What I have learned and what I would like to be transferred
Interview with His Excellency Vann Molyvann, PhD.

Transcribed by Brian McGrath

Vann Molyvann was born in Kampot province in 1926. He studied architecture at the Ecole des Beaux-Arts in Paris, and returned to Cambodia in 1956. As one of the first fully qualified Cambodian architect he was promptly appointed Head of Public Works and State Architect by Prince Norodom Sihanouk during the “Golden Age” of Independent Cambodia. Between 1956 and 1970 Vann completed master plans for the extension of Phnom Penh at Bassac and for the port city of Sihanoukville. He designed important buildings such as the National Theater, National Stadium, Teachers Training College, and “100 houses” to house workers of the National Bank of Cambodia in Phnom Penh, and SKD Brewery in Sihanoukville.

Vann relocated to Switzerland following the coup d’état led by General Lon Nol. He worked for the United Nations Human Settlements Program. He returned to Cambodia in 1991 where he served as President of the Council of Ministers, Minister of Culture, Fine Arts, Town and Country Planning. Most recently he has authored the book *Modern Khmer Cities* and completed his PhD on Southeast Asian urbanism. He continues to be an active intellectual and kindly granted an interview in March, 2012.

Could you talk about your recent research work on sustainable urbanism?

I would like to talk about two research projects. The first one is the historical analysis of Khmer water-based urbanism. This research forms the background lessons for the Kingdom of Cambodia to prepare for urban development. This work has been published in the book *Modern Khmer Cities* published by The Reyum Institute of Arts and Culture, Phnom Penh, in 2003. The second one is an expansion of this research into the ten-country region of Southeast Asia, the subject of my PhD dissertation that is being translated and will soon be published in Khmer, French and English.

When did you begin your research?

I began this research in 1994 to use the historical analysis of Khmer urbanism to create a model for 21st century Southeast Asian cities facing the dual challenges of rapid expansion and increased flood vulnerability. During my career as the Head Architect for King Norodom Sihanouk from 1955-1970, the major challenge was the construction of a modern country. Of primary importance was the establishment of modern institutions for the new nation of Cambodia. This included the institutions of governance, culture and education.

What challenges did the city face in 1994 that differed from the ones you faced in 1955?

In contrast, in 1994, we faced the challenges of reconstruction of the entire country after a long period of conflict. My research provided the basis to create a new mega regional urban model for the city of Phnom Penh and the country as a whole. This modern regional thinking needed to begin from the knowledge that could come from an analysis of historical Khmer architecture.
How did your education or experience prepare you for these new challenges?

While my education at the Ecole des Beaux Arts in Paris prepared me for my role as the metropolitan architect of the capital city of Independent Cambodia, I learned much during my exile from the country in Switzerland, Laos and Kenya about environmental risk management and social development. In Switzerland I learned how even small homes in a mountainous country managed the risk of avalanche. In Nairobi, while working for UN-HABITAT, I learned about seismic disaster prevention in a rapidly developing country. As the Chief Technical Advisor in Vientiane, Laos increased my knowledge for slum upgrading. I believe Indonesia and Kenya were saved from internal social troubles by slum upgrading and sites and services projects introduced at that time by the World Bank.

What is the fundamental issue confronting Phnom Penh ecologically?

Phnom Penh is a city at the confluence of four fluid arms: the upper and lower reaches of the Mekong, the Tonle Sap and the Bassac Rivers. This complex hydrology is complicated by the enormous sedimentation carried by the Mekong down on its long journey from China, through Laos, Thailand and Cambodia before ending the Mekong delta in Vietnam. Furthermore, the monsoon climate reverses the flow of the Tonle Sap from south to north, and from north to south, annually filling the Great Lake south of Angkor.

What lessons strategies have you learned from the past about sustainable urbanization in Cambodia?

After the Khmer Rouge period and since 1994, I have proposed in my above mentioned two research projects Ancient Khmer Cities and Modern Khmer Cities, a strategy of territorial management focused on the reconstruction programs of three martyred cities: the Angkor/Siem Reap city, the Capital city of Phnom Penh, and the port city of Sihanoukville. This research attempted to utilize lessons learned from the past to formulate a new national policy and strategy of urbanization for Cambodia. In this regard, I have highlighted two lessons to be applied:

- The first lesson was that the mechanics of management of the Khmer territory have always been essentially hydraulic techniques.
  - In the flooded valleys of the Mekong River, the inhabitants always utilize high earth dikes for the construction of water basins and canals, either artificial or natural, to organize the water distribution networks. This traditional system is called the system of “Prek”.

Figure 1: Hydrological works of Angkor
The effluents of the Mekong River and the canals alongside it, deposit their alluvium all year long. The banks are thereby periodically renewed and re-fertilized, at every swelling and drop of the water level.

- In the non-flooded zones, such as the plain of Siem Reap-Angkor, the inhabitants built up huge reservoirs for water storage, which they called “Baray”, and implemented a very sophisticated system of distribution.

The second lesson was that in the Mekong valley, flooding is still the major constraint for the creation or for the expansion of human settlements: the shores where flooding occurs, impose the localization of all Khmer cities along the Mekong River and around the Great Lake, at the highest water level along these shores. All national roads function as dikes. Moving away from this limit requires the construction of very expensive infrastructures for water supply and distribution to the populations.

What strategies have you proposed for the future of sustainable urbanization in Cambodia?

