

UN-HABITAT & IAARA (I)**International Congress & Forum on Urban Sustainability “City for All”****Qazvin, Iran, 2-4 December 2009****URBAN AND REGIONAL SUSTAINABLE DEVELOPMENT:
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THE MEGALOPOLIS/ECUMENOPOLIS CHALLENGES

URBAN DEMOGRAPHY.

The urbanisation has reached the level announced by Doxiadis 40 years ago (Ecumenopolis: Tomorrow's City, Constantinos Doxiadis, Britannica Book of the year, 1968) but is still far from having reached its apex.

Another estimated 1.8 billion inhabitants will need housing by 2030. The majority of this growth will be in urbanised areas. To reckon with this projection, we need to be building a new city for a million inhabitants every week, year after year, as well as the related infrastructures. Meanwhile the oil production peak will reduce fossil fuel energy supply. Climate change will generate additional constraints.

These issues are intrinsically linked to spatial development patterns. City and regional planners need to be poised to help address them. Traditional models serving as time-tested examples for future developments, allied to new technologies may help find innovative planning tools for sustainable urbanisation and low energy cities. But governance is the prerequisite for implementation.

THE MEGALOPOLIS GOVERNANCE.

The “Urban Age” 2009 research paper “Istanbul, city of Intersection” (www.urban-age.net) presents comparative studies about the size and population of some of the world's largest conurbations like Istanbul, New York, London, Mexico and Shanghai, illustrated by a set of maps at the same scale. All are in quest for a governance blueprint.

The Berlin case is a unique example of city adaptation to institutional changes. An ongoing German pilot study “Governance Analysis” will suggest an ideal type of framework for adaptation to climate change (Research News November 2009, Federal Institute on Building, Urban Affairs and Spatial Development). The weak results of the COP 15 will put adaptation to inevitable effects of climate

change more in the forefront.

The oversupply of built space is a specific challenge in areas of old industrialisation and related urban sprawl, combined with shrinking population. The international research project “Shrinking Cities” has developed a body of international knowledge of the field (www.shrinkingcities.com). It includes a world map of shrinking urban areas. The effort of Germany to integrate the New Länder has produced a number of initiatives. The IBA Sachsen-Anhalt and the renovation of Köthen can be cited as example (www.iba-stadtumbau.de).

Besides energy savings in new constructions, the saving of the energy stored in existing constructions and neighbourhoods, beyond any heritage considerations, is making a case for labour intensive restoration instead of replacement by “low energy” materials or new “eco-enclaves” à la Bedzed (www.zedfactory.com).

CITIES AND CLIMATE CHANGE.

The 2009 OECD Report “Cities, Climate Change and Multilevel Governance” confirms the related aims and shared benefits of sector mitigation policies to reduce GNG’s at urban scale (OECD).

The benchmarking of cities as to their GHG emissions remains a daunting technical challenge for those who want to engage in emissions trading (GHG Study Report 2009). More generally the measurement of economic, social and environmental performance according to “Beyond GDP” indicators will require new professional inputs, in addition to economics.

Climate change poses specific threats to cities located in hot spots of global warming. Mediterranean cities for example are to consider the effects of very hot summers by investing in cooling amenities (trees, fountains, ponds). The Paris hot summer of 2003 is estimated to become the standard.

The coastal areas protection will be a tremendous investment opportunity once the ocean level increase resulting from Arctic and Antarctic and mountain ice melting will have become sufficiently evident to all as to trigger new behaviour and new policies (Seavy 2009). The Dutch Delta Plan is a case in point, followed by projects for the Belgian coast (Baaïen 2009) and Antwerp (Van de Put).

FROM URBAN SPRAWL TO SUSTAINABLE URBAN DEVELOPMENT.

Meanwhile the forecasted growth of the automobile, main contributor to GHG emissions is unabated. OCDE figures indicate that in the last ten years the population increased by 13%, the number of cars by 50% and the number of vehicle-km by 65%. The latest projections suggest unabated further growth perspectives in emerging countries.

