

900 KM NILE CITY
urban research

Period: **2009 - 2013**
Place: **Upper Nile Valley, Egypt**
With: **Atelier Kempe Thill
GRAU
LOLA**
In collaboration with: **Berlage Institute
University of Assiut
Sohag Governorate
University of Gastronomic
Sciences (Italy)**
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Sponsor: **The Netherlands Architecture
Fund
AMGA, Genoa, Italy**
Exhibitions: **5th International Architecture
Biennale, Rotterdam
(April 2012)
Townhouse Gallery, Cairo
(February 2013)
1st Istanbul Design Biennale
(October 2013)
Louisiana Museum of
Modern Art, Copenhagen
(February 2014)**

I A New Type of City

The reason for the existence of cities has always changed throughout history. The urban development of the last two centuries in Europe, America and Asia has been based on fast expanding capitalist economy. The rapid growth of industrial production stimulated an enormous immigration of poor farmers into the emerging industrial centres, generating a new working class with a secularized culture of the masses. This new *metropolitan culture* has always been seen as the polar opposite of the more tradition-based lifestyle of the countryside. These two cultures have long been an inseparable couple, with the countryside inspiring city dwellers and the rural population entranced by urban life. The whole tradition of European urban planning of the 19th and 20th centuries was based on the fertile contradiction between metropolis and countryside, a contradiction that generating fascinating new urban ideals like the garden city, the linear town and CIAM planning.

At the beginning of the 21st century, new gigantic urban systems began to appear in developing countries that cannot be explained either by a capitalist economy paired with rural exodus, or by the traditional conflict between metropolis and countryside. To be able to read these systems, classical Western urbanistic thinking seems too limited. A new vocabulary is therefore necessary in order to be able to understand and describe these new megacities.

II A City of Population Density

One of these new gigantic urban systems is located in Egypt. Lacking a formal name, this city appears on no map. Even in Cairo – which is a megacity itself – the new metropolis is unknown, because Cairo's Western-trained urban planners are simply unable to see it. But with more than 26 million inhabitants, the "Nile City" is bigger than the Egyptian capital and is – in terms of sheer numbers – one of the biggest cities in the world. The Nile City is situated in the river's upper valley, forming a narrow linear strip of urbanization along the Nile. The city is no more than a few kilometres wide, but it is nearly 900 kilometres long.

As an urban system, the Nile City is based neither on any particular industry nor on rural exodus. It is a new city type that was formed simply by rapid population growth produced by the introduction of Western medical standards, the security of food availability thanks to foreign importation and the absence of family planning in a tradition-based Islamic society. The Nile City is in its essence a *city of population density*. As an agricultural region, the Nile City has slowly turned into a single homogenous urban corridor over the last hundred years exclusively due to an annual population growth of around 2%.

III A Natural Linear City

The Nile City has an astonishingly simple layout that is clearly defined by its geographical limits. In the middle, there is the Nile, an approximately half-kilometre-wide body of water that is strongly controlled by the Aswan Dams, several Nile barriers and man-made riverbanks. On both sides of the Nile there is a small strip of land irrigated with Nile water via an ingenious network of water channels, which create an artificial and very fertile oasis. On average, the valley is no wider than 12 kilometres, and it ends abruptly when it reaches the two mountain chains that soar as high as 300 metres and form the edges of the Sahara. The infrastructure of the Nile City is closely linked to these morphological conditions. A single railway line, which was already built by the British in the 19th century, runs over 900 kilometres along the middle of the valley up to Aswan, forming a kind of "subway" for the Nile City with stops every 50 kilometres or so. Along both desert edges run two very functional highways connecting the Nile City to Cairo and the Red Sea. Every 200 kilometres there is a little district capital with its own bridge over the river and a small airport, each of them serving as an urban satellite in the desert.

