles of water, azote or phosphorus.

We must urgently operate a change in our economic and development models. Limitless

“sustainable development” can’t be human societies’ compass, especially for developed countries from the North. The compass should be a cohesive response to ensure everyone’s basic needs, within our planetary limits. This has become even more crucial in the face of the multiple crisis that affect the most vulnerable populations. We need new priorities in order to build collective prosperity – to find a balance.

Let’s get ready together now, by mapping the way to territorial resilience.

The World Urban Forum in Cairo is a wonderful moment and place to voice and carry this message to international stakeholders, and to design our world around a stronger role granted to commons.

Sébastien Maire  
General Delegate of France Villes et territoires Durables<sup>1</sup>

<sup>1</sup> Sustainable Cities and Territories by France

# Contributors

## Facilitation

- Marion Gonzales, Project Manager, Communication, Events & International, Sustainable City by France
- Sébastien Maire, General Delegate at France Villes et territoires Durables
- Christophe Leikine, in charge of the relations with local authorities at France Villes et territoires Durables

## Great witness

- Natacha Gondran, Professeur of environmental evaluation at Mines Saint-Etienne university / UMR 5600 EVS ; co-author of "L'empreinte écologique" (2009) and "Les limites planétaires" (2018) with Aurélien Boutaud.

## Participants



## Coordination

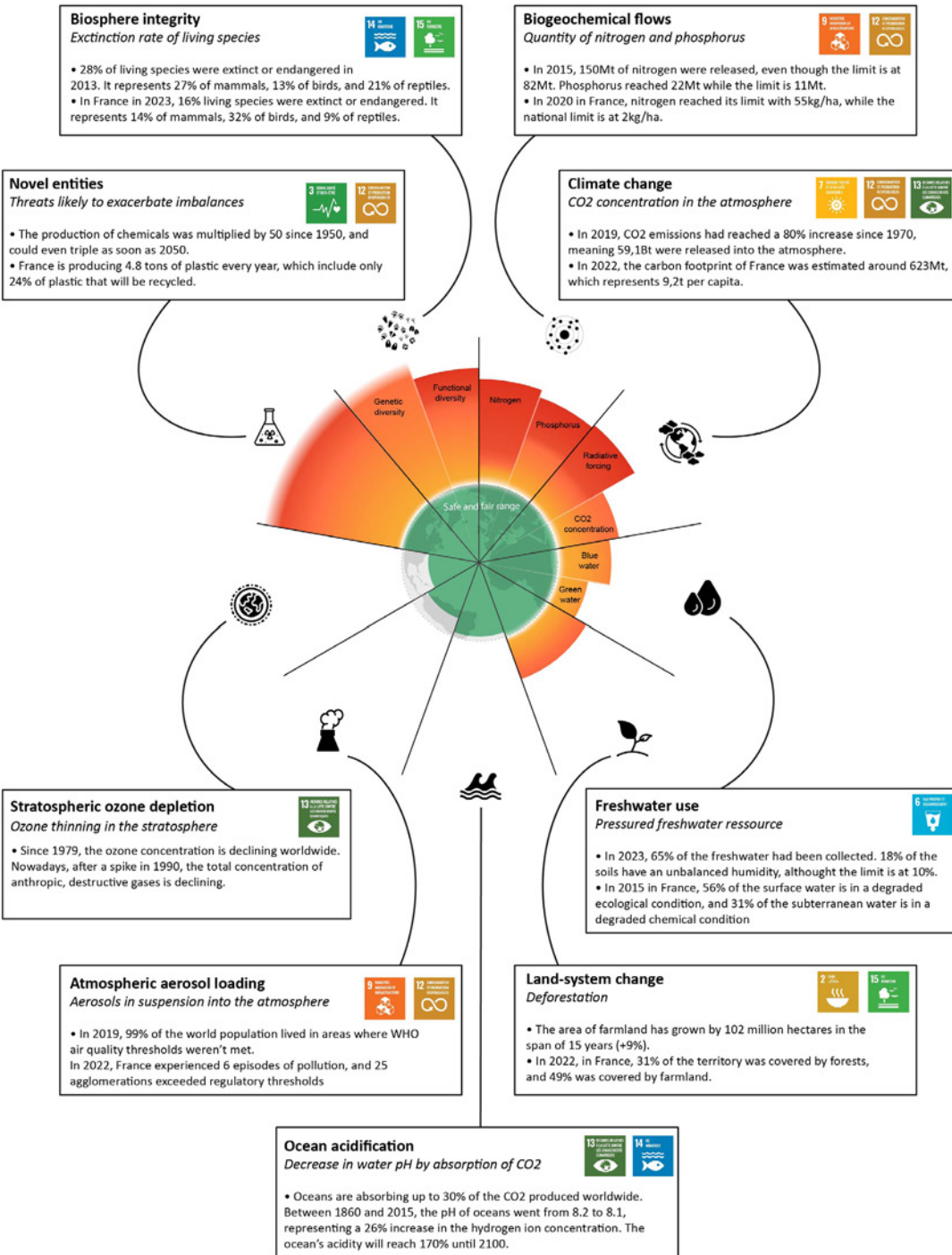
- Brigitte Bariol-Mathais, Fnau / PFVT
- Carla Doncescu, Fnau / PFVT
- Maia Martin, Fnau / PFVT

