

44th International Planning Congress, Dalian 2008
A Way Towards Sustainable Urbanisation
19-23 September 2008

Opening session - Key note speech: "*Urbanisation in Europe: Limits to spatial Growth*"

Mr Ronan Uhel
Head –Spatial Analysis
European Environment Agency

Thank you mister Chairman,

I am honoured to stand before you today and am also sincerely grateful to the organisers and our Chinese hosts for granting the European Environment Agency the opportunity to address what appears to be both a fantastic asset and a critical risk for Europe's welfare: the organisation of its cities and towns. I hope it will resonate with the debates that this timely and fascinating conference has already generated, bringing in experiences and know-how from across the world.

Ladies and gentlemen,

With its stunning urban landscapes, historical cities and cultural treasures, Europe remains one of the world's most desirable and healthy places to live and the most frequently visited world-travel destination. Though it stands among the most urbanised regions on the globe, Europe remains indeed a fascinating and diverse continent and its people still enjoy access to extensive natural or semi-natural landscapes.

Yet, in contemplating the way we have accommodated this marked urbanisation trait of our societies, serious concerns persist regarding Europe's urban future, its urban growth being far from a down turn. From 72% today, around 80 % of Europeans will be living in urban areas by 2020; in several countries the proportion will be 90 % or more. Embedded in this development, we all continue to witness daily rapid, visible and conflicting changes in land use which are shaping landscapes in cities, as well as around and between them as never before; today, already, more than a quarter of the European Union's territory is negatively impacted by urban land uptake.

Furthermore, in this modified landscape, a powerful force is now fully at work: cities are spreading, minimizing the time and distances between and in-and-out of cities. This expansion is occurring in a scattered way across Europe, affecting any size of towns and cities; it is not driven by a growth of population but by changing lifestyles and consumption patterns as well as very lenient, service-driven planning policies. This powerful force is commonly termed 'urban sprawl', as we all know either from research interest or city management responsibility perspectives.

Available evidence demonstrates conclusively that urban sprawl has accompanied the development of towns and cities across Europe over the past

50 years: European cities have expanded on average by 78 %, whereas the population has grown by only 33 %. The dense enclosed quarters of the compact city model have been replaced by free standing apartment blocks, semi-detached and detached houses, with more than a doubling of the space consumed per inhabitant over that period. Trends towards new low density environments should continue according to business-as-usual scenarios. On a straight extrapolation of current practices, a 0.6 % annual increase in urban areas, although apparently small, would lead to a doubling of the total amount of urban area in a little over a century. Thus, urban sprawl, which remained an ignored challenge on a European scale until very recently, is now rightly regarded as one of the major common and cross-cutting issues facing Europe. I would assume that such a picture of the European urban realities will relate to those of the many participants from other regions of the world, gathered today in Dalian for this important conference.

I would like to add that just over the past 20 years low density suburban development in the periphery of Europe's cities has become the norm, and the expansion of urban areas in many European countries has increased by over three times the growth of population. Moreover, in the past 10 years alone, the equivalent of five times the size of Great London has been given up to further sprawl of our cities; just consider for a moment that the Council of Great London has calculated the land and ecological footprint of their city to be equivalent to 293 times its area – I leave you with completing the arithmetic for the whole of Europe!

Suffice to say that today, society's collective reliance on land and nature for food, raw materials and waste absorption results in a resource demand without precedent in history. Our consumption patterns are completely different throughout Europe from what they were twenty years ago. Mobility, new types of housing, communication, tourism and leisure have emerged as major components of consumption by households in Europe, whose size and composition are also undergoing profound changes: many more households, smaller in size with higher consumption rates per individual.

Now that most of the population is living in urban areas – a factual reality for the whole world since last year - agricultural land uses and their functions in the countryside have evolved in order to ensure feeding city populations, fuelling our cars and troublesome maintenance of depending rural structures and functions. In this context, our coasts in particular and, to a lesser degree, our mountains, are being urbanised at an accelerating rate – for instance, urbanisation of the coast grew about 30 % faster than inland areas. Resident communities in these areas keep being transformed to accommodate new economies increasingly intertwined with the hinterland and principally dependent on tourism and the massive boom of secondary homes. There is no apparent slowing in these trends, with the urban areas of the southern, eastern and central parts of Europe particularly at risk.

In light of all these trends, I would even go as far as to argue that sprawl now threatens the unique urban culture of Europe, as it creates severe environmental, social and economic impacts for both the cities and the countryside of Europe. As a matter of fact, traditional environmental health problems from unsafe drinking water, inadequate sanitation and poor housing

have largely disappeared from cities across Europe but the sprawling nature of Europe's cities is critically important because of major impacts that are evident in increased energy, land and soil consumption, that threaten both natural and rural environments; rising greenhouse gas emissions that cause climate change and elevated air and noise pollution levels that often exceed the agreed human safety limits - Europe loses 200 million working days a year to air pollution-related illness alone; not to mention social inequities associated with such impacts or the economic losses due to traffic congestion or to the effects of extreme weather events.