In light of these conditions, the Nile City can be read on a larger scale as a very logical and beautiful diagram of infrastructure and landscape, and it can be understood as a *natural linear city*, one that is placed not in a lush Arcadian landscape but in the harsh and beautiful emptiness of the Sahara. The Nile City is a linear city in the middle

of nowhere – the only place where man can survive in an otherwise endless ocean of sand and stones.

IV A Metropolis without Physical Density

The Nile City is very densely populated. With 2,841 people per square kilometre, it has a density similar to those of Los Angeles, Tokyo–Yokohama and Milan. Such a comparison sounds promising, but in terms of its urban image, the Nile City absolutely cannot compete with Western or Asian megacities. Entering the Nile City is at first a disillusioning experience, yet is also astonishing at the same time, for there is no city. The classic image of an urban metropolis comprised of housing blocks with big boulevards for traffic is almost nowhere to be found. There are no signs of intense, hectic urban life. Seen through European eyes, the Nile City still looks like an agricultural landscape, or like the countryside, despite having a population density ten times that of Germany. On an emotional level this is not easy to understand, but the reason for it is simple. Because of the limited conditions of a developing country, the Nile City is very rich in population but poor in physical infrastructure. The average housing surface is not much more than 5 square metres per person (the Western/European standard is around 45), there are hardly any built public facilities like office buildings or factories, and the street network is very modest, because with 30 cars for every 1,000 inhabitants (the Western/European standard is around 500), mobility is still very limited. The Nile City is obviously very dense in terms of its population, but its building density is very limited. A population density that in Europe or America would generate a very densely built and farmland-consuming metropolitan area produces nothing more than a small-town atmosphere in the Egypt context. The Nile City is a *metropolis without physical density*.

V The City as Countryside

The Nile Valley forms a very strong barrier and offers no horizon other than its own. There is hardly any difference between the countryside and urban settlements, and hardly any difference between the periphery and ur-

ban centres. The Nile City looks the same everywhere. The Nile City is the only reality the people who live there know and – as if trapped in a test tube – they cannot escape from it.

In the Nile City settlements and agricultural land form one inseparable unity because urban development and farming depend in a very direct way on one another. The Nile City can be read as a 900-kilometre-long continuous body of farmland or as an equally long continuous strip of urban fabric or as combination of both. The Nile City can be read as a dense network of street villages or as a system of agricultural megablocks with an average size of a square kilometre. It can be read as a Leonidovian landscape-based linear city or as an Branziesque “agropolis”. In the Nile City, landscape is neither suppressed nor replaced by the city; rather, urban development encircles the landscape and frames the agricultural fields. Here “the field” is obviously not merely the foundation for the city; rather, in the urban figure-ground relationship, it has shifted from being the latter to being the former. In the Nile City, the landscape is still the essence and the structural backbone of the urban fabric, and it is the only thing people in the city have. The Nile City is a metropolis in which the city’s essence is still the countryside – it is a metropolis that is at the same time Arcadia.

VI The Pre-urban Condition

The Nile City is an accident. There had never been a will or a wish to create it; it just happened. The Nile City even denies being a city. People in the Nile City have no idea that the Nile City exists, or at least they ignore it. They try to behave like normal farmers, and even today their horizon ends at the edge of their fields. There is no consciousness of the Nile City as a perceivable object because it is a biotope for 26 million – a zone these people never leave and therefore cannot see. The Nile City is the first metropolis completely populated by farmers – a sort of rural metropolis or endless chain of villages turned into one *metropolitan village*.

