



Working group synthesis

RESILIENCE AND CLIMATE CHANGE

2019 - 2020

Produced for the World Urban Forum of Abu Dhabi, February 2020
"Cities of opportunities: bridging culture and innovation" and for the
Africa-France Summit for sustainable cities, June 2020

EDITORIAL

Climate change has become a major challenge of our societies. It impacts millions of lives and aggravates already difficult situations, relation to biodiversity, food production or access to decent life conditions for all. The mistake would be to think that only preventive solutions can be thought out.

To anticipate the effects of climate change and decrease the vulnerabilities of territories by promoting their resilience, we must envision a profound transformation of urban and economic models, as well as think about alternative development models.

In this context, concrete measures need to be implemented which shouldn't only be about new tools; the action priority

must rather be re-centered around the core: an urban and economic development that is sustainable, inclusive and makes a low consumption of energy and land, in respectful of both the individual needs and of the general interest.

To reduce inequalities, the general interest must be at the heart of our reflections about the development of territories, in accordance with the New Urban Agenda.

It is of crucial importance that we create a mobilization at all levels, cities, territories and organizations, from the most local to the most global, to reinforce resilience of the territories and of the people who populate them.

**Sylvain Chapon, Engie
Camille Wainrop-Boyon, Sustainable City by France**

Co- Pilots



With contributions from





TABLE OF CONTENT

PART 1	
DEFINITION AND APPROACH	6
PART 2	
RECOMMENDATIONS AND EXAMPLES	
Recommendation 1	11
Governance is essential to implement resilience policies regardless of the scale of the threatened perimeter	
Recommendation 2	16
Low consumption of energy and land in the cities: key tool of resilience	
Recommendation 3	19
Involving all territorial actors: major component of resilience	
Recommendation 4	22
Integrate nature in the cities	
Recommendation 5	25
Rethink the territories after a crisis	
Recommendation 6	28
Cooperate to reach our goals together	
CONCLUSION	30







PART 1

DEFINITION AND APPROACH

Cities and territories in the 21st century are a web of infrastructures that ensure the continuity of movements, functionalities and services meant to answer basic socio-economic and health needs. Regardless of the world region we look at, individual needs increase and diversify. This tendency increases under the pressure of the constantly increasing world population. In this fragmented and complex world, we must facilitate and secure the means and the networks that connect cities and territories in order to rationalize and optimize interconnected infrastructures and to significantly improve the decision-making process of political leaders and operators, aiming for cohesion and for a low consumption of energy and land. For close to 20 years now, the idea of resilience has progressively grown into a stake of local, national and international governance.

Confronted to the growing urbanization

of the world, happening in a more or less controlled way, to the intensive exploitation of natural resources and to the frequent occurrences of extreme climatic events, many international organizations joined forces to draw analysis and solutions and to enable cities and territories to better resist and absorb the shocks they go through, in order to also overcome them. These organizations, gathered for the Paris Agreement and for the Cadre de Sendai (for the reduction of catastrophes' risk between 2015-2030) are public entities (AFD, ADEME), private foundations (Rockefeller Foundation) and company-led or citizen-led civic organizations (FNAU, Comité 21, ENERGIES 2050).

