

Development at the expense of the environment and the poor: The conflict for Boeng Kak lake in Phnom Penh, Cambodia

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Abstract: Although still among the poorest countries in Southeast Asia, Cambodia has experienced remarkable economic growth during the last decade. But the present conflict for the lake of Boeng Kak in Phnom Penh shows – like looking through a magnifying lens - how accelerated development has, up to now, mainly benefited the country's narrow elite and foreign investors at the expense of the natural environment and the poor. Urban land previously considered useless or not usable, often occupied by the urban poor, is now in the focus of attention of potential investors. This is the case with the inner city lake of Boeng Kak and its surroundings, home to app. 30.000 people living and working there. The lake is presently filled with sand in order to convert it into a high-yield office, shopping and dwelling complex. The paper is not based on primary data but recapitulates the available information on the conflict for Boeng Kak lake, combines it with own observations during a field trip in 2009 and tries to link the socio-political conflict consequently with the already precarious situation of the hydraulic landscape of the wider Phnom Penh area, a situation, which will get even worse with the expected effects of climate change. Thus the conflict for Boeng Kak lake is shown as an exemplary environmental conflict (not only) for Cambodia.

Key Words: Phnom Penh; Boeng Kak conflict; land law; urban poor; flooding

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During the last decade Cambodia has experienced remarkable rates of economic growth, based mainly on textile exports and tourism. Since the end of civil war in the 1990s it was possible to reduce poverty considerably, although there was a remarkable downturn in 2009 caused by the world financial and economic crisis. Cambodia is still among the poorest countries in Southeast Asia, together with Laos and Myanmar/Burma. The main beneficiaries of economic growth are the members of a politically well-connected small urban elite, while for the majority of the population, that is for those living in rural areas, but also for the urban poor, little has changed. For 21% of the population the food situation in 2010 was still considered "very serious" (Welthungerhilfe, 2010). Economic development has also stimulated the urban real estate market, especially in Phnom Penh, causing not only social, but also environmental conflict.