In the Nile City, there is no working class and hardly any middle class. Here there is no reason for people to move

because farmers don’t move. People just stay and live their lives in their fields – the city is simply an endless sequence of local situations that do not relate to one another in any kind of spatial hierarchy. Urban consciousness does not exist. In the Nile City there is no reason for celebrating civitas, nor is there a reason to develop a public domain (like inventing an agora, founding an acropolis or creating a piazza) . . . In the Nile City people still engage in a Neolithic life, so there is no need for theatres or museums, or even a cinema or a discotheque, because there is no audience, no public dimension. Even the mosques – which are produced as endless repetitions of the same building types – are smallish and modest, because they serve very circumscribed local communities. There is no need for architectural heroes like Sinan, nor for architectural representation or landmarks. The Nile City is just the endless expansion of the same local conditions – the house with the field next to the house with the field, one village next to another village. The accumulation of enormous quantities in the Nile City has not yet resulted in a jump in quality.

The Nile City is a city in a *pre-urban condition*, a megalopolis without an urban consciousness.

VII Architecture = Urbanism

Architectural production in the Nile City is a very disciplined act based on limited local technologies. Building is expensive, and therefore it must be effective and efficient. The building materials is in large part taken directly from the fields. Illegal temporary brickyards turn out simple bricks made of the Nile’s fertile mud. A Maison Domino-like concrete skeleton functions as the basis for a house and gets filled with brickwork. Because of the hot climate there is hardly any need for windows, and this ends up generating a hermetic architecture of rough brick surfaces.

The brown architectural volumes appear in different sizes. Houses are designed in such a way as to be extendable. A small farmer’s family usually starts out with an (illegally built) one-storey structure and then gradually adds additional surfaces according to their family’s needs. Because

of the fact that agricultural land is very valuable and is directly related to a family's income, the houses are extended vertically. This results in housing that is up to five or six storeys high, even in small villages. The same technology is used for the design of commercial small-scale apartment buildings in the local centres, thereby producing mini-towers of up to fifteen storeys.

Because architecture is the result of this rational and objective process, nearly all houses in the Nile City look the same. As a consequence, an astonishingly hermetic homogeneity is produced. Continuous brown building masses form modest walls between the intensely coloured green fields. This (nearly structuralistic) image of the Nile City generates two interesting phenomena. On one hand, architecture and urbanism can hardly be separated from one another in the Nile City – the quality of the individual building is also that of the whole megapolis, and so there is no difference between architecture and urbanism. On the other hand, the figure-ground relationship in the Nile City is influenced in a lasting way by the more structural qualities of the buildings. The building masses form humble, non-communicative objects but can at the same time be read as neutral, monolithic structures that emphasize the green landscape; in other words, in the Nile City the buildings are so neutral that the landscape becomes the dominant element, thereby causing an inversion of the classic figure-ground relationship.