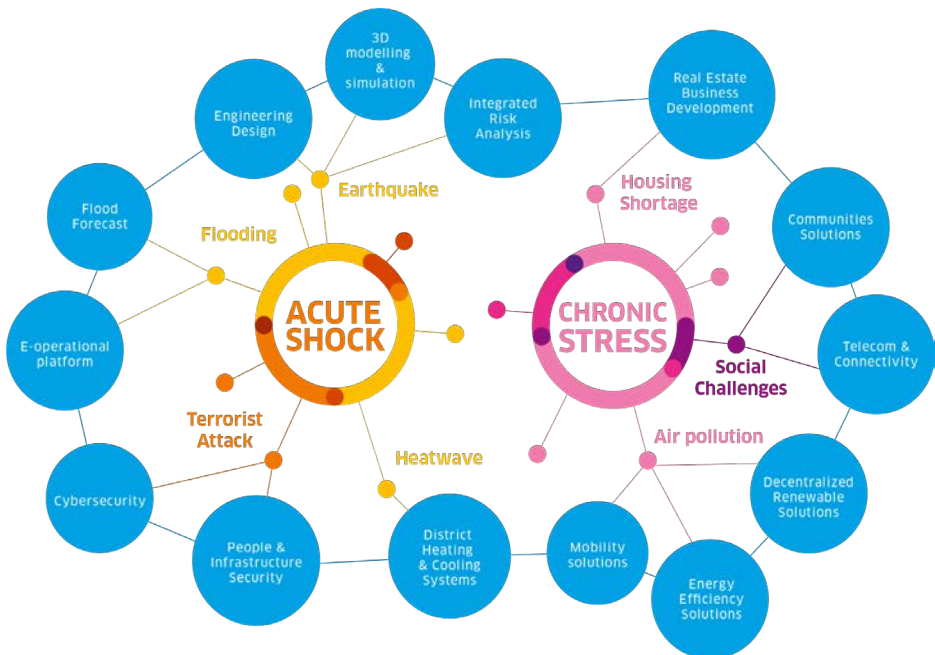
The capacity of cities and of local communities to overcome their malfunctions has become crucial, regardless of their level of independence or development. This capacity is made all the more necessary by the increased





vulnerability of human ecosystems faced with risks that keep on increasing in frequency and in intensity: interdependence of digital networks, pollution, lack of reliability of constantly expanding logistics lines, embrittlement

or questioning of official institutions and information systems, growing social inequalities; all of it being factors that can lead to situations of strong tensions. Shocks and risks can be acute or structural: heatwaves, floods, financial





crisis, drying of water resources, limited access to energy, pandemics, lack of administrative or planning capacities, brutal financial crisis, demographic breaks.

Resilience is defined as “the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow, no matter what kinds of chronic stresses and acute shocks they experience” (100 resilient cities)

In the very first place, we must identify the hazards that territories face through adapted studies in order to precisely define their resilience capacity.

In the resilient approach, many experts and researchers think about the city as a living organism exposed to various and more or less serious risks. Those risks must be answered at different levels: organizational, technical, sanitary, sociological and safety-wise. This approach is called ‘biomimetic’, implying that we can learn from natural phenomena. Places of power, business and cult, cities are also mobilized solicited in regard to multiple services: transportation, information system, energy production and consumption, support to economic and cultural activities, assistance to inhabitants of all age groups. They will be even more solicited by 2050, when two thirds of the world population will be living in urban environments, emphasizing the impact of climate change (urban heat pockets, soil sealing). Given the increasing number of catastrophes caused by climate change, a shift of paradigm needs to be operated.

The idea of urban or territorial resilience implies from the cities a transdisciplinary and holistic approach, sole guarantor of sustainable systems and solutions that allow to avoid a domino effect.

Cities must be thought out as systems made out of interdependent and interacting components, in order to:

- think about and anticipate how potential major disruptions can impact them
- define crisis management methods taking into consideration cities’ complexity
- imagine how to rebuild an urban system after a crisis

Committing to a resilient approach means driving the planned strategies through or for example various systems of urban and strategic planning, through policies and measures in favor of environmental and energetic transitions, or through rational network policies – making sure they actually get implemented. A challenge for the transitions of the cities and the territories is to commit on the one hand to significantly decrease greenhouse gas emissions so to best contribute to the fight against climate change; and on the other hand, to make sure organizations adapt to climate change. The implementation of these 2 axes ((fight against climate change and adaptation) will be of decisive influence in the next decade (2020-2030).

Another decisive point for a resilient approach is to take into consideration the conservation of certain vital resources, among which water, soil, energy and food



production.

Cities must be thought out as part of greater ecosystems (especially in relation to rural areas) in order to look for complementary resilience resources: flooding fields, population movements, etc.