Urban sprawl thus produces many adverse impacts that have direct effects on the quality of life for people living in cities as well as - though this fact is not stressed as much as it should be - a patent uniformitarian approach to shaping and designing urban development in Europe, resonating as such with growing empirical evidence across other regions in the world –several presentations that will be given during the workshop sessions, which I have taken a look at with great interest, agree wholeheartedly with this.

With this remark I mean to highlight the fact that global socio-economic forces interact with more localised environmental and spatial constraints to generate the common characteristics of urban sprawl evident throughout Europe today. In essence, through the realisation of the 'internal market', Europe's new prosperity and economic development has put pressure on cities. The role and contribution of cities to Europe's competitiveness, economic growth and jobs, while also delivering social and environmental goals, has been addressed extensively by the European Union's institutions together with the regional and local authorities. To this end, considerable budget transfers from European Cohesion and Structural Funds to member states provide powerful drivers of macro-economic change to support European integration, but analysis shows that they also craft inadvertent socio-economic effects that have promoted the development of urban sprawl.

This is why the co-ordination of land use policies and Structural and Cohesion Fund investments remains crucial to support the containment of urban sprawl in Europe. Practically, this is complicated by the fact that central European interventions in many others, if not all, policy domains, impact on or are impacted by urban development. One obvious –and critical- illustration of the extent of these interrelationships is the European Union's commitment to sustainable development and policies to tackle climate change: how can we ensure that the growth of urban greenhouse gas emissions due to the ever-increasing dominance of car transport in European sprawling cities does not threaten to undermine the European Union's Kyoto commitment to reduce greenhouse gas emissions by 2020? Illustrative of this complex problem is a straight projection that vehicle-kilometres travelled in urban areas by road can rise by up to 40 % in 2030 compared to 1995 levels, forcefully raising the question of our societal model of mobility.

Undoubtedly, urban sprawl in Europe has accelerated in response to improved transportation links and enhanced personal mobility that has made it possible either to live increasingly far from city centers while retaining all the advantages of a city location, or to enable personal choices to live in one city and work in another; this reflects social values that place great emphasis on individual

achievements rather than on group solidarity. It is a well-established fact that economic development and the marginalisation of land by consequent urban development generates the need for new transport infrastructures to link them together, which in turn, clearly, produces more mobility and additional costs to society. The mix of driving forces include both micro and macro socio-economic trends such as the means of transportation, the price of land, individual housing preferences, demographic trends, cultural traditions and constraints, the attractiveness of existing urban areas, mono-centre urban visions and, not least, the application of land use planning policies at both local and regional scales.

In this context, another well-established fact, and an important factor underlying urban sprawl, is the extremely low price of agricultural land -in most cases highly productive agricultural land - compared to already urbanised land such as brownfield sites or former industrial sites. In many development projects, the cost of agricultural land acquisition is relatively low and enables better profits to be realised than for already urban land or the use of former industrial waste land, even if no remediation is needed. This factor is particularly imperative in the economic heart of Europe stretching from the United Kingdom down through the Benelux countries, Germany and France. The trend of good agricultural land being deliberately and artificially maintained at a low value is reinforced by the broad use of expropriation tools. A direct side effect of these combined tools — low value, future use not taken into account, and expropriation — is clearly demonstrated by the development of villages near cities, for residential or business purposes.

Managing cities is certainly a complex and interrelated task which highlights the potential dangers of ad-hoc decision making: the solution to one problem, at one scale, is often the cause of another, at a similar or different scale. However, overall, evidence highlights that where unplanned, decentralised development dominates, sprawl will occur, in a mechanistic way; conversely, where growth around the periphery of the city is coordinated by strong urban policy, more compact forms of urban development can be secured. It is therefore of prime importance to recognise that while the city is the main focus of socio-economic activity, and the associated pressures and impacts on the environment, it cannot be managed in isolation from forces and decisions that originate well beyond the city borders. As a result, there is now increasing awareness of the benefits of considering urban territory as an integrated unit for stimulating better coordination of policies and analysis of their economic, social and environmental impacts.

But as you might have gathered, most of the current discussions and policies are driven by the needs of today's economy rather than the environmental realities of our situation. Being pragmatic, many environmentalists, wishing to see improvements or changes in urban policies and practices, have hooked up their arguments to the climate change and energy bandwagon, opting to use reductions in the use of fossil fuels as their cause célèbre to achieve a greener way of life. Critics would say that this was forcing us into doing the right deeds for the wrong reasons. But, I believe that this would be wrong. Reliable scientific arguments exist for shaping urban sustainability around the spine of environment quality and ecosystem services rather than simply based on meeting energy and transport demands.