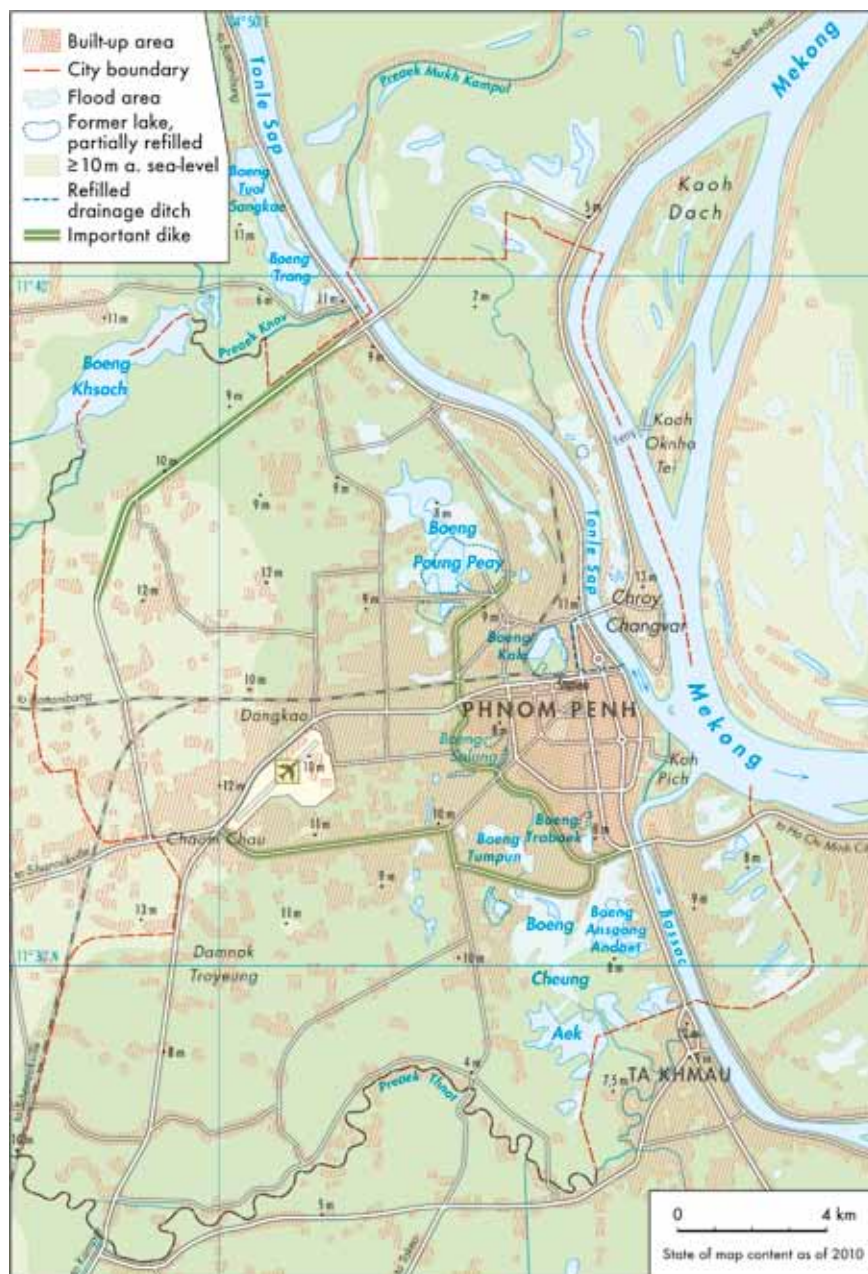
Source: Jan Peter Mund 2008

In developing the urban real estate market local actors belonging to the country's elite are increasingly cooperating with foreign investors mainly coming from China, South Korea, Malaysia and the USA (Hirschle & Kahler, 2010). The change came after the withdrawal of the Vietnamese forces in 1989, the switch to market economy and the end of civil war in the 1990s. A cornerstone of market liberalization was the reintroduction of private land ownership. In the larger cities, namely Phnom Penh, urban land not used or considered to be underused came into the focus of the attention of potential investors intending to develop it into profitable real estate projects. Thus also the urban poor came under growing pressure, because they often occupied these open spaces or urban niches along trenches, ditches and lakes, which are part of the flood protection system of Phnom Penh. Transforming these urban niches into high-yield real estate projects does not only cause social conflict, with view to the urban poor losing their homes and often also their means of livelihood and being evicted by force in many cases. But this development is also a danger to the already tenuous flood protection and water regulation system. The filling of ditches, trenches and lakes, like it is currently done with Boeng Kak lake, one of the few remaining retention reservoirs, will also put the inner city area at a higher risk for flooding. Anticipated effects of climate change will put the flood regulation system further under stress.

This paper is not based on primary data but recapitulates the available information on the conflict for Boeng Kak lake, combines it with own observations during a field trip in 2009 and tries to link the socio-political conflict consequently with the already precarious situation of the hydraulic landscape of the wider Phnom Penh area, a situation, which will get even worse with the expected effects of climate change. Thus the conflict for Boeng Kak lake is shown as an exemplary environmental conflict not only for Cambodia.

Climate and the hydraulic landscape of Phnom Penh

Cambodia's development in general and especially the urban development of Phnom Penh are strongly influenced by climate and the hydraulic



Natural settings of Phnom Penh

landscape. Cambodia has a tropical, summer-humid climate and it is part of the monsoon wind system. Rainfall normally starts in May/June and it ends in October/November. During the rainy season most rivers are flooding the surrounding flat land and the waters will deposit fertile sediments, which are highly welcome for agriculture. Traditionally settlements and the way of life in Cambodia were adapted to this natural situation. Settlements developed on top of the levees, where they were less exposed to flooding, although not without risk. But the risk of flooding is not only caused by high water levels of the rivers, during the rainy season flooding is also an effect of heavy rainfall and rising groundwater levels.

Phnom Penh developed on the banks of Tonle Sap River, just adjacent to its confluence with the Mekong. Since the 15th century the city has expanded spatially by building succeeding concentric dikes, which were connected with the levee, and filling in the enclosed space. This is why Blancot (1994, 72) called Phnom Penh "a large 'polder'". Since the 1960s spatial expansion has accelerated, only to be brutally disrupted during the regime of the Khmer Rouge, when Cambodia's cities were evacuated almost totally (e.g. Kiernan, 2002). After the downfall of the Khmer Rouge and after ending the civil war, the growth of Phnom Penh in terms of population and space took momentum again in the second half of the 1990s.