# Summary

INTRODUCTION	7
<b>PARTIE 1 - COLLECTIVE CHALLENGES</b>	<b>8</b>
Emancipating from "business as usual"	
Toward a regenerative model	
Economic models to be transformed	
Stop fighting. Start cooperating.	
<b>PARTIE 2 - GUIDELINES FOR 2050: Between planetary limits and essential needs</b>	<b>11</b>
Collective pathways	
Pathways based on Europe	
Pathways based on Africa	
<b>PARTIE 3 - RECOMMENDATIONS</b>	<b>18</b>
Recommendation 1: Redefining essential needs to aim for a less energy-hungry consumption	
Recommendation 2: Setting up local diagnosis prior to each project, making sure to include the availabilities and limits of resources	
Recommendation 3: Relying on exhaustive prospective	
Recommendation 4: Supporting everyone in appropriating planetary <sup>2</sup> boundaries	
Recommendation 5: Making water and biodiversity protection central in decision-making processes	
Recommendation 6: Turning cooperation into a tool to activate territorial resilience	
CONCLUSION	23







## Introduction

### How to respond to essential needs in the South and in the North while keeping our planet livable?

If we look at greenhouse gas emissions only, we know the equation quite well: people with the less revenues are the least responsible for these, yet they are the first affected by it - both at the national scale and globally. We should thus adjust the guidelines that apply to the North and the South, to ensure a coherent share of responsibilities. The group that worked two years ago on resilience for the World Urban Forum in Katowice, already emphasized the need for climate justice.

The path to resilience is narrow and delineated: the concept of planetary boundaries as proposed by Rockström and al.<sup>1</sup> in 2009 lays down the Earth's livability conditions for humans. Beyond solely greenhouse emissions, this concept invites us to think but more broadly about the whole of planetary boundaries – 6 out of 9 being already overpassed<sup>2</sup> – to take the measure of the extend of the degradation on our ecosystems. This model defines thresholds beyond which a shift operates, a point of no-return, making it impossible for us to restore the balance. Once we overpass those thresholds, the interconnected livability boundaries open up an unknown horizon, wherein life isn't possible anymore.

the interconnected livability boundaries open up an unknown horizon, wherein life isn't possible anymore.

In the face of such a challenge, simple “reforms” or “measures” won't be enough. We need to transform, profoundly, our representations, our landmarks, and the sense we give to our actions. Planetary issues are intertwined, calling for our approach to be systemic, to cross factors and to work at various scales. Yet even though issues are global, their consequences are strongly local. This is why local territories are a place of choice to operate change, especially in the economy and in urban planning fields, if these bring together local authorities with stakeholders involved: institutions, companies, nonprofit organizations, citizen organizations, etc.

We drew two pathways, one for Europe and one for Africa, in order to punctuate the 2030, 2040 and 2050 horizons with a set of progressive measures. The objectives remain the same throughout, though: reviving territories (in reply to the “ecological debt”) and making the Donut economy and the planetary boundaries concepts, the new frameworks for public and private investment plans.

1 Rockström, Johan, and al. “Planetary Boundaries: Exploring the Safe Operating Space for Humanity.” Ecology and Society, vol. 14, no. 2, 2009. JSTOR, <http://www.jstor.org/stable/26268316>.  
2 Richardson, Katherine, et al. “Earth beyond six of nine planetary boundaries” Science Advances, vol 9, Issue 37, 2023. Science.org <https://www.science.org/doi/10.1126/sciadv.adh2458>.