VIII *Instable Equilibrium*

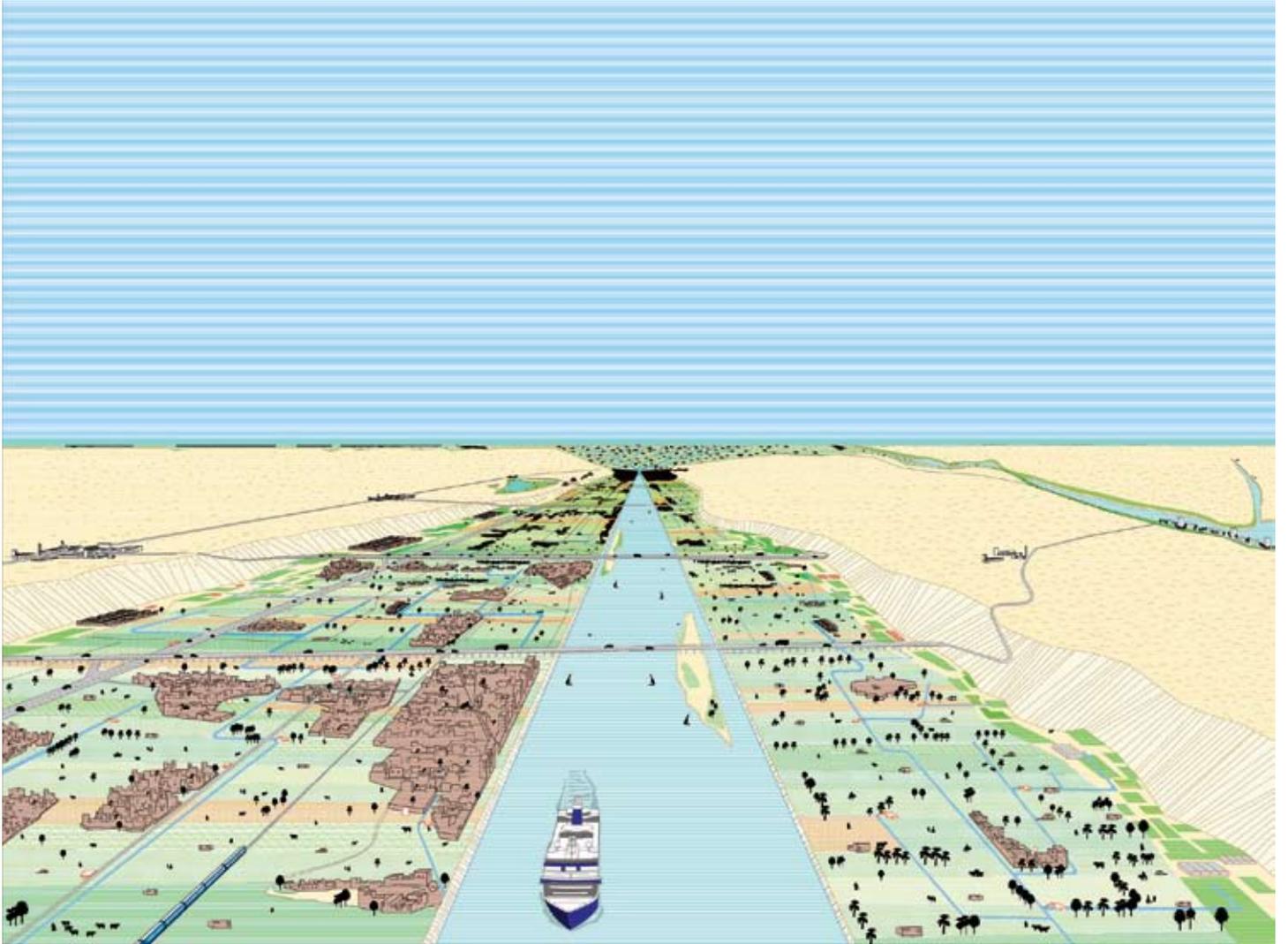
The Nile City is an interesting phenomenon, and its existence raises more questions than it provides answers. Will it ever become a real city? Will the continual addition of quantity eventually create a jump in urban quality? Will there one day be some sort of development of the public domain?

The future of the Nile City is very unclear. It exists in a very fragile state of balance, but might already be out of equilibrium. The rapid growth of the Nile City's built structures has already reduced the agricultural surface to a level that obliges its inhabitants to import 30% of

