

Towards a Sustainable Housing Development of Phnom Penh City



Cheam Phanin

Architect and Urban planner, Vice head of Urban planning office, Urbanization division, Municipality of Phnom Penh, Cambodia.

Abstract: There are traditionally three basic demands for human beings: food, clothing and shelter. Of the three basic demands, housing is a major issue that Phnom Penh faces today. The related housing issues are the result of increase in demand, issues related to property price increases, investment and suitable housing types. This proposal analyses the factors that cause the increases, their impacts and the related problems. Finally this proposal suggests recommendation to pave the way for a more sustainable city development: City for all.

1 Shelter Situation Analysis

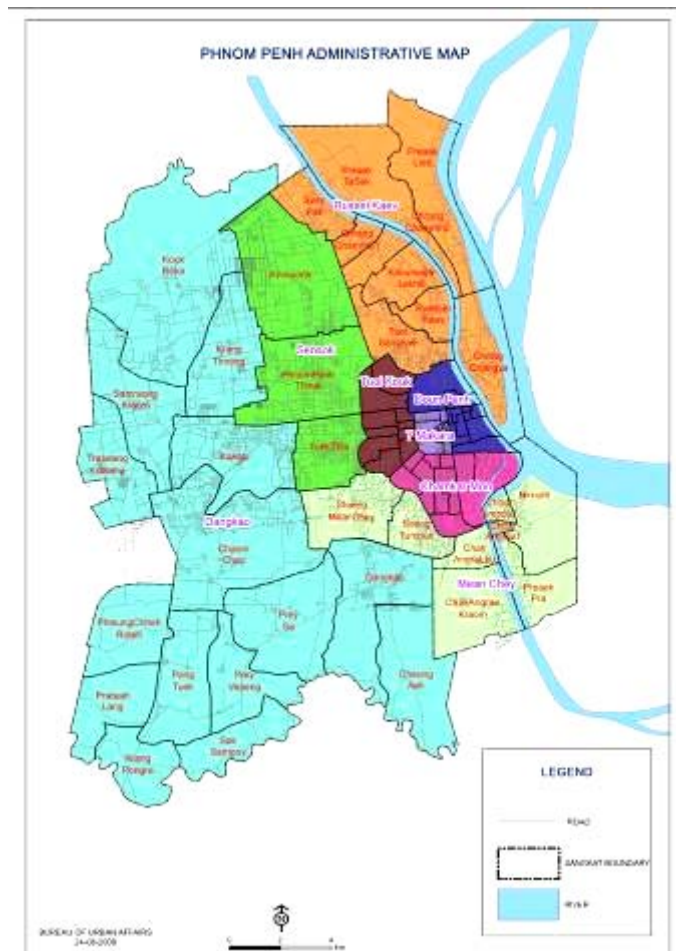
1.1 Basic General Data

Geography and Administration:

Cambodia is one of the most ancient countries in South-East Asia. It has a surface area of 181.035km² with more than 11 million inhabitants in 2008, sharing border with Thailand, Vietnam, Lao and the Gulf of Thailand. Cambodia is one of the fast growing economic developments in the last decades with the GDP of double digit of 10.2 in 2007. Main Motor economics are: textile for exportation, service, and construction (include real estate activities) and agriculture.

Total/ Urban/ Rural	Population in					
	1998			2008		
	Both Sexes	Males	Females	Both Sexes	Males	Females
(1)	(2)	(3)	(4)	(2)	(3)	(4)
Total	11,437,656	5,511,408	5,926,248	13,395,682	6,516,054	6,879,628
Urban	2,095,074	1,020,264	1,074,810	2,614,027	1,255,570	1,358,457
Rural	9,342,582	4,491,144	4,851,438	10,781,655	5,260,484	5,521,171

Figure 1: Population by urban-rural resident. Source National Census 2008



Phnom Penh is the capital city of Kingdom of Cambodia, biggest city and the centre of administration, economy, social and culture and education. It is uniquely located in the junction of four rivers.

With the surface of 376.93 km², this city is divided in 2 parts: city-centre and sub-urban.

Figure 2: Phnom Penh administrative map 2009. Source: BAU, Municipality of Phnom Penh

Demography and Health

In 2008 the population of Phnom Penh was 1,327,615 with 1,242,992 in the urban area and 84,623 in the rural area. The density in 2008 was 4,516 persons/Km² with annual growth rate of 2.68%.