Main pillars of resilience:

- Fight against climate change
- Protect resources (energy, raw material, water, soils) and biodiversity;
- Strengthen infrastructures;
- Reinforce the cohesion between means and between citizens;
- Reduce the vulnerability of the most underprivileged populations;
- Foster the solidarity and desirability of our cities;
- Prevent natural, industrial and health hazards;
- Anticipate change with planning tools.







PART 2

RECOMMENDATIONS AND EXAMPLES

Recommendation 1

Governance is essential to implement resilience policies regardless of the scale of the threatened perimeter.

The scale at which a resilience policy is implemented is crucial. All levels of governance must be involved in a resilience policy so to best define their respective role and to be more efficient at all stages of a crisis: anticipation, management and reconstruction.

1. Crisis anticipation

Strong political support: a top priority

The government or its dedicated services must be able to define the division of competences, means and intervention powers between governance levels (State, provinces, cities) in order to tackle resilience and to coordinate policies at all levels.

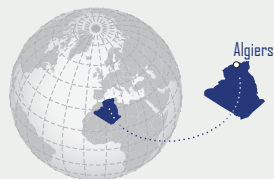


PROJECT

Vulnerability and adaptation of the Algiers Wilaya (province) to climate change and to natural risks

With the support of the Ministry of the Environment and the funding of the Caisse des Depots et des Consignation, the Algiers Wilaya took a fresh look at its urban planning tools at all scales, to strengthen its adaptation capacity in the face of climate change and of natural hazards: intensity and frequency of average rainfalls; revision of its flood plains;

alert systems; reinforcement of strategic infrastructures to face crisis; revision of urban planning documentation; assessment of prevention costs. (Algiers - ALGERIA)



en.institutparisregion.fr

Build coherent public policies at a local level

In case of antagonist public policies on a same territory, implement cohesion systems to link institutional actors and civic society, who will decide to take concrete actions and implement them (if considered adequate and legitimate by them)

To do so, we must define a regulation framework, adopt urban planning documents which plan to prohibit or implement building requirements based on the hazard levels of the affected area and under the control of local authorities; or establish security perimeters around hazardous installations.

Develop an adaptation plan to climate change

Studying the impact of climate change on the territory will allow to assess this territory's vulnerability to risks, in particular through the study of the territory's degree exposition and sensitivity. The goal, then, is to build a hierarchy the level of vulnerabilities, in accordance with their various level of impact.



TOOL

The SEVESO Directive in Europe

The implementation of the SEVESO Directive follows the Seveso catastrophe in Italy. It establishes a classification of the sites presenting a risk related to technologic hazards based on the quantity and types of products present on those sites.

The registration of a new SEVESO installation generates the implementation of a security perimeter within which no housing can be settled, in order to protect inhabitants and to increase the territory's resilience.

Cities of all sizes have to get involved at their level with implementing resilience policies, in the same way that they have to get involved with implementing social and energetic policies.

2. Crisis management

Governance and implementation of crisis management public policies must lead to limiting crisis' impacts.

Anticipate and inform

One of the top priorities is to implement an efficient alarm system at the local scale to prevent great risks from happening with maximum anticipation, and to efficiently and quickly inform the entire population of a given territory.

Reinforce the coordination of policies in crisis situations

To do so, a chief resilience officer can be named (whose action can expand to various levels of governance). He/she is in charge of leading measures that foster a good management of crisis situations, thanks to a transversal approach of crisis-related issues.





Ensure the provision of basic services

Through dedicated policies, local authorities must make sure that operators of vital importance provide basic services (water, electricity and communication means) during crisis and during the time it takes for the situation to get back to normal.

Collaborate with partners

Lastly, local authorities must collaborate with neighboring partners and territories to look for support with crisis management, to limit the negative impacts that follow the shock they suffered.





3. Prepare the post-crisis times

Authorities should plan the reconstruction of the areas that directly suffer the negative effects of the shock.

Identify and assess to be able to move forward

Identify circumstances that aggravate the shocks' consequences and assess their level of impact on the losses to be able to rebuild on a more solid basis.

