International Dialogue

Governing Emerging Megacities – Challenges and Perspectives

7–8 December 2006, Frankfurt/Main

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German Museum of Architecture
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PREFACE

The year 2007 represents a turning point in human development. For the first time ever, the majority of the world's population will no longer live in the country, but in cities. By 2030 the proportion of the urban population will have increased to over two thirds of all the people in the world.

Megacities assume a special importance in this development. There are already some 16 megacities in the world today, each with over 10 million inhabitants. By 2015 there will be 23 cities of this dimension, with 19 of them in developing and emerging countries.

The growing importance of megacities is not only due to their increasing number and size. They also have a growing influence in the globalization process because of the numerous political, economic, social and ecological activities centered within them. That the megacity of Mumbai generates more than one third of the total Indian tax revenue, or that the annual per capita CO_2 emission of the megacity of Beijing is two and a half times that of the country of Belgium are just two examples that highlight this influence.

Enormous disparities continue to exist within megacities as regards the existence level of their inhabitants. One section of the city population has an extremely high standard of living that offers more comfort and quality of life than ever before. Another substantial section of the city population is excluded from this development and lives in extensive slum areas with little or no access to public services. It is therefore essential to find solutions to the development of megacities that contribute to breaking down these disparities and building up social cohesion.

The governability of large cities and megacities represents one of the key challenges of the new millennium. Only with responsible action and the involvement of all sections of the population can social and ecological catastrophes with global consequences be avoided. It is imperative to make use of the opportunities that arise, especially in emerging megacities. Above all, there is an opportunity for innovative and sustainable solutions for guiding and supporting good city government. Essentially, the quality of life of people living in megacities is dependent on the provision of affordable housing and on access to drinking water, energy, education and health services.

This was the background to the international dialogue forum "Governing Emerging Megacities: Challenges and Perspectives", that brought representatives of megacities in India and China together with German and international experts to exchange experiences regarding the development of megacities. The special significance of

the event was in the combination of participants, with representatives from politics, business, science and civil society, who were given the opportunity to exchange views on proven and new solutions for the development of megacities.

In a total of four sessions during the two day event, the experts discussed aspects of governance in megacities and major urbane agglomerations. At the centre of the debate were questions on the importance of water supply, health services and housing provision for the quality of life of city dwellers, as well as on new challenges in the political fields of energy, transport and environment in the face of the rapid growth of urban areas.

The highlight of the second day was the "mayors' forum", in which representatives of different city governments discussed governance issues with regard to improving social cohesion. Of particular interest in this debate was that the predominantly Indian and Chinese experiences were supplemented by the viewpoints of representatives from the cities of Jakarta (Indonesia), Lagos (Nigeria) and Addis Ababa (Ethiopia).

The InWEnt conference laid the ground for a dialogue initiative of the Federal Ministry for Economic Cooperation and Development (BMZ) with politically and economically important developing countries. Intensification of the exchange of views on common global challenges should pave the way to a common outlook on the problems and a concerted approach to their solution.

In this respect, I hope that the exchange of views on questions of megacity development against a background of different experiences and perspectives will prove to be useful and profitable for the future work of the participants. The numerous contacts made during the conference will surely contribute to this, by intensifying cooperation between participants and thereby giving new and positive impulses to megacity development.

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Megacities in a Globalizing World

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I. UNDERSTANDING THE ROLE OF CITIES, AND MEGACITIES IN PARTICULAR, IN A GLOBALIZING WORLD

There are a number of reasons to study cities and megacities. Cities are the birthplace of globalization, and they are also the testing ground for governance and democracy. In this context, several key questions emerge:

▌ Does globalization help or hurt cities?
▌ What is the relationship between global- ization and megacities?
▌ What is the role of governance in city performance?
▌ What is the impact of city performance on globalization?

When looking at long-term patterns in city development, it is clear that the size of cities is not a stable outcome. Cities grow and shrink, and some even die. However, in the last 200 years, human civilization has dis- covered how to sustain very large agglomer- ations. The important role of decision making among large groups – in other words, demo- cratic choices amongst diverse groups – is one of the reasons why it has been possible to sustain such large cities. But could there be other reasons?

Consider the patterns of urbanization across countries. While the size of the urban popu- lation has been growing in all regions of the world since 1960, the pattern exhibited by China and India is quite distinct. After 1975, China and India show a significant increase in the number of people living in cities. What role has globalization played in this regard?

What about the supporting role of infra- structure and other enablers of globaliza- tion?

To answer these questions, data was collect- ed from various sources and used to test assumptions about globalization and urban- ization, and to assess policy and operational implications of the findings. The analysis is both exploratory and confirmatory. Data limitations make it difficult to draw valid conclusions on the impact of globalization on city performance. The paucity of data is a key obstacle to effective policy design at the national and subnational levels. To learn more please refer to Léautier, F. (ed). 2006. Cities in a Globalizing World: Governance, Performance & Sustainability. Washington, DC: World Bank.

The research explored four major themes:
1. Globalization of city infrastructure: Local, networked and global services
2. City performance profiles: What happened in Africa?
3. Globalization, technology, and scale: How do they interact?
4. Globalization and city performance: Does governance play a role?

The data was used to test five key hypo- theses:

Hypothesis 1: Institutions matter:
Demands for city infrastructure in the context of globalization generate local and global conflicts that require new institutions for solutions.

Hypothesis 2: Globalization matters:
Africa demonstrates the special dilemma of urbanization without globalization. A global city performs better than a local city, for a given quality of governance.

Hypothesis 3: Globalization interacts with technology, city type, and scale:
Globalization presents a competitive pressure to perform; technology is an enabler of voice; and city size and type have an impact on performance.

Hypothesis 4: Governance matters:
A city can be well-performing whether local or global, and driven by its good governance alone.

Hypothesis 5: Globalization and governance interact positively:
There is a dynamic virtuous circle which pushes globalized cities to be better governed and which attracts further globalization in well-governed cities.

The following sections provide detailed assessments of these hypotheses.

II. GLOBALIZATION OF CITY INFRASTRUCTURE: LOCAL, NETWORKED, AND GLOBAL SERVICES

Infrastructure networks are the foundations for urban globalization and are critical to megacities and their development. Infrastructure plant and service are mainly local, but demands are increasingly global.

Vulnerability and security have been found to heighten some old conflicts. For example, choices made at an airport such as Frankfurt depend on security determinations in New York or London.

Globalized infrastructure requires new institutions to manage the interface between local, regional, and global interests. Megacities are the laboratories for inter-jurisdictional cooperation and metropolitan management, and hence it is important to study them. New institutions, operating at the community, local, national, regional and global levels, have to respond to the preferences of various stakeholders and respect the hierarchy of interests.

In the megacity context, for example, there are many examples that illustrate this point.

Participatory Budgeting:
The Case of Sao Paulo, Brazil
Sao Paulo had to "re-district itself" in order to define a viable participatory consultative process to define its budget – the issue of economics of scale as they relate to participation – in other words "economies of participation" need to be considered.

Waste water treatment solutions:
The Case of Chongqing, China
The master plan for Chongqing required numerous waste water treatment plants as they were mandated in each jurisdiction and not by the economies of scale inherent in metropolitan management. After several

years of deliberations, Chongqing reduced the number of water treatment plants by more than 50 percent by taking a collaborative multi-jurisdictional perspective.

Managing growth:
The Case of Mumbai, India

The new initiative defined by Bombay's City Development Strategy of the "Bombay First" program requires a broader perspective for solutions of public transport, road and bridge infrastructure, and environmental management.

These three cases illustrate how sometimes there is a need for institutions beyond the city itself and that sometimes the ability to aggregate preferences can lead to better results. The cases also show when there is a need for more dialogue and lower-level institutions to achieve superior results.

The approach for assessing institutional performance includes an exploration of globalization and city performance. Defining urban governance, city governance, and globalization as outcomes that are visible to citizens

allows empirical tests of the city as a "place" or as an "enduring performance."

This approach also makes it possible to test how such institutions perform at the city level and the particularities of megacities.

III. CITY PERFORMANCE PROFILES

When comparing city performance across cities that are globalized and those that are less globalized (Figure 1) it can be seen that globalized cities outperform those that are less globalized by a significant margin. This is even more marked when looking at productivity (as measured by city product per capita) or wealth creation (as measured by average per capita income). Employment generation is not as obvious, even though more globalized cities seem to have more formal employment. Exceptions include cities such as Dhaka in Bangladesh, where the employment in the informal sector is a key dynamic.

These trends also seem to hold not only in a "spot comparison" but also when looking at

Figure 1
City Performance Profiles: Economic Performance of Citites, 1993

Indicator	Cities in countries that are	
	More globalized	Less globalized
City product per capita (1993, US$/year/person)	3,818	1,175
Average per capita income (Q3/person in US$)	2,066	377
Informal employment (percent)	32	40

Source: UNCHS 1998, Global Urban Indicators

long-run trends. A highly globalized city such as London generates a higher city product per capita than Addis Ababa. However, Mumbai, which is globalizing at a fast rate, has an even higher growth in city product per capita per year than Addis Ababa, which is not globalizing as fast.

The superior performance of globalized cities can also be seen in other indicators. However, all types of cities have a major challenge with poverty reduction, where globalization does not seem to offer superior options for reducing the number of households living below the poverty line (Figure 2). More global cities do seem to solve transport problems more creatively and offer more choices between motorized and non-motorized modes. Globalization also forces cities to keep travel times low, since otherwise such cities would fail to compete and lose competitive power. This may explain up to a 5 minute difference in the mean travel time to work for such cities.

Another area where globalization seems to have an influence on city performance is in local government efficiency. More globalized cities are capable of generating more revenues per capita and spend more time on their citizens than less global cities. Such cities also tend to be more efficient, using their revenues for expenditures other than wages.

IV. CITY PERFORMANCE PROFILES: WHAT HAPPENED IN AFRICA?

Such performance profiles are starkly different in Africa (Figure 3). While there has been tremendous growth of urbanization in developing countries with differential perform-

Figure 2

City Performance Profiles: Residential density, growth rates and household size, 1993

	Cities in countries that are	
Indicator	More globalized	Less globalized
Residential density (persons/ha)	96	252
Annual population growth rates (percent)	2	3
Average household size (persons)	3	5

City Performance Profiles: Equity in Cities, 1993

	Cities in countries that are	
Indicator	More globalized	Less globalized
Households below poverty line (percent)	26	27
Income disparity (Q5/Q1)	7	12

Source: UNCHS 1998, Global Urban Indicators

ance of cities, such patterns are different in Africa. African cities perform well below their counterparts in the developing world, yet post the highest growth among urban populations. There is a special dilemma of Africa: (i) urbanization without globalization; and (ii) high urban growth not accompanied by rapid economic growth. This presents a great possibility to test hypotheses in Africa (since there is high urbanization with low globalization) relating to the locus of policy decisions with respect to cities.

Consider, for example, the average performance of an African city compared to its counterparts in other regions of the world in the area of waste management services or access to health and education services (Figure 3). African cities underperform all other regions in these areas. One key feature

of African cities, despite their poverty, is that they are highly productive. They are, in fact, as productive as cities in Asia.

Similar patterns are seen when looking at local government performance. African cities are poor. On average, an African city has only $15 per capita per year to provide all local services. This is more than 10 times lower than what is available to cities in Asia and Latin America, and more than 100 times lower than what is available to an average city in the Arab States.

There are however, cities in Africa that do very well. There is a wide range in performance within and across cities. Cities in Botswana perform 100 times better than those in Nigeria or Senegal, which are both more globalized. This difference can be explained by how local governments manage.

