Resilient urban development against the backdrop of large-scale transitions

**Srei Sophon, Cambodia**

A collaboration between the Faculty of Architecture, the city of Srei Sophon and several Cambodian Universities NGOs and research institutes.

Dr. Caroline Newton
Dr. Koen De Wandeler
Dr. Pascal De Decker
EXECUTIVE SUMMARY

Description
The city of Srei Sophon is going through major changes at the moment due to macro scale and regional development plans for infrastructure and reconstruction. The city has witnessed a serious growth over the last years, attracting new businesses and people. This growth can be attributed to several factors such as the good location of the city and its connectivity with other major cities in Cambodia and its close distance to Thailand. It is expected that an increasing number of both internal and international migrants will move to the city and its hinterland.

During the summer school we aim to:

understand the complexities of urban growth in the context of rapid change and transition
recognise the challenges to deal with these complexities through (architectural, urban, service,...) design.
propose spatial strategies to deal with these major challenges
  More specifically spatial strategies are developed that:
  create a more resilient and diverse urban(-rural) landscape
  raise awareness of the potentiality of local resources and cyclic systems
  optimise the production and use of local resources
  allow the development of systems for locally produced (green) energy
  promote production and distribution of local food
  stimulate sharing and collaboration in the communities
  enhance the rural urban relations
construct small scale catalytic interventions that make the possibilities of sustainable practices tangible

Fig. 1: small scale catalytic actions summer 2017
Fig. 2: Proposed action plan Srei Sophon
(Kashmiry, Krisdawat, Kumar & Tirlea, 2017)
SREI SOPHON, CONTEXT

Background

Cities in the Global South are coping with an unprecedented rate and pace of urbanisation. Especially secondary cities face unseen challenges in terms of governance, resource management and social and economic equity. Whilst they may have been of some importance as regional urban centres, they tend to gain more importance as infrastructural and trading networks expand beyond national borders. Local authorities often are ill-prepared to handle this situation: they either lack the capacity, the material and financial resources or the institutional and regulatory framework to cope with an exponential growth of urban populations and activities.

The environmental impact of unbridled urban growth is well documented. Efforts to limit the ecological footprint of growing cities essentially revolves around the reducing the input of resources and the output of waste. Almost 24 million people are involved in some sort of waste management around the globe, 80% of them are waste pickers. World Bank research suggests that about 1% of the urban population in developing countries are making a living out of waste picking and recycling (Medina, 2008).

Three decades of advocacy on sustainability have demonstrated that a circular economy creates various ways to avoid stretching scarce resources and handle value chains in cost-effective, environmentally friendly, socially just and culturally validated ways. In line with this approach, this project is designed to clarify the cornerstones of circular thinking, elaborate feasible scenarios and offer concrete measures to implement a stepwise conversion of local economies. It explicitly focuses on the spatial aspects of this conversion to help anchoring the activities in the everyday life of all stakeholders and realising a truly circular city.

This approach is of particular relevance for Cambodia as it is, once again, in a time of transition. Urbanisation is steadily progressing, but increasingly, cities will have to manage the challenges of urban growth by themselves. Therefore, all knowledge that can be developed and shared with local authorities will be useful to cope adequately with city-wide transformations.
RECENT HISTORY AND POLITICAL CONTEXT

At the turn of the 20th century Cambodia was part of French Indochina. The French Protectorate over Cambodia (1863-1953) was established in August 1863. At that time the territory of Cambodia was only 100,000 square km and was inhabited by about 1 million people. Phnom Penh did not count more than 25,000 inhabitants at that time (Vann Molyvann). During this period the French organised the major cities according to the French notions of urban life. Phnom Penh became the seat of government and home of the royal palace.

From the 1920s onwards Phnom Penh faced rapid modernisation and grew into a noteworthy city. The French constructed vast boulevards, churches, hotels, and villas for the well-endowed.