While the 19th Century has been the age of the great railways and the urban rail, the 20th Century has clearly been the age of the automobile. Henri Ford’s large scale production of his Model T and his capacity to convince the governments to pay for the roads construction and maintenance, while urban rail had to pay for both and enjoyed no right of way on the street, entailed the end of self supporting rail public transport in the US cities. Street views of Chicago in the 30’s show streetcars locked in traffic. The automobile-based American way of life became the underlying principle of spatial development, linked to traffic forecasts and related road development (“Predict and Provide”).

The effects of the automobile on cities are mainly the need to provide parking space during the 90% of its life-time it is not running. Space-consumption graphs show the area x time space use by

mode ranging from 1 to 90 from pedestrian to automobile parked at work place (Laconte 2009). The limits to road construction were shown by the UK Government 1995 SACTRA Report (www.dft.gov.uk/pgr/economics/sactra). This report shows the effects of new roads in terms of traffic generation and that the space need generated by new roads is higher than the additional space provided. New roads thus increase congestion, after an initial relief period, and enhance further urban sprawl. "Urban Sprawl" was the theme of the 44th ISOCARP Congress (Dalian) and its REVIEW 04 (www.isocarp.org).

The side effects of traffic in terms of personal safety, air pollution, stress and obesity have been shown again and again. The WHO warned that people walking or cycling less than a half hour per day were in danger for their health. Rental bike experiences proved successful in cities like Paris, Lyons and Barcelona (Guet 2009).

INTERNATIONAL PRACTICES.

Case histories illustrate successful attempts by a few cities and urban regions to achieve sustainability. Some of them are mentioned hereafter.

In terms of national sustainability of a City-State, Singapore's integrated approach of urban development covers transportation, land use, pollution and water management (Mah 2009).

In terms of regional sustainability the case of Portland Oregon, which has limited its spatial urban extension, is clearly a best practice (Bragdon 2009). Vienna's urban and regional interface as well as the one of Zurich (city and region) can be considered as best practices.

Among large cities Chicago is credited with having adopted a most systematic greening policy and decentralised budgets for its implementation. A spectacular facet of it is the Green Roofs initiative (www.greenroofs.com/projects/pview.php?id).

NY City has recently developed a growing awareness of its urban environment. In Mid-town Broadway there are 5 times more pedestrians than cars but pedestrians get only 10% of the street space, while space taken on the street by a running car is about 20 times the one by a pedestrian. The City has now started to give some street sections to pedestrians (NYCDOT "Green Light for Midtown" 2009).

Curitiba, which developed highly innovative urban development tools (transfers of development rights, central boulevards, new parks and selective garbage collection) can also be considered a top-down best practice (www.ippuc.org.br), which as influenced other cities in its region (Bogota) and elsewhere (Kunming).

Medellin has achieved a successful urban regeneration, making full use of citizen participation. High density urban regeneration in Tokyo, Seoul and Vancouver are to be mentioned.

Vancouver planning tools such as the Vancouver City Planning Commission have been taken over by the Abu Dhabi Urban Planning Council (www.upc.gov.ae/en/Home.aspx). Abu Dhabi is organising its second GlobalCity Forum 2010 (9-13 April).

European cities have been the subject on many "green" rankings.

The Siemens new "European Green Cities Index" ranking's first ten cities read as follows: Copenhagen, Stockholm, Oslo, Vienna, Amsterdam, Zurich, Helsinki, Berlin, Brussels and Paris (<http://w1.siemens.com/entry/cc/en/urbanization.htm?stc=wwccc020810>).

Berlin has taken advantage of the reunification to put in place strong urban design rules for new buildings in the areas formerly occupied by the wall, such as Friedrichstrasse, taking inspiration from the traditional urban blocs and their inner open space, such as Riemershof).