Figure 3
City-level performance across regions

Indicator	Africa	Arab states	Asia Pacific	Latin America	Industr. countries	Transition economies
City waste management services						
Regular waste collection						
(from percent of city households)	36	65	67	85	99	91
Waste water treated						
(percent of generated waste water)	15	54	26	18	87	64
Health and education in cities						
Child mortality						
(percent of children < 5 yrs.)	12	8	5	5	0,4	0,8
Children per primary classroom	62	42	40	34	23	11

Source: UNCHS 1998; Foreign Policy 2003

V. GLOBALIZATION, TECHNOLOGY, AND SCALE: HOW DO THEY INTERACT?

The size of a city can be seen as a measure of long-run performance. Small size cities are best able to maintain high quality of life. However, megacities do outperform large cities, supporting the hypothesis that when cities perform well, they attract more residents and maintain existing ones.

A city like Guangzhou in China has grown tremendously in the last 15 years. It has done so while reducing residential density and physical compactness. The average citizen would have seen an increase in well-being as measured by per capita income, which grew more than 9 percent between 1990 and 2000. Such a citizen would have also felt less crowded and enjoyed more open space – both quality of life measures. Mumbai has also grown tremendously in the last 10 years, from an already large megacity. While per capita income grew by close to 4 percent during this period, city density did go down. An average citizen of Mumbai would have seen a better quality of life, not so much in terms of residential density, but perhaps more in the "connectedness" of the city and mobility (a measure of contiguity). Many researchers have argued that capital cities should do better than other city types because of the concentration of political power – a governance effect. Yet others have argued that port cities should outperform other city types because of their need to remain competitive – a globalization effect. Evidence is found for both hypotheses. Port cities tend to do better than other cities in

indicators linked to competitiveness such as access to the internet and overall quality of infrastructure. Capital cities tend to outperform other city types in indicators related to access to local services such as water, electricity, and telephone.

Technology also has an effect on city performance. Cities that post their budget data on a website (transparency measure) or include information on how to start a business on the website (competitiveness/openness measure) do outperform those that do not post such information. Technology is hence an enabler of voice (governance effect) and entry (globalization effect). Technology can however have other effects. By enabling exit (such as when one can install their own generator for electricity) technology can reduce pressure for improved governance.

China, which has urbanized very rapidly and at the same time globalized rapidly, provides a good case study for questions on city productivity. When looking at the GDP per sq km in Chinese cities, one sees a general inclining curve, with higher productivity at higher volumes of people in one agglomeration. This is an argument for the potential superior performance of megacities, which comes from aggregating large numbers of diverse-creative people for exponential benefits. The fact that many cities have yet to make this incline shows how hard it is to achieve across city types and the need for alternatives.

KEYNOTE ADDRESSES

The patterns of higher productivity also hold when looking at per capita GDP in the Chinese metropolis, which follows the pattern of a gentle S-curve. The significance of the gentle S-curve is an indication of the potential for large cities to really take off and generate higher per capita incomes.

VI. GLOBALIZATION AND CITY PERFORMANCE: DOES GOVERNANCE PLAY A ROLE?

It is hypothesized that well governed cities would outperform those that are less well governed, and that globalization would pressure cities to perform better. It is expected that the interactive effect of globalization and governance pressures should lead to even better performance. Cities would find it easier to progress along a 45 degree line, making incremental changes in the quality of governance and receiving dividends in terms of attractiveness for global activities.

The hypothesis holds for local services such as water as well as networked services such as electricity. The hypothesis is much more stark in the case of globalized services such as access to cell phones. Corruption is particularly difficult for cities that are local given the lack of competitive pressure. Effects of controlling corruption are more muted for global cities, except when it comes to access to cell phones. The empirical evidence indicates interactivity between globalization and governance effects in a mutually reinforcing pattern.

VII. POLICY IMPLICATIONS

Two broad sets of policy implications can be drawn from this analysis:

1. Skills, Networks, and Institutions

The analysis presented shows that there is a need to build the skills that city managers have so that they can better manage the opportunities of globalization. There is also a need to work with city governments and intercity networks and partnerships to support their globalization and governance efforts. It is also important to develop new institutions that can operate at local, regional, national, and multinational levels.

2. Megacity Management

Policies relating to managing megacities require anticipating and managing urban growth including megacities as vibrant metropolitan areas. Fostering effective metropolitan management is a key feature of making megacities competitive and efficient. It is important to recognize the new "polycentric" city as a reality and foster effective decentralized governance models.

The Role of Megacities in Development – Opportunities and Risks

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In much of the popular literature on megacities, there is a common negative theme of dystopia. "Dickensian" has become a recognized adjective used to describe megacities everywhere, and its connotations are readily understood. Megacities are feared. Their seemingly relentless growth, their burgeoning size, their envelopment of surrounding communities, their massive slums, all seem to combine to present an image of an intimidating, inhuman scale that cannot be managed.

And it is not just a matter of scale. The qualitative aspects of life in the megacity are often perceived as being at odds with an ordered and civilized existence. Differentials of wealth are more obviously contrasted in the highly contested spaces of megacities. Threats of terrorism, ethnic violence and criminality seem to be particularly concentrated there. Environmental impacts due to emissions from vehicles or industries, or contaminated water, or the presence of untreated sewage all add to the dysfunctional image. At the more extreme end of spectrum, ungovernable and anarchic forces challenge the very existence of ordered forms of government.

And some of this nightmare has a basis in reality. More people live in Mumbai's slums than in the whole of Norway. Bangkok grew from 67 km^2 in the late 1950s to 426 km^2 by the mid 1990s. And densities of development have increased. Mexico City increased its density from 16,225 per km^2 to 21,074 km^2

by 1970. And increased size and density has led to a proliferation of public bodies. As early as the 1950s New York was found to have over 1400 local government bodies often with overlapping jurisdictions. Scale and complexity seem to combine in the megacity to make them ungovernable.

In a number of cases the response has been to create metropolitan planning and development authorities in cities such as Mumbai, Calcutta, Delhi, Madras, Manila and Karachi in an attempt to impose order on this seeming chaos. Sometimes they had success, but as often as not they ran into conflict with elected entities at state, provincial and municipal levels, not to mention sectoral agencies that wished to retain responsibilities and power.

But despite offering a "Blade Runner" nightmare of dystopia, megacities are also magnets of hope, creativity and growth. Many are already recognized as hubs of innovation in arts, manufacture and finance and have ambitions for more. This is not true of all, with some megacities, or at least major areas within them, facing crises and decline. Many great American cities have experienced a hollowing out, with the formerly prestigious areas suffering vertiginous declines, although interestingly, some, such as New York, have managed to reinvent themselves. Lagos seems to be permanently dysfunctional, all though some would argue with this, noting that although it contains one third of Nigeria's inhabitants, it generates 65% of its

wealth. Dhaka seems to be mired in complications. But the irony is, the more one looks at megacities, the more one sees each of them having the positives outweighing the negatives. The comprehensively dysfunctional megacity is difficult to find.

Yet we need not rehearse how Mumbai, Shanghai, Singapore, and Beijing and others, and their associated megacity regions, have not only come to dominate the social, economic and cultural landscapes of not only their countries, but also to assume a global importance. Megacity administrators and national governments have spotted these possibilities and are working to enhance their comparative advantages in order to secure a larger competitive niche in a globalized economic environment. The mantra of the "World Class City" is that which provides the lodestone for strategy. The question we have to ask is, not whether this objective is correct, because it most probably is, but whether the measures adopted to achieve it are correct.

In order to answer this question, we perhaps ought to look at those ingredients in successful megacities of the past, and ask which of those attributes are relevant to today? The surprising thing is that we tend to think of the knowledge economy and the wired-up world as something new, which requires a new response. Well, yes and no. Certainly megacities have to ensure that they have the hard information infrastructure that is so essential, and if they do not have it, they will not compete. But, the bigger question is,

what do they with it once they have got it? And this is where the soft infrastructure, the human element becomes the key variable. Because it is the capacity to innovate, not only technologically, economically and financially, but culturally, politically and socially that will determine the success of cities. History tends to show us that all these things run together and feed off each other, although we must always be aware that good general explanations do not always provide a guide to individual circumstances.

And here I rely heavily on the work of Peter Hall, who in his work has asked the question, "Why do some cities succeed?" His answer is to look at the sources of innovation and creativity. He found that successful cities were often at centre of far-flung trading, not necessarily military, empires. They constructed themselves so that they were open to the outsider as diverse, tolerant and egalitarian places that welcomed talent, and stressed individual self-improvement. Their plurality of cultures, the climate of free discussion and debate and of easy participation in them provided the yeast which sparked ideas and provided networks for information exchange at a scale which could make difference. Their size provided a range of opportunities to outsiders of ability who could find a niche there. Outsiders played a disproportionately important role in the successful cities, as people half-inside and half-outside the establishment. This heady brew yielded cities that were powerhouses of information exchange leading to technological innovation and cultural vitality.

In the information society, face-to-face exchange through local networks that operate at scale is just as important as it was. The facilitating environment is provided by the megacity, suffused with the creative juices generated by its inclusive spirit.

How has the notion of the World Class City fared compared to this socio-historical narrative? The reality is the planned path towards this status has often been to emphasise the outward signs of the successful city, normally based on a northern model, and to see the physical vestiges of the preceding messy reality as embarrassment. The World Class City is a beautiful city, with clean streets, gleaming skyscrapers and a modern and efficient transport and communications system. There is nothing seemingly wrong in that of course.

One of the problems with the city beautiful is that the poor apparently have no place in it. We see extensive programmes of slum demolition, thus creating an atmosphere of exclusion. Many of these programmes do not take place in conformity with international law, even when carried out in the public interest, to create new infrastructure for example, they are often accompanied by forced evictions carried out without notice and without following due process. The capital invested by evicted people in their homes and possessions is often lost. The informal economy, so essential to their survival, is severely ruptured. This seemingly deliberate impoverishment of the vulnerable seems to

send a message that exclusion is a price worth paying to attain the status of a "world class city".

There are two aspects of this to be considered further. First, to create the space for the city beautiful there is a resort to punitive measures entered into in the name of efficiency and competitiveness of which mass evictions are a part and are often accompanied by loss of public space, weakening of popular participation, restriction of movement even. The danger is that the punitiveness undermines some of the key elements that give megacities their vitality. These are drained away in the cause of a more economistic vision of what makes a megacity successful.

It might be argued that the poor have a small place in the global knowledge economy. But all cities need those who provided support services – the refuse collectors, vegetable vendors, factory and domestic workers – which can be provided by relatively low cost labour.

But the poor in megacities make their own investment in global intellectual capital as well. It is no accident that groups of organized slum dwellers in Mumbai such as the National Slum Dwellers Federation have helped originate an international movement, founded concerning innovative tools to address housing deprivation. These contributions are an important part of the cultural mix that have created that city's vitality and

Peter W. D'Souza   Eckart Ehlers

made it a centre of reference for the global community of practitioners and thinkers about urban issues.

Second, the model for development is a northern one, developed for the comparatively rich and powerful. Services are provided in a form that are expensive, that cannot be afforded by poorer members of society, as well as often having high environmental costs that lead to consequences not only for the quality of life in the city but for extended hinterlands. Extensive provision for car based transport leads to local and global environmental impacts. In Delhi, cars assume 75% of the road space, yet transport only 20% of the people living in the city. Pollution of acquifers by untreated sewage (itself caused by assuming that high-cost technologies for sewage treatment are the only suitable alternative – thus leading to under-investment) often leads to the need for abstraction at a great distance from cities. Transmission losses are large, the overall capital and recurrent costs are high, and the overall package often unaffordable, with the poor losing out more than most.

