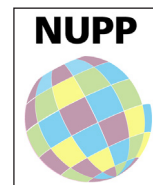


3rd International Conference on **NATIONAL URBAN POLICY**

UN-Habitat Headquarters | Nairobi, Kenya
28th-31st October, 2019



KEYNOTE ADDRESS

29 October 2019

Sustainable Cities at the age of the Digital Revolution

by Daniel Biau

Keynote address by Daniel Biau

Ladies and Gentlemen,

I don't need to tell you that today the world counts 7.7 billion inhabitants of which 4.3 billion live in cities. You may remember that in 1980 there were 4.4 billion people of which only 1.7 billion lived in cities. In 2050, current projections predict 9.8 billion people including 6.7 billion urban dwellers¹. You all know that a huge **urban transition** is under way, one of the most important migrations in history that brings with it numerous challenges as well as opportunities in the political, economic, social and environmental areas. I will not elaborate on these well-known figures.

As an introduction I prefer to bring to your attention two main elements that have a direct influence on the formulation and implementation of National Urban Policies (NUPs).

Firstly, I will remind you that the current urban transition is occurring at the time of a **Digital Revolution** marked by a growing number of technological innovations which impact urban life and therefore urban policies. From internet's instant on-line communications to mobile phones, from drones to ground level video-surveillance, from Uber to driverless cars, from carpooling to Airbnb, from computerized housing monitoring to traffic management systems, from social media to teleworking, from on-line publishing to Netflix movies, from Amazon, Alibaba or Jumia home delivery to Internet finance such as M-Pesa or cryptocurrencies such as bitcoins, from increasingly sophisticated robots to expanding artificial intelligence and telemedicine, from decentralized cooperation to civil society mobilization and widespread demonstrations, the world is changing. It is changing very rapidly and policy-makers should exploit the benefits of the Digital Revolution, while minimizing its negative or disruptive impact.

I tend to share the view of Martin Mühleisen, a Director at the IMF, who wrote: "The digital revolution should be accepted and improved rather than ignored and repressed. The history of earlier general-purpose technologies demonstrates that even with short-term dislocations, reorganizing the economy around revolutionary technologies generates huge long-term benefits. This does not negate a role for public policies. On the contrary, it is precisely at times of great technological change that sensible policies are needed"².

I believe that, to be sensible, these policies should prioritize the development of **new skills** required in the changing economy as well as the promotion of **smarter cities**. I observe that these cities could also become smaller as many new jobs don't need to be concentrated in dense areas. I think that urban corridors, Silicon Valley-type, will probably replace mega-agglomerations as a dominant urbanization pattern in the coming decades.

Secondly, I will also remind you that the narrow definition of sustainability, outcome of the 1992 Earth Summit held in Rio de Janeiro, has evolved into a multi-dimensional approach combining institutional, economic, financial, spatial, social and environmental components. Climate change has become a major international concern but it is clear that this is not a simple environmental issue as its **causes are both institutional, economic, financial and spatial while its consequences are both social and environmental**. Causes are institutional because the lack of political will explains the absence of firm regulations to reduce Green House Gases (GHG) emissions. They are economic because enterprise efficiency has been for a long time associated to uncontrolled carbon emissions. Causes are financial because insufficient funding does not allow to implement at scale climate adaptation measures. And of course they are spatial because the design and operation of our towns, cities and buildings have a tremendous impact on energy consumption and vulnerability to disasters.

¹ Official data are from "World Urbanization Prospects: The 2018 Revision", Population Division, UN-DESA

² Finance & Development, June 2018.

Consequences on their part are obviously social as the poorest communities are the first victims of climate change and they are also environmental as all natural cycles and living conditions are affected by droughts, heat waves, flooding, etc.

Based on the NUP Formulation Guide published by UN-Habitat this year, I wish to lead you now through the **six dimensions of sustainability** while putting some emphasis on urban innovations and climate-resilience. These dimensions are closely inter-related and to some degree overlapping. In practice they require a holistic approach associating cross-cutting actions at different levels.