Hamburg has developed ambitious renewal plans and will be the European Green Capital in 2010 (www.europeangreencapital.eu). Selection is on-going for the following years (http://ec.europa.eu/environment/europeangreencapital/about_submenu/com_toolbox.html).

Lisbon has redeveloped a large waterfront area around the former World Fair 1988 through the State run ParqueExpo '98 SA (www.parqueexpo.pt). This development systematically keeps in mind the future increase of ocean level.

Among medium size cities, Bilbao has been recognized as a successful example of revitalisation through culture investments (Vegara 2005).

Bordeaux's riverside rehabilitation and new tramway lines have revitalised the city (Guet 2008).

Manchester has brought 20.000 new residents along its derelict canals through sanitation, access improvement, cultural attraction points and Public Private Partnerships with developers capable of creating vibrant places around vibrant public spaces, such as Argent - www.argentgroup.plc.uk and Urban Splash - www.urbansplash.co.uk (Douglas 2009).

The same track is followed by Birmingham and Liverpool (rehabilitation of Albert Docks).

Freiburg is widely considered as the prototype of low carbon medium/small sustainable cities (www.freiburg.de). Bruges and the new university town of Louvain-la-Neuve in Belgium are in the same league and attracting residents and tourists alike. They were presented together at UN-Habitat I in 1976. The Louvain-la-Neuve eco-features were the subject of a specific publication (Laconte 2009).

UN-HABITAT is sponsoring a World Olympiad of Urban Design Projects (W.O.U.D.), to be held in Oxford 2011 (www.woud2010.org). This event will be launched at the WORLD URBAN FORUM 5 to be held on 22 to 26 March in Rio de Janeiro (www.unhabitat.org).

CONCLUSION—CITIES, PART OF THE SOLUTION.

New kinds of MULTILEVEL challenges and opportunities arise from the fight against the effects of climate change and the search for urban and rural sustainability. They affect decision-makers and decision makers at international, regional, national and local level. Professionals have a proactive role to play at each level.

At world level, the awareness has been remarkably fast (some 20 years) but the belated collective commitment towards effectively mitigating climate change, expressed by the Copenhagen Conference non-results, suggests looking at adaptation to inevitable consequences of climate change, and possible actions by regional, national and local decision makers, while pursuing coalition building efforts towards collective action to reduce emissions, at all levels of governance.

At European level the pioneering policy/strategy response to the climate change challenge opens an array of potential actions by regions and cities as well as by countries. The technicalities of emissions accounting and energy efficiency measurement open an entire new field for the planning professions. The benchmarking of cities as to their GHG emissions remains indeed a daunting technical challenge for those who want to engage in emissions trading or charging (GHG Study Report 2009). More generally the measurement of economic, social and environmental performance "Beyond GDP" will require new professional inputs, in addition to the one of macro-

economists.

At local level the implementation of both emissions cuts and energy supply and demand management require planning skills of a new nature, at the interface of land-use planning, mobility planning and environmental planning.

New skills should including the effective achievement of a low energy urban development meeting the demographic requirements.

To save open land, emphasis should be put on rehabilitations and greening of urban brown fields and reconversion of surplus old industry lands to nature friendly bio-diverse new uses all require new skills. These include landscape architecture, ecologic engineering and restoration, synergies between urban infrastructure and water management and phyto-remediation to polluted soils, among others.

In short, maintaining urban and rural quality of life and urban cultural diversity in the wake of a global warming environment will require a new form of “planning with nature”, a long-term exercise.