When Cambodia became independent from France in 1953, Phnom Penh was further developed and Prince Sihanouk stimulated the use modern urbanisation using ‘New Khmer Architecture’, a fusion of modern European architecture with traditional Angkor typologies and ornaments. (Turnbull 2007). He also initiated more expansive suburban development to accommodate small but rising upper and middle classes. Phnom Penh expanded rapidly and doubled its inhabitants from 364,800 in 1950 to 760,000 in 1970.

During the 1960s comprehensive urban plans were developed and large scale public works initiated (Van Mollyvann).

A railway link between Phnom Penh, Battambang and further North was introduced in 1936.

During the late sixties the first peasant uprisings paved the way for the establishment of the violent Khmer Rouge regime under Pol Pot. This devastating civil war between 1970 and 1975 destabilised the country. Pol Pot and his army took over the capital in 1975 after having “tortured the capital almost continuously”, “inflicting random death and mutilation” on millions of civilians and reducing
the city to rubble (Barron and Anthony 1977). City dwellers were forced to move to the countryside and work as agricultural labourers. Under the terror of the Pol Pot regime millions were tortured and executed, those who could fled the country.

While Phnom Penh was home to more than 1 million people at the beginning of 1975, by April 1975 the city was literally emptied. Only a couple of hundred people were living in the capital during the Khmer Rouge regime.

An invasion from neighbouring Vietnam ‘liberated’ the capital in 1978. Former residents together with thousands of others, returned to Phnom Penh. Homes were occupied on a first-come, first-serve basis (Barron and Anthony 1977). The Khmer rouge fled to the border regions. In 1981 elections are held, but the results never recognised by the international community. The government in exile (former Khmer Rouge) keep their seat at the UN. In 1989 the Vietnamese withdraw from the country. In 1991 a peace agreement is signed.

In 1992-93 the United Nation Transitional Authority in Cambodia (UNTAC) is established. The UNTAC aimed to restore peace and civil government after decades of civil war, and to hold free and fair elections (September 1993) leading to a new constitution. It was the first occasion on which the UN had taken over the administration of an independent state.

**DEMOGRAPHICS**

Cambodia’s total population was estimated by the United Nations Population Fund at 15.8 million in 2016, with annual population growth of 1.6 percent. The last formal census was carried out in 2008:
• 78% of the population live in rural areas
• Two-thirds of the population are working age (15–64), around 29 percent younger than 15 and around 5 percent 65 and older
• The average age at marriage is 23.7 years for women and 26.2 years for men; both are marrying later in life than in previous years.
• Life expectancy at birth is 67 for men and 71 for women.

Srei Sophon City and its challenges
Srei Sophon is the capital and the largest city of Bantaey Manchey province, which is located in the northwest of Cambodia. The city is going through major changes at the moment and is facing a large number of challenges it has to deal with.

The connection between Srei Sophon and Poi Pet had created massive business and trading opportunities between Cambodian and Thai, through the Poi Pet border gate.

These businesses and trading opportunities caused Srei Sophon to urbanise rapidly, this expansion has gradually pushed the poor towards the outskirt and to the rural areas. Housing, hotels, industrial estates were competitively constructed, at a speed that overtook that of the development of the master plan for the city. The lack of an enforceable legal framework and spatial development plan allows for an uncontrolled sprawl towards the South.

Fig. 7, 8 and 9: Private led urban growth, railway upgrading and coping with flooding on the every day level (C. Newton, 2014 and 2017)

The rapid urbanisation, led by private investment, ignores the needed integrated infrastructural planning. Consequently the city lacks infrastructure on multiple levels, from an integral transport infrastructure to a comprehensive waste management plan. At current the existing, but unused railway is being upgraded and will be active by the end of 2017. In the near future a sewerage and water system will be implemented with the help of the ADB (Asian Development Bank).
As migration will increase, the growth of the city and its densification needs to be planned in order to safeguard the current green character and the very short rural-urban linkages that are imperative for a local food production and distribution network. As such the need has emerged to think about intelligent ways to densify with respect to cultural and historical typologies.