For newly emerging Asian megacities to earn their spurs as world class cities, it might be argued that the true test is innovation in sustainable urban development. This will require them to increase economic wealth, but differently from preceding models. A form of "leapfrogging" might be envisaged

whereby progress can be made without the blight of exclusion and environmental damage. Many have made major strides – Singapore for example has made major achievements in preserving old-growth tropical rainforest, protecting and creating green spaces, and promoting clean rapid transit to such an extent that it is the only large city in the world that acts as a carbon sink. There are many such others. The approach would continue to draw on the traditional virtues of diversity and openness, but seek to enhance these by consciously extending their footprints further into city governance so that they to can benefit from the unlocking of the creative endeavour of its citizenry that is already achieving so much in other fields. At the risk of over-simplifying the argument, it is suggested that this can best be done by seeking out the views of all of its citizens and engaging them in decision-making, thus stimulating the ferment of ideas and increased commitment.

Urban Infrastructure and its Ecological Demands and Constraints – An Indian Perspective

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Urbanization in India is characterized by large imbalances, both in terms of spatial patterns and class-size distribution. The pace of urbanization is found to be much faster in the metropolises than in any other urban area. By 2001, the urban population in India constituted 28% of the total population and presently it is estimated as about 30% of the total population of the country. This population, however, is not uniformly distributed throughout the country. There are regional disparities both in the level and pace of urbanization.

I. STATUS OF THE URBAN ENVIRONMENT – PROVISIONING OF MUNICIPAL SERVICES
Water and sanitation
According to the latest Census, 69% of the urban population has access to tapped water supply. However, the average availability is less than four hours a day, and in some areas water is supplied only for one hour on alternate days. The poor quality of transmission and distribution networks results in higher operating costs and physical losses ranging between 25% to over 50%. Low pressure and intermittent supply leads to the contamination in the distribution network. Hence, a vicious cycle of unsatisfactory service standards caused by low tariff structures resulting in poor resource positions of Urban Local Bodies (ULBs) and poor maintenance and service continues.

Approximately 70% of the urban households in India have sanitation facilities, however, only 72 of 4400 towns in the country have partial sewerage facilities and 17 have some form of primary treatment facilities before disposal.

Municipal Solid waste
The growth of Municipal Solid Waste has outpaced population growth in recent years as a result of changing lifestyles, food habits, and rising living standards. About 48 million tons of solid wastes are generated in the urban areas everyday, an eight-fold increase since independence. Of this not more than 72% is collected daily, which leads to accumulation and decomposition of the waste in public places with adverse effects on public health. The increase in non-degradable waste is alarming; the production and consumption of plastic has increased more than 70 times between 1960 and 1995.

70% of Indian cities have inadequate waste transportation facilities resulting in littering during collection and transport. The landfill sites too are seldom managed in an environmentally acceptable manner and are prone to groundwater contamination because of leachate production. These sites are sources of livelihoods for the urban poor like rag pickers who often locate their residences in proximity to these sites, living in and exacerbating unhygienic environmental conditions and suffering from an array of physical and mental health problems. Landfill workers

have significantly higher incidence of respiratory symptoms, and they suffer more often from diarrhea, fungal and other skin infections, transient loss of memory, and depression.

II. IMPACTS OF INITIATIVES ON PROVISIONING OF URBAN SERVICES: SOME CASES

Water and Sanitation – The Yamuna Example

With awareness towards water pollution making its mark in the country, Delhi government initiated a drive in 1993 to clean up the Yamuna River, which flows through the heart of the city. To arrest river pollution, certain measures of cleaning river have been taken by the Ministry of Environment and Forests (MoEF) of the Government of India (GOI) in 12 towns of Haryana, 8 towns of Uttar Pradesh, and Delhi under an action plan (Yamuna Action Plan-YAP) which is being implemented by the National River Conservation Directorate (NRCD) of the Ministry of Environment and Forests. Control of pollution from industrial effluents was to be addressed under the environmental laws.

Yamuna Action Plan includes:
a) Construction of sewerage systems for interception, diversion and treatment of sewage in the larger towns
b) Provision of public latrines
c) Provision of crematoria and improvement of bathing ghats alongside the river
d) Some plantation and beautification works
e) Education and public awareness in sustaining cleanness of the river.

Municipal Solid Waste – Greater Visakhapatnam Municipal Corporation (GVMC) initiatives

The current reform process has brought in the awareness about environmental and health hazards of improper waste management and sanitation in a city. This has been demonstrated by the Greater Visakhapatnam Municipal Corporation (GVMC), which has implemented a comprehensive solution to these problems. Through Resident Welfare Associations (RWAs) i.e. associations formed by citizens, GVMC partnered with citizens in waste management exercise. Two programs were initiated for management of solid waste and cleaning up of drains and roads respectively. In both these programs, citizens actively participated in project estimation, resource mobilization, execution, monitoring, and contributing in terms of cash and supervision. The two programs have jointly resulted in improving the sanitary conditions in 900 localities covering about 75% of the population.

III. OTHER INITIATIVES

Current policy shifts with redefinition of approach at the national level represent significant conceptual change in the policy environment for local service delivery and has the potential to rewrite the way urban
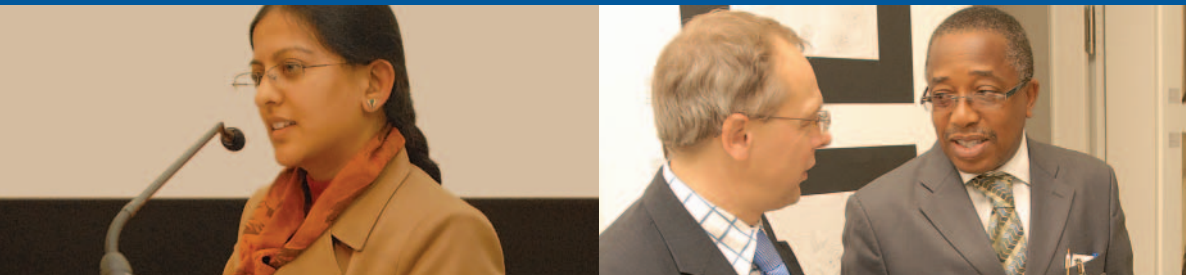
local governments will deliver services. The examples discussed above showcase the improvements that can be brought about with policy interventions. However, it is well known and accepted that changes at the policy level alone cannot bring about a significant improvement of our environment. It is with consistent efforts of the policy makers, NGOs and civil society of the country along with supportive policies, which can make an impact.

A major lacuna in provisioning of services has been due to inadequate data availability and its management although there is awareness about latest techniques to measure quality of Urban Environment. Some of these techniques are described here which have been implemented in the country on a small scale and are being seriously considered for wider applications.

Ecological Footprint Approach

Although much qualitative work has been done to assess sustainability in urban areas, few quantitative measures exist. One of the more interesting quantitative techniques to emerge is Ecological Footprint, or Appropriated Carrying Capacity Analysis. This technique measures the land and resources a society consumes in order to sustain. The Ecological Footprint of a region is the area of productive land required to provide all the energy and material resources consumed and to absorb all of the wastes discharged by the

population of the region using current technology, wherever on earth that land is located. Small or decreasing per capita Ecological Footprints indicate that the region is moving towards sustainability, while those that are inordinately large or rapidly growing indicate just the opposite. Urban areas can use Ecological Footprint analysis as a yardstick measurement against which the impact to sustainability of future developments and growth can be measured.

Green Accounting

Green Accounting, also referred to as natural resource accounting or environmental accounting, is a system in which economic measurements take into account the effects of production and consumption on the environment. It specifically takes into account the depreciation of natural resources and the environment while estimating net domestic product or net national product. The concept dictates that natural resources, such as minerals, soils and forests, have an economic value. This is called natural capital, to be distinguished from manufactured capital such as roads, factories, and machinery. Until recently, changes in natural capital were not given money values, nor included in cost-benefit and other forms of economic analysis.

While there are some preliminary efforts towards Green Accounting at the National and State levels, there is virtually no frame-

work to incorporate it at the city level.
Undoubtedly, the preparation of Green
Accounts is a vast exercise for the city level
and cannot be completed in a short time-
frame. However, it is important to establish a
framework and baseline data for the present
state of environment in our cities so that one
can periodically assess how the quality of
environment has changed in terms of air,
water, soil, biodiversity and exhaustible
resources.

IV. CONCLUSION

India has still a long way to go in achieving
acceptable levels of service delivery and
eliminating the negative impacts of service
delivery on the environment. However, the
above discussion brings to the fore that both
the government and the intellectual commu-
nity recognize the consequences of environ-
mental degradation and efforts are on in the
country for improving the current situation.
Sustained efforts of the government and the
intelligentsia in an enabling policy environ-
ment has already started yielding positive
results and I am positive that the day is not
far when India would be at the juncture of
boasting an environmentally friendly system
of service provision in place.

Principles of Urban Development in Agglomeration Areas

Albert Speer, Architect and Urban Planner, Managing
Director AS&P – Albert Speer and Partner GmbH, Germany

"It seems that complex systems, once their constituting elements surpass a critical number, tend to self-organize following ever similar principles in order to obtain stability."
Wolf Singer in: "The architecture of brains as model for complex cities structure"

Framework-conditions of today's population-development
Europe from 728 Million to 668 Million; USA from 294 Million to 420 Million; Asia from 3,9 Billion to 4,2 Billion

Involvement by AS&P
During the last 40 years, our office has been involved in various planning projects for larger cities, not the least in Shanghai. The city development of Shanghai with its tremendous activities in the construction sector, offers the opportunity to function as a showcase for city development strategies, future-oriented urban Development and sustainable building technologies in Chinese Megacities by implementing and testing sample projects. Parallel to our engagement in China we have been involved in strategic city development planning in a larger scale in various countries and have gathered experience, among others, in the Saudi Arabian capital Riyadh, Baku in Azerbaijan, in Nigeria with the planning for greater Abuja as well as regional planning for the Rhine-Main-Area around Frankfurt am Main, Germany.

Although these city's framework conditions are completely different there are some principles that seem to be almost "universally" applicable.

1. THE PRINCIPLE OF "DE-CENTRALISED CONCENTRATION" SERVES AS THE BASIC TOOL TO IMPROVE URBAN DEVELOPMENT IN AGGLOMERATION AREAS
The planning principle suggested to allow for a proper development control in metropolitan areas has been called de-centralised concentration, which means a densely inter-linked network of sub-centres or "satellites" with particular vital functions within the concentrated urban fabric of a megacity.

2. "THE DOWN-TOWN LANDSCAPE" IS A VITAL STRUCTURAL ELEMENT TO COMPENSATE THE LAND USE FOR BUILT-UP AREAS IN MEGACITIES
Today's rapid growing megacities do significantly lack down town open space and regional green belts in a dimension to be called "landscape". This cannot be balanced by artificial water ways, parks and street related green belts only. Megacities demand a profound ecological inner-city-landscape planning. The function of inner-city-landscape is manifold, to name the most important:
❚ Local climate improvement, better exchange of fresh air, reduction of air-pollution.

▍ Help to establish an orderly, recognisable structure, understood as sequential mix of open landscape and built-up areas of the agglomeration which makes it fabric more "readable" to its inhabitants.

▍ Help to maintain the human scale within large settlements

▍ Urban agriculture can support provision of food supplies with short transportation ways (reduction of traffic)

▍ Locating sports and recreation facilities embedded within the down-town landscape, in the immediate vicinity of residential areas leads to reduction of Leisure time mobility (which for example in Germany generates 50% of the total of individual transportation (km/person))

3. THE COMPATIBLE ORGANISATION OF MOBILITY IN MEGACITIES CALLS FOR A PREFERENCE OF PUBLIC TRANSPORTATION

The organisation of passenger and freight generated mobility is a key issue in megacities both with regard to ecological and economic reasons. Above and beyond construction of a given transportation infrastructure, its operation is also crucial. What is necessary is a networked, integrated traffic management system encompassing multiple modes of transport.