Limit the impact of the shock and be better prepared for it

New planning documents and regulations can emerge from such studies. This process should necessarily integrate all territorial actors, in a concern of ownership of the measures that must be collectively decided upon.

In this dynamic, we can progressively fine-tune the knowledge about the consequences of climate change and about the methods available to adapt to. It is therefore crucial to plan an adaptive management.



PROJECT

The vulnerabilities of Dakar in front of climate change

An analysis of the vulnerabilities of Dakar was run as part of the PCTI (Plan Climat Territorial Intégré – Integrated Territorial Climate Plan) of the region of Dakar. Using a systemic approach, it sheds a light on the Dakar region's vulnerabilities related to climate change. The research describes interactions between social and natural systems. It displays the vulnerabilities specifically related to this region, based on a classification of vulnerability types embracing all sectors involved. This type of holistic analysis is an essential step to raise awareness among

actors about the scale of risks and to prepare for the measures needed to face them. (Dakar - SENEGAL)



en.institutparisregion.fr





Recommendation 2

Low consumption of energy and land in the cities: key tool of resilience.

Turn to the circular economy

Given the increasing number of catastrophes incurred by the current climatic disruption, a shift needs to happen. To do so, encourage recycling and reuse practices to limit the production of new products that consumes more resources.

Ally a low consumption of energy and land with economic development

Promoting a low carbon economy also appears like a viable development model in certain areas of the world, where greenhouse gas emissions remain low. It decreases the negative impacts of production on the environment without limiting opportunities of development (especially economic) for the population.

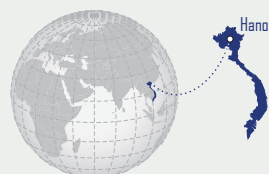


PROJECT

Life quality – City quality

Supported by the Île-de-France region, the City of Hanoi strengthens its resilience by finding new ways to plan. The “Qualité de vie – qualité de ville” project aims to reduce mobility needs by densifying neighborhoods located around the stations of the new metro line. The goal is to limit greenhouse gas emissions thanks to urban development, targeting a moderate use of land and energy. The project relies on a greater coherence of

the mapping of activities and functions in the city.(Hanoi - VIETNAM)



www.iledefrance.fr





Reduce resource consumption

Act at local scale by rethinking the city as a place of low consumption of energy and land in order to: decrease greenhouse gas emissions, limit waste currently incurred by our consumption-based model, protect soils from informal constructions and intensive cultures... not forgetting the development of territories and of their inhabitants.

Take action on buildings and construction

Rely on innovations in the construction and architecture sectors that emphasize good practices in terms of buildings' energy saving as well as energy saving of the adapted urban structures.



The TYCCAO program

The TyCCAO project (*Typha Combustible Construction Afrique de l'Ouest* – Typha Fuel Construction West Africa) is the product of a partnership between ADEMA, GRET, MEDD Senegal, Biobuild Concept, OMVS, FFEM et Fonds Vert Climat (Climate Green Fund). It contributes to the energetic transition and to the fight against climate change through the development of green fuels' use and through energetic efficiency in the construction sector,

thanks to the massification and dissemination of products made out of typha, an invasive reed that proliferates in the Senegal river basin. (WEST AFRICA)



www.ademe.fr/en



Rethink the energy, food and water provision

After an extreme event, a greater water and energetic autonomy can help accelerate the recovery of basic energetic needs (based on the nature of the hazard and on the configuration of the infrastructure). This process fosters also the responsibility of the population, urban or rural.

PROJECT

On the way to energetic autonomy with the Simpa Energy project

Created 5 years ago, Simpa is a start-up that sells solar home systems (individual solar kits) to households in rural India (until now, in the states of Uttar Pradesh, Bihar and Orissa). These kits include a solar panel to be installed on a roof, a battery, LED lamps, a fan and a TV. This equipment is sold as lease-to-own, allowing clients to become owners of the



system by paying a lease via a network of commercial/business agents. (INDIA)

www.simpanetworks.com

TOOL

Be Circle web platform

This is a web platform of geographic data designed to rethink and reorganize territories to create cycles of resources at the local level (water, energy, materials).