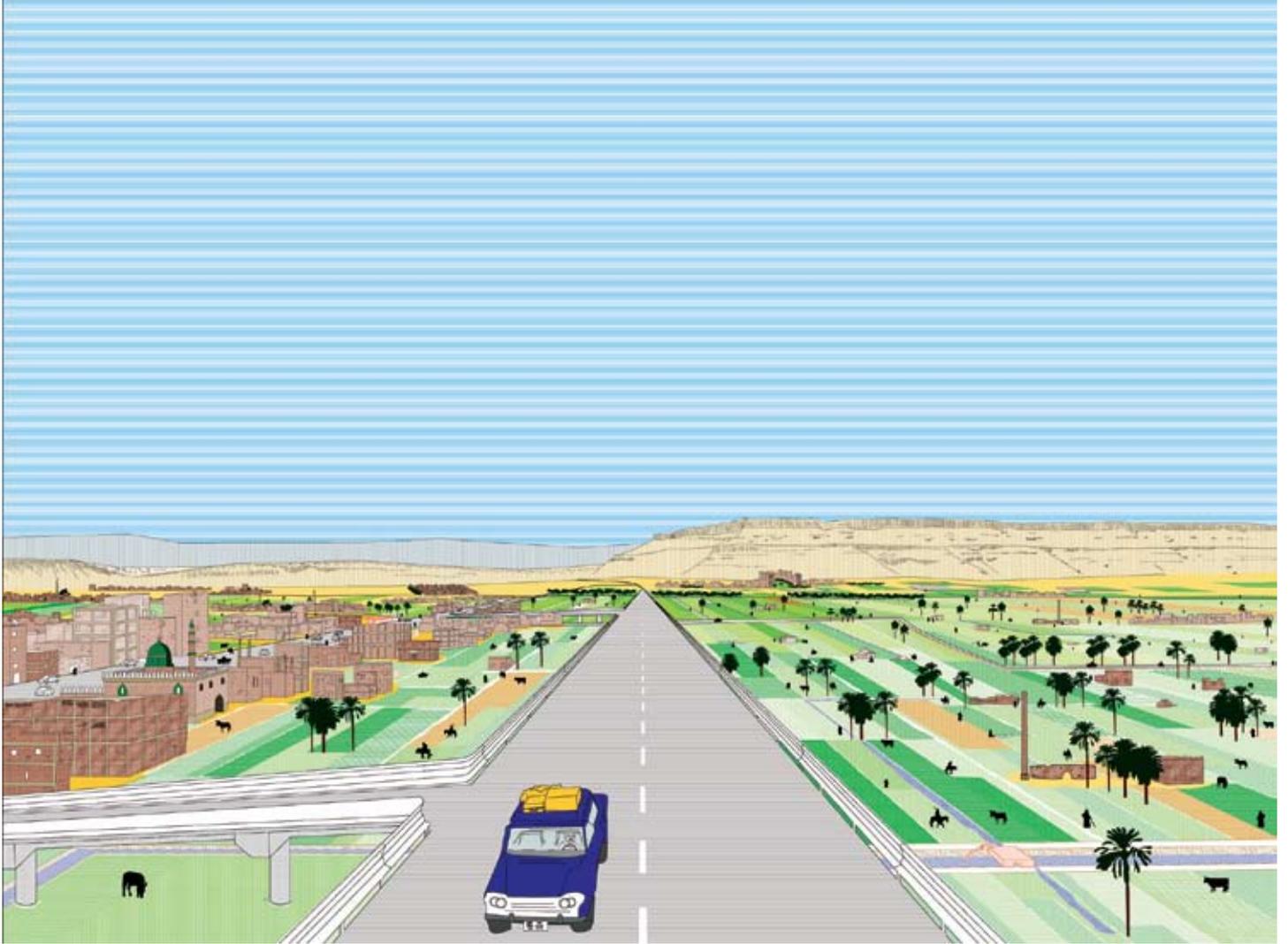
their food. This is a very dangerous state of affairs for a developing country. The farmer tilling the soil between the housing high-rises demonstrates the limits of the system. One thing seems to be sure, however. If the Nile City goes on like this for the next fifty years – if the population explosion is not stopped or if the prosperity level rises too quickly – then it will consume all of its own ecological resources and become a city with serious water and food supply problems. Further growth will prove deadly for the Nile City. From this point of view, the Nile City can be seen as a model for the whole world with its rapidly growing population. Is it possible to imagine the world as an Arcadian metropolis? Is it possible to invent other models of prosperity, like welfare without growth? Is a happy Existenzminimum even thinkable?