This requires not only investment in high-tech solutions (detection, satellite navigation, centralised administration, etc.), but also a newly integrated manner of thinking on the part of individual operators and organisations.

A well functioning public transportation system is the only chance to guarantee mobility in 21st century. Consequent means towards this goal will have a positive impact on the urban structural fabric as a whole. Above all, public transport, in contrast to individual traffic, will drastically reduce air pollution as well as energy consumption. Organising a regional planning with regard to reduction of mobility is the key to overall sustainable development and reduction of energy consumption.

4. NETWORKS OF INFRASTRUCTURE SYSTEMS ARE A PREREQUISITE FOR SUSTAINABLE URBAN DEVELOPMENT

Organic growth and constant rejuvenation have become one of the major objectives in strategic megacity development planning, in particular applied to infrastructural systems, leaving more space to the self-organisation of the "City Organism". Only the introduction of an intelligent network of infrastructure systems within the megacities will preserve resources and reduce emissions drastically. To develop and optimise infrastructure systems an interdisciplinary planning approach is necessary, which finally leads to a sustain-

able solution. Urban planning and planning of urban technical facilities has to be conducted simultaneously. The various fields of infrastructure (water supply, sewage, waste treatment as well as heating and air-conditioning) may no longer be optimised separately and sequently, but rather jointly and parallel, they have to be considered as one system, to be integrated in one urban technical network.

5. EFFICIENCY IN CITY MANAGEMENT AND USE OF FINANCIAL RESOURCES WILL PROFIT FROM CLOSE CO-OPERATION WITH PRIVATE ORGANISATIONAL STRUCTURES

The process of urban development calls for optimising the organisational structures. The organisation and management of a Private Public Partnership provides for a proper use of financial resources and lasting economic success.

6. THE PRINCIPLE OF RESOURCES EFFICIENCY MUST BE FOLLOWED THROUGHOUT THE ENTIRE PLANNING PROCESS, FROM THE REGIONAL PLANNING TO THE CONCEPTION OF THE SINGLE BUILDING

Any chain is only as strong as its weakest link. The efficient use of recourses and energy in particular has to be followed from the production through the transport and distri-

bution to the end-users. With regard to urban planning and building construction this means that only parallel and joint efforts on all levels and in all scales of planning will provide for an optimum of efficiency in use of resources and environmental preservation. The general planning approach towards sustainability thus has to encompass the level of regional planning and urban design as well as the architectural design for single buildings. When it comes to the concrete urban and architectural design, we have found a way to deal with these tasks in a comprehensive way, which might be considered suitable in other fields of activity as well. We call our approach "sequential, cooperative, transparent planning process".

Private Sector Contributions to Municipal Public Service: China's Power Investment Regulation Reform

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1. POWER SHORTAGE IN CHINA'S HISTORY

Power industry is a typical public service, and it is usually recognized as a natural monopoly industry. China's central government used to invest and operate power industry by itself. As you know, the fiscal investment is quite limited. However, due to massive industrialization and extensive urbanization, power demands have increased quickly. Thus, power shortage is inevitable, and occurs repeatedly.

In 1949, the People's Republic of China was founded. At that time, China had a power capacity of 1850MW (megawatt), and produced 4.3 billion kWh (kilowatt-hours) annually. China faced severe power shortage. After more than 10 years, in 1965, the power capacity increased six times to 12 GW (gigawatt), and the electricity production increased twelve times to 57 billion kWh. The electric demand and supply balanced off temporarily.

In 1966, China faced power shortage again, and since then power shortage became more and more serious. In 1978, China started its reform and open policy. At that time, the power shortage gap amounted to 10 GW, and 40 billion kWh. In 1985, the shortage gap amounted to 14~15 GW, and 60~70 billion kWh. In that year, China implemented an important policy: "to develop power industry by gathering social capital". After 12 years, at the end of 1997, the electric demand and supply balanced off, and had lasted for 5 years. Unfortunately, there were few new power plants approved during 1998–2000. Since 2002, China faced a new-turn power shortage. In 2005, there were 26 provinces, among 31 provinces, where we had to switch off, or cut down the electric load. This year, however, the situation has been improved, and it is expected to balance off next year.

2. CHINA'S POWER INVESTMENT REGULATION REFORM

China's Power investment regulation reform has started since 1980. In this year, fiscal administration separated between central and local government into two tiers. Consequently, power construction fund was planned and arranged according to the subjection of firms. The local government can make policies to collect social capital. It is the premise for private sector to join power construction.

In August 1984, the central government cleared a policy-orientation, that is, to collect social capital, and to insist on multi-forces investment. In 1986, the State Council approved the policy. It encouraged to develop power industry by gathering social capital. It also arranged a new electricity price system. Thus, the independent power plant (IPP) came into being. In 1993, the "Company Law" was promulgated. The power plant started to operate as a company. In 1996, the State Council started an initial capital policy.

And the "Electric power Law" was promulgated in the same year. It has explicitly stipulated the rights of shareholders and the stakeholders, and outlined the governance and management of power plant companies. From the year of 1984 till now, a multi-forces investment structure came into being. There are mainly 4 forces: First, the state-owned enterprises (SOEs) belonging to central government, the so-called Big-five power group.

Second, the state-owned enterprises (SOEs) belonging to local governments. In 1984, the State Council approved East China Grid Company to charge additional 2 cents per kWh industrial consumption. The money collected was used as power construction initial capital. In 1988, the experience spread nationwide. There are 47 companies started by this means.

Third, joint venture (JV). In 1985, Hong Kong Hehe Power invested the Shajiao Power Plant by means of BOT. Another Hong Kong company also invested in Daya Bay nuclear power plant. Since then on, many foreign companies have invested power plants in China.

Fourth, the social capital through stock market. In April 1993, Shenergy Company Ltd. was listed in Shanghai Stock Exchange. It was the first power company listed. After Shenergy, there were tens of companies listed. Datang, Huaneng, Huadian, and China

Power were also listed in Hong Kong, London and New York stock exchanges. In this way, a lot of social capital have been collected and invested in power industry.

3. PRIVATE SECTOR CONTRIBUTIONS TO CHINA'S POWER INDUSTRY DEVELOPMENT

Since 1984, China's power industry has grown very fast. In 1987, the capacity exceeded 100 GW. In 1995, it exceeded 200 GW. In 2000, it exceeded 300 GW. In 2004, it exceeded 400 GW. In 2005, it exceeded 500 GW. And it is expected to reach 600 GW this year.

The private sectors contributed a lot to the fast growth of China's power industry. As mentioned above, the private sector includes mainly two parts. One is foreign direct investment (FDI), and the other is social capital collected by stock market. From 1985 to 1992, FDI played an important role. In 1990, FDI accounted for 12.2% in total fixed asset investment in power industry. Since 1993, stock markets have become more important. According to statistics, there are 60 companies listed in Shanghai and Shenzhen stock exchange. They collected 67 billion RMB totally. In addition, Huaneng and other companies listed overseas collected more than 13 billion RMB. Assuming this 80 billion RMB, mainly private, was used as initial capital, we could build 200 GW capacity, based on the current power plant construction

cost. This 200 GW accounted for 39% of the China's power capacity at the end of 2005. Here we can see the great contributions of stock market, mainly private sector, to China's power industry.

4. IMPLICATIONS

From the practices of China's power invest-ment regulation reform, we can draw some conclusions and implications:

First, in developing countries, due to massive industrialization and extensive urbanization, the demand for municipal public service grows quickly. Government investments can-not meet the actual demand. Private sectors can and should play an important role in public service delivery.

Second, even in pure natural monopoly industry, private sectors may play a role in certain parts. For example, in the power industry the distribution part is run by SOE, however, private sectors can play an impor-tant role in power plants.

Third, municipal public service usually needs a lot of money. It is a good choice to startup companies and collect social capitals through stock market.

Fourth, when private sectors join in the municipal public service, government should provide more guidance and support in areas such as standard formulation, cost restric-tion, price regulation and market supervision.

The Urbanization and Re-Urbanization in China: The Shanghai Experiment

Zheng Shiling, General Schemer EXPO 2010 Shanghai, Director of
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I. THE RAPID AND LARGE SCALE URBANIZATION IN CONTEMPORARY CHINA

The Chinese national government's open policy in the late 1970s gives Chinese cities a great opportunity to modernize and develop. The urbanization in China has become the focus of multi factors such as industrialization, globalization, social and economical transformation etc. All of those factors are mingled together. The governance and urban development mechanism are undergoing a fundamental change, too, which has brought a sophisticated geo-political context for the urbanization in China. The urbanization since 1950s could be divided into three phases: The first phase is the general urbanization until 1970s, the urban industrialization and reversed urbanization. The second phase is the market oriented urbanization in 1980s and 1990s. The third phase is the rapid and large scale urbanization since late 1990s in order to catch up the world trend of urbanization.

In 2000, the urbanization in China is 36.22%, in 2005 it is 43.3%, in 2010 the urbanization will be 49.2%, and in 2020 it will be about 60%. Since 1996, every year the urbanization will have 1.43 – 1.44 more percentage point, which means yearly there will be more than 25 million agricultural population become urban population. There are some unilateral trends in the rapid urbanization, such as the land use urbanization is ahead of economical urbanization, the hardware infrastructure has been paid more attention than software infrastructure, the environmental pollution; the neglect of the urban culture; the uneven distribution of public resources in urban area, and finally, the lack of idealistic model for future city.

In these fields, Shanghai is already in the leading position in China, but the built-up area in Shanghai is still one tenth of the metropolitan area, and the average income per capita is still very low. A striking contrast in living quality from area to area still happens in different corners. There is a serious uneven distribution of environmental resources, environmental quality, educational opportunities and infrastructure for different corners, especially the difference between the upper part and lower part since 100 years not yet eliminated. The rapid and large scale construction of Shanghai in late 1980s and 1990s has nearly changed the urban skyline with a random image of "form follows profit". All of these situations asked Shanghai to start a re-urbanization.

After the government open policy, Shanghai has the opportunity once again to become a world class centre of finance, economy, trade and shipping. As a result, since the late 1990s, a series of master plans for different areas of the city have been worked on, covering over 1000 km^2, to catch up this rapid growth. About 20 million square meters of buildings are expected to be built every year with new housing, offices, infrastructures and other facilities. To give a sense of scale, this equates to the half size of Shanghai in

1949. The current master plan covering the period 1999 – 2020 is based on a multi-centric urban structure.

II. THE SIGNIFICANCE OF RE-URBANIZATION IN SHANGHAI

Today Shanghai becomes a compact showcase of the world city and architecture. The urban development has followed the models of classical European cities and integrated with traditional Chinese ideology. As a center for modern Chinese culture, Shanghai already became an important economic and cultural metropolis in 19th and 20th century. In the history, Shanghai is always famous for its chasing for advanced technology, prosperous economy and the fashion of life.

There are three important factors that will profoundly affect the future development of Shanghai: the first event is the development of the Pudong New Area, the second event is EXPO 2010; the third event is the suburb development of Shanghai. All of those three factors have promoted the city into a period of Re-Urbanization. The opening policy for Pudong Area, i.e. the east part of the Huangpu River has led to a restructuring course both for the urban industry and urban form. The Huangpu River becomes the center of urban space, the former waterfront along the river is now transforming from the industrialized area full of factories, shipyard, warehouses, docklands into a public open space. The transformation of waterfront space has lead to the birth of EXPO site along the river.

In 1990s, Shanghai has started the re-urbanization course due to the opening policy of Pudong Area. Re-Urbanization is a special debate upon the Chinese and especially the Shanghai situation, which is an optimization of the urban environment and establishment of the creative economy, which means the improvement of the urban space and restructure of the industry and urban structure, to deal with the agricultural area of the metropolitan area and the urban area, to heal the city with the preliminary and unbalanced urbanization and to eliminate the differences of urban service and education facilities and the uneven distribution of urban infrastructure and resources in the city, to eliminate the big differences between the Upper Corner and the Lower Corner of the city since more than 100 years, to improve the service sector for better life quality and to foster human creativity.