The goal is to improve the competitiveness and environmental performance of activity zones and of cities by encouraging their functioning as real ecosystems.

www.be-circle.com





Recommendation 3

Involving all territorial actors: major component of resilience.

Social inclusion and development of a hazard culture policy

Involve all citizens in the governance and prevention processes, including the most vulnerable ones. A systematic consideration of the general interest must help to counter risks. Must be included in the process, the populations who live in informal neighborhoods, who often suffer hazard consequences the most violently.

Encourage solidarity and cohesion between citizens, and between citizens and authorities

Foster the creation of social link between inhabitants and local public authorities (thanks to town halls, neighborhood organizations), as well as between inhabitants of a same territory. These measures contribute to decrease human loss in crisis situation, turning citizens into real relays of the public authorities when it comes to prevention, awareness and good practices, regardless of the level of development or resilience of the urban infrastructures.

Involve inhabitant in the planning of the resilient city

Directly involve inhabitants in the construction of essential infrastructures by activating local resources as much as possible, to create virtuous circles of wealth creation. They can also find support in external partners (public, private or civic society) for their house improvement dynamic, and thereby become key players of their own resilience.



PROJECT

Action of 'La Voûte Nubienne' Associations

The 'Voûte Nubienne' association works to improve life conditions by leading construction projects (houses, health centers, schools) that bring inhabitants and crafts makers of

the territory together. Inhabitants acquires thereby a precious training that allows them to build infrastructures by using local materials exclusively.

www.lavoutenubienne.org/?lang=en

Create urban planning agencies

Furthermore, train other territorial actors to ensure sufficient autonomous resources and limit the dependency to resilience. The creation of urban planning agencies reinforces the knowledge about the different places and spaces thanks to studies, but professionals from other fields must also be trained to ensure a local and cross-sector consideration of resilience challenges on a given territory (architecture, urban landscaping, urban service management, sociologists...)

PROJECT

The Metropolitan and Territorial Planning agencies (MTPA)

The world network of urban planning agencies fosters exchanges between metropolitan and territorial agencies, helps with the creation of new agencies and promotes the role of territorial agencies in front of local and national authorities. Territorial agencies are

essential cross-disciplinary platforms to prepare territorial strategies and policies, to ensure the follow-up of territories' dynamics and to guide public concertation about territorial development and urban planning.

www.mtpa-network.org/en/





Educate and empower actors

Educate inhabitants and civic society organizations about crisis and hazards, keep them informed and make them aware of the hazards that are different from natural catastrophes (fight against pandemics, erosion, agricultural practices)

PROJECT

ENERGIES 2050 Association

ENERGIES 2050 guides territories with the development and implementation of resilience strategies and of low carbon development in about 50 countries. We can mention the annual continuing education for environment professionals, which since 2012 has led to taking into consideration resilience and the energetic transition in Africa, in partnership with IFDD (Institute of Francophony for Sustainable Development), ONU Habitat, and African School of Architecture and Urban

Planning (EAMAU - *Ecole Africaine des Métiers de l'Architecture et de l'Urbanisme* –). This also happened in partnership with Task Force climat, initiated in 2017 by the United Local Cities and Governments of Africa (ULCG Africa), focused on the territorial development of climate commitments and on the resilience of territories in 54 African countries. This organization gathers UNFCCC, C40, BADm ICLEIAfrica, ENERGIES 2050, BOAD, CDP, CoMSSA...

www.energies2050.org/?lang=en

TOOL

An innovating education program about the strategy of territorial resilience

Both a strategic and operational tool, The IVD (Institut pour la Ville Durable – institute for the sustainable city) is the organization formed by French parties involved in sustainable cities, gathered in the general interest to promote good practices on sustainable cities both in France and internationally. Part of its missions is to trigger and circulate innovating

action-training. A training about strategies of territorial resilience, available online and offline, attracted already 70 participants who mostly come from local authorities - obviously the most affected by hazard and shock management as well as by their consequences and by the regeneration that must happen afterward to move on.

www.francesustainablecity.org





Recommendation 4

Integrate nature in the cities.