To this effect, we are more and more often confronted with long term problems for which the outcomes are highly uncertain. Making sense in a complex world requires that we separate straightforward problems that can be solved through exchange of best practices, complicated ones where good practice helps, complex problems where practices are emerging and problems borne out of chaotic systems where novel practices are needed. If we want to seriously address the sustainability of our consumption and production we need to recognise uncertainties about the future, go beyond the short timescales of current policies and change our current preoccupation with working on many separate issues. We need to develop policies that reflect the complexity of the systems we are dealing with, so that we can address the needs of today's disenfranchised as well as those of future generations.

This is particularly true with regard to the substantial financial flows that shape planning budgets. At present, urban planning policies often reflect the logic of the market. They should rather reflect a vision of urban development, in which environmental and social considerations are fully embedded in spatial planning policies at all steps of the policy cycle from problem identification and policy design through to the implementation and ex-post evaluation stages. This could have several benefits, including cross-compliance to legislations, redressing the market failures that drive sprawl by acting on price signals for land, in, around and between urban areas. Such realisations are demonstrated throughout the effective approaches undertaken by some cities in Europe.

The fact is that despite the complexity of urban systems, a piecemeal approach to urban management still prevails in many cities; sprawl is seldom tackled as an integrated issue. In turn, issue integration is rarely matched by procedural integration through policy-making, problem analysis and impact assessment, planning, financing and implementation, precisely because of the wide scope of the issues involved. Surely, this constraint on effective urban management stands high on political agendas - though I must add that this was already identified as far back as the 1980s. Why does this lack of effective implementation still persist then?

I would respond, only partly though, that there is a continuing managerial perception of cities as isolated from their wider regional context. In reality, however, the functional influences of cities are recognised to reach far beyond their immediate boundaries. There are also multidimensional links between urban and rural areas that are becoming more and more apparent. Typically, in Europe today, cities flow imperceptibly across municipal boundaries, a process that is at different stages of development in different countries, but which occurs everywhere. But, at the same time, the responsibility for land use management remains divided between different administrations, and this fragmentation of management, frequently exacerbated by the political tensions of neighbouring administrations, leads to incoherent and uncoordinated land use management.

Therefore, urban policies that increase the efficiency of land use, energy and material play an important role in reducing the urban footprint –I am not afraid of making understatements, as you can hear! But we have to bear in mind that rising consumption often outweighs efficiency improvements. For example, despite the fact that the average fuel consumption per car in Europe has

decreased by 10 % due to technical improvements since 1990, the overall fuel consumption by cars in the same period increased by 20 %, mainly because more and more people own a car and the number of kilometres travelled increased. It remains a hard fact that many consumers simply prefer larger and less fuel-efficient cars –and eco-labelling and other purely voluntary instruments alone are unlikely to reverse these trends. In Germany, without measures to reduce transport pollution, the volume of traffic and related economic growth would have to have been 90 % less than what it is today! In other words, environmental measures liberate the economy to grow faster than it could without such measures, partly because the population would not have tolerated the pollution from untrammelled growth.

However, Europe is only a player in our globalised world. The truth is that Urban Europe, if I may use this expression, relies not only on its own resources but to a large extent on the resources from other parts of the world. Our emissions – for example of greenhouse gases and persistent chemicals – affect not only Europe's environment but the global environment. The widely cited indicator of the ecological footprint shows in an easily understandable way that the footprint of the EU is larger than our bio-capacity; I gave you earlier a vivid illustration of this point with the case of Greater London. I could have pointed at the issue of waste management as well, considering that from 2005 to 2020, the amount of municipal waste in Europe is expected to grow by a quarter, part of which, electronic waste mainly, being shipped to India.

So it is time for change, a rallying sign of many conferences like the one assembling us today -Time to redesign the way we live, consume and produce in Urban Europe. In particular, we need action to address the three urban-related consumption areas that have been identified as having the highest environmental impacts during their lifecycle: housing, food and drink, and private transport which, all together, are responsible for about 65% of material use and 70% of global warming potential. This is a huge challenge as we would like to continue to have a good quality of life in the 2030s – a human well-being based on secure access to clean water and air, healthy food and without dangerous climate change, to mobility and decent housing, with equity in access to education and social security. And without exporting our problems to the detriment of the quality of life in other regions of the world, or causing irreversible changes or loss of the provisioning, regulating, supporting and cultural services from ecosystems.

To be on the right path towards this vision, we know that we must substantially improve the efficiency of our energy, material and land use and to reduce emissions of both greenhouse gases and pollutants. Such changes have to be accompanied by a shift in our consumer model. One proposal is to gradually move from a society of assets and ownership of goods to one where access to services is the driver. Long-life products and urban settings where at least most trips can be made by public transport rather than cars could help deliver this part of the vision. Thus, there is a need for more research on societal drivers of change as consumers across Europe are also increasingly showing their willingness to move towards more sustainable and low carbon consumption - but they need the right information and the right price signals. This is why a green tax reform is necessary, one that gradually shifts taxes away from labour

and investments and towards taxes on pollution and the inefficient use of materials and energy.