The EXPO 2010 is located on a land of 5.24 km^2, which spans both sides of the river and is just 5 km away from the city center. The existing situation of the EXPO site is full of factories, warehouses, shipyards, piers, waste land and low quality residential buildings. After the master plan, the whole area will be transformed into a convention center, a sub-center of the city.

The EXPO 2010 is a result of the achievements Shanghai has accomplished, at the same time it will also give the city a challenge and a new opportunity for the future development. Since 1990s, Shanghai has been undergoing a significant urban transformation. The urbanization cannot be considered just as a statistic relationship between urban population and the total population, which is related to the urban industry, urban space, urban environment, infrastructure and service sectors.

III. THE SUBURB DEVELOPMENT IS THE FORERUNNER FOR RE-URBANIZATION OF SHANGHAI

Already since 1958, 7 satellite cities have been built in suburb area of Shanghai which have played a very important role in the course of industrialization. Since 2000, Shanghai has put the emphasis of development on its suburb area. A program called "One City, Nine Towns" has been initiated throughout about 6,000 km² suburb area, Shanghai planners and architects collaborated with their colleagues come from Germany, Italy, U.S.A., U.K., Netherlands, France, Japan, Sweden have made a great contribution for the new urban planning ideas. The suburb Development is also the forerunner for Re-Urbanization of Shanghai. Since 2000, a restructure of the urban system has been conducted in a large scale. In 2006, a program named 1966 Program has been initiated, in order to have a balanced development between the urban area and suburb area in

Shanghai that means one metropolitan city, 9 satellite cities, 60 towns and 600 central villages. Some projects in the suburb area are very significant for the re-urbanization of Shanghai, such as the New Harbor City, New Pujiang Town and Qingpu New City.

Shanghai is rethinking the rational model for its future development to lay down a solid foundation for the re-urbanization and to create a new cultural tradition, in order to live in the city better than viewing it from the air. To insist a balanced development between the physical form and social behavior, it needs the cultural driver to foster the establishment of a creative city. Shanghai is conducting the re-urbanization as a practical deduction of the theme of EXPO 2010, let the city better and the life eternal.

Summary of the Mayors' Forum on Governance and Urban Development – Prerequisites to Safeguard Social Cohesion

There are many other countries besides India and China facing the challenge of megacity development. For this reason InWEnt invited representatives of different city councils from Africa and Asia to discuss questions of urban governance with special regard to the prerequisites for safeguarding social cohesion.

The panel discussion was chaired by Günther Taube (Head of Department, InWEnt). He emphasised the importance of looking at questions of urban megacity development from the perspective of government officials and also stressed the opportunities that might arise through widening the viewpoints of Indian and Chinese urban development experts as a result of contributions from Indonesia, Ethiopia and Nigeria. The guests on stage were Changyuan Wang (Deputy Secretary General of the Chinese Association of Mayors, China), Fauzi Bowo (Vice Governor of Jakarta, Indonesia), Berhane Deressa (Mayor of Addis-Ababa, Ethiopia), Mary Neelima Kerketta (Additional Commissioner (Special) of Pune, India), Johny Joseph (Municipal Commissioner of Mumbai, India), Francisco Bolaji Abosede (Honourable Commissioner for Physical Planning and Urban Development, Lagos State, Nigeria), and Jiuling Xiong (Deputy Director General Policy, Research Bureau of the People's Government of Beijing, China).

Changyuan Wang (Deputy Secretary General, Chinese Association of Mayors, China) pointed out the necessity for mayors to not only focus on the management of

their own city, but to think in terms of city clusters. "A mayor, the manager of the city, should not only think about the management of his city. Urban development has to be in cooperation with the surrounding areas so that industries can really develop by means of shared resources and shared information."

He also pointed out the importance of a harmonious society, which is based on four aspects. The first is equality, which refers to equality between the cities and the countryside, between the east and west of China. The second aspect is employment: urbanisation attracts a new population of about 10 million people every year. In the past, cities have not been capable of providing a sufficient number of jobs for the new citizens, resulting in high unemployment. The third aspect of achieving a harmonious society is coping with the effect of rapid economic growth. He referred to the energy sector by way of example: "The use of resources is not really fine-tuned. Our share of global GDP is 4.1%. The percentage consumption of energy is much larger than this figure. We know about this problem and we are changing it. Central government takes the question of energy resources into account when judging the performance of its subordinates." The fourth aspect is social security. This includes areas such as old-age insurance, health care and education. Changyuang Wang emphasised the responsibilities of the cities in this regard, "But of course they are experiencing problems in finding ways to help the people, to help the underprivileged section of the population." He concluded with the words,

"The construction of the harmonious society has a great impact on the development of city organization."

Fauzi Bowo (Vice Governor of Jakarta, Indonesia) opened his speech with the essential statement, "Social harmony is something we are all longing for. But social disparity is a fact that we are facing everyday. In real terms social disparity reflects poverty. Poverty means scarcity of job opportunities, and this can easily be seen in the pattern of distribution of the gross domestic product."

He continued by asking the question how social harmony can be achieved, especially in a plural society such as Indonesia where "social harmony depends on being able to harmonize the diversity of ethnics, religions and traditions all at the same time. What is needed is a partnership of all stakeholders, a partnership that is multi-faceted, multi-disciplinary and multi-level." He emphasised that it was crucially important to include all stakeholders in this process and saw the government playing a key role in the process of urban development and the achievement of social cohesion.

If there was no cooperation "each and every cluster, every government entity and every community will have their own prevalence, goals and objectives. Their objectives may not be compatible with those of the larger clusters. This is the reason why we need understanding, a proper mindset and why we need a system of cooperation. We need to know how to tackle and deal with all these problems. The administration also has to set

goals, objectives and a common strategy for all the different levels, set priorities, develop an infrastructure and manage the resources at their disposal. The involvement of the stakeholders is very important in this phase of urban management. Each and every stakeholder should have a place in the process, a different role at a different level."

Berhane Deressa (Mayor of Addis-Ababa, Ethiopia) pointed out that practically all megacities were facing the same problems, which mainly arise from the underdevelopment of infrastructure, resources, and expertise.

He described the approach adopted in Addis-Ababa to improve the government's performance: establishing sub-cities in order "to bring the administration and management of the city closer to the people at grassroots levels. The reason for devolving functions to lower levels of the city administration is that this is both politically and economically a more effective and efficient way of implementing public policies and programmes. It is aimed at strengthening public participation in decision-making processes to increase transparency, accountability and the responsiveness to local needs. It will enhance democratic decentralisation and good governance within the framework of the overall decentralisation policy of the country. Both sub-cities and lower administration hierarchies are assuming strategic roles in planning and decision making even though resources may not always be adequately available."

He continued by explaining that, "Sub-cities now play an important role in decision making as they are involved in the planning and management of urban affairs. Sub-cities have a great deal of freedom in preparing their own budgets, plans and programmes and in implementing them. Up to 90 percent of the services are provided at municipal level." He summed up his speech with the words, "The role of the city government is to create a framework and facilitate collective action with less direct intervention."

Mary Neelima Kerketta (Additional Commissioner (Special) of Pune, India) focused on the positive effects of globalization for urban development and its attempt to safeguard social cohesion. "Globalization leads to prosperity which results in stronger revenues. This ensures more resources which leads to greater autonomy. This increases efficiency which finally leads to better service delivery." She expressed the belief, "... if the cities in India have to follow the path of sustainability they must wholeheartedly accept the positives of globalization without of course compromising our rich culture and tradition."

Johny Joseph (Municipal Commissioner of Mumbai, India) agreed with the problems as outlined by the previous speakers. He emphasised, "the negative by-products of urbanisation from the citizen's point of view: the lack of well-defined performance standards, multiple touch-points, time and location constraints, irregularities due to multiple human contact. This can ultimately be sum-marised as a lack of transparency." He described the major e-governance initiative which has been undertaken in Mumbai in order to deal with this shortcoming. With this initiative the Municipal Corporation is attempting to increase the transparency and efficiency of its work and make itself more accountable to the people.

Another aspect which Johny Joseph focused on was the situation of slum dwellers. About half of the population of Mumbai lives in slums, "because of large-scale migration from the land to the city." Because of the great influx of people and the rapidly growing population, "it is impossible to make incremental changes and investment overnight – for housing, but also for drainage, sewage, sanitation, water supply and so on."

Finally he addressed the question of how social cooperation can be achieved and supported. He saw the solution in decentralisation and participatory planning, especially in the budgetary process. In Mumbai, "the entire budget – not only allocation but also fiscal milestones – are indicated and published on the web and in the newspapers. So the progress of expenditure and also the physical progress can be monitored by the citizens."

Francisco Bolaji Abosede (Honourable Commissioner for Physical Planning and Urban Development, Lagos State, Nigeria) also expressed his basic agreement with the points brought up by the previous speakers. He highlighted the importance of Lagos by

saying, "the population of Lagos is larger than 37 individual African countries." He illustrated the situation in his city: every day 6000 people come to Lagos from the countryside in order to find employment. This puts the government under serious pressure to provide public services for the rapidly growing number of citizens. To solve this problem, "the government looked at the issue of establishing public-private-partnerships to enhance its ability to provide public services. This is a new approach to provide public infrastructure and ancillary services through a mutually beneficial alliance between the public and the private sector. With these partnerships we were able to deliver some services."

Mr. Abosede addressed two additional problems in Lagos. The first is the high number of slum areas in the city; the second is the large informal sector and the resulting low level of tax generation. In these cases he also cited the cooperation between the public and private sectors as a possible solution to these problems.

Jiuiling Xiong (Deputy Director General Policy, Research Bureau of the People's Government of Beijing, China) described the change in the Chinese management system of local urban governance. It used to be based on a very hierarchic, top-down approach. But in the wake of economic reforms a social reform is taking place. In China, they "build up a social system outside and parallel to government and administrative systems. Through grassroots community development, large numbers of social organi-

sations are built up, which have greater capability to solve social problems and deal with social affairs. And a plural-entity network for urban development is taking shape. Local urban governance is beginning to change from vertical administration towards a civil society-based horizontal network."

She stressed that, "the ongoing social reforms in Beijing consist of three closely related features: autonomy in the local residents committees, the development of NGOs, and citizens' participation and volunteering." She pointed out that some progress has been made in increasing the autonomy of local residents committees. However, the financial and social situation of NGOs is weak, as is citizens' participation and volunteering. She concluded, "The reality is that the traditional vertical administration still exists and that the new civil society-based, local urban management has not been built up. Practically, the current urban social reform is taking place within the vertical dimension."

During the discussion, in which the speakers also answered questions from the floor, the main points brought up by the speakers were reaffirmed. Once again it was mentioned that a priority of urban development should be the provision of public services, particularly in the areas of housing, infrastructure, and education. In order to achieve this goal the active involvement of all stakeholders was seen as a necessary condition and there was general recognition of the opportunities of public-private-partnerships.

Conference Report
by Ulrike Herrmann, InWEnt

INTRODUCTION

"The governability of rapidly growing large cities and megacities in countries such as China, India and other 'emerging powers' represents one of the key challenges of the new millennium. Only with responsible action and the involvement of all sections of the population can social and ecological catastrophes with global consequences be avoided." Thus **Günther Taube**, head of the International Regulatory Framework/ Good Governance/ Economic Policy Department at InWEnt, described the necessity for an international political dialogue on this topic with anchor countries or 'emerging powers'.