From August 2010 Phnom Penh city has extend to the new size taking 20 communes of Kandal province with 193,608 inhabitants and 40,383 households. Phnom Penh has 8 hospitals of national level, 1 hospital of municipality level, 8 hospitals of district level, and 17 health centres of commune level. Major health problem of the people is: respiratory diseases. Childs mortality below 5 years old is 83/1000 (year 2006). Life expectancy: Males 60.5, females 64.3.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 (F)	2010 (F)	2011 (F)
Cambodia (millions)	12.7	12.9	13.1	13.3	13.5	13.8	14.2	14.4	14.7	15	15.3	15.6
Growth (%)		1.6%	1.6%	1.5%	1.5%	2.2%	2.9%	1.4%	2.1%	2.0%	2.0%	2.0%
Phnom Penh (millions)	1.11	1.15	1.19	1.23	1.27	1.31	1.35	1.39	1.44	1.48	1.52	1.57
Growth (%)		3.4%	3.4%	3.3%	3.3%	3.3%	3.2%	3.2%	3.0%	3.0%	2.6%	2.9%
Labour Force (million)	5.4	5.6	5.8	6.0	6.2	6.5	6.8	6.9	7.1	7.2	7.3	7.5
Labour Force (% of population)	42.8%	43.7%	44.5%	45.3%	46.2%	46.9%	47.8%	48.1%	48.0%	48.0%	48.0%	48.0%

Figure 3: Population of Phnom Penh city. Source: AZ city

Economy

Major economic activities of Phnom Penh are: Industry (garment factory), service sector and construction include real estate sector. GDP in 2008 is 800 USD per capita.

1.2 Shelter Related Fact and Figures

Access to Shelter

Base on general population census of Cambodia 2008, the total number of building with households of Phnom Penh city is: 214,043 with wholly residential 90,25%, residence shop; 7,33%, residence workshop; 1,27%, residence and 1.5% for other use. The total of household in the city is 260,468 with average household size of 5.0 people. From 2004 to 2008 the Phnom Penh residential supply was 25,596 units and only 64% sold out. All units produced are luxury housing with an average price of 81,697 USD. The trend of most Cambodian people like to live in shop-house making the most supplies produced

this kind of house in recent years. This housing typology sprawls from the city-centre to the sub-urban. Based on the report of Master plan of Phnom Penh city for the year 2020, the annual of housing demand is around 8170 units. So this current supply is supposed to respond to the demand. But when we take a close look into the price of these housing units, majority of people cannot afford the units. Most of the potential buyers are the high-income people and which make a fortune by doing speculation. Majority of these housing units meet the high quality for a luxury living. Means while we still can see some new housing unit specially the shop-house are being built with low quality in both design and construction due to inaccessible professional service.

From 2005, many developer both foreigner and local start to build their projects with the name of new satellite city: Diamond island city (80Ha), Sunway city (about 100Ha), Bangkok city (130Ha), Camko city (120Ha), Grand Phnom Penh international city (256Ha) and AZ satellite city (2634Ha). Along with the construction of these satellite cities, the new high rise residential buildings starts to change the skyline of the city and makes construction and real-estate sector more active than ever. Majority of these satellite cities will become gated-communities for the high-income people and also for the foreign client.

Speculation in real estate sector

Many people both medium-income and high-income people make their fortune from doing speculation in Real-estate sector by buying a cheap house or land and then to rent it out with high prices.

The Financial crisis is an example of how it impacts the real estate sector in Cambodia. In reality, there is no change in price or little change. Land Owners are cash rich – they don't depend on loans and local banks hardly give out property mortgages until recently. This puts buying land or property out of reach for most Cambodians. A typical shop-house in prime Phnom Penh of 4m x 16m (standard 2 storeys plus roof top for extension) can cost more than USD 250,000. In the suburbs and outskirts without proper land title, single storey shop house of 4m x 16m can cost usd45,000(compared with the Cambodia typical income per annum) It makes many poor and low-income families suffer of being unable to access to a good housing and living in slum or overcrowded houses.

Land speculation is also an obstacle to any present and future development project of the state and city such as: infrastructure system, public utilities, etc.