I proposed three town-planning projects, which I considered most urgent, and practically achievable in the medium term (1995-2005):

a) The first project has as main development objective, the rehabilitation of the archeological heritage of Angkor. The cities of Angkor have been dubbed by the archaeologists “Hydraulic Cities”. In this project, the ancient techniques used for the construction of the Hydraulic City of the past will be rehabilitated at an urban scale, in order to give life...
to the whole region, which has been since the 12th century, the home of up to 600,000 inhabitants. The project foresees also that this development be implemented simultaneously with the development of cultural tourism, which should generate sufficient resources to revive the national economy.

b) The second project concerns the extension of Phnom Penh. Its development objective is to create an “Urban Region” of Phnom Penh, a vast conurbation that should cover the fusion of the present territory of the Phnom Penh Municipality, with the territory of the satellite city of Takhmau, and the whole valley of the Stung Prek Thnot as well. The traditional system of canals and “preks” should be extensively modernized and generalized to the whole central plane of Cambodia. The project of the Stung Prek Thnot becomes a multi-functional project, encompassing both irrigation, production of electricity and flood control.

c) The third project has for the objective to reinforce the reopening of Cambodia to the Southern China Seas. During the first century of the Christian era, Chinese sources mentioned that there existed in the Valley of Mekong the first indiane Kingdoms, which were governed by rulers having Sanskrit names. The centre of one of these kingdoms was situated in the Lower Mekong and its delta. This was Fou-nan with a city capital named Vyaddhapura. Fou-nan is the modern mandarin pronunciation of two characters pronounced in the past b’iu-nam, which are the transcription of the old Khmer bnam, presently Phnom, “montain”. The kings of this country had a title which meant “King of the Mount”, in Sanskrit pasvatabhupala or çalaraja: Fou-nan was connected with these China Seas via the harbor of Oc Eo which linked Fou-Nan to the international maritime roads of these times. The present Harbor of Sihanoukville that was created in the 1960s should once more try to fulfill this function, which is essential for Cambodia to be integrated in the global economy. Sihanoukville can therefore become the modern new growth pole of the whole Khmer Coastal zones.

What are you currently working on?

Through my doctoral thesis entitled Cities of South East Asia, the past and the present, I propose a new national strategy of urban development for Cambodia. I suggest to the present authorities:

Do not concentrate the urban growth to the Capital of Phnom Penh alone, as they are doing, but better to distribute this growth between the Capital, the principal provincial towns, and to create new urban growth poles.

Through the analysis of the existing regional economies, and namely by identifying the factors that determine their growth, I propose to establish the typologies by function of all provincial cities, plus Phnom Penh. These cities are classified in seven categories:

1) Principal town

This is the case of Phnom Penh. It is inevitable that a dominant Phnom Penh will continue to grow rapidly for years to come. Such growth must be anticipated in order to maximize the capital contribution to the national economic development, and in particular, to be able to benefit from the opportunities offered by the Southeast Asian economy, while ensuring this development remains environmentally sustainable. All the formal investment projects introduced into Cambodia have been monopolized by Phnom-Penh and its region which had 1,5 million inhabitants in the year 2000, 2,4 million in the year 2010, and will have 3 million in the year 2015. Phnom Penh and its region would therefore need three times more space and more infrastructure to accommodate this growth: It is better to extend the mega pole of Phnom Penh to the South, along the Bassac River, instead of evicting the current inhabitants to increase the density of the existing districts.

2) Important Provincial towns

The towns in this category are Pursat, Battambang, Kompong Cham and Takhmau. The regions to which they belong to are principally agricultural. Their economic potential is very promising. It would be possible to modernize their system of exploitation, to attract more new investments and to generate more surplus through for instance the processing and the export of agricultural products. Presently, 80% of the lands of the rural population are heavily dependent on climatic patterns and subject to
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The average production of paddy is only about 1.3 tones/hectare, which is much lower in terms of investment return, than the international standard. The introduction of a modern, performing and well-managed irrigation system would bring enormous gains to the country’s economy. These regions are situated principally in the Central Plain of Cambodia, an area drained by the Mekong and the Tonle Sap that ranges amongst the most populated of Cambodia.

3) Tourist towns
Siem Reap is already in progress to become a great international attraction for a cultural tourism; Sihanoukville has the potential to become a seaside station.

4) Port
The principal harbor of Cambodia, Sihanoukville, receives only 1 million of tones of merchandise per year.
5) Frontier-towns
Actually there is a very important legal and illegal commerce between Cambodia, Thailand and Vietnam. The cities situated along these transports corridors particularly near the borders, undergo a very strong growth. They are in located in the provinces of Oddar Meanchey and Svayrieng.

6) Provincial cities
The cities of this category are lightly populated, and have very low population growth rates. They offer limited commercial and industrial activities, and thus very limited immediate potential for economic growth. They are located in the provinces of Prey Veng, Kompong Thom, Kompong Chhnang Takeo and Kampot.

7) Cities of frontier provinces
This category includes cities, which have minimal economic activities and are far off any existing commercial routes or any modern infrastructure. There are little development activities. They are localized along the borders with Laos and Vietnam. They are located in the provinces of Kratie, Stung Treng, such as Tbeng Mean Chey, Banlung, Sen Monorom.

As a sector, urban approaches and institutions are in their infancy in Cambodia: There is so much to do, and capacities must be built up across governmental institutions, professional and technical cadres, frameworks for development control, regulation, and finances, etc. Many of these capacity elements take years to reach fruition, and thus a start, even if small, needs to be made.