One example of how to look at this is the Intervention Diamond, developed by the Department of Environment, Food and Rural Affairs in the United Kingdom. Made up of four action areas - the four E's - enable, engage, exemplify, and encourage - it can be used to catalyse an integrated approach which can evolve as attitudes and behaviours change over time. Ideas like these, and conferences like this, are what is needed to ensure the necessary research and social acceptance and adoption of the goal of, and pathways to, sustainable urban development and, hopefully, a post-carbon society. When communities have a shared mental model of core values and basic principles that define meaningful and dignified goals, experience shows us that it is possible to prevent diversity from compromising decisiveness, leadership from compromising subsidiarity, the short term from compromising the long term, and self-interests from compromising the common good.

Indeed, seemingly contradictory aspects can be made mutually supportive. But the benefits do not come free; in order to overcome many of the obvious urban problems we must develop and share a set of basic principles that are scientifically verifiable and can be endorsed across cultures, that are generic for all scales and fields of activities, are practical enough for scrutinising today's situation, as well as of proposed solutions and visions that are sufficient for the development of integrated indicators and tools to monitor complex and inter-related transitions.

We must find ways of creating public visibility for such principles - always more difficult than for concrete actions. We need to find a calm area of entry - the opposite of a crisis-generating tipping point - for sharing and experiencing such principles at a time when haste seems inherent in our society. Perhaps these requirements are overwhelming, forcing us towards a more diffuse and ad-hoc approach. But experience tells us that without a shared framework of robust principles, sustainable development will remain a sidecar to other goals.

Typically, urban sustainability is dealt with through defensive terms: 'doing as little harm as possible', 'minimizing impacts' and 'we require more research to be more proactive than this'. In this world, phrases such as 'wasting resources is like pouring money down the drain' and 'eco-efficiency' are of limited use. Worse still, maintaining the reactive, ad-hoc approach characteristic of today means that we are failing to do four things: first, to recognise the very real dangers of extrapolating our current unsustainable course into the future; second, to plan with reference to the future rather than the past; third, to look at investments as strategic platforms for further improvements; and, fourth, to regard the economy as a means to reach dignified goals for overall well-being rather than as a goal in itself.

The renewed recognition of urban sustainability, or I should say the contribution of cities to sustainable development, is genuinely a matter of life and death. As shown by the European Science Foundation-funded work on social inequalities in health, once the basics of food and shelter have been provided, it is the presence of social cohesion together with a shared model of society that overwhelmingly leads to higher life expectancies, rather than absolute levels of

gross domestic product. This is evidenced in Japan and even within Europe, where it can be linked to cohesion amongst policies.

On the verge of concluding my speech, I hope that I have managed to present some evidence and argumentation that will hopefully resonate with you in demonstrating that the problem of unsustainability of our urban societies is not simply about a series of negative impacts, but more about underlying systemic errors in societal design that makes things worse and worse.

The fundamental challenge remains indeed understanding in both functional and operational terms, the unsustainable development patterns of our sprawling cities, so that future unsustainable development can be corrected or avoided. All things considered, the paradigm of the compact city, as an immediate antidote to the sprawling city, still cannot be fully substantiated. The effectiveness of compaction, as well as centralisation and concentration, have been thoroughly examined, including the various ways in which compaction can be achieved including intensification, new high-density development, traditional neighbourhood development etc. However, there are still uncertainties, particularly in the areas of ecological, social and economic impacts. In this context, the relationship between urban compactness and mobility is central to the debate. But there are more dimensions, for example, to the simple causal relationship between high-density development and reductions in mobility demand. Current monitoring and analysis of such links could be improved greatly if employment catchment areas were used to define functional urban regions, a proposal initiated by the President of ISOCARP, M. Pierre Laconte.

Ladies and gentleman,

We need to regain a sense of humility when facing the natural reality – and not a virtual perception - of our urbanised world. As traditional peoples have come to understand, in the end it is nature that we must confront. We now understand that it is the multi-dimensional, integrated form of the pressures that give rise to most concern, for it is through this that the loss of Xiao kung - the Chinese sense of completeness- and greenlash - the sudden loss of ecological diversity - are likely to occur generally with limited notice.

For years and decades, the impacts of urban sprawl have generated debates among scientists and practitioners, less so among the authorities and our leaders. I hope, humbly but forcefully, that together, we will contribute to raising further awareness and provoking reactions to an issue that is crucial to our societies' resilience.

I thank you for your attention and wish you a rich and productive event.