Pacific News Cartography: © Harald Krähe 2011



Dubai Mosque: still at the lake's shore

From the beginning urban expansion influenced the natural and man-made system of flood regulation, the system of rivers, ponds (*boeng*), trenches and ditches (*prek*). Several inner city ditches and ponds were filled and converted into roads and lots for buildings. Natural drainage of the inner city area became impossible. To protect the urban area enclosed by dikes from flooding during the rainy season,

it was necessary to install a system of pumping stations. And with every expansion of the city's space, more water had to be pumped to the surrounding swamplands. But obviously there is a limit for this kind of urbanization: "It is not possible to continue expanding the city through the building of ever larger concentric dikes, filling the interceding space to provide new areas for urbanisation." (Vann Molyvann

2003, 115). More and more pumps, money and manpower are necessary to expand and sustain this artificial drainage system. Presently during the rainy season already one third of Phnom Penh's urban area is at high risk of flooding (Vann Molyvann 2003, 127).

Top and bottom water levels of the Mekong normally differ by up to eight meters. With nearly 12m a.s.l. the highest top water level ever of the Mekong near Phnom Penh was measured in 2000; only in 1894 a top water level nearly as high was measured (11.78 m). But with 7.5 m a.s.l. 1998 also a historical low top water level was measured. The growing difference between top water levels in a short period of time may be interpreted as a first sign of the effects of climate change for the Mekong river system. Presently the dikes of Phnom Penh protect the city from floodwaters of the Tonle Sap, Mekong and Bassac, a distributary of the Mekong, branching off just south of the inner city, up to a top water level of 12 m a.s.l. If floodwaters will rise above this limit, large urban areas will be at risk of flooding.

The Mekong is transporting and depositing a huge amount of sandy sediments. Sand deposits made the Chroy Changvar peninsula, lying between Mekong and Tonle Sap, grow by ca. 100m to the south during the last 50 years. Temporary sand banks and islands caused by sedimentation do not only hamper ship traffic on the river, they also increase the water pressure of the Mekong and thus the risk of flooding of urban areas. Just were the Bassac branches off, a new island buildt up by sediments surfaced a few years ago (Koh Pich or Diamond Island). Damming up the Mekong outflow adds to the rising risk of flooding caused by high top water levels of the Mekong. A proposal, put forward by the Mekong River Commission, to remove this island altogether, had no chance to be accepted against mighty interests (Wehrmann 2005, 238). After the removal of informal settlements on Koh Pich, now an ambitious urban development with Canadia Bank as its main investor, is going on ("Island City"). For this development the island's level will be raised to nearly 12m a.s.l. and it will be protected by dikes. This will further hamper the Mekong outflow and increase the flood risk for Phnom Penh.



Boeng Kak Urban Development Project

The situation of the hydraulic landscape of Phnom Penh and its surroundings would necessitate a comprehensive urban development planning including a well-designed water management system. But up to now this is not the case. Since the 1990s the urban area rapidly expanded spatially, but in a very unplanned manner and also well beyond the area protected by dikes. Meanwhile more than 40 % of Phnom Penh's urban area are lying outside the dikes and are exposed to flooding (Vann Molyvann 2003, 118). But also in the protected inner city area the risk of flooding during the rainy season is increasing, because the well planned original water management and drainage system, comprising canals, ditches and ponds functioning as retention reservoirs, is only poorly maintained or no longer existing at all. For new buildings in the inner city area the owners mostly look for individual solutions without considering the effects for the water management of the whole city.

Presently, only three larger retention basins remain in the inner city area: Boeng Salang, Boeng Trabaek and Boeng Kak. The area covered by lake water is variable and depends on seasonal rainfall. But it is conceivable that these retention reservoirs will vanish in a short time. The areas of Boeng Salang and Boeng Trabaek are already partially occupied by buildings and the water is heavily littered. The lake of Boeng Kak is presently filled with sand to develop it into a new, high-prize urban area. In a few months the lake will have vanished totally. Not only does this development spark social conflict because the marginal population living and working around Boeng Kak lake will have to move, but also because the loss of one of the last larger inner city retention basins will increase the risk of flooding of large parts of the urban area during the rainy season.