Slum and city sprawl

The collapse of Khmer rouge regime in early 1979 open free economic market in early 1990 the immigrant population from rural area influx into unplanned district, public property and private property raise the issue of land production and land conflicts. Poor household thus have no option to choose but to stay in that informal area and hoping to obtain plots for housing. This people aim is first to avoid being evicted, then to gain access to basic service, amenities and job, and finally to obtain the right to sell and transfer. Some of this people still cannot afford to build their own house due to the lack of capital. Others can afford to build their house with limited funds. Many houses are build from cheap materials that cannot last long and they are effected by climatic condition and also subject to fire. Adding to this problem is the increase in immigration from the rural area to find a better living, study and work as well as the increase inner city the demand for affordable housing has increased due to the inner city population can not be meet by the existing supply. Without proper and specific policy to manage growth and let growth go freely will create a massive problem in all sector specially housing sector. Unsustainable city development recent year have create a sprawl from city centre to the sub-urban area and sooner this spontaneous development will endanger to our rich green and blue network such as: agriculture in suburban and natural water body etc.

Another problem is the location of industry zone in and around the city, making a massive number of migrant people from rural area to work those activities. This new comer demands a massive housing unite without getting what they demand and have no choice to live in the poor condition worker's house which lack of hygienist.

Residential types in city

The most common residential types in Phnom Penh:

- Villa: a two or three floor detached house with surrounding land area/garden
- Semi detached Villa: a single villa divided into two attached villas with surrounding land area/garden and a wall or fence separating the two properties.

- **Townhouse:** a house over two or three stories. It can be detached or semi detached with a front and back garden, which does not extend to the either side of a building.
- **Shop-house/flat house:** a two to four storey building where the ground floor is often utilized for commercial activity or parking, normally in a row of shop houses.
- **Apartment/condominium/flats:** a residential unit over two floors within a building, comprising of many residential units over several floors, each unit with one to four bedrooms and would have a communal entrance and lifts.
- **Penthouse:** a residential unit on the top floor of a building within a building comprising of many residential units over several floors, each unit with one to four bedrooms and would have a communal entrance and lifts.
- **Worker's house:** a renting house for the factory workers, most of them is the textile factory. Each building has 4 to 5 rooms and each room for 2 to 4 workers.
- Majority of this type of housing are build with wood and metal roof.
- **Poor's people housing:** the shantytown, majority of them are built from inadequate materials. This house seem mostly in the city centre and sub-urban of city (informal housing without land title). Poor people housing also refer to the house that relocate from the former slum area in the city-centre. Most of them are relocated to out-skirt of the city with land title and some support to build their home, but still some people cannot afford to good shelter, so only one choice they can do is to build their house from inadequate materials
- **Blockhouse:** a residential which comprising many house with 2 to 4 stories. This typical locates mostly in the city-centre, it was build during France protectorate and continue until late 1960s.
- **Khmer traditional house:** it locates in the sub-urban of the city. It use Khmer vernacular architects.

Floor area per person: approximately 9m^2 (base on floor area of flat house of 2 stories for 5 persons/ family)

Ownership

Tenure of households: majority of tenure of household are the owner occupancy and the immigrants are the tenancy. In the last decades with the financial support from World

Bank, the ministry of land management, urbanization and construction have launched the systematic land tilling. More than 50% of residential in the city already get their land or housing title.

Rental (formal and informal): the formal tenant is the agreement between tenant and owner which legalised by the local authority and paying tax.

Ownership (formal and informal): there are 2 types of ownership

- Legal title: is the housing title or land title which legalise by cadastral department
- Illegal title: housing ownership with an agreement between buyer and seller.

Housing affordability ratio: Due to the increase of housing price in recent years many people cannot afford to own the house.

House price to income ratio: with the house price is raising rapidly than earnings many medium classes worker and low-income people cannot afford to own the house.

Land (formal/informal): there are 2 types of land ownership

- Legal title: is the land title is legalised by cadastral department
- Illegal title: land ownership originated from an agreement between buyer and seller.

Building materials: Most of the housing projects in Phnom Penh were building from brick and cement; some still use wood and other used material

Access to basis service

Around 80.43% of household have access to clean water both in public or private service. 75.50% of household have access to city power. Most of housing have road access both in city centre and sub-urban. Basic education of Cambodia is 9 years compulsory. Adult literacy rate of Phnom Penh city is about 93.17%. As mention above that Phnom Penh is the centre of education where we can see many public and private school from elementary to university.