Take action on the urban environment

In front of the frequent occurrences and the intensity of climate change-related crisis (heatwaves, fires, floods), give populations more means to protect themselves by combining “grey solutions” (material, constructions) with green solutions (nature-inspired, development of green spaces, water) and soft solutions (practices, urban shapes).



TOOL

Ademe's guide Design urban development with nature

In this publication, ADEME provides local authorities with insights and orientations about better ways to integrate nature to urban spaces through planning. Nature is presented as a key tool of cities' development and of

the development of sustainable territories, since it contributes to the conservation of biodiversity, air quality, soil quality, comfort...

www.ademe.fr/en





Fight urban heat pockets, flood risks and pollution

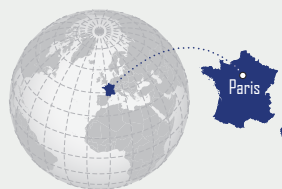
Grow green areas in cities (parcs, green corridors for soft mobility, roofs/riverbanks greening, crossroads renaturation, school yards renaturation). Many correlated benefits can be expected: improvement of life conditions, new socialization spaces for inhabitants, service offer for an ecosystem approach, green employment, attractivity, improvement of citizens' health.

PROJECT

Paris – the “Oasis” schoolyards: an answer to climate change challenges

The “Oasis” project aims to progressively transform all elementary and middle schools in Paris into “urban freshness oasis”. The idea is to offer greener schoolyards made with more natural materials, less asphalt and with more permeable soils.

Product of the resilience strategy of the city of Paris, the goal is to reinforce the territory's



capacity to face the great climatic and social challenges of the 21st century.
(Paris - FRANCE)

en.parisinfo.com/

Preserve biodiversity in the heart of cities

This type of green areas in the middle of cities are also true biodiversity reserves and a shelter for living species that must be protected from the deforestation happening in parallel, and from monocultures and pesticides that contribute to the destruction of biodiversity. We must therefore implement different management method as well as adapted maintenance means (not harmful for our health or for biodiversity).



Include biodiversity in urban planning decisions

The green and blue corridors is a system in favor of the protection of biodiversity, a recommendation in conformity with the “Great Green Wall for the cities” initiative preconized by the UN Food and Agriculture Organization (FAO).

PROJECT

“A Great Green Wall for Cities”, a FAO initiative

The Food and Agriculture Organization (FAO) and its partners wish to support projects in about 30 African and Asian countries with the objective to create 500 000 hectares of urban forests by 2030 and to preserve the ones that already exist.

Trees and urban forests are real assets to help decrease air temperature (up to 8 degrees) while reducing costs and nuisances of A/C's and contributing to water quality. A dedicated fund supported by various financial backers should help to collect the \$1.5 billion needed to plant and preserve those forests.

www.fao.org

Draw inspiration from nature-based solutions

Fight against urban catastrophes by developing nature-based solutions: re-meandering and reforestation of the banks of the rivers crossing cities, augmentation of floodplains zones or even micro-zones in neighborhoods, decrease of the run-off of urban areas and enable permeability of city soils.





Recommendation 5

Rethink the territories after a crisis.

Post-crisis strategy for a more resilient territory

Transforming urban areas to make them more resilient after a crisis is sometime difficult; yet it is of vital importance to establish a management strategy of post-catastrophe reconstruction, to allow for a revival of the territory with a quick return to normal and with a sustainable and resilient redevelopment of the affected areas.

Rebuild based on the Build Back Better principle

Reconstruction should enable the planning of more resilient cities, in particular through the implementation of previously expressed recommendations: identify hazardous zones and assess the consequences, define constructible and non-constructible areas among those that present recurrent and important risks and define building requirements based on the identified risk, or develop green spaces in the cities.

Involve governance

Name a person in charge of post-crisis management to concentrate the reconstruction effort on key priority axes, while dealing with matters of rescue and displaced populations.