(1) IAARA - International Art & Architecture Research Association - www.iaara.org.ir

REFERENCES

- (Baaien 2009) “Vlaamse Baaien2100” project for the Flemish Government (Study team Arcadis, DEME, Jan de Nul, ORG, IMDC and AT&T.
- (Bragdon 2009), Bragdon, D. “Portland Metro” 45th ISOCARP Congress, 2009
- (Douglas 2009) “The urban industrial waterways: From dereliction to benediction”, lecture made at the Club of Rome EU Chapter (publication pending)
- (GHG Study Report 2009) Baader, N. & Bleischwitz, R., “Comparative Analysis of local GHG Inventory tools”, College of Europe and Institut Veolia Environnement.
- (Guet 2007) Guet, J.-F “The Tramline: The Focal Point of Bordeaux’s Urban project”, ISOCARP REVIEW 03, 2007
- (Guet 2009) Guet, J.-F. « Mobility and the Compact City: The bike is back », ISOCARP REVIEW 04, 2008-2009.
- (Laconte 2007) Laconte, P. and Hein, C. (eds.) “Brussels: Perspectives on a European Capital”, Brussels : Aliter 2007
- (Laconte 2009) Laconte, P. (ed.) « La recherche de la qualité environnementale et urbaine : le cas de Louvain-la-Neuve (Belgique) », Lyon : Éditions du Certu 2009.
- (Laurent 2009) Laurent, E. & Le Cacheux, J. « An ever less carbonated Union? Towards a better European taxation against climate change”, Paris 2009 - www.notre-europe.eu.
- (Mah 2009) “Building Sustainable Cities: The Singapore Experience” keynote address delivered by Minister Mah Bow Tan at the 45th ISOCARP Congress.
- (Meadows et al. 1972) “The limits to growth: A report for the club of Rome's project on the predicament of mankind” New York: Universe Books 1972
- (OCDE 2009) Report “Cities, Climate Change and Multilevel Governance”, Paris 2009
- (Seavy 2009) Seavy, N. “Why Climate Change makes Riparian Restoration more Important than Ever: Recommendations for Practice and Rersearch”, Ecological Restoration, 9/2009.
- (Solomon 2008) Solomon, S. et al. “Irreversible Climate Change due to Carbon Dioxide Emissions”, Proceedings of the National Academy of Sciences 106, 2009
- (Stern 2006). Stern, N. "Stern Review on The Economics of Climate Change (pre-publication edition) ". HM Treasury, London. http://www.hm-treasury.gov.uk/sternreview_index.htm.
- (Van de Put) Van de Put, M. “Imagining a new *waterfront* for *Antwerp*”, 43rd ISOCARP Congress 2007.
- (Vegara 2005) General Assembly Address by Alfonso Vegara at the 41st ISOCARP Congress.
- Wagner, H.-J. "Energy: The World's Race for Resources in the 21st Century", Klaus Wiegandt Haus Publishing London, 2009.

ILLUSTRATIONS.



Illustration

1:

IMAM SQUARE ISFAHAN – This huge pedestrian precinct (512 x 163 m), surrounded by famous architectural landmarks, Palaces, religious buildings, the Bazaar, shops at the first floor, and some tea rooms above them is a most sustainable public space. The rigorous alignment and bulk have remained as they were conceived by Shah Abbas the Great in 1602.



Illustration 2:

The SULTAN AHMED Area in Istanbul has one of the highest concentrations of historic landmarks of the city. Improvement of its access was achieved by creating a new tramway line instead of widening the main street. This initiative was taken by Greater Istanbul Mayor Nurettin Sözen upon his election in 1989, when he discovered that his predecessor had ordered some 100 metro cars for a metro that still had to be built. He had the metro cars transformed into trams. The success of the new line triggered a whole new tramway network extending to the BEYOGLU area, beyond the GALATEA Bridge, ensuring sustainability of central Istanbul.



Illustration 3:

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The Foundation is a charitable institution of public interest authorised by Royal Decree of 17/8/99 (Belgian Official Journal 1/10/99)
It sponsors and organises activities in the fields of urban planning and mobility e.g. conferences, publications and exhibitions.