# PART 1 : COLLECTIVE CHALLENGES

The consequences of climate change are becoming more and more spectacular: giant fires, destructive floods, extreme heat waves, winter drought, exhaustion of ground water, species extinctions, etc.

We hardly see the consensus that will allow us to bind ourselves to the Paris Agreement since the ideas it relies on keep on misleading us: “sustainable development”, green growth, technology, or the carbon-based prism to draw adaptation strategies.

## Emancipating from “business as usual”

we need to deeply rethink what we’ve called until now “local development”, and which has often consisted in adding, producing more and spreading. The urge to accumulate and to seek for immediate results can’t be the sole determining decision-making factor anymore. Our responses to essential needs should now also work hand in hand with measures protecting the living, preserving commons, guaranteeing our future – meaning, with long term priorities. In this perspective, the “Donut” theory<sup>1</sup> can be a framework to cross and connect challenges, in order to make human activities exist between a “social foundation” and an “ecological ceiling”.

## Toward a regenerative model

Each year, the Earth Overshoot Day (EOD - the calculative calendar date on which humanity’s resource consumption exceeds what the Earth can produce to regenerate those resources that year) reminds us that our debt toward the environment grows bigger. We live on credit, off of the natural resources that the Earth has been able to provide for us, to the point that we may end up reaching a ceiling and cause our resources to exhaust. Yet there are ways to think of regenerative projects for water, soils, ecosystems. When they include the Earth’s livability limits to their urban planning strategies, regenerative territories don’t limit themselves to mere attempts to not damaging their environment; they care, and repair, and prepare, for new and even more serious challenges.

## Transforming our economic models

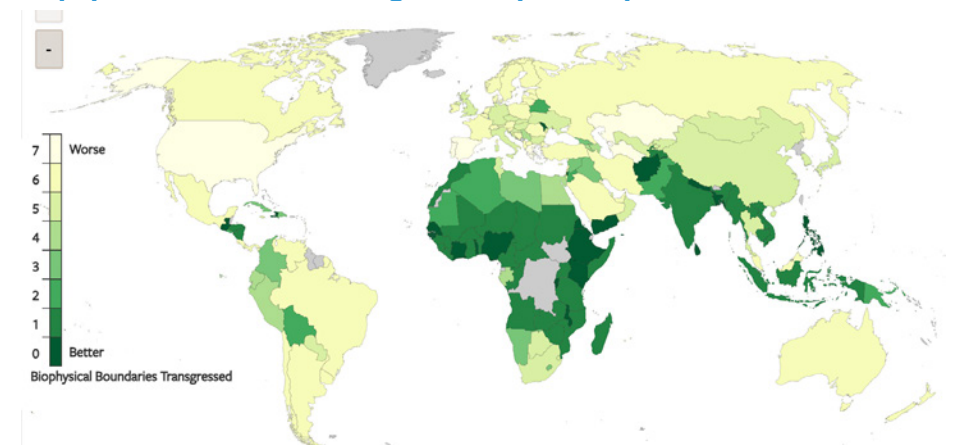
We need to deeply rethink also the goals and the effects of our economic activities. Wealth accumulation has been for now only measured through indicators such as the gross domestic product, but it should be reconsidered through the lens of the physical boundaries that condition livability on Earth. This change also implies to transform the way we think about prosperity. This is more a philosophical matter, but the importance of the issue at hand justifies that we take this side-step. Once we question the meaning of prosperity through the lens of what fulfilling essential needs, we can start engaging ourselves onto a path where we will let go of outdated projects – a renunciation synonymous with a strategic, positive and federating choice.

<sup>1</sup> Raworth, Kate (1 May 2017). "A Doughnut for the Anthropocene: Humanity's Compass in the 21st Century". The Lancet Planetary Health. 1 (2)

## Less confrontation. More cooperation.

Competitive approaches between territories need to be replaced by cooperation and solidarity instead, at all territorial levels. To ensure our collective success, structuring a fair share of the ecological transformation’s costs and benefits is key. At the global level, the concept of climate justice calls for equal and balanced dialogue, and requires coordinating actions with the most fragile populations and countries, being the most affected by the Anthropocene and the first victims of the historical growth of industrialized nations. The North has to learn from past experiences, as well as from Southern countries’ approaches to essential needs. What can we thus learn from resilience strategies that get implemented in the South?