1.3 Housing Policy

There are 2 drafts of housing policy: one from the ministry of land management urban planning and construction and other from the municipality of Phnom Penh, bureau of urban affairs.

Draft from the ministry recommends

- Housing Finance for housing rehabilitation, construction and/or property purchase
- Institutional Organization
- Development Standards for land development and building construction
- Development of Housing Programs as an element, or component, of regional, provincial, and municipal Master Plans

Draft from municipality of Phnom Penh recommends

- Diversify the housing sectors
- Integrate the social housing in private housing project.
- Rehabilitation and manage the housing for the worker
- Create the institution in charge of every housing program and projects

This draft is still being drafted within the MLUC with an indefinite time limit. When this draft gets an official approval, it will become an efficiency tool to tackle the current and future housing problem.

1.4 Actors in Shelter Delivery and their Roles

There are several actors in housing delivery in Phnom Penh:

- Foreign investors: with the projects worth of millions of dollars, considered as the main key player that increases the GDP of the city. Most of them are direct investment from South Korea. These investors focus mostly to high-end customer with luxury housing and apartment.
- Individual landowner: In recent years many land owners are coming from low-income to high-income people start to build their house for living or renting.
- Community: Through the saving program in the community, member of community can borrow the money to upgrade their house, create a business etc., with low interest. More over this saving program has been supported by the government, specially the Premier Minister of Cambodia, who donate his own money every month to this program.
- NGOs and Municipality of Phnom Penh. In recent year many projects have been came out from NGOs and Municipality. They have built many housing for the urban poor communities, which are mostly locates in the sub-urban of the city.

- Private company. Many investments that development on the former location of urban poor community in the city-centre always making compensation to the community with a new housing unite (4x8m, 4x10m) with a plot in relocation site in sub-urban of the city. One appreciate project is on site development of the former Borey Keila-urban poor community, which is located on one of the prime location in the city centre. Upon the informed, the Municipality of Phnom Penh and the Community has finally signed in agreement to do land sharing project to the local investors. Each family is offered a unit of 3.5x8m in a 4-5 stories building. An exchanged has been consented the investors to keep some parts of the site for the commercial project.
- Urbanization office of Urbanization division: this office is not relatively in housing delivery but it plays a key role in advising and giving the permission for housing construction for small, medium and big project. The total surface of construction which under 300m² the owner of the project apply for permission in municipality level and if the surface is more than 3000m², the owner must apply for permission both from Municipality level and Government level (Ministry of Land management, Urban planning and Construction).

2 Organisation

Former Bureau of Urban Affaire is an internal institution of Municipality of Phnom Penh; this office was created in early of 1993 with the technical and financial support from the city of Paris, department of city planning. Based on 2008 Organic law and from mid-2010, Bureau of urban affairs was changed to Urbanization division, which mainly focus on urban development, land titling, housing construction and public work. With these newly added roles, this division faces many challenges such as: lack of human resource, technical related issues, budget for operation is limited, out of date information and data, finally the area of intervention is limited. This division has two offices: office of construction and development, and office of urban planning

This division plays an important role of technical assistance to municipality.

- To coordinate all urban development project with all municipality departments

- To propose and study urban development project (Master Plan) for municipality
- Designing some specific urban planning regulation for using within the city authority.
- Study green and blue network
- Study and make a technical report of all construction permission to the governor then grant permission to construction. Before grant a construction permission, our technical officer check and analysis the construction documents to see if they are in line with the sub-degree of construction permission number 86 if it is not comply with this sub-degree, the construction documents are send back to the owner to verify and make it again.
- Study the relocation site for urban poor community with housing design. In recent years many poor community in the city centre have been relocated to the sub-urban of the city. The office of urban planning was in charge of design the new relocation site with, making master plan and infrastructure plan. This office provides also housing design and technical solution for construction when needed.
- Working with international expert (French technical team) to design a housing policy for the city and also studying a pilot project: introduce good urban design for the northern part of the city.

