

# Executive Summary<sup>1</sup>

Zurich, September 2, 2016

CCRS Science & Policy Panel and Plenary Discussion on:

## **Towards an evidence based urban agenda: Engaging at scale with 21<sup>st</sup> century urbanization**

**Keynote Speaker: Shlomo (Solly) Angel**

**Thursday, 18 August 2016, 16.00 – 18.00 h, University of Zurich**



### **Introduction**

By 2030, sixty percent of the world's population is projected to live in cities. The majority of this growth in urban areas is expected to occur in cities in Asia, Africa and Latin America. The transition from rural to urban life styles is likely to result in a significant expansion in urban areas, which has to be mapped out and planned in advance. Urban expansion will require massive investments in urban infrastructure and innovation. It needs to be designed in a way that makes these cities livable and sustainable, not just for the privileged who already own property in cities, but also for the new residents. The latter have little access to essential urban goods and services and have a hard time to find affordable housing.

### **Key Messages by Professor Shlomo (Solly) Angel, New York University**

In his keynote lecture Solly Angel presented worldwide data on urban expansion. He argued that cities in less developed countries currently face the great urbanization challenges of cities in Europe and the United States in the 19<sup>th</sup> century. Back then, urban planners realized that with every new resident of a city, the urban living space per inhabitant roughly doubles considering that a city needs a lot more than just residential buildings to accommodate new arrivals. Today, developing countries face urbanization rates of similar speed. They need to respond to these new challenges by planning for urban expansion, as did the far-sighted city planners of the 19<sup>th</sup> century.

Prof. Angel pointed out that the three key ingredients for successful urban planning and actual expansion are jurisdictions, powers, and budgets. In his view, to work at scale, city officials must (1) estimate future urban expansion correctly, (2) plan and secure the rights-of-way for future arterial roads, (3) ensure that adequate lands are allocated to streets, and (4) protect key future public open spaces, so as to organize urban peripheries in a productive, inclusive and sustainable way before development occurs. Yet, he observes that the public sector often fails to come up with a bold long-term strategy for urban expansion and stick to its commitment also in the face of resistance from incumbents.

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This failure of urban planners and policy makers to guide and organize future urban expansion by laying out public works in advance of development, makes him rather pessimistic with the regard to our ability to cope with the urbanization challenges of the 21<sup>st</sup> century. Instead we still tend to stick to modernist master plans that were in fashion in the 20<sup>th</sup> century but never really worked in less developed countries. These master plans have no teeth, and our “smart city” districts, built from start to finish, make no difference because they do not reach to poor migrants in the outskirts of cities. Further he points out that «as long as we are confused about our core mission, we will not convince our publics to give us the necessary tools—the jurisdictions, the powers and the budgets—to do our job».

His findings show that urban expansion is ‘invisible’ and therefore typically underestimated. In this context he states five major facts: (A) between 1990 and 2015, the area occupied by cities in more developed countries increased by a factor of 1.8; in less developed countries (LDCs) it increased by a factor of 3.5. (B) Most of the residential fabric in the expansion areas of cities (1990-2015), especially in LDCs, is unplanned and disorderly, taking place in defiance of municipal plans or regulations. (C) The paucity of arterial roads in the expansion areas of cities is failing to connect them effectively to metropolitan labor markets, making cities less productive, less inclusive, and less sustainable. (D) Most cities in LDCs suffer from insufficient allocation of urban space to local streets that ensure the segregation of neighborhoods, the reduction of redundancy in route selection and other serious bottlenecks. The absence of a functional transportation infrastructure prevents the integration of the urban fringe into the city. (E) LDCs fail to generously allocate land for public open spaces. At the same time sensitive open spaces of high environmental risk are not protected from development.

Professor Angel further stressed that it is very important to set clear priorities in urban planning and policy making to capitalize on the window of opportunity for successful urban expansion where it still exists. He ends with the following key messages which in his view are essential to accommodate urban growth that for the largest part is driven by income:

Message 1: Estimate urban expansion correctly, based on population and density projections for the next 30 years.

Message 2: Create legal and fiscal mechanisms for ensuring that one-third of land on the urban fringe reverts to streets and arterial roads.

Message 3: Plan and secure the routes for wide arterial roads, spaced no more than one-kilometer apart, in the entire projected area of urban expansion in the coming 30 years.

Message 4: Create the institutional framework for securing key public open spaces, including sensitive areas of high environmental risk, and protecting them from development.

### **Panel discussants**

Following the keynote lecture of Shlomo Angel, the panelists were introduced by Philipp Aerni, director of CCRS, who moderated the panel discussion. They were asked to present their particular perspective on global urbanization and conclude with a concrete question for Professor Angel.

**Christoph Lüthi** [Department Head, Sanitation, Water and Solid Waste for Development] from EAWAG gave a brief overview of the urban services challenges that pertain to sustainable water management, urban sanitation, and urban water management. Dr. Lüthi warned of the growing backlog with regard to two of the most essential urban public goods, namely access to decent sanitary services and clean water. Currently, population growth in large cities in LDCs are causing water scarcity and water stress. Groundwater aquifers are depleting and those most affected and least served in terms of sanitation and clean water are as usual, the poor residents at the fringes of cities. He concludes by warning that there is a huge investment backlog in this kind of essential infrastructure, which also explains why improving access to clean water and sanitation has been the Millennium Development Goal (MDG) that most underperformed. If the newly approved UN

Sustainable Development Goals (SDGs) are resolved to address the issue more effectively, they need to better involve the private sector. Dr. Lüthi concluded by asking professor Angel what he thinks of the New Urban Agenda proposed by UN Habitat and to be approved at the Habitat III conference in Quito, Ecuador in October 2016.