## Biophysical boundaries transgressed by country



Daniel W. O’Neil, Andrew L. Fanning, William F. Lamb et Julia K. Steinberger, “A Good Life for All within planetary boundaries”, *Nature Sustainability*, 1, University of Leeds, 2018, p. 88-95.





## PART 2: GUIDELINES FOR 2050

The PFVT “guidelines” are operational synthesis that rely on the outcomes of workshops and crossed perspectives held between French and international actors. They are structured around two axes of reflection, crossing different topics: 1, Actors and governance; 2, Disparities and social justice. Using these documents, PFVT intends to support territories in respecting their commitment to the Urban Agenda, and provide a set of concrete policies, actions and tools for the short-, mid- and long runs.

These three guidelines result from crossed perspectives between French and international actors (Mediterranean area, Africa, etc.); they define pathways for all to follow (purple guideline), as well as specific pathways (blue for Europe, pink for Africa), to reach the set goals by 2050.

### **Various guidelines to be differentiated based on the territorial specificities in front of our planet's livability limits**

Although the challenges induced by not overpassing planetary boundaries are global, the consequences of it are local, and so are the solutions. That's why we must absolutely consider each region's specific needs, and particular context. The needs and resource consumption levels aren't the same in Europe and in Africa.

### **One way to solve the issue: sober resource use and cohesion!**

Developed countries overall need to be exemplary in terms of reasoned and reasonable resource use (sobriety), in order to leave developing countries able to reach the minimum living standards they need to match the “social foundation” level of the Donut economy model. If reaching those life conditions implies for developing countries to exceed planetary limits, then it will likely be developed countries' duty to compensate this catch-up by being even more sober with their own resources use.

FEUILLE DE ROUTE

**BETWEEN PLANETARY BOUNDARIES AND BASIC NEEDS**



**Inequalities and social justice**

A holistic approach to build a safe and fair environment for humanity

**Economic stakes and funding**

Planetary boundaries as a framework for public and private investments

Preserving Water Resources

Improve access to water resources by including the notion of essential needs to the management of common goods

Identify resources • regulation • legal frameworks

Acting Locally

Define action priorities at the national and regional levels based on the planetary boundaries and apply/adapt them locally

Data • Legal framework • democratic process • diagnosis

Opening fields of action

Strengthen the capacities of local government bodies by moving beyond the fragmented political and administrative action frameworks

Cross-sectorial coordination • cohesive institutionalized and legal frameworks • ecosystemic approach

Observing

Analyse the economic and social feasibility of local projects in regards to their impact on planetary boundaries

Open data participatory platforms

Building awareness

Develop a real awareness and a real culture of planetary boundaries among elected representatives, companies and people

Education and training from the early years

Defining a common ground

Set-up a local indicators system at the international level to display how a territory contributes or not to exceeding planetary boundaries

Statistic data • indicators grid • research

Assessing impacts

Analyse the economic and social feasibility of local projects in regards to their impact on planetary boundaries

Grid analysis • studies and indicators of opportunities

Preparing for economic evolutions

Foster the financial sector to shift economic model

Market studies • strategic monitoring • collaboration actions to support new needs and rules • functionality economy

Condition funding

Create eco-conditionality criteria applying to funding conditions, based on the typology of energies in use (renewable, fossil, etc.)

Life-cycle analysis • environmental assessment • environment rules • 1% rule

Supporting

Help individuals impacted by economic change

Employment safety nets • economy (loans, micro-credit, subsidies) • impact assessment

Promoting alternative consumption

Encourage new ways of producing and consuming

Training and education from the early years • awareness campaigns

Taking action on international trade

Produce and develop local activity sectors

Grow local product varieties, locally, adapted to local needs

Shift paradigm to provide better answers to basic needs

Accelerate the change of economic model to build a livable future

## Europe

### OBJECTIVE

### POLICY

### LEVER

2023

2030

2040

### 2050 OUTLOOK

#### Inequalities and social justice

A holistic approach for a safe and fair environment for humanity

Experimenting with humility	Implement learning and experimentation perspectives that include the idea of inter-operability between territories	Domino effect modelling	
Building a national legal entity	Harmonize the law by setting up legal corollaries to public policies	Legal framework	
Cooperating	Organize great gatherings with the stakeholders involved to reach collective flagship goals	Cooperation between the public and private sector, and the population	
Respecting the planet	Make the known planetary boundaries a starting point to define the framework of a collective agenda	Overviews • digital modelling	
Building transparency through monitoring	Ensure that local policies and international agendas are in line with the due accountability to planetary boundaries	Sector-specific registers • reporting	
Assessing	Assess the efficiency of a project in regards to local policies, following a systemic and regenerative approach	Experience feedback: urban planning agencies, cities, companies, local economy actors	