**ENVISAGED OUTCOMES**

With the formulation of the SDGs the UN has acknowledged the important role of cities today, and with the formulation of SDG 11 (making cities and human settlements inclusive, safe, resilient, and sustainable) they emphasise the crucial role of urban planning and design as a "lense" or a "trajectory" that has to enable the realisation of the other 16 SDGs.

By working on a micro-scale, on site, we visualise the possibilities of sustainable practices and through a design research approach investigate ways to activate these practices in an integrated way on a city wide scale:

- From local IRRCs (Integrated Resource Recovery Centers) to a "waste to resource system" on a city wide scale, differentiating between agricultural, household and 'commercial' waste.
- From small scale aqua-agriculture to a productive urban-rural landscape as climate mitigation strategy.
From small scale sustainable housing to city-wide integrated densification strategies, allowing the preservation of large green natural 'reserves'. Working on different scales allows us to not only 'imagine' and 'visualise' possible urban futures but to also give people, through the construction of the envisaged, a close encounter with what this future might entail.

Fig. 13: co-creation of small scale catalytic interventions (S. Lamote, C. Newon & A. Kumar, 2017)

CALENDAR
25.08-26.08 – meet & greet in Siem Reap
27.08 – introduction to the workshop and information about the city and the issue
  - visit of the city
  - visit to surrounding upgrading projects and visit to the railway communities
  - visit to the garbage belt
28.08 - 31.08 – interactive workshop (morning: lecture, afterwards: on site and design workshop)
01.09 – final presentations
03.09 - 04.09 – optional presentations in Phnom Penh
PRACTICAL

IMPORTANT DATES
Call for participation: 23/02/2018
Deadline for submitting motivation letter: 1/04/2018
Selection and notification of acceptance: 20/04/2018
Deadline confirmation travel arrangements by participants: TBC (for all participants)

ELIGIBILITY
Eligible for participation are all (International) Master students in Programs of Architecture, Urban Design or Urban Planning (including Erasmus or exchange students), as well as recently graduated Architects, Urban Designers or Urban Planners (graduated between 2014 and 2017). Bachelors (3th year) are also eligible.
Participation of students enrolled in Master/Bachelor Programs at KU Leuven, Faculty of Architecture, campus Sint-Lucas and Cambodian students is without charge, selection based on motivation letter
Participation of students/professionals not enrolled in Programs at KU Leuven, Faculty of Architecture or Cambodian nationals, is at charge of 195.00EUR, to be paid via international bank transfer on the KU Leuven Faculty of Architecture account before September 1st, 2018 (details for payment will be given after selection procedure, final acceptance of participation will be given after having confirmed travel arrangements and having paid registration), selection based on motivation letter.
All participants book and pay the needed travel and accommodation costs and agree to be present on August 25th at the previously communicated meeting point in Siem Reap (late arrivals or early leave will not be accepted).
All participants are personally responsible to obtain all legal documents and permits to travel and stay in Cambodia, KU Leuven does not have responsibility in this matter.
All participants arrange travel modes and insurances individually for the whole stay, KU Leuven does not have responsibility in this matter.
After completion, all participants will receive an official certificate of participation at the International Summer School, 5 ECTS study credits can be granted for participation when the participants enrol in the elective “Participation International Project” at KU Leuven (only for master students at KU Leuven, Faculty of Architecture).
Availability: max. 20 participants

ESTIMATED COSTS
€3/dag tuktuk (transportation), 6 days = €18
transport from Siem reap to Srei Sophon: €15
Hotel Srei Sophon: €20 per night (if you share, you can divide by 2 or 3)
Hotel Siem Reap: varies
Food: €12 per day
Rough estimate: €280 (no flights nor additional travel costs)
For more information: email to caroline.newton@kuleuven, koen.dewandeler@kuleuven or nele.demeyere@kuleuven.be

Fig. 14: Transformation of vernacular principles into dense, urban, resilient, sustainable, incremental practice (Jolicoeur, Mansour, Rocray & Wirth, 2017)
Fig. 15: Investigating Connectivity (Kashmiry, Krisdawat, Kumar & Tirlea, 2017)
Fig. 16: Impressions from past activities