1. Institutional sustainability

National urban policy implementation depends not only on public actions but more widely on the modes of urban governance used in each country. Good urban governance³ must be participatory, accountable and transparent. According to UN-Habitat, it should be based on two inter-related pillars: a solid institutional framework and an enabling regulatory framework. These frameworks are indispensable to establish and implement proper governance set-ups, to promote equality and inclusion of vulnerable people and to shape what citizens can expect from the state. National governments have to work with key stakeholders to build and strengthen these two pillars.

There are numerous public institutions involved in a NUP process and responsibilities have to be well established with supervisory and coordinating bodies clearly defined. As a rule, national governments lead the definition and formulation of the NUP, while sub-national and local governments coordinate its implementation through planning and management procedures and processes. Sub-national and local governments should be supported to design specific territorial and environmental strategies and plans of action based on the NUP. Note that in large countries NUPs are often under the primary responsibility of regional/provincial/state governments. This is the case in federal countries such as Nigeria, South Africa, Brazil, USA, India or even China.

Public authorities, particularly sub-national and local governments, must involve private stakeholders, including landowners, investors, banks, developers, construction companies, private service providers, architects and consultants, planning agencies, surveyors, etc. They should provide mechanisms to consult with civil society organizations, residents' and users' associations, women and youth organizations, research centres, the informal sector, etc. This is a challenging task.

The institutional framework should consider that most nations are evolving towards greater decentralization and need to strengthen the autonomy, powers and resources of local authorities. This was the subject of International Guidelines on Decentralization, unanimously adopted in 2007 by UN-Habitat Governing Council.⁴ But decentralization does not mean that local authorities should be left alone to design autonomous local policies. Local decisions should be bound by national and sub-national frameworks.

Here an important innovation would be to establish Schools or Institutes of Municipal Technicians and Managers to train city-level civil servants in both technical and financial matters. The Municipal Institute of Learning based in Durban, **RSA**, is a good example of this type of institutional venture.

An enabling legal and regulatory framework is the second pillar of good urban governance. Too often the absence of such a functioning framework hinders the implementation of policies. All over the world there are many cases of overabundant, obsolete, poorly enforced, unenforceable or simply ignored urban regulations. The main regulations to be assessed and adjusted are about land use, responsibilities of local authorities, quality of buildings, environmental protection, human rights and care for the vulnerable.

³ Urban governance is understood as the multi-level governance system which impacts and organizes the overall management of the urban sector.

⁴ New Urban Agenda (NUA) Para 85. We acknowledge the principles and strategies contained in the International Guidelines on Decentralization and Strengthening of Local Authorities, and the International Guidelines on Access to Basic Services for All, adopted by the Governing Council of the United Nations Human Settlements Programme (UN-Habitat).

In all areas, simple rules should be adopted, rules that are easy to understand and applicable, being facilitating rather than punitive.

Land regulations constitute an important core of urban governance. Tenure rights, zoning, land transactions and registration, pre-emption and expropriation rules, regularization of informal settlements, territorial planning standards, building permits, all such elements should be subject to national laws, regulations and codes capable of ensuring social equity, economic efficiency and quality of the urban space. This is a significant challenge that requires strong political will. Land-use planning and management should be a top priority of local governments which should be evaluated against their performance in this area.

The relationship between landowners and tenants as well as the contractual relations between local authorities and service providers (for drinking water, public transport, etc.) should also be subject to regulations. The former should encourage the expansion of the rental housing sector and the latter should foster public-private partnerships benefiting both users and taxpayers.

An innovation in many countries would be to compile and assess all national legislation having a relation to climate change, with a view to issue a general set of enforceable regulations on mitigation and adaptation which would guide city-level rules and interventions.

2. Economic sustainability

To ensure economic sustainability and prosperity, I believe that urban and territorial policies need to focus more on infrastructure provision and maintenance. Many cities have high levels of congestion and any policy should prioritize transport networks as part of the overall plan for both primary and service roads. The rule should be to promote a variety of transport modes, with a strong focus on public transport and active mobility (walking and cycling). Other critical priorities for a city's economic sustainability include the adequate availability of water and electricity. In recent decades, many cities have made much progress in water supply, but urban mobility has deteriorated everywhere. Social infrastructure such as education and health facilities should also be expanded and made more accessible.