3 Shelter Problem

1. Absent of data and facts. Although housing construction and real estate consider as one of main economic drivers of the city, but there are no specific research and survey which would give a good data and fact. This sector develop extremely by market oriented specially the speculation market. The urban planning and construction management which current in charge of housing have never done any social and science survey about existing housing stock, demand and any problem relate to housing sector. This absent of data due to the lack of financial support to do the real research and the human capacity working in this field is limited and unmotivated. However, data exists from private sector developers such as Knight Frank; CBRE and even the offshore and local investment fund units. The current regulation for all kinds of buildings construction seems out of date and cannot comply with the current massive development. Many housing units did not respect

to the regulation and build without technical and aesthetic aspect. The big urban development which mainly focus on housing unite become a city in the city or gate community for the high-income people making the gap between poor and rich people who live in the same area.

2. The lack of land title also limits borrowing capacities to buy a house or house renovate. Absent of the creation of a housing financing system for the poor and low-income people are one of the main problems. The low-income people that really need access to good shelter normally do not have a chance to get loans with low interest from financial institution while many rich people can afford to the high interest loan to not only access to the good shelter but to do a speculation. Recent year many good housing unit: flat house and villa are not being yet sold due to the over production while many low-income people still live in informal housing, showing the gap between the poor and rich people. The recent housing supply did not target the poor or even medium-income people. Cities in city raise up rapidly it become gated communities which clearly divide the class of the people who living in the same city. This causes a ghetto syndrome with the rich living separate from the poor. Recent development of the city centre for commercial space, the shanty-town where locate on the prime location were relocate to the sub-urban. The new relocation is not generating enough their income due to the far distance from city-centre where their jobs use to be and it result them to unable upgrade their living as their housing. Another point to note that these poor people in shanties are usually squatters – this means they do not own any rights to the land but claim on the basis of “dominant user / occupier” which is unfair to the real title owner.

3 Absent of housing policy and national and local housing policy letting this problem uncontrollable.

Day by day without solution, housing problem will create a hug impact on the city as well the society. Lack of direct invest and involve from the state is also an obstacle in creating such policy and institution. More over land acquisition system that many cities around the world have been use for solving many problems such as housing and infrastructure have not yet been consider using in Cambodia. There is no low-income housing program in Cambodia. As the result, the poor people live in slump both in city-centre and sub-urban. The main problem of the government is a budget for this exercise

and land to build it. Land in the city and around the city is already too compressed and expensive. Importantly, there is no large parcel of land to start this program unless it is very far out and outside the city limits of Phnom Penh.

Master plan of the city for year 2020, showing the way to develop the Phnom Penh in sustainable way and specially also how deal with housing problems is not yet get a official approval from the government.

4 Proposal for Change and Improvement

Short term

I will work with various actors in the housing sectors (public and private) and to formulate new directions and strategies to address the challenges in the housing sectors in the country today. Since I am the vice-director in charge of architectural and urban design project, which include the housing project, I am in a position to influence both the government and the bureaucracy. I will also lobby to the municipality to start working immediately with the private sector for the interests of all parties with WIN-WIN strategies. These proposals below can become a part of my official duties in the office of urban planning.

I will work with investors who will invest in the urban development projects especially in housing sector by encouraging them to integrate the low-income housing also in their plan. I will also try to work with some project managers to seek whether they are willing to open their projects for low-income housing. These investments will be encouraged by the government and their project will have a good image as a part for their marketing. Actually, AZ city which is the big real-estate development project in Phnom Penh is an excellent example of a possible partial solution for social housing. If the city can work with AZ to set aside leasehold land (say 60 or 99 years) for social housing. Also units to rent and sell. For subsidized housing to work, it cannot be allowed in the free market enterprise that means – no selling or buying on the open market. The Housing Co-operative should control resale and they determine what is a fair profit (less than market – so the property will always remain within reach of the poorer people). They can only buy, sell and rent through the Co-Op. City work with other ministries (Electricity, Water,

Transport) to give incentives to the developer thru tax concessions (say 10 year tax free), operating permits (example, let developer collect levies for street cleaning, rubbish collection, even policing). This proposal can lead to the formulation of a National Housing Policy. I have already discussed this idea with a few housing project managers and they are really interested to invest in affordable housing projects. To implement these ideas, the investors need assistance of the housing authorities in the country.