Lead to a more reasoned and collective management of common goods which respects the planet and its limits

#### Economic stakes and funding

Planetary Boundaries as a framework for public and private investment

Treating water as a limited resource	Manage and regulate future water usage conflicts at the local scale	Training of elected representative • legislation • local water policy	
Managing resources	Regulate water usage and fight waste	Progressive tax system for big users	
Improving investment efficiency	Implement tracking between public actions and the budgets allocated to transition	Investment • data • human resources • creation of a delegation for "ecological finance and accounting"	
Structuring funding sources	Create a cohesive funding chain which includes the ideas of cumulation and conditionality on planetary imprints	Public/private funding in proportion with the commitments already signed off • generalization of eco-conditionality • awareness building • water agencies	

Operate a change of economic model, acknowledging planetary physical boundaries

## Africa(s)

#### Inequalities and social justice

Taking action on land management rights	Regulate the law by explicitly acknowledging customary land rights	Land management institutions • creation of a register acknowledging the spiritual value of the land • build awareness about land rights	
Improving access to essential services	Fight gender and social inequalities related the "load of water"	Awareness-building • rainwater reuse • domestic water filters • drip irrigation	
Going beyond administrative limits	Ensure more flexible, dynamic, strategic, inclusive and locally-based planning processes to guarantee fair and equal access to essential services	Grids and micro-grids • effective decentralization • democratic local governance • digital tools and platforms (mobile money, e-wallets, e-administration platforms)	
Structuring resources management	Use bioregions as the framework to manage common goods	Mapping • management plans • local heritage and geomorphic scale	
Structuring resources management	Rely on topic-based strategies (biodiversity, soil, water, etc.)	Resource management plans • environmental assessments • sustainability indicators • mapping	

Lead to a collective and reasoned management of common goods which fulfills needs inclusively

#### Economic stakes and funding

Including the most vulnerable populations	Foster alternative solutions to financial service providers	Savings and Credit Coopératives • reliable and exhaustive legal framework to develop financial cooperatives	
Enabling access to funding	Organize funding chains to build more capacity	Surveys about financial products with an effective demand (their type and modalities) • digital payment solutions • training on possible funding solutions available to women too	

Operate a change of economic model to ensure a safer and fairer environment





FEUILLE DE ROUTE



© Unsplash - Evelt Studio

# PART 3 : RECOMMENDATIONS

## Recommendation 1

*Challenge: Ensuring cohesion between the North and the South to grant equal access to resources in the face of essential needs*



### Redefining essential needs to aim for less energy-hungry consumption

- Shift paradigm: natural resources are neither infinite nor free
- Toward a strategic bifurcation: give priority to answering essential needs and use the territorial scale to make sure planetary boundaries don't get overpassed.
- Prevent conflicts around resources by addressing the question of how they get allocated and shared
- Choose for the "care" approach: ensuring access to resources and services for the most vulnerable people (housing, health, food and water, education and culture, citizenship, security and justice).

### A Marshall plan for water, Pays de Fayence, 2023 (FRANCE)

Faced with a yet unseen drought episode, 9 mayors from Pays de Fayence (in Var, South of France) decided to declare a 5-year moratorium on new building permits, given the fact there won't be enough water to sustain the needs of new inhabitants.

## Recommendation 2

*Challenge: Breaking away from compartmentalized approaches and choose for holistic strategies instead, relying on more adapted indicators*



### Setting up local diagnosis prior to each project, making sure to include the availabilities and limits of resources to it : Observe, Understand, Decide.

- Draw inspiration from the "Donut" concept to establish complete check-in of the situations, considering each time both the social foundation and the ecological ceiling

- Inject a sense of responsibility and of accountability toward the collective management of commons on a territory
- Apply the territorial triple-capital ecological accounting system to economic activities
- Rely on collective scientific grounds and on solid modelization and data collecting systems, to assess the state of resources.
- Facilitate data access to help strengthen local diagnosis and identify opportunities to regenerate soils, to manage water, to develop renewable energies, etc.

