

# Necessary for cities to become resilient and adaptive

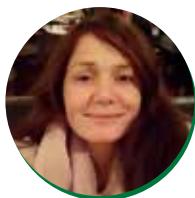
*There is a consensus that climate change is one of the major threats of our time. It is expected that in the next decades, climate disasters such as typhoons, floods, sea level rises and dry spells will be more frequent, while the disruptions in the ecosystems and water resources may jeopardize the wellbeing of local populations*

In 2015, the signatory countries of the Paris Agreement agreed to fight against climate change, and to limit the rise in temperatures to 1.5 or 2 degree Celsius. Five years later, the efforts towards climate mitigation and adaptation are still urgently needed – including scientific research on the topic.

Climate Adaptation has been defined by the International Panel on Climate Change (IPCC 1995) as responses to both the adverse and positive effects of climate change. It refers to any adjustment, whether passive, reactive or anticipatory, that can respond to anticipated or actual consequences associated with climate change. It is implicitly recognized by international

organizations and research that future climate changes will occur and must be accommodated in policy, and that adaptation to climate change is a necessity. Specifically, the role of cities and local governments in climate mitigation and adaptation has been increasingly recognized as essential in these processes. Indeed, cities are considered at the right level to





**DR PASCALINE GABORIT**

Director, Pilot4dev

understand territories' socio-economic dynamics, to take appropriate decisions, and to protect local populations and ecosystems.

Urban development and concerns for the environment are undergoing permanent and constant changes and transformations: cities need to adapt to the local economy, to population needs, to legal and physical constraints, and to migrations. In an ever-changing context, local authorities and governments are submitted to contradictory imperatives. On the one hand, they need to adapt to global contexts in terms of employment, climate and arrival of new populations, and on the other hand, they also need to provide housing, services, green spaces and liveable places, and offer good conditions of living for their local residents. In many countries, the urban population is steadily rising, creating more pressure for cities to grow. Cities will not only have to accommodate population growth, but also alleviate urban poverty and informal settlements, to decrease urban inequalities, and to provide basic services such as drinkable water, sanitation, and access to electricity for all. On top of this comes the central question of urban resilience, or the capacity of cities to adapt to crisis or disasters, to develop responses, and to build back better. In the context of climate change, the question of urban resilience becomes an urgent priority for cities affected by heat waves, and for the ones in coastal areas.

The CRIC, or the Climate Resilient

and Inclusive Cities project, is a five-year project co-funded by the European Union. This project involves cities in Indonesia, India, Europe and in other Southeast Asian countries. During the latest focus group discussions, we concluded that climate adaptation involved a robust investment from cities, the development of ICT solutions (smart early warning systems), nature-based solutions (nature buffers), as well the involvement of communities and people (in the preparedness).

In this framework, the partners are trying to develop collaborative tools, which will support the cities in several areas: water and sanitation, waste management, and early warning systems.

The research in the project concluded however that the cities will be increasingly confronted to trade-offs. Cities do not only need to be innovative, economically vibrant, culturally active, creative and environmentally friendly; they will also be at the front line in climate change mitigation (protection of forests, ecosystems, renewable energies) and in climate adaptation (protection of the urban infrastructure, early warning systems and information to the population, and reduction of vulnerabilities, especially among the poorer population). In low lying areas, climate change and sea level rise has become a threat: soil subsidence, saline infiltration and water scarcity contribute to the vulnerability, which is further reinforced by rapid population growth and urbanization. This situation is likely to fuel conflicts between authorities in charge, and some segments of the population, when the poorer population and minorities are more exposed (and less likely to be informed) to climate disasters. In this regard, the questions of land use, land ownership and participative management of natural ecosystems such as forests and marine ecosystems can play an important role both in climate mitigation (attenuation of climate change), and in climate adaptation (attenuation of the impacts of climate change).

In addition to the priorities, the

question of the end responsibilities is at stake. Preparedness and response would need strong and robust multi-stakeholder' engagement, which is able to mobilize actions from the public and private sectors, from the local populations and from all government tiers. Research shows, however, that there will be no 'harmonious' cooperation from all stakeholders without coordination and strong financial incentives. The question of coordination, end responsibilities and the availability of funding are indeed also important for cities to strengthen their resilience.

Good examples of urban resilience do exist at the international level: early warning systems and infrastructure protection (resilience of the levee system) worked successfully in Louisiana (U.S.A) in August this year, before the arrival of hurricane Ida, which loomed 16 years after hurricane Katrina (2005). Hurricane Katrina had led to many more fatalities after the breach of the levee system and subsequent flooding. It shows that preparedness and response are efficient in limiting the casualties of climate events. Similarly, in Paris (France), early warning systems monitor possible floods from the river 'la Seine'. This system has been efficient in connecting infrastructure to prevent overflows. The recent floods in Liège (Belgium) and the floods followed by landslides in the Cologne region (Germany) show however that many cities should increase their resilience to climate disasters. The recent climate events show that more needs to be done at all possible levels to adapt better to climate change (and decrease its impact). Urban Resilience and Climate Adaptation now become a necessity for every vulnerable city or neighbourhood governments, and urban local bodies, and the common person needs to realise this. Only when we all come together will we be able to make a change. ■

*[The views expressed are the author's own. They do not purport to reflect the views of Urban Update.]*