In the coming years the effects of climate change will put the already tenuous flood regulation and protection system of Phnom Penh further under stress. In all of monsoon Southeast Asia not only an increase of the average rainfall per year is expected, but also the more frequent occurrence of extreme events, e.g. very heavy rainfalls concentrated in only a few days or weeks (WBGU 2008, 59 ff.). This is also true for the whole Mekong region. If there is a very intense rainy



Source: Helmut Schneider 2009

The old Hotel International - with marginal dwellers on the roof top

season, combined with above average smelting of snow and glaciers in the Himalaya region and heavy rainfall in Sechuan and the Annamite mountains, this may lead to disastrous floodings along the whole Mekong valley. And it is more likely that such a situation will occur when the climate situation in the Western Pacific area is following the La Niña pattern, leading to above average rainfall in East and Southeast Asia. When due to those combined effects the top water level of the Mekong in the Phnom Penh region exceeds 12 m a.s.l., extended urban areas are not only in danger to be flooded by rain water, but also by flood waters from the rivers, because then the dikes can not hold it back any longer (Vann Molyvann 2003, 125).

Conflict for lake Boeng Kak

After the downfall of the Khmer Rouge in 1979 re-urbanization of the almost empty cities, strictly regulated by the Vietnamese forces and the new government, only started slowly. A complete new situation emerged after the withdrawal of the Vietnamese Army in 1989, the following switch from planned to market economy, the first elections made possible by the United Nations Transitional Authority (UNTAC) in 1993 and the end of civil war in the second half of the 1990s. Growing numbers of rural-urban migrants now moved to the towns and cities looking for work and a place to live. The population of Phnom Penh grew from only 100,000 in 1979 to 615,000 in 1990 (Shatkin, 1998). It reached one million at the end of the

decade and for 2010 the population of Cambodia's capital was estimated to be around 1.5 million.

The government and the Municipality of Phnom Penh tolerated the new urban inhabitants to move into empty buildings and to occupy open spaces to build their homes. But the switch to market economy also brought the reintroduction of private land ownership. The real estate market began to flourish. The marginal population, the urban poor, were more and more pressed to leave those lots considered by investors to be promising sites for profitable real estate developments. Those who would not leave voluntarily were evicted by force. Because land was state owned and the people living there did not had the chance to secure regular land titles, the land law didn't work in their favour, but the rich and mighty were able to turn it against them. High-ranking public servants and members of the ruling Cambodian Peoples Party (CPP) sold state land to private investors on their own account.

This was possible, because the CPP, to stay in power after the transformation of the country to market economy and (formal) democracy, had successfully developed an extended system of patronage. The marginal population was more and more displaced to urban niches: railway tracks, unused buildings like former cinemas, even the roof tops of multi-storey buildings were used for dwellings, and last but not least sites along inner city ditches, trenches and depressions prone to flooding, among them reten-

tion reservoirs like Boeng Kak.

But with the booming real estate market these urban niches also came under pressure. Land previously considered useless or not usable is now in the focus of investors. And one of these inner city areas in Phnom Penh, which is going to be transformed into a high-prize office, shopping and dwelling complex is Boeng Kak lake (90 ha) and its surroundings (approx. 43 ha). The area is home to approx. 30,000 people living and working there. In 2007 the Boeng Kak area was leased by the Municipality of Phnom Penh to Shukaku Inc. for 99 years. Little is known about this enterprise, but a leading figure is senator Lau Meng Kinh, who is a close ally of president Hun Sen. According to the Cambodian Land Law passed in 2001 the Boeng Kak area is considered “state public property”, because it is a lake of natural origin and its existence is of public interest. “State public property” should be used for public purpose only, it can’t be sold and leasehold is limited to a maximum of 15 years (East-West Management Institute 2003, 53 f.; Grimdsitch & Henderson 2009, 60). Being one of the remaining larger retention reservoirs in the inner city area, Boeng Kak is part of the existing, although tenuous water and flood regulation system. To reject the claim of public interest for Boeng Kak lake, Mao Hak, director in the Ministry of Water Resources and Meteorology,

simply challenged the fact: “Boeng Kak is not a flood protection area. It is just a dead lake.” (Phnom Penh Post, 27.8. 2008).