**Jacqueline Schmid** [Programme Manager, Climate Change Section] from the Swiss Agency for Development and Cooperation (SDC) points to the fact that urban areas in less developed countries are particularly prone to suffer from pollution due to formal and especially informal economic activities. The situation is likely to get worse with climate change. Unpredictable weather patterns are likely hamper development and jeopardize what has been achieved so far in terms of economic progress. For that reason, climate change mitigation and management are increasingly important elements of development cooperation for SDC. Urban areas in LDCs must increasingly prepare for post-disaster management. At the same time they should learn to minimize the side-effects resulting from economic development. The question here is whether growing cities in LDCs are not frightened by the development in China. Most cities failed to preserve their original character and confront waste pollution problems.

**Carsten Menke** [Commodity Analyst] of Julius Bär pointed at the increasing consumption of natural resources caused by the growth of megacities in China over the past two decades. China has built an enormous amount of infrastructure and housing but is now experiencing a slowdown in growth. This is however unlikely to lower natural resource consumption in view of the growth of other megacities in Asia and Africa. There are however possibilities to make better use of non-renewables such as steel and other metals for construction. In this context, urban mining, the business of recovering and reusing metal and building material, has a long history as a profitable business that also greatly contributes to the circular economy. While solid waste recycling is indeed practiced for a long time, liquid waste is more costly and difficult to treat and recycle. He ends his viewpoint by asking professor Angel what he thinks of the potential of the sharing economy making urban economies more resource efficient, less polluted and more livable (less traffic jams).

**Markus Schaefer** who is partner at HOSOYA SCHAEFER ARCHITECTS AG addresses urban growth from a more holistic perspective. According to him, the urban space is based on agglomerations of people generating social differentiation and division of work resulting in the cultures and markets which allow us to live diverse, complex, and relatively safe and stable lives. In this sense urban residents past, present and future contribute to an urban narrative that needs to be taking into account in the planning and design of cities. As a scholar with degrees in architecture and neurobiology, Markus Schaefer suggests to learn from system-oriented and interdisciplinary research that shows the value of very open or networked systems that help mitigate social inequality and enhance resilience in cities. In this context, new digital technologies can also be used to monitor urban expansion and anticipate future trends. His team has developed a mapping of urban expansion that is based on Twitter messages. It greatly overlaps with the urban expansion projections by Shlomo Angel. His final question to professor Angel is about the modernist development approach, which may no more be appropriate to address the urban challenges in cities in LDCs.

**Manfred Max Bergman**, Professor of Social Research and Methodology at the University of Basel, pointed out that the development of urban areas are very much driven by social transformation processes, in particular increasing social mobility and accelerated cultural transitions. He gave examples how closer rural-urban linkages coupled with better access to education and technology in cities can help to reduce rural poverty, reduce cultural conflicts or improve public health. He also mentioned the example how the education of women in cities can translate into better jobs. It enables them to make self-determined lifestyle choices. Often their primary motivation to excel in school is to delay marriage by studying and starting a professional career. Professor Bergman expresses however some skepticism regarding prior urban expansion initiatives in China. Lots of apartment blocks stand empty and there is little live in these new residential areas. He combines this

observation with the final question for Shlomo Angel whether urban expansion can also go wrong by planning 'too big'.

**Solly Angel's responses:**

As for Christoph Lüthi's question, Solly Angel does not expect anything from the New Urban Agenda by UN Habitat. It is, as always with the UN, a nice wish list which no one can oppose because it wants to solve all problems at once. What is completely missing is a clear set of priorities that takes into account the history, cultural context and economic stage of development of a particular urban area.

He is less concerned with the point raised by Jacqueline Schmid and Dawit Tesfaye from the audience, who wonder whether African cities are going to repent urban growth in view of the development in China. China illustrates how the negative side effects of urban growth (pollution, contamination, traffic jams etc) have become increasingly unbearable for the Chinese urban population. As a consequence, cleaning up the urban environment and embark on massive reforestation in urban surroundings has become a top priority of the Chinese government and will remain so until the situation substantially improves.

Solly Angel agrees with Carsten Mencke, that there is indeed a great potential in the sharing economy of helping to solve various problems associated with urban growth (affordable housing, traffic jams, etc). He does however not agree in all points with Markus Schaefer because he understood his criticism of development as a top-down approach as a very popular stance in the Global North that is often linked to the belief that people in the Global South 'should not make the same mistakes'. He thinks this is a rather paternalistic point of view. Moreover it is easy to make such judgements if you live in a well-functioning city. Cities in LDCs do not so much care about development models but are more concerned with concrete practical issues related to the daily problems resulting from urban growth.

Mr. Angel very much liked the view of Max Bergman which takes all the sociocultural aspects of urban growth into account and also acknowledges the potential of urbanization to contribute to human empowerment and development.

As for urban expansion initiatives, Solly Angel mentioned the case of Colombia where he successfully managed to get on board 100 municipalities to implement city planning at scale. In Africa, several cities in Ethiopia are also embracing his concept. What is key is that the locals take ownership and do the work by themselves. He and his team only assist with consulting work. The big advantage of the urban expansion project is that it is almost costless and that the benefit cost outcome is excellent.

In regard to Chinese "ghost cities" Solly Angel is of the view that even though Chinese are masters to putting new infrastructure into place ("Indians just have difficulties with the infrastructure"), many times fail to cater to the economic potential of people. Many workers just cannot afford the new residential areas and are constrained by Chinese laws to rent a space in the surrounding rural areas.

Overall, there will be very little that can be done to deter people from moving to cities. This will remain a major driver of urbanization, especially in the Global South.