Against this background, the international conference "Governing Emerging Megacities – Challenges and Perspectives" was staged on 7th and 8th December 2006, organized by InWEnt in cooperation with the City of Frankfurt am Main on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ). Among the 100 participants who accepted the invitation to attend the Frankfurt event, 15 came from India, 20 from China as well as 10 representatives from other countries. The German Museum of Architecture in Frankfurt am Main, designed by Oswald Mathias Ungers, offered the German and international experts a challenging setting in which to exchange their experiences of the problems and opportunities in the development of megacities. The bringing together of such diverse viewpoints on the topic – with representatives from

science, administration, politics, business and non-governmental organizations – added special significance to the event.

On the stage were internationally known personalities, including Sheela Patel, founder and director of the Indian non-governmental organization SPARC, Albert Speer, architect and city planner, and Zheng Shiling, curator of EXPO 2010 in Shanghai. They described the problems of urban development in megacities from their differing perspectives: Sheela Patel from the point of view of slum dwellers, Albert Speer from the viewpoint of an architect and city planner operating in the international sphere and Zheng Shiling from the official viewpoint of the city government of Shanghai, currently pursuing ambitious plans in readiness for "Expo 2010". In the different forums held over the two days, discussions took place on city governance in megacities and major urban agglomerations, on the importance of water supply, health services and housing space for the quality of life in the cities, and on the new challenges in the political fields of energy, transport and environment in the face of the rapid growth of urban areas. The involvement of the private sector in the problem of the controllability of megacities and in the provision of infrastructure and services was considered to be the way ahead by several speakers.

The megacity dialogue forum marks the beginning of a series of international dialogue forums which are planned by InWEnt

in the coming years, designed to intensify the exchange of experiences and ideas between anchor countries or 'emerging powers' and Germany. The second event in this series will be held as early as January. Then, within the framework of an Indian-German dialogue, the question under examination will be: what contribution social security systems could make to strengthening social cohesion in economically successful developing countries?

THE OPENING SPEECHES

In her opening speech, **Manuela Rottmann**, city councilor of Frankfurt am Main, introduced the topic by drawing the participants' attention to the international city of Frankfurt as a metropolis with a diversity of challenges and perspectives. The BMZ representative for Asia and Eastern Europe, **Klemens van de Sand**, reaffirmed the possibilities of this conference for the intensification of the cooperations with India and China and the importance of the debate on topics of urban development and megacities for the German development cooperation. **Gerhard Hahn**, head of the Department of Global Change, opened the event on behalf of the Federal Ministry of Education and Research (BMBF). He reminded the audience that one cannot consider globally sustainable development without tackling the problem of urban development, particularly in megacities. Mr. Hahn mentioned current research by BMBF on megacities and cited the integrative and interdisciplinary approach as well as close

cooperation with partners on the ground as the main aspects of the program. Only in this way can long-term strategies for megacities be developed. **Günther Taube** referred to the human approach of the Indian Nobel prize-winner, Amartya Sen, who does not talk about civilization in general, but about the interaction of individuals with different identities. In this spirit, Mr. Taube called for recognition of and intense debate on urban identities. The importance of India and China for future global development is undisputed, and it is yet to be resolved how Germany can contribute to this development.

Frannie Léautier, Vice President, World Bank Institute, stressed in her opening speech the importance of institutions for urban development as well as the positive interrelationship between good city governance and globalization. She emphasized the many opportunities that exist besides the problems in the megacities. International studies show that globalized cities fare better than smaller cities in areas such as economic development and transport systems. Structure and size therefore play a significant role in the successful development and governance of cities. However, as soon as a certain point in the expansion and the population is exceeded the efficiency and controllability of these cities diminish. Accordingly, Frannie Léautier regards a polycentric structure of interlinked smaller cities as a model that promises success, which could represent an antipole to the megacities.

SUMMARY OF DISCUSSIONS

Paul Taylor from UN-Habitat, the United Nations settlement program, argued in his speech that cities will play a major role in achieving the millennium development goals, since many of the aims, such as water supply, health services and education are the responsibility of local authorities. Therefore the involvement of government levels below the national level will be of even greater importance in the future. Like Frannie Léautier, Paul Taylor underlined the human aspect of cities and, along with Peter Hall, asked the question, "Why are some cities successful?" One must look at the sources of innovation and creativity. Also tolerance, individuality and plurality of cultures contributed to the 'soft' infrastructure of a city. Paul Taylor asks that people be more open to new models of city development, because too many of the current models are based on western concepts.

GOVERNANCE, PARTICIPATION, POVERTY IN MEGACITIES – CHINESE AND INDIAN VIEWPOINTS

Peter Herrle, head of the Habitat Unit of the Technical University of Berlin presented the first panel round on the topic of governance in the megacities. Speakers on the stage were Aniruddha Kumar from the Indian Ministry of Urban Development and Yong He from the Beijing Municipal Institute of City Planning and Design. Aniruddha Kumar outlined the ambitious reform program of the National Urban Renewal Commission in India, which involves decentralization, urban regeneration and infrastructure projects. Important focal points are improved partici-

pation and greater transparency. Questions from the general public revealed, however, that the implementation of the participative approach is difficult if all stakeholders are not actively and jointly involved. But in this regard Aniruddha Kumar showed herself open to future partnerships with local non-governmental organizations. In answer to the question from Mr. Herrle, as to how this ambitious reform, as an obvious central government project, fits into the understanding of governance in India, Aniruddha Kumar argued that central government cannot implement plans without the support of the federal states and cities. The role of central government is that of a catalyst in support of developments, but it is the regions and cities that are responsible for implementation. Above all, more effective public consultation must be guaranteed in drawing up urban development plans. Nevertheless, there is still a need for greater understanding of the importance of public discussion and participation in the planning process among many responsible people – this is a long-term process and will take time. Sheela Patel was of the same opinion. She stressed the great success of India in the participative planning of recent years and cited the highly ambitious climate within the city administrations as a sign of this. Because the planning is still inadequate in many areas, however, Sheela Patel thinks it would also be worthwhile looking to China – to a more technocratic planning approach, which nonetheless permits clear-cut decisions.

The presentations of Yong He and Aniruddha Kumar clearly showed different perceptions

of urban development, related problems and possible solutions. Both spoke of governance and participation, but the meaning and interpretation of the terms appeared to be wide apart. While deficits in the participation procedure were confirmed and improvements promised by the Indian side, Yong He, when discussing the Beijing urban development process, referred to the possibility of citizens to inform themselves in the exhibition center for urban planning or on the planning authority's homepage.

Mr. Herrle steered the discussion towards dealing with problems such as poverty in the city. He took up the hypothesis of **Frannie Léautier**, who had said in her opening speech that globalization can improve the situation of the cities in certain areas, but not the situation of the poor in the cities. How, for example, do the people in charge in the Beijing city administration deal with this topic, if it even exists? Yong He affirmed that the city government most definitely recognizes the problems of the poor sectors of the population. But the Beijing City Master Plan, for example, is a development plan and not a political directive to deal with this matter. On the other hand, there are now housing plans which should ensure that areas are set aside for the provision of affordable housing in the city. For Yong He, these are the programs the city administration uses to deal with current problems such as poverty in the city. She underlined once again, that China as a whole is in a state of transition and is opening up to many international concepts. In this regard planning processes will also change and she announced that she would debate

the fruitful discussions and impressions of the Frankfurt dialogue on her return to China.

IMPROVING THE QUALITY OF LIFE IN MEGACITIES – APPROACHES TO BASIC PROVISION

The second round of talks at the conference concerned the provision of water, healthcare and housing, which have an enormous effect on the quality of life in megacities. How do cities deal with the growing demand for these things, and what strategies exist to safeguard the quality of life of all inhabitants of megacities? Many questions were raised in the lectures and discussions: how does city planning deal with a marginalized population? What strategies exist to utilize the potentials of city dwellers and to enable them to share in the development of the cities?

In his speech, **Baohui Zhai** from the Center for Political Research of the Chinese Ministry of Construction identified three points that must be dealt with to control megacities in the future – provision of affordable housing, provision of efficient transport systems, but one must also deal with the susceptibility of megacities to catastrophes and crises. Baohui Zhai sees the model of the "harmonious society" as an ideal in Chinese urban development, which must be strived for in the future.

Sheela Patel of the NGO SPARC, who is active on behalf of slum dwellers, described the situation in the megacities from the per-

spective of the poor. Most migrants come to the cities with no idea of the structures and conditions that await them. They have great expectations and often settle where they find work. Sheela Patel used the image of "ants on the back of an elephant" to describe this situation. The megacities have great economic potential. Utilization of this potential should also improve living conditions in the cities, especially those of the poor. It is a reality that "the largest cities will be located in the largest economies".

Modern-day cites have two faces. But it is no longer possible to deny and ignore the other face, the face of poverty, because mutual dependencies are increasing. This is why the poor sectors of society must be included in the planning process. Sheela Patel sees her most important task as being a mouthpiece for the unheard to help them make themselves heard and become actively involved. She cited various positive examples in which the inhabitants of unofficial settlements were involved in the planning process after long-standing disputes and could thus codetermine their future and improve their living conditions.

It is precisely the poor in the cities that have the potential which has not been appreciated until now. They have functional networks in place, which exist not only within the city but also extend into the rural areas. They form strong communities with a different view of the problems in the city and can thus lead the way to new approaches and solutions. Sheela Patel called for a new approach to dealing with the poor urban population

and for the application of new methods, because, "poor people do not believe in Powerpoint presentations, they want to see it in reality." To bring home the importance of cities for achieving the millennium development goals, she named the month of February 2008 as the official date when half of the world's population will be living in cities.

Albert Speer, architect and city planner, spoke from the perspective of a developer of major building projects. In his experience there are often enormous differences in the basic conditions of cities: shrinking and outdated cities in Europe and rapidly growing, demographically young cities with inadequate infrastructure in Asia and Africa. But nevertheless general principles have emerged which are almost universally applicable.

Mr. Speer named decentral concentration as one of these basic principles, which functions through an urban network of sub-centers and satellite cities with different thematic focuses and improves the controllability of the development of metropolitan regions such as Beijing. A second principle, which in his judgment had hardly been mentioned in the discussion, is the preservation of inner-city landscapes as a vital and structuring element. According to Mr. Speer, these natural free spaces and green belts compensate for the land consumption by building developments and cannot be replaced by artificial parks. Green spaces have a great influence on the quality of life in the cities, both through their ecological functions and as structuring elements in the building develop-

ment, as well as by preserving human criteria in the expanding megacities. Mr. Speer proposed that areas within the cities used for agriculture be retained to reduce transport distances and to support the food supply. As has been the case for many years in Germany, the leisure time traffic flow will increase in Asian cities – in Germany this alone accounts for 50 percent of all private transport. Therefore a balanced mixed use, including sports and leisure complexes, should be maintained in the inner cities, to support the principle of short transport distances and reduce leisure time traffic.

Mr. Speer declared his support for the promotion of public transport systems, which he defined as the third basic planning principle. Mobility in megacities can only be guaranteed with efficient, attractive public transport systems. Sustained development in megacities also depends on a functional network of systems, in which the different areas of infrastructure (water supply and waste water disposal, waste management, energy supply, etc.) are viewed and planned in combination with each other. As a model for the realization of efficient city planning, Mr. Speer advocated more public-private partnership projects, which he feels constitute the appropriate balance between financial resources and long-term economic success.

However, in his comments and examples of urban development projects Mr. Speer totally avoided the negative aspects of city planning in China. Neither did he mention the difficulties involved in the realization of his principles and the resultant demands placed on political decision makers.

In the following discussion Sheela Patel observed that inner cities have developed into business centers where no one lives. In these cases, informal markets can enrich city life, but in her experience acceptance and tolerance is in short supply in these city areas.