- Currently I am working with Real-estate Company and Municipality Department of Land management, Construction and Cadastral to share and exchange information and data of housing situation in the city. Finally we can digitalize the housing data based on the number of permission documents each year. At the end we will know the increase of number of housing, construction material, location etc. This data will facilitate our work to do a projection of the future demand of housing units.
- The construction permission sub-degree 89 seem to be out of date, unspecified the type of construction and cannot deal with the new massive of housing development. So the municipality should design a specific Deika (municipality regulation) and implement this regulation while is waiting the revision the sub-degree 86 from the Ministry of Land management Urban planning and Construction (MLUC). It will help to solve some current housing problem and will orient also the future development of housing project.
- I have been called to participate in a few workshops, which focus on urban planning and housing development in our city. I will actively participate in the those workshops and discussions where I will be able to share what I have learnt and experience from Housing Development and Management course to all the stakeholders to improve their housing environment.

Long term:

The long-term proposals will be worked out in tandem both with National and local authorities, it can take a long period to draft and implement it. It is the work of cross-sectorial and with many partners, especially the private sector and communities.

- The authority who is in charge of granting the construction permission must work with the other relevant institution to do registration, social and technical survey of

existing housing stock and demand of new housing each year for high-income and low-income housing. This project should be financed by the MLUC and private sectors.

- Encourage the bank and other financial institutions to grant the loans to the low-income people with low-interest to up-grad their houses. The low-income people should create an association to deal with housing problem and this association, which also in charge of monthly saving problem, work with the financial association and the authority.
- Manage growth: managing growth is an efficiency to tackle of the massive demand of housing unit. The modern city cannot become a barrier to protect the immigration from the rural area. Municipality of Phnom Penh should implement the inter-city project or urban-rural linkage. This project will study and analysis the need of rural people, helping them to make a better living, generates income and developed the rural infrastructure. In result it will decrease emigrate people from the rural area to the city.
- Design the National Housing Policy (NHP): this policy has the following objectives: To strengthen the institutional development of the responsible ministry and other relevant institutions, thereby encouraging private sector investment by introducing good governance measures; to provide financial mechanisms whereby housing ownership, construction and rehabilitation are affordable to most Cambodians; and to develop housing programs as components of the master planning process.
- Create National Housing Authority: It should be an independent unit. This institution in charge: implemented the future of national housing policy, design housing regulation, research and update the housing data and information, coordinate with the local housing authority, working with private sector in housing project. This NHA will be financed by the central government.
 - Create Municipality Housing Company/Authority (MHC): this public-private institution will work under directly under the authority of Municipality and implemented the NHP of the NHA. I will also in charge: making land acquisition to build the renting for low-income people, upgrading the existing housing unite, housing data collection and analysis, working with real estate-developer to integrate low-income housing in the private project etc. Developed master program with master developer, if

their project size is bigger than, let's say, X hectare of land to compulsorily set aside free land for development of affordable housing. It will balance the mix use of rich and poor will bring up the level of the poorer housing.

Attract major developers to include a low cost housing component with tax incentives or fast tracking of permits, concession or subsidized infrastructure for this kind of project.

This MHC will also be doing some technical research such as: housing construction technology, energy efficiency housing etc. This research will be introduced to the local people as investor to be aware of shelter problem and solution.

- Implement the Master Plan of Phnom Penh city: The master plan of city is the key to help city developed in sustainable way. Although it deal and challenge mainly in spatial planning but it also take the housing problem in to account and propose some alternative solution to tackle the unsustainable growth which lead to high demand of housing without sufficient supply. What this master plan proposes is to change from mono-centric development to polycentric spatial development. With this concept the government must encourage the participation from private sector and the local people to develop their area to become multi-function communities with live, work and play.

There is no quick or fast solution for housing in Phnom Penh because of the wide disparity of income (very rich and very poor). This will only improve with the education of the children, the improved standards of jobs, higher pay, higher expectations, and increased government spending on social issues and housing and infrastructure. The practical solution is to partner with large tract landowners and co-develop (by providing co-operation and infrastructure).

6 References

Mauret, Frederic, BAU and DATUC

2009 *Schéma Directeur d'Urbanisme Phnom Penh horizon 2020*. Phnom Penh: MPP

Mauret, Frederic and Cheam Phanin

2009 *Résumé Schéma Directeur d'Urbanisme Phnom Penh horizon 2020*. Phnom Penh:
MPP.

Ministry of planning

2009 *General population census of Cambodia 2008*. Ministry of Planning, Phnom Penh,
Cambodia.

ISTED

2007 *Emerging Cities*, Montpellier, France.