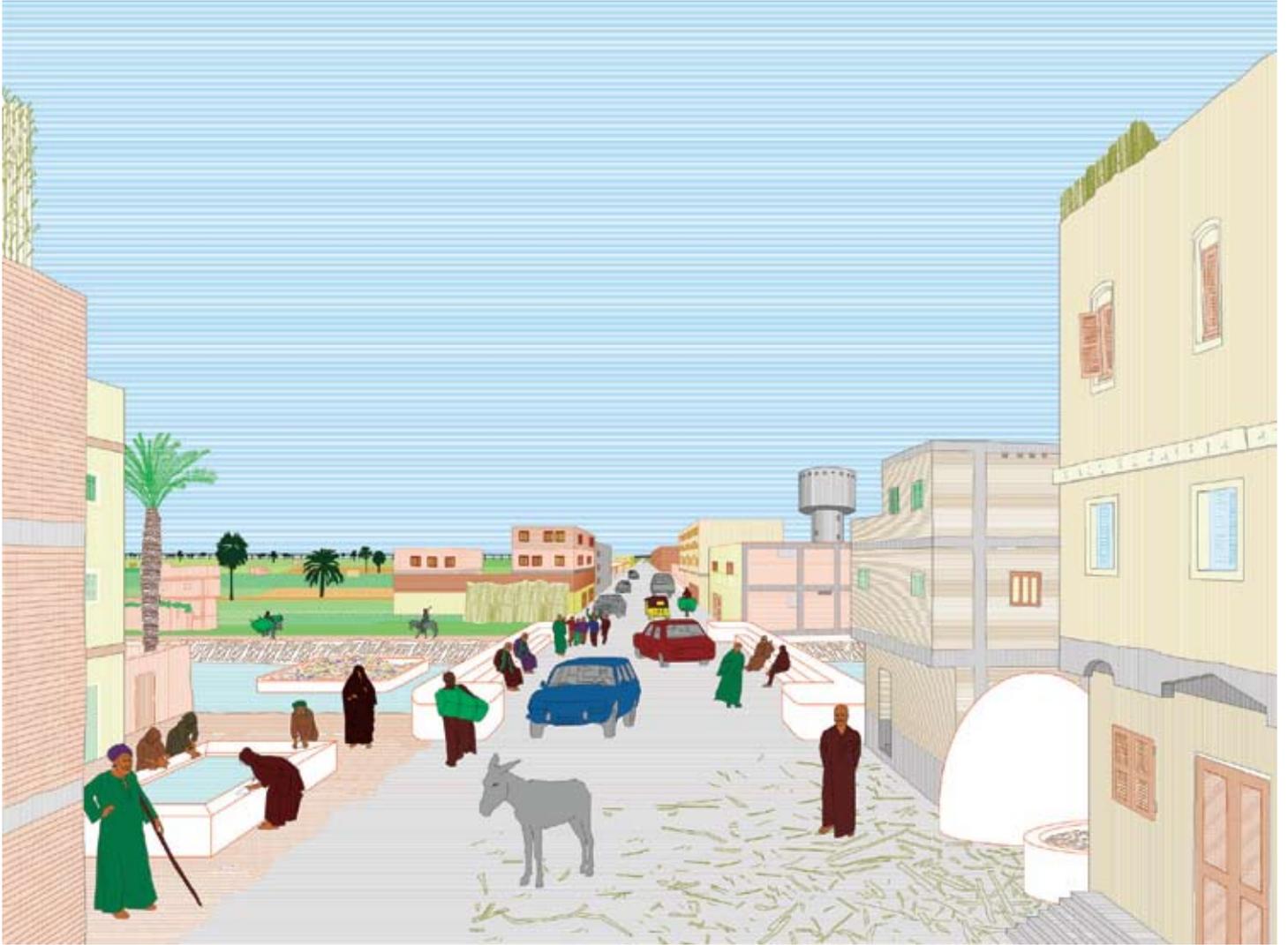
photo by Giovanna Silva



large scale perspective



medium scale perspective



small scale perspective



900 Km Nile City at the 1st Istanbul Design Biennale