On the question of land use Mr. Speer confirmed to **Paul Taylor** that the realization of his urban development projects was also preceded by resettlement, because the developed land was formally cultivated and inhabited by Chinese farmers. The replanning was subject to intense discussions with the responsible planning authorities, but not with the other stakeholders, e.g. the inhabitants.

ECOLOGICAL COLLAPSE – HOW IS RISING DEMAND FOR MOBILITY AND ENERGY COMPATIBLE WITH ENVIRONMENTAL CONCERNS?

Frank Weiler, Asian transport expert in the KfW Development Bank, took up Mr. Speer's point regarding mobility and confirmed that the solution to the urban mobility question is key to the sustained development of megacities. According to Mr. Weiler, "Transport is the fastest growing consumer of energy." According to forecasts by the Asian Development Bank, in the next 30 years motorization will increase by 360 percent in China and by as much as 660 percent in India, which will place a massive strain on the urban areas. The challenge is to proactively and foresightedly plan effective transport systems now instead of reacting to this development in the future.

SUMMARY OF DISCUSSIONS

The fact that Asian megacities have a high population density is a great potential for the development of public transport systems. Experience shows that precisely in densely populated megacities such as Shanghai an efficient network of local public transport is the only way to guarantee mobility in the long-term. This development must also be promoted with regard to energy and environmental effects, because according to Mr. Weiler, "the greater the proportion of public transport in the total traffic volume, the smaller the energy consumption."

Cities can exercise proactive control in the implementation of public transport systems by, for example, linking spatial planning more closely with infrastructure planning – a demand that was expressed by several parties during the conference. In the funding of public transport, not only the users, but also the beneficiaries, particularly real estate, hotel and restaurant owners must be involved in order to make the transport system prices affordable for all city dwellers.

Manraj Guliani from the Center for Urban Systems and Infrastructure of the TERI Institute in India also cited the problem of the rapid growth of cities combined with inadequate infrastructure. The effects are obvious: not only the inadequate supply of drinking water, sewage systems and sanitation facilities for all sectors of society at the local level, but also the dramatic interrelated environmental effects. By way of example, Manraj Guliani outlined the efforts and results of Indian policy makers in recent years. A positive aspect was the attempt to

actively involve the local population in planning and implementation. Nevertheless, it was shown that precisely at the local level capacities and competences are insufficient to implement these programs effectively. There is a lack of information and management systems, as well as a lack of adequate monitoring.

Sheela Patel also criticized the lack of monitoring and assessment of project implementation. She correctly observed that there should be a responsible institution to carry out such an evaluation of the programs.

Paul Taylor and **Rusong Wang**, from the Research Center for Ecological Science, who chaired the round, both took up this observation and asked Mr. Weiler whether the KfW banking group sees capacity building as an area of activity in the development cooperation with India and China. Mr. Weiler outlined the division of tasks within the German development cooperation and explained that a long-term successful strategy can only be effectively realized if further training and education are offered parallel to the investment.

Jens Krause, who has worked closely with the Beijing administration for many years, contributed to the debate on regional planning. In future, city planning cannot end at the city boundaries but must include the entire metropolitan area to achieve a sustained city-surrounds-structure. Strategies must be developed at the regional level, especially where infrastructure is concerned. This is a great opportunity to manage urban development, because by establishing a sus-

tainable public railway network, long-term urbanization can take place along these development axes. He sees the future of the metropolitan region of Beijing as a network of different cities of different sizes that interact, form focal points and supplement each other, exactly as a decentralized concentration should.

PUBLIC TASKS IN THE PRIVATE SECTOR – POSSIBILITIES AND LIMITATIONS

Eckart Ehlers, from the Geographical Institute of the University of Bonn introduced the topic of public-private cooperations with the assumption that neither in India nor in China is the public sector capable of providing all of the investment required for the infrastructure of megacities. But in which form should the private sector participate in primarily public tasks? And which role does it assume, particularly in megacities? The compatibility of economic with ecological and social aspects also plays an important role, because private enterprises are becoming increasingly important players in the cities and have an obligation to society; which became the subject of further debate.

Peter D'Souza, environmental manager with Tata Motors in Pune, India placed the ecological and social aspects at the foreground of his lecture. On the basis of a case study, he outlined the measures and goals to which Tata Motors had committed itself on its production site in Pune. These involve both energy-saving systems and the utilization of renewable energy sources (wind energy and

solar panels) as well as water supply (sewage treatment plants and rainwater collection) and waste management. Furthermore, the production site has been integrated into an area of natural beauty in a continuing process of renaturation.

Erach K. Bharucha, Director of the Institute of Environmental Education and Research at the Bharati Vidyapeeth Deemed University in Pune, praised the environmental work of Tata Motors as a successful example of dealing with environmental matters in industrial areas. However, environmentalists such as Samir Meta, activist with the 'Bombay Environmental Action Group', called for companies to cooperate more closely with NGOs. Mr. D'Souza agreed and confirmed that Tata Motors wishes to work more closely on environmental issues with local NGOs in the future.

Li Zhen Wei, vice president of Hopefluent Real Properties described the development of the real estate market in China using the example of Guangzhou city near Hong Kong. It became clear that urban development and the performance of the private real estate sector are very closely linked with the Chinese open-door policy, without which Guangzhou would not have become such an economic strength. Due to its proximity to Hong Kong, many of the developments in the real estate market could be adapted. Mr. Wei attributes the success of the extensive housing areas on the outskirts of Guangzhou to a combination of diverse components. It was the huge demand for housing combined with the lack of financial support for housing

projects and land development by the state that brought private real estate developers into the game. For Mr. Wei, all parties benefit from the success story of the real estate sector: the government, the developers and the consumers.

Private-sector property development in China means that the government makes land available and the developer constructs the buildings on it; but planning sovereignty is still in state hands. Thus, in Mr. Wei's opinion, new residential areas could not be developed efficiently enough in the past because public planning lagged behind the private property market. According to Mr. Wei, this problem must be solved in the future by means of stronger and more efficient government planning instruments.

In turn, there were questions from the ranks of the critical civil society about tackling the environmental effects of the planning. **Samir Meta** asked whether in China a regulation or procedure exists which is comparable to the environmental impact assessment required for major projects in India or Germany. Mr. Wei affirmed that preliminary investigations are made, but could not say in which form these are obligatory.

Xingbing Tang, director of the Department of Strategy and Investment of the Beijing Energy Investment Holding Co., spoke as a further representative of the private sector. He described similar basic conditions in the energy sector to those described by Mr. Wei in the real estate industry. The situation that the Chinese state could not adequately meet

the demand for energy and the opening of the Chinese market in 1978 led to the development of an energy business run by the private-sector, which has capital at its disposal ready for reinvestment. Today, four main types of businesses exist: businesses owned by the state, businesses owned by the cities, joint ventures and businesses listed on the stock exchange. Generally, Mr. Tang assessed the privatization of a public undertaking such as energy supply as being a practical development in China, but he demanded greater support and leadership on the part of the state.

THE CHALLENGES FACING MEGACITIES OF THE FUTURE – THE PERSPECTIVE OF AFRICAN AND ASIAN CITY GOVERNMENTS

The highlight of the second day was the "mayors' forum", presented by Günther Taube, in which representatives of different city councils discussed questions of government leadership, especially regarding the improvement of social cohesion. In this forum, the perspectives of the Chinese and Indian experts were widened by the perspectives of the representatives of other megacities such as Jakarta, Addis Ababa and Lagos. The guests on the stage were **Changyuan Wang** (Deputy Secretary General of the Chinese Association of Mayors, China), **Fauzi Bowo** (Vice Governor of Jakarta, Indonesia), **Berhane Deressa** (Mayor of Addis-Ababa, Ethiopia), **Mary Neelima Kerketta** (Additional Commissioner (Special) of Pune, India), **Johny Joseph** (Municipal Commissioner of Mumbai, India), **Francisco Bolaji Abosede**

(Honourable Commissioner for Physical Planning and Urban Development, Lagos State, Nigeria), and **Jiuling Xiong** (Deputy Director General Policy, Research Bureau of the People's Government of Beijing, China).

All the representatives in the forum presented the challenges and problems of their respective cities and it became clear that despite the very different basic conditions (e.g. Beijing, Pune and Addis Ababa) they were all confronted with similar problems (**Berhane Deressa**). Everyone saw the necessity for establishing partnerships and networks at all levels with the various partners in business, science and civil society to achieve further development. **Fauzi Bowo** noted that it should be an important role of central government to enable stakeholders to contribute to planning processes. In this context, capacity building will be one of the major themes for the cities in the future. The exchange of ideas between megacities at events such as this in Frankfurt was recognized as being constructive and necessary (**Mary Neelima Kerketta**, Pune and **Changyuan Wang**, China) and should be promoted in the future. Mr. Wang cited the Chinese-African mayors' conference planned for 2007 as an example of this.

Positive trends for governance in their cities were seen, for example, through e-governance programs and participative slum improvement projects (**Johny Joseph**, Mumbai) or through increasing activity in the local citizens' movements in community development (**Jiuling Xiong**, Beijing). Despite these welcome developments, many prob-

lems remain; particularly in China where participation of civil society in urban planning is still in its early stages, as Jiuling Xiong from Beijing emphasized once again. During the discussion, in which **Frank Weiler** of the KfW Development Bank posed the interesting question, what would the representatives of the megacities do with € 100 million additional development funds, the answers of all the speakers tended towards the same direction: improving the living conditions of the poor in the cities with education, infrastructure, housing, etc. (Berhane Deressa, Addis Ababa; Jiuling Xiong, Beijing; Francisco Bolaji Abosede, Lagos). But the stated priorities of other city representatives included the active involvement and further education of all stakeholders in the planning processes (Francisco Bolaji Abosede, Lagos; Johny Joseph, Mumbai).

TASKS FOR RESEARCH AND IMPLEMEN–TATION – THE VISIONS FOR MEGACITIES
Frauke Kraas of the Geographical Institute of the University of Cologne and Chairperson of the Megacities Task Force of the International Geographical Union (IGU) wound up the event with a summary of the topic from the perspective of international megacities research. She outlined the various international and interdisciplinary research projects, networks and conferences that are currently in place or are planned for the coming years. These include: International Year of Planet Earth 2008: Megacities – our global urban future; BMBF research program: Megacities of tomorrow: Research for Sustainable Development, 2005 – 2016; German Research

SUMMARY OF DISCUSSIONS

Foundation: Megacities – Megachallenge: Informal Dynamics of Global Change, 2005–2011, Pearl River Delta, Dhaka; Helmholtz Association: Risk Habitat Megacity, 2005–2013, Santiago de Chile; 11th World Business Dialogue: "Population Dynamics: Ageing Societies & Megacities", Cologne 2007.

Frauke Kraas expounded the urgent need to give serious thought to the interrelationship of megacity development and global change. Megacities should never be viewed as single entities because there is a need to study, understand and manage the effects of individual megacities on global change. Many questions regarding megacity research and development were again addressed by Frauke Kraas: sustained development, protection and consumption of resources, infrastructure, the role of interested parties and stakeholders in the planning process, networks and the different perspectives from which megacity development is observed. How can the focus of planning be shifted to the people and how can the people be more actively involved, how can social coherence be achieved and the increasing fragmentation of city communities be avoided? There is a need for research into questions of informal systems and self organization in megacities and the role and response of the state in these processes must also be examined. What possibilities and different levels of governance exist, in which form can all stakeholders be meaningfully integrated into this process and how can this be managed financially and politically? Frauke Kraas called for a paradigm shift, which she summarized

with the terms: problems, processes and people. In her vision of megacities she sees the people in charge acting instead of reacting; planning will be understood as a process that includes the people and gives them a role in this process. For Frauke Kraas shifting the focus of planning to the city dwellers themselves is a key element in sustained development.