The infrastructure strategy should encourage local governments to associate infrastructure planning with land-use planning and to link physical development with financial planning. A prerequisite for sustained economic growth is better connectivity and the integration of technology into infrastructure planning at all territorial levels.

Infrastructure development requires significant public investment, close coordination between government spheres, careful phasing and continuity of interventions. I am convinced that many developing countries could draw inspiration from successful emerging economies whose progress in recent decades is closely linked to strategic investments in infrastructure (roads, railways, subways, ports, airports etc.). North-South, South-South and triangular cooperation could be very useful in this regard. Also, in terms of resilience to climate change, **adaptation infrastructure** should become a top priority, particularly in developing countries.

The economic success of **China** offers a good example of the role of infrastructure development in boosting economic performance at a very large scale.

Transport infrastructure development and investment are essential to promote city connectivity, public transport and multi-modality. To reduce the impact of climate change, particularly floods on exposed settlements, major infrastructure (new dykes and drains) as well as ecosystem-based infrastructure are necessary in coastal areas and river basins and should receive adequate funding.

In Quito, Governments committed themselves to adopting a **smart-city** approach which will require an expanded use of technology in the planning, operation and maintenance of infrastructure networks, particularly to address energy consumption and transport efficiency⁵. In the **Republic of Korea** a focus has been on smart

⁵ NUA para 66. We commit ourselves to adopting a smart-city approach that makes use of opportunities from digitization, clean energy and technologies, as well as innovative transport technologies, thus providing options for

cities for the last ten years. The country organized recently a “World Smart City Expo” while the new city of Songdo is replete with technological innovations.

In term of innovation, I think that new modes of urban mobility financing, mobilizing in particular employers’ contributions, have to be put in place. Some cities (such as Tallinn, capital of **Estonia**) already provide free public transportation for the commuters, or for some categories of citizens. An option that could be more widely considered.

3. Financial sustainability

Local governments require sustainable and predictable sources of funding to develop and maintain the basic infrastructure and local services required to face the challenges of rapid urban growth. Without adequate financial instruments the role of local governments is significantly compromised. Throughout the world, local governments rely of two basic sources of financing: inter-governmental transfers and own sources of revenue. As far as transfers are concerned, the basic rules are that: (i) they should be commensurate with the responsibilities assigned to the corresponding level of government; and (ii) they should be transparent and fair.

Local governments could rely on **land-based taxation** as one of their main sources of revenue. Two factors make it possible to develop and adopt such instruments. The first is economic: the price of urban land is much higher than the price of rural plots and, in market economies, it increases rapidly with urban growth and densification. The second is political: public authorities can decide on the allocation and use of urban land and derive a considerable income from it. This is somehow the miracle of urbanization, that it can feed itself by producing its own fuel and its own financing.

During my career, I met many Ministers and Mayors complaining about the lack of resources for urban development. I systematically responded: “Try and reform your land policy”!

Indeed, important sources of land-based finance are available. They include: (i) the annual tax on property, land and real estate occupations, (ii) the betterment tax on improved infrastructure beneficiaries and (iii) taxes on capital gains in land transactions. The addition of these multiple incomes may represent several hundred US dollars per capita per year, reaching hundreds of millions of US dollars for a well-managed city. Total land-based revenue indeed represents more than 1% of GDP in OECD countries. The Global Land Tool Network coordinated by UN-Habitat has extensively explored this issue⁶.

The terms of the equation are clear: (i) urbanization increases the value of land and creates property wealth; (ii) public authorities should make every effort to capture significant portions of these benefits and (iii) they should allocate them to cover investment and operating costs, completing a virtuous circle.

Here two types of innovations would make sense. The first one is to establish a digital land record system. There is an attempt in this direction in **India** with the “Digital India Land Record Modernization Programme”. The second innovation is to keep a regularly updated register of land and property ownership and values as a basis for progressive taxation. This is quite standard in most OECD countries.

4. Spatial Sustainability

Ideally urban expansion should be publicly planned, regulated and managed to meet the needs of the local communities. The priorities should be to contain urban sprawl and reduce spatial inequalities, and to regulate land and property markets. To do so urban planning methods need to be renewed in order to combine, according to national circumstance two types of approaches, the traditional technocratic top-down approach (applied in a majority of cities) and the participatory bottom-up approach (adopted by an increasing minority of local authorities).

inhabitants to make more environmentally friendly choices and boost sustainable economic growth and enabling cities to improve their service delivery.