### Territorial application of planetary boundaries in Sud Loire, 2021 (FRANCE)

Saint-Etienne's urban planning agency (Epures) and MINES Saint Etienne (engineering school) worked together on the first research that aims to apply the scientific frame of planetary boundaries to the local level, in the territory of Sud Loire.

## Recommendation 3

*Challenge: Encouraging practices that anticipate long-term impacts*



### Relying on exhaustive prospective

- Acknowledge that we've exceeded 6 of the 9 planetary boundaries, and anticipate on risks and impacts to come
- In developed countries, work actively toward going back under the environmental ceiling, thanks to more reasoned resources consumption
- Foster dialogue between fields and stakeholders to deepen our understanding and perspectives about the future
- Adapt legal regulations thanks to more flexible frameworks that can embrace unexpected changes in the long term.
- Promote experimentation prior to territorial application (transitory urban planning, living labs, etc.)

### Developing a low-income neighborhood in a flood-risk area in Douala, 2016 (CAMEROON)

Due to urban sprawl, poor people in Douala set up in humid areas subject to floods-risks. Following an innovative approach, the sustainable development and valorization project that was funded in Makèpè Missokè neighborhood by the urban community of Douala, AFD and the French Facility for Global Environment, aims to include climate-induced risks into urban planning policies, and to thereby make this low-income neighborhood more resilient. The project is part of a broader program called "Douala, sustainable city" .



## Recommendation 4

Challenge: Promoting a logical approach of planetary limits



### Supporting everyone in appropriating planetary boundaries

- Promote the benefits of sober resource use for our lives (for our health, the economy, the environment) and use therefore positive and federating storytelling around the idea of a transition that we're choosing for.
- Get everyone in the population on board by providing training about the challenges at hand and by sharing new imaginaries, new methods
- Grow capacity among decision-makers, as they are the ones able to operate immediate change: local authorities, companies, state institutions. In parallel, deepen and develop the school programs of the youngest.
- Use a sensible and democratic cultural approach to support the understanding of those complex challenges and build collective imaginaries around sober energy use.

#### "Où atterir" Collective (FRANCE)

This project was initiated by social scientist Bruno Latour in 2017. It intends to question our essential needs, dependencies and means of subsistence in order to give orientations to public policies. To operate that sidestep, the group uses several tools: voice and body exercises, collective writing and listening sessions. Art is also used as a way to capture a kind of reality that we're not used to mobilize anymore. <http://ouatterrir.fr/>

## Recommendation 5

Challenge: In the face of mass extinction of life, enhancing biodiversity should now be the matrix of local policies.



### Making water and biodiversity protection central in decision-making processes

- Preserve biodiversity thanks to the "Avoid, Reduce, Compensate" sequence, part of the zero net land take strategy. An old tree brings more ecosystemic value than a newly planted one.
- Foster collaboration between the private and public sectors to implement sustainable water management solutions. Overall, urban land is privately owned; it is thus worth triggering new partnerships to mobilize territories as a whole: to manage rainwater infiltration, ensure ecological continuities, create freshness islands, etc.
- Develop more Nature-based Solutions (NbS) to answer ecological challenges while improving people's life conditions
- Organize a collective management of commons by the community, to put buildings and estates in the service of collective projects, and to grant legal entities to nature areas and non-human beings.

## Overseas Biodiversity Counter, 2018 (FRANCE)

French overseas territories make for 80% of the French biodiversity. The Overseas Biodiversity Counter developed together by the State, by Museum d'Histoire Naturelle and by the French Biodiversity Office (OFB), enriches the Naturefrance digital portal by presenting a focus on overseas territories. It intends to promote a global vision on overseas biodiversity issues, in order to invite everyone (professionals, inhabitants and travelers) to get involved at their own scale to preserve this exceptional biodiversity.

## Recommendation 6

Challenge: The workings of ecosystems and environmental challenges go beyond the strict limits of administrative frameworks.



### Turning cooperation into a tool to activate territorial resilience

- Adjust the action focal in order to allow for collaboration to happen between bio-regions' territories (based on their bio-morphology, geo-morphology, hydrography) and emancipate ourselves from the usual administrative limits – thereby broadening our action scope.
- Make cohesion and social inclusion a goal, by elaborating concerted actions between territories, and at the global level.
- Support knowledge sharing at all scales of governance and more importantly at the local scale, in order to collect fragmented, sensitive, historical information and thereby gather a precise and available set of data.
- Foster international cooperation in order to build global strategies to pay back the ecological debt, acknowledging the fact that its impacts transcend national borders.