Zheng Shiling, architect from the Tongji University in Shanghai and head curator of EXPO 2010 in Shanghai, presented the ambitious projects of the city as a vision of the planning of the future. Three major projects in particular will have a decisive influence on the development of Shanghai: restructuring the Pudong district in the heart of the city, the planning projects for EXPO 2010 and development of the Shanghai suburbs. In 2006 the program "1966" was initiated which should ensure a well-balanced development of urban and suburban areas in Shanghai. 1966 stands for 1 metropolis, 9 satellite cities, 60 towns and 600 villages within the metropolitan region. The reurbanisation of Shanghai raises many questions, including the restructuring of old industrial areas, the concept of a green city, sustained transport systems and the conservation of historical buildings.

SUMMARY AND OUTLOOK
Overall, the dialogue forum clearly illustrated that much depends on the observer's point of view and that confrontation with the viewpoint of others helps people to break down prejudices and gain new insights.

Though the approaches to planning are very different in India and China, the people in charge in the megacities of both countries have to combat similar problems in planning implementation. However, it should not be forgotten that the urban development of both countries has taken place under very different political regulatory frameworks and that the respective development strategies have different parameters. This is also the background against which developments in governance and participatory planning approaches should be viewed and judged accordingly.

All participants on the stage and in the audience of experts emphasized the value of exchange of experiences between the cities – at international, national and local level. Events of this type should be continued in the future, so that cooperation is strengthened, new partnerships are formed and reciprocal learning can be promoted. The necessity of training and further education measures was frequently discussed during the conference. Cooperations between the cities can provide interesting options here. But the role of the (German) development cooperation in this area also needs to be clarified and requests from the megacities should be taken up and implemented in coordinated programs.

That the gap between research findings, theoretical strategies and their implementation in city planning is frequently very wide was confirmed during the course of the event. The known results of research must be practically and extensively communicated and disseminated, so that this knowledge can be utilized at the implementation level.

The emphasis on the human aspect in development planning was a recurrent theme throughout the event and was taken up again and again from different perspectives. It was clearly stated in the discussions that people must not just be viewed as part of a problem but also as part of the solution. However it still has to be shown, particularly in the megacities, whether planning reality will allow this to be put into practice. Nevertheless, there was a clear commitment to cooperation with the citizens of megacities to solve outstanding problems.

Megacities are not self-sustaining structures, but must be seen as an integral part of their surrounding areas. Accordingly, the region should also be incorporated in the city development strategies – in a planning process that takes all stakeholders and sectoral interests into account. The model of a decentralized city network was cited many times as a forward-looking approach to the controllability and planability of megacities. Experiences with this approach should continue to be discussed and exchanged at international level in order to find sustainable planning models. The Frankfurt conference showed that countries can learn quite a lot from each other and not only act as competitors. The fact that Chinese and Indian experts with very different viewpoints came together and worked together on a topic with an open exchange of views and experiences can be seen as an important step in a common direction.

Programme

THURSDAY, 7 DECEMBER 2006

08:30 – 09:00   Accreditation

09:00 – 10:30   Opening

Welcome   **Manuela Rottmann**, Municipal Councillor, Frankfurt/ Main Municipality
Peter Schmal, Director, German Museum of Architecture
Klemens van de Sand, Deputy Director General, Federal Ministry for
Economic Cooperation and Development (BMZ)
Gerhard Hahn, Head of Division, Federal Ministry of Education and
Research (BMBF)
Günther Taube, Head of Department, InWEnt

Keynotes   **Frannie A. Léautier**, Vice President, World Bank Institute
"Megacities in a Globalising World"

Paul Taylor, Director, UN-HABITAT Liaison Office to the European
Union and Belgium
"The Role of Megacities for Development – Opportunities and Risks"

10:30 – 11:00   Coffee Break

11:00 – 13:00   Session 1:
Megaurbanisation in China and India – Challenges for Governance

Background   "Governance" has become a key term for describing the complex arrange-
ments for managing change in modern societies as a whole and cities in
particular. In contrast to "government" the term "governance" denotes
that there may be more than one actor involved in taking decisions, plan-
ning, service delivery or project implementation. For cities, and particular-
ly megacities characterised by social and spatial fragmentation and
economic pressure the issue of governance becomes even more critical,
raising questions associated with legitimacy, social exclusion, access to
resources and political power.

Key Questions   ❚ Which are the underlying systems and principles for governing Indian
and Chinese cities respectively? Which are their potentials and
deficiencies?
❚ Who are the actors that should be involved in local governance and
what should be their respective roles?

▌ Can more participative approaches to governance including the civil
society lead towards more social cohesion?

▌ What is the role of local governments for "governing" megacities?
Do we need "strong" local governments or good managers of
multi-actor processes?

Moderation	**Peter Herrle**, Head of Habitat Unit, Berlin University of Technology (TU), Germany
Inputs	**Aniruddha Kumar**, Director, National Urban Renewal Mission, Ministry of Urban Development, India **Yong He**, Vice Director, Beijing Municipal Institute of City Planning and Design, China
Discussion	Questions and contributions from the floor
13:00 – 14:00	Buffet Lunch

14:00 – 15:30 **Session 2:**
Water, Health, and Housing – Improving Quality of Life in
Megacities

Background In the emerging megacities of the developing economies, access to quali-
ty public services like healthcare, drinking water and affordable housing
has great bearing on the healthy, inclusive and productive living of the
citizens. Considering the low level of services, it is believed that new
approaches of improved governance, urban design, financial strength and
citizen partici-pation can reinforce the quality of living conditions and
produce more inclusive cities. How these objectives can be realised
remains the major concern of this technical session with a special focus
on India and China.

Key Questions ▌ What strategies of urban design, construction, maintenance and
management are known to foster social cohesion and creating an
inclusive city?

▌ How can the existing institutional mechanisms be improved with
respect to transparency, accountability, and decentralisation in order
to enhance efficiency, equity, and productivity of the public services?

▌ Who shall contribute to sustainable service delivery aiming at
improving the quality of life of the citizens?

▌ How can adequate financial resources be secured to render the city services sustainable?

Moderation	**Surinder K. Aggarwal**, Department of Geography, Delhi School of Economics, India
Inputs	**Baohui Zhai**, Centre for Policy Research, Ministry of Construction, China **Sheela Patel**, Founder and Director, Society for the Promotion of Area Resource Centres (SPARC), India **Albert Speer**, Architect and Urban Planner, Albert Speer & Partner GmbH, Frankfurt/Main, Germany
Discussion	Questions and contributions from the floor
15:30 – 16:00	Coffee Break
16:00 – 17:30	**Session 3:** **Dangerous Growth? Power, Transport, and Ecological Demands and Constraints**
Background	The fast urban sprawling, intensive energy use and traffic congestion prevalent in most emerging megacities, have exerted severe ecological stresses on both local human living conditions and regional life support ecosystem. Urban sustainability can only be assured with a human ecological understanding of the complex interactions among environmental, economic, political, and social/cultural factors and with careful planning and management grounded in ecological principles. This session is to share approaches, experiences, and lessons in dealing with these problems among different megacities in different development stages.
Key Questions	▌ What are the ecological strains and main driving forces of rapid urban growth? ▌ What is the relationship between intensive urban energy use and the environmental effects such as the urban heat island, local air pollution and global green-house gas emissions, the hydrological cycle, and changes to periurban areas? ▌ How to cultivate eco-mobility in different kinds of megacities to meet the challenge of fast urban growth? ▌ What kind of adaptive approach should be taken in land use management in fighting urban sprawling?

> How should experiences, methods, and technologies of ecological urban development be transferred between different countries and cultural contexts?

Moderation   **Rusong Wang**, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

Inputs   **Frank Weiler**, Senior Sector Specialist, Sector and Policy Division Transport and Communications Asia, KfW Banking Group, Germany
                  Manraj Guliani, Area Convenor, Centre for Urban Systems and Infrastructure, The Energy Resources Institute TERI, India

Discussion   Questions and contributions from the floor

17:30 – 18:00   Summary of the Day
                  Ulrich Nitschke, Head of Division, InWEnt

FRIDAY, 8 DECEMBER 2006
9:00 – 11:00   Session 4:
                  Part of the Solution – Private Sector Contributions to Public Service Delivery in Megacities

Background   The World Development Report (2003), in its pursuit to foster and promote sustainable urban development, has stressed the ecological, economic, and social pros and cons of megacity developments. It is a fact that public and private sectors (have to) pursue different – maybe even contradictory – pathways in their policies towards urban sustainability. Questions in this context include:

Key Questions   > How and to what extent does the private sector respond to the Millennium Development Goals?
                  > How does the private sector succeed in reconciling ecological and social goals with economic considerations?
                  > What about coordination between public and private sector activities?
                  > To what extent can the private sector be expected to contribute to public service delivery, and thus to social cohesion, in the future?

Moderation   **Eckart Ehlers**, Geographical Institute of the University of Bonn, Germany

Inputs	**Li Zhen Wei**, Vice President, Hopefluent Real Properties, Vice Director of Guangdong Properties' Association Committee, China **Xinbing Tang**, Director, Strategy and Investment Department, Beijing Energy Investment Holding Co., China **Peter Wilfred D'Souza**, Senior Manager (Environment Management), Tata Motors Limited, India
Discussion	Questions and contributions from the floor
11:00 – 11:30	Coffee Break
11:30 – 13:30	**Panel Discussion: Mayors' Forum on Governance and Urban Development – Prerequisites to Safeguard Social Cohesion**
Background	Comprehensive decentralisation and the promotion of communal self-administration are key prerequisites to an orderly process of urbanisation in developing countries in general, and in megacities in particular. Both elements are essential for socially, economically and ecologically sustainable development (Local Agenda 21) and, at the same time, contribute to democratisation and an increased participation of the citizens in the respective countries.
Key Questions	▌ Where and through which instruments has it been possible to contain and enhance the governability of the risks and negative by-products/accompaniments of worldwide urbanisation? ▌ Are there successful examples of efforts to purposely turn megacities into urban regions and thus contribute to a decentralisation of the dominant metropolis? ▌ What happened to approaches to increase the governability of megacities through consequently partition them in sub-districts? ▌ In the area of urban planning, are there promising approaches based on modern and efficient administrative structures that contribute through participatory development planning to the redevelopment of slum areas, the improvement of the infrastructure and the residential environment? ▌ Could communal development cooperation become an increasingly promising self-help instrument and one of cross-border collaboration in the future because of the fact that it is indisputably more closely related to the problem? ▌ What is the possible impact of globalisation on megacity governance? How can we balance local demands with global pressures?

Moderator	**Günther Taube**, Head of Department, InWEnt
Panel	**Changyuan Wang** – Deputy Secretary General, Chinese Association of Mayors, China
	Fauzi Bowo – Vice Governor of Jakarta, Indonesia
	Berhane Deressa – Mayor of Addis-Ababa, Ethiopia
	Mary Neelima Kerketta – Additional Commissioner (Special) of Pune, India
	Johny Joseph – Municipal Commissioner of Mumbai, India
	Francisco Bolaji Abosede – Honourable Commissioner for Physical Planning and Urban Development, Lagos State, Nigeria
	Jiuling Xiong – Deputy Director General Policy, Research Bureau of the People's Government of Beijing, China
13:30 – 14:30	Buffet Lunch
14:30 – 15:30	**Wrap–Up**
Outlook	**Frauke Kraas**, Department of Geography, University of Cologne ,Chair of the Megacities Task Force of the International Geographical Union (IGU), Germany "International Perspectives on Megacity Research in Germany"
Vision	**Shiling Zheng**, General Schemer EXPO 2010 Shanghai, Director of the Institute of Architecture and Urban Space, Tongji University, China
Conclusion	**Günther Taube**, Head of Department, InWEnt

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