Develop territories' resilience after the flood of the Carcassonne area (Aude)

In October 2019, this department suffered several rainy episodes of Mediterranean type, intense and exceptional, that resulted into catastrophic floods of the urban and rural areas, resulting in heavy human and material consequences. Given the vulnerability of certain territories, the most affected towns have had to reconsider their further development and did urban restructuring studies.

Those studies triggered an intention to make the Aude department a landmark example of reconstruction and to target a broader and more inclusive approach. This approach was selected in July as part of the national operation for an ecologic transition contract (CTE – *Contrat de transition écologique*) and should result in the signature of a contract

at the end of the year 2019. The collective intention is to turn the reconstruction of the Aude department into a model example of resilience.

Three major axes were defined:

- Initiate a reconstruction of the territory that serves as example against flood risks
- Ensure water management adapted to climatic changes
- Develop the ecologic transition economy (Aude department - FRANCE)



www.aude.fr

Make use of new technological tools

Rely on new technologies and especially on 'Building Information Modeling', which allows a revolutionization of the design, planning and management methods of the buildings, infrastructures and of all technical networks.

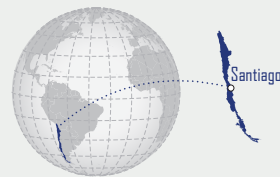


TOOL

The “Santiago Deseado” 3D simulator

Given in June 2015 to the city of Santiago, the Santiago Deseado 3D simulator is a tool to help decision-making related to the development of sustainable policies for the city. Funded by France and developed by a group of companies led by Artelia, it compiles a great amount of data about water and waste management, public infrastructures, transports, social repartition of inhabitants, telecommunications, etc., in the form of an interactive map. Relying on this information, it offers a diagnosis of the challenges and of

the urban optimization's solutions and helps to define as well integrated and sustainable urban projects. (Santiago - CHILI)



en.institutparisregion.fr

Give thought to habitat and sanitation

The integration of informal neighborhoods into planning documents is a way to fight the consequences of a shock. Sanitizing those neighborhoods must be one of the priorities to decrease the risks of health catastrophes, as well as to improve their servicing and the communication and alert means between informal neighborhoods and the cities, in case of crisis.

Make cities more resilient on the longer term

Include construction regulations in urban planning documentation and in development toolkits. Cities are built on the long-term, step by step, neighborhood after neighborhood, and through the fostering of cohesion between those neighborhoods during a crisis.



Recommendation 6

Cooperate to reach our goals together.

Cooperate to better anticipate and rebuild

Natural catastrophes go beyond the individual scale. Oftentimes, they affect more than just one community. We must organize the cooperation at various levels, neighborhoods, cities, territories, international community, to face a crisis in a logic of anticipation, management and reconstruction.

Cooperation to strengthen the resilience of territories

Activating supports and launching cooperation can happen before a crisis, around projects, with the goal to strengthen resilience of territories in a broad way: protecting biodiversity to face the consequences of climate change, resilience of infrastructures and services...

PROJECT

Covenant of Mayors – Subsaharian Africa

The network counts more than 200 African cities willingly committed to develop and implement action plans to fight climate change and allow access to energy. Cities

exchange their practices during workshops and international events to improve the resilience of their territories and of their population.

www.comssa.org







CONCLUSION

Key words





Memo

Resilience must be embraced as a new public policy priority.

The many climatic and social challenges push authorities around the world and at all levels to tap into crisis management questions. Resilience implies a greater agility in the management and regulation of territories as well as a holistic approach of questions of urban management, unlike the fragmented solutions that have now shown their limits.

To increase a city or territory's resilience, sustainability and receptivity require to foster the knowledge sharing about those changes and about their local effects, to guide and inform all territorial actors, in order for them to benefit from the sometime unexpected opportunities that can arise during or after a crisis. It is also important to inform and

educate people about what to do in a crisis situation, in order to involve all territorial actors in a collective effort. The development of social interactions between inhabitants of a same territory appears also essential to limit losses incurred by a catastrophe.