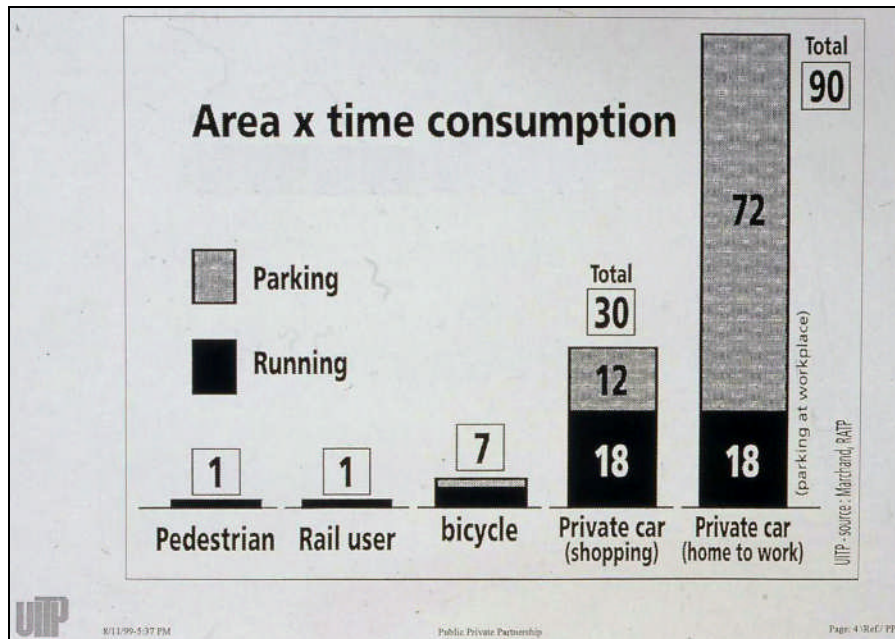


Illustration 4:

Illustrations 3 and 4 suggest other facets of urban sustainability: high density – low rise as a way to achieve compact urban neighbourhoods and the reduction of space consumption through land and energy thrifty modes of transport.

Illustration 3: BERLIN. The central part of BERLIN’s Friedrichstrasse was occupied by the dividing wall and had to be rebuilt after reunification. Under the leadership of Hans Stimmann the reconstruction of the area was planned in accordance with the former street lay-out and bulk, without other architectural constraints, allowing for contemporary architecture (here the Lafayette Department store, by Jean Nouvel) .All buildings had to include at least 20% apartments. Today the whole area is most lively by day and by night. Its diversity and resilience have insured its economic stability.

Illustration 4: SPACE CONSUMPTION. The table indicates the space consumption by the different modes of urban transport. If the pedestrian space occupation is taken as standard one can see that the space occupation by all other modes has to take into account parking. Sustainable cities are therefore preferably compact and accessible by the less space consuming modes of transport modes These modes are also the most energy thrifty, preparing cities to the growing scarcity of fossil fuels.

Illustration 5: CURITIBA, Brazil.

Curitiba developed highly innovative urban development tools:

- Transfers of development rights from flood prone or low density areas to high density areas, allowing central boulevards and new parks,
- Selective garbage collection, practiced as part of the education, and
- Buses running as fast as metros thanks to fare collection done outside of the bus (see the boarding at stops).

It can be considered a top-down best practice (www.ippuc.org.br), which as influenced other cities in its region (Bogota) and elsewhere (Kunming).



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Illustration 6:



Illustrations 6 and 7: the new university town of Louvain -la-Neuve, near Brussels, in Belgium.

The towns of Bruges and of Ottignies-Louvain -la-Neuve in Belgium can be considered as examples of small sustainable cities, attracting residents and tourists alike.

They were presented together at UN-Habitat I, in 1976. The Louvain-la-Neuve eco-features developed over 40 years were the subject of a specific publication (Laconte 2009).

The pictures illustrate some of these:

- The centre is reserved to pedestrians. The absence of cars in the street increases quality of air and pedestrian safety.
- Access takes place by train – see the entrance of the underground railway station - and through underground parking.
- The high density-low rise construction allows keeping surroundings green.
- Sustainable water management's main feature is that storm water is collected into a reservoir treated as a lake. The lake is thus both an ecologic feature and an attraction to residential development.