## Nile Cooperation for Climate Resilience (NCCR), 2021

The project was initiated by CIWA (Cooperation in International Waters in Africa) to improve cooperation systems between countries from that area through elevating the voices of civil society and reinforcing hydro-diplomacy. It aims to enhance resilience to water insecurity, and to transform water management infrastructure so to lessen the more and more intense impacts of climate change.







# Conclusion

## For a safe and fair future

The development model that prevailed until now, which, since the beginning of the Northern countries' industrial era, has been fueled by fossil energies and disregarding of the living's essential role, is out of date. It brought humanity on the edge of a precipice, making us go beyond the physical boundaries that condition our capacity to remain living on Earth in the future.

The planetary boundaries and the Donut economy scientific frameworks are simple tools to support decision-making. They should help us connect our answers to economic and social needs to the ecosystems' effective capacity to absorb our human activities. However, designing human activities in a

sustainable perspective implies to widely share challenges and to ensure equal access to services and resources for all.

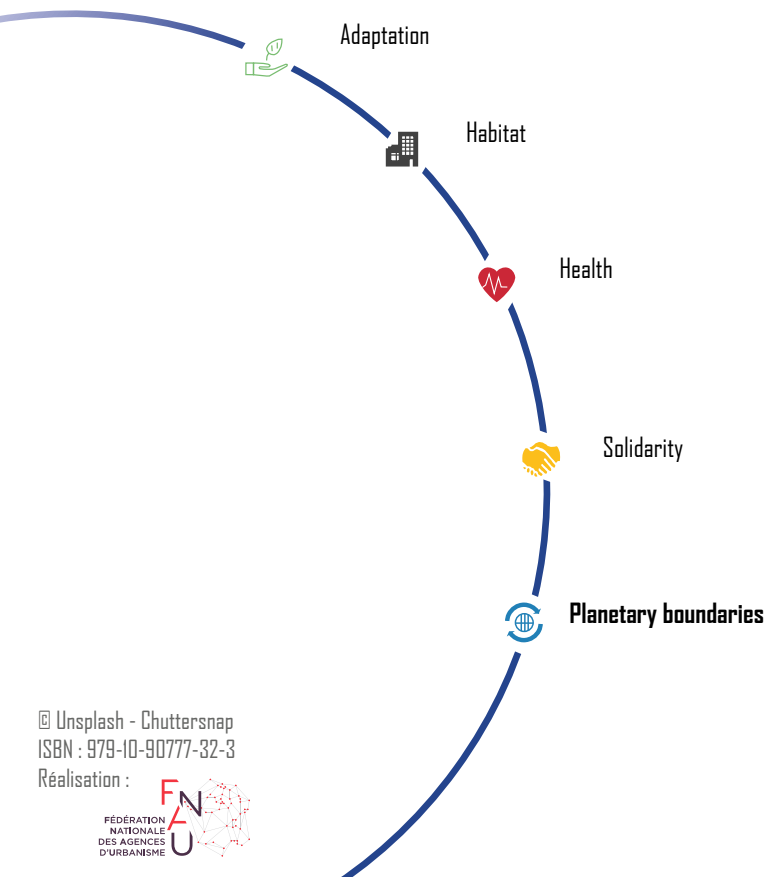
With the World Urban Forum coming up in Cairo where the future of the 2030 Agenda and of the UN Sustainable Development Goals will be discussed, this PFVT work group hopes that this booklet will serve as a useful contribution to the debates. By recalling the challenges related to the Anthropocene and drawing up sustainable perspectives based on inspiring examples, we hope to have shed a light on the ecological, economic and social transformations that we vitally need.

Unsplash - Paul Pen





Launched in June 2011, the **French Partnership for cities and Territories (PFVT)** is a platform supported by the French Ministries of Europe, Foreign Affairs, Culture, and Ecological Transition and Territorial Cohesion. The PFVT is a multi-stakeholder partnership and think-tank meant as a hub to exchange and showcase the expertise of French urban development actors on an international scale. It involves almost two hundred organizations reflecting the diversity of France's urban expertise, helping to build a shared French vision based on exchanges and innovative, sustainable experiences. <https://www.pfvt.fr/>



© Unsplash - Chuttersnap  
ISBN : 979-10-90777-32-3  
Réalisation :