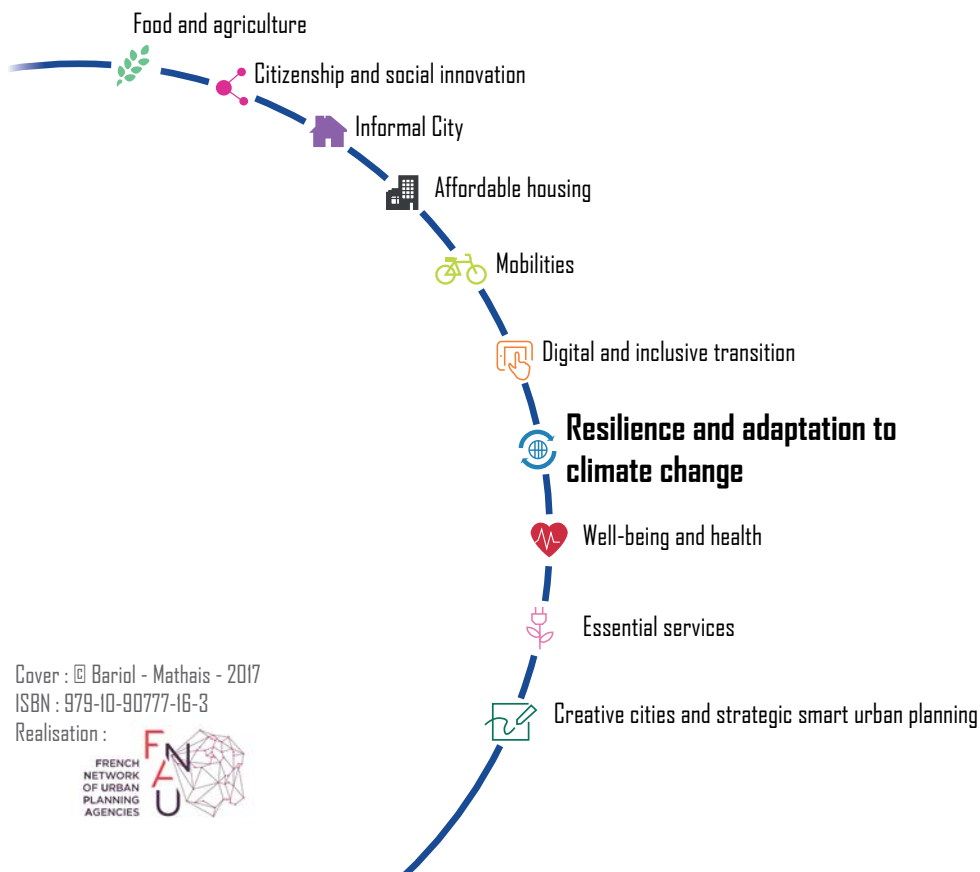
The great role played by great infrastructure networks (sanitation, energy, water, transformation, ICT) needs to be acknowledge, explaining why such networks need to be protected, to limit impacts of a crisis during and after it happens.

Lastly, the point is to capitalize the knowledges acquired during previous crisis and to rebuild accordingly, to improve the anticipation and resistance to shocks. All these efforts must be constant and on the long term, to for the development of a territory's resilience.



P F V T

Started in 2011, the **French partnership for cities and territories (PFVT – Partenariat Français pour la Ville et les Territoires)** is a platform meant for the exchange and valorization of the French urban actor's expertise at the international level. It is a multi-actor partnership headed by Hubert Julien-Laferrrière, Member of Parliament, supported by the Ministry of Europe and of foreign affairs, the Ministry of territorial cohesion, the Ministry of the ecologic and fair transition, and the Ministry of culture. It brings together close to 200 organizations representing the diversity of the French expertise, contributing to the construction of a shared French vision based on a capitalization of exchanges and of innovative and sustainable experiences.



Cover : © Bariol - Mathais - 2017

ISBN : 979-10-90777-16-3

Realisation :