⁶ See “Leveraging Land: Land-based Finance for Local Governments. A trainer guide.”, GLTN, UN-Habitat, 2016

A major innovation has been promoted by UN-Habitat in the last decades, the holding of **City Consultations** as a key ingredient of participatory planning.

As you know, many developing cities expand rapidly, and their peripheries encroach on agricultural lands. This unplanned expansion is characterized by low densities, pockets of poverty and gated communities. Urban sprawl has a negative environmental impact by increasing cities' footprint, consuming green spaces and increasing distances to be travelled. It forces local governments to either extend their services or to leave some areas un-serviced. Urban and territorial planning should be a tool to promote more compact cities, make more efficient use of existing infrastructure and result in an orderly urban growth. However densification still appears to remain a wishful recommendation with little application in the field as demonstrated by New York University in a forthcoming report⁷.

In addition to city-level actions, a national urban policy should be concerned with balanced urban systems. This means that a country should have a hierarchical system of cities, where the large metropolitan centres generally lead the country's economic growth by harbouring the most innovative and dynamic economic activities, regional centres and medium size cities provide support to their respective regions, and small towns ensure the linkage with their rural surroundings.

In most countries, socio-economic development is closely associated with urbanization. The role of secondary cities and provincial capitals is critical for regional economies and the wellbeing of their populations. A comprehensive NUP should maximize the opportunities for these secondary towns to contribute to local economic development. Fiscal incentives could be a strategic tool to encourage private companies to invest in these towns.

Local, metropolitan and regional authorities play an increasingly important role in urban and territorial planning and management. This role has been highlighted in the International Guidelines on Urban and Territorial Planning⁸ that invite local authorities to take the lead in several strategic areas, including to formulate plans to prepare for and adapt to climate change and to increase resilience, particularly in vulnerable neighbourhoods.

In large agglomerations, an important institutional innovation has been the creation of regional development and metropolitan authorities to coordinate actions from local governments, attract private investments through Public-Private-Partnerships and promote territorial cohesion and regional economy of scale.

Spatial sustainability finally requires to forbid constructions in flood-prone areas or to displace those already there. This could be costly in human and financial terms. Vulnerability assessments and contingency plans are not an innovation but they should be generalized, particularly in coastal cities. Use of satellite imagery and drones could help a lot in this field.

5. Social Sustainability⁹

Social sustainability is certainly a major concern of a majority of urban dwellers across the world.

Our time is marked by the division of cities between poor and posh neighborhoods, the proliferation of gated communities and of under-equipped and dangerous areas which are features common to many cities, in the North as in the South. Ensuring urban equity probably constitutes the major challenge that public authorities have to face. This is a difficult task as market economies are fundamentally inequitable: the price of land (and therefore of housing units) varies enormously according to its location. This implies that affirmative actions are required to improve slum settlements, to develop and support social housing, to provide basic services (water, sanitation, electricity, communication) and to ensure human safety.

⁷ "Atlas of Urban Expansion Programme", New York University, 2019

⁸ See "International Guidelines on Urban and Territorial Planning", approved by the Governing Council of UN-Habitat in its resolution 25/6 of 23 April 2015.

⁹ See **NUA** para 107-109

A housing policy should focus on the resorption of inadequate housing and the upgrading and regularization of slums, without forgetting to support the development of the real estate and rental markets and the regeneration of dilapidated centres. The Participatory Slum Upgrading Programme implemented by UN-Habitat has identified a comprehensive number of options, extensively applied or more innovative, in this area¹⁰.

A housing policy should promote diversity in housing supply both in terms of standards and status. It could review and adjust building codes to ensure affordability and promote energy-efficient housing options. Above all, it should establish appropriate housing finance systems which mobilize household savings and public subsidies, and support the development of adequate housing with proper access to basic services and employment opportunities.

All over the world, housing expenses represent an average of between 25 and 30 per cent of household incomes and the sector is a powerful mobilizer of domestic savings. In a number of developing countries, however, housing strategies have long been limited to the public support to the production of housing units for the middle class. Many governments still ignore the reality and potential of rental housing, which can be a major option for the urban poor. In addition short-term lending to support self-help housing is also largely missing.