For leasing the lake area Shukaku Inc. had to pay 79 Mio. US\$. But the market value of the area is estimated to be 25-times more than that! (Sokuntheoun SO 2010, 2; Gluckman, 2008). Due to the good relations between the developer and politics the Boeng Kak area was leased to a private enterprise against existing law, and for a prize far below market value. Six months after the leasing agreement was signed, the Municipality of Phnom Penh changed the legal status of the whole area to “state private land”. Land of this category now may be used like any other private property. But even now the population living around the lake was denied the right to claim regular land titles for lots where some already were living since 20 years. First the city’s officials had argued that the whole area was state land and nobody could claim private property rights. After the deal with Shukaku Inc. was made, the argument changed: Now the lake and its surroundings were declared a “development zone”, within which no other competing private property could be claimed.

Apart from being part of the flood protection system of the city, for many families Boeng Kak and its surroundings are also the place to earn their living by growing, harvesting and sel-

ling water vegetables (morning glory) and by working in the backpacker tourism sector with small pension houses, restaurants and tour operators along the lake shore. If they have to move, they will not only lose their homes but many will also lose their income. In 2009 the first eviction orders were passed. It was offered either to accept a compensation payment of 8,500 US\$ per family or to move to an alternate site 15 km to the southwest of inner city. If none of these offers would be accepted, the affected families are threatened with eviction by force.

Whether the whole sum of the promised compensation money is paid, paid instantly or not paid at all, is by no way certain. And going to the courts to claim their right is no option for the urban poor. The resettling of evicted families at the city’s outskirts in the past has already shown that the chosen alternate sites did not have even basic infrastructure facilities like houses, electricity or clean water. And the distance to the inner city area, where one could look for jobs, is too far and expensive for commuting (Dombrowski, 2006). Grimdsitch & Henderson (2009, 61) conclude: “None of these compensation options fulfil international law obligations regarding evictions and have been deemed inadequate by affected persons.”

Since 2008 the lake of Boeng Kak is being filled with sand, which is dredged in the Mekong and pumped





Source: Google Earth 2011

Satellite Picture of Boeng Kak Lake from 2010

through large iron pipes into the lake. Already a large and growing sand bank has emerged in the lake. Thereby the retention capacity of the lake is reduced. Thus during the rainy season in 2010 above average flooding of the lake's shore area occurred and the homes of around 1,000 families were severely damaged so they had to be given up. The NGO Housing Rights Task Force assumes that the developer was well aware of this effect and welcomed it, because it makes the people around the lake leave more quickly. Up

to now neither the Municipality of Phnom Penh nor Shukaku Inc. have, parallel to the filling of the lake, installed an effective drainage system.

Conclusion

Apart from the social conflict caused by the Boeng Kak development, filling of the lake, one of the few remaining larger retention reservoirs left in Phnom Penh, will put the inner city area at a higher risk for flooding. This risk is not only a consequence of heavy rainfall during the rainy season,

but also of high top water levels of the Mekong and Tonle Sap, which are to be expected in the future due to the effects of climate change. These effects will put the already tenuous flood regulation system of Phnom Penh and its surroundings under severe stress. The Boeng Kak case also shows an extraordinary degree of recklessness of the country's elite looking for quick profits and personal enrichment, often jointly with foreign investors and at the expense of the environment and the poor. An explanation for the elite's



Source: Helmut Schneider 2009

behaviour can be found in the political development since the downfall of the Khmer Rouge in 1979, which has led to a nationwide system of patronage coordinated by the ruling party, in fact the base of the elite's political power in present day Cambodia (Gottesman, 2004; Hughes, 2003).

The conflict for Boeng Kak lake is shown here as an exemplary environmental conflict (not only) for Cambodia. Conflict is not caused by environment per se, but by social actors with conflicting interests and different means of political power, which in effect may increase environmental risks. Cambodia's mighty elite, following its interests at the expense of the environment and the urban poor, is increasing the environmental risk for Phnom Penh. And, at least in this case, the urban poor, by defending their homes and their sources of income, also defend the hydraulic stability of the city.

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