INTRODUCTION



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Nicolas RENARD - Director of Foresight, Veolia Institute

Greater population density coupled with our ever more inter-related lives - including trade issues - make us increasingly vulnerable. Urbanized territories concentrate these risks: some appear as sudden and unpredictable events such as natural disasters or technology induced accidents; others as chronic stresses that insidiously undermine economic and social ties, such as climate change, impoverishment and population aging. Some of these risks have been with us since time immemorial, others arrived on the coattails of the digital revolution, which overcomes some weaknesses but creates others.

The types of crises we face have changed over the years, becoming more varied and more destabilizing in a process driven by a number of

factors. First, crises themselves mutate and render traditional responses obsolete. Then, the very success of our protective systems renders us less familiar with unexpected events and thus less able to deal with them. Finally, the violence and amplitude – and therefore impacts – of certain natural disasters is growing. All the more so as many people and infrastructure are located in high-risk areas such as coasts, river banks, seismic fault lines and so on.

Cities are vulnerable once again and must strengthen their ways of operating if they are to protect the safety of their inhabitants – especially the poorest who are often the most exposed and least resilient in the face of disasters – and safeguard their economic, social, environmental and cultural heritage.

This is why this issue of The Veolia Institute review - FACTS Reports focuses on developments that strengthen the resilience of our cities and urban stakeholders' capacity to ride with the punches, pick themselves up off the floor and continue to develop, no matter the challenges they face. Looking at examples from emerging and developed economies, this issue is a follow-up to the colloquium on Resilient Cities and Territories organized in 2017 by La Fabrique de la Cité and Veolia Institute at the Cerisy-la-Salle Cultural Centre in northern France.

Resilience is not something that can be tackled on one front. Risks are too varied and consequences too numerous; a wide range of expertise is needed if we are to ward those risks off, limit occurrences and repair damage. This is why it is so important that all stakeholders are included, reaching out to form broader partnerships and strengthen social cohesion. Resilience is never just about concrete, infrastructure and insurance cover

Cities, assailed as they are by numerous priorities, struggle to take the long-term view when it comes to protecting themselves from events that seem improbable. Worse, the success of a resilience-boosting policy will be invisible: success is when nothing happens. This makes it hard to find funding for costly protective infrastructure that may or may not be called on.

Sadly, crises are more effective than warnings in terms of making us aware of the threats we face and forcing us to provide our cities with the means to prevent potentially disastrous situations. All the more so in the case of "true" crises, events beyond our experience and that undermine even the deepest certainties: Fukushima and Tianjin, Katrina and Harvey, the Mendocino Complex fire, and so on. The past 10 years have witnessed a number of mega-crises with devastating knock-on effects. How can we prepare for and manage these super-crises? By ceasing to cling to outdated doctrines - those Maginot lines that ultimately deliver nothing in the face of extreme need and instead trying to imagine the unknown as a way to help us to think and react differently. Only by venturing off the beaten track can we invent novel solutions to unforeseen crises.

Resilience can only be judged after the fact, once the shock has been confronted. It is only in overcoming a crisis that a city's resilience can be certified. When Hurricane Katrina ravaged New Orleans in 2005, it highlighted the impotence of the world's largest superpower. But in the aftermath, New Orleans emerged as a life-size open-air laboratory for resilience. History is littered with lost and faded cities, but many others have endured for a thousand years and more – proof that the city can resist trauma in all forms. Even today, cities are re-emerging after decades in decline, phoenix cities experiencing a renaissance.

However much effort we put into prediction and prevention, the extreme and the unimaginable will always find ways into our lives. It is impossible to plan for all the surprises today's world has in store for us. For our cities, it is no longer a matter of predicting the unpredictable, but of preparing to face it – which means becoming resilient.