In my opinion, a housing policy should not be considered as a by-product of the NUP as its financial component could be largely non-territorial. However housing and urban policies should be linked both in design and implementation, essentially through land markets which constitute their unavoidable interface.

Ecologically, housing is the core and most visible aspect of the built environment and represents a major share of national energy consumption. Its location, design and density have a direct impact on the consumption of environmental resources and on transportation needs. It seems advisable for governments to focus on land for housing development as a major component of land-use planning and on financial incentives targeted to low-income households. In these two areas there is room for sensible country-specific innovations which could leverage more private and individual investments in housing and basic services.

I should add that social sustainability cannot be attained without a degree a cultural consensus and agreement on shared values, for instance on human rights and gender equality and on the need to care for future generations. **Cultural sustainability** is becoming a challenge at a time of social fragmentation and religious and ethnic tensions. It requires more political attention in countries where the goal of living together in peace and harmony seems to recede due to poor leadership, fake news and unnecessary controversies. The debates on migration going on in several OECD countries are a case in point.

6. Environmental sustainability

We now reach the 6th dimension of sustainability, that both UN-Habitat and UNEP colleagues are very familiar with, environmental sustainability.

During the last forty years, ecological issues have become increasingly important concerns in all continents and the need to reduce energy consumption by optimizing mobility options and promoting green buildings is now universally recognized. Similarly, the adaptation of cities to climate change, the reduction of CO₂ emissions, and the resilience to natural disasters have become consensual matters. The New Urban Agenda insists on the densification of urban fabrics, on compact cities, but also on smooth mobility. It highlights the importance of public and green spaces and of cultural life. However most countries still struggle to reconcile socioeconomic objectives with environmental protection.

According to UN-Habitat, basic environmental services should be programmed and managed through a multi-sectoral and coordinated approach based on adequate contractual relationships between public authorities and service providers, taking fully into consideration their impacts on the environment and public health¹¹.

¹⁰ See "A Practical Guide to Designing, Planning and Executing Citywide Slum Upgrading Programmes", PSUP, UN-Habitat, 2015

¹¹ See "International Guidelines on Access to Basic Services for All", UN-Habitat, 2009

National and local programmes must be undertaken on reducing energy-consumption, improving water and air quality and changing mobility modes. It is also advisable to establish quantitative and qualitative targets and standards for service delivery; as well as clear rules for the selection of service providers.

Cities are the main generators of GHG due to the concentration of industries, vehicles and other sources of air and water pollution. Already cities account for roughly 75 per cent of global GHG emissions and this percentage is rising. Cities are also highly vulnerable to disasters, given the concentration of people exposed to risks of flooding, landslides, earthquakes and other natural phenomena.

The NUP should propose steps to promote clean energy consumption, improved air quality and changing mobility modes (fewer private cars, more public transport and non-motorized options).

A well-known innovation in traffic management consists in the separation of road lanes used respectively by public transport (such as Tram or Bus Rapid Transit systems), private vehicles (possibly subdivided in motorcycle lane and car lane) and non-motorized transport (bikes, scooters...) in addition to sidewalks for pedestrians. This could be done on primary infrastructure as in several Latin American cities and as currently envisaged here in **Nairobi**.

Building design and urban forms should encourage compact, connected and low-carbon urban development and reduce GHG emissions. Architectural competitions, awards and guidebooks on **autonomous buildings** would be welcome. Computerized assessment models allowing to compare various options in term of energy-efficiency and GHG emissions are already available.

I will conclude by a simple message:

The steps required to design a NUP are well described in UN-Habitat's Formulation Guide which emphasizes that governments should work with partners to establish an order of priorities based on the political, legal and financial implications of each possible option. What matters is to focus on a limited number of programmes of actions constituting the backbone of a holistic approach, and not to wait for miraculous innovations or external resources. The Digital Revolution already offers a lot of new tools that we can collectively test and apply to our urban world. I am convinced that we can move forward and benefit from the support and guidance of the organizers of this third International Conference on National Urban Policy.

I wish you a very fruitful Conference and I thank you for your kind attention.

