

17th IPHS Conference ▪ Delft 2016

HISTORY URBANISM RESILIENCE

VOLUME 01

Ideas on the Move
and Modernisation

International Planning History Society Proceedings



17th IPHS Conference, Delft 2016 | **HISTORY ■ URBANISM ■ RESILIENCE**
VOLUME 01 Ideas on the Move and Modernisation

The International Planning History Society (IPHS) is dedicated to the enhancement of interdisciplinary studies in urban and regional planning history worldwide.

The 17th IPHS Conference was held in Delft, The Netherlands, from July 17 to 21, 2016.

The conference theme 'History – Urbanism – Resilience' inspired contributions investigating a broad range of topics in planning history: modernisation, cross-cultural exchange, and colonisation; urban morphology, comprehensive planning, and adaptive design; the modern history of urban, regional and environmental planning more generally; destruction, rebuilding, demographics, and policymaking as related to danger; and the challenges facing cities around the world in the modern era.

Convener

Carola Hein, Chair, History of Architecture and Urban Planning, TU Delft

This series consists of seven volumes and one Book of Abstracts. The seven volumes follow the organisation of the conference in seven themes, each theme consisting of two tracks and each track consisting of eight panels of four or five presentations. Each presentation comprises an abstract and a peer-reviewed full paper, traceable online with a DOI number.

Editor

Carola Hein, TU Delft

Design

Sirene Ontwerpers, Rotterdam

Editorial Assistance and Layout

Phoebus Panigyrakis, TU Delft

© 2016, TU Delft Open

ISSN 2468-6948 (print)

ISSN 2468-6956 (online)

ISBN 978-94-92516-00-8



THE WORK OF THE JAPANESE SPECIALISTS FOR NEW KHMER ARCHITECTURE IN CAMBODIA

Kosuke Matsubara

University of Tsukuba

Cross cultural exchanges are an important aspect in the development of modern architecture. Multiple flows of ideas have shaped the architecture of Cambodia in the second half of the 20th century. Western designers shaped Cambodia's architectural and urban form, but the country also saw collaboration from Japanese practitioners and this paper explores their respective roles and paradigms. Helen Grant Ross and Darryl Leon Collins, for example, regarded the 1960s as the age of New Khmer Architecture in Cambodia. They have explored the French-educated architect young Cambodian leader Vann Molyvann, who led this age as an architect-administrative official. However, the fact that there were some Japanese architects who collaborated on some of these projects is not well known. In particular, Gyoji Bانشoya (1930-1998) and Nobuo Goto (1938-2000), two students of the Japanese leading architect Kiyoshi Seike, officially participated in projects during the 1960s and wrote plans, reports and articles. Based on new resources found in the private libraries of the Japanese planners, this paper discusses New Khmer Architecture based on the largely unknown fact that some Japanese architects participated in projects in Cambodia.

Keywords

Phnom Penh, Shihanoukville, Angkor Wat, Vann Molyvann, Gerald Hanning, Gyoji Bانشoya

How to Cite

Matsubara, Kosuke. "The work of the Japanese Specialists for New Khmer Architecture in Cambodia". In Carola Hein (ed.) *International Planning History Society Proceedings*, 17th IPHS Conference, History-Urbanism-Resilience, TU Delft 17-21 July 2016, V.01 p.251, TU Delft Open, 2016.

DOI: <http://dx.doi.org/10.7480/iphs.2016.1.1203>

INTRODUCTION

BACKGROUND OF RESEARCH

In 1960's, the trend of Cambodian architecture was called *New Khmer Architecture* lead by the architect-administrative official Vann Molyvann (1926-) who realized many urban and architectural projects ,and finally became a minister. However, Cambodia, just after its independence, was a poor country and the projects were realized thanks to the international cooperation. The specialists dispatched from the United Nations were French specialists represented by Vladimir Bodiensky one of the chief technicians of Le Corbusier, Gerald Hanning one of the old stump of the office of Le Corbusier as well, and three Japanese specialists who were disciples of the architect Kiyoshi Seike, Gyoji Banshoya(1930-1998), Nobuo Goto(1938-2000) and Setsuo Okada(1933-). They officially participated in projects during the 1960's and wrote some plans, reports and articles. Their activities in Cambodia may be considered as an early example of urban design work implemented by Japanese international cooperation.

Based on the introduction of new resources found in their private library, the purpose of this paper is to examine the possibility to discuss *New Khmer Architecture* from a new viewpoint based on the unknown fact that some Japanese architects participated there. In general, the question of how to manage the modernization of historical spatial composition of the city was a common interest shared by the French, Japanese and Cambodians alike. In this paper, I will examine this question in the international context composed of the movement of CIAM, the participation of Banshoya, and supervision by the young Cambodian leader Vann Molyvann. Based on the analysis of the process the Japanese specialists got involved in *New Khmer Architecture*, and on the evaluation of the contents and realization of their works from the viewpoint of “reconstitution of historical space”, I will clarify an aspect of the history of urban planning based on the international cooperation.

LITERATURE REVIEW AND RESEARCH METHOD

After 1970 the Cambodian civil war was started, and most of participants and documents of *New Khmer Architecture* were lost because of the brutality of *Khmer Rouge*. As a result, little has been known about *New Khmer Architecture* except for the master piece of Helen Grant Ross and Darryl Leon Collins in 2006, which does not refer to the work of the Japanese specialists. Vann Molyvann himself wrote his doctoral thesis not about *New Khmer Architecture* but about the history of urban development in the South East area. Bodiensky and Hanning wrote some reports in architectural journals at that time, but the detailed information including primary sources are still unknown. They didn't refer to the works of the Japanese neither. Information provided by the Japanese themselves were limited for very few descriptions in journals and their own CV.

In this paper, however, the author uses some primary sources newly founded in the private library of Goto including planning documents, maps, texts and photos. Here I will compare the new information obtained from his library with the facts already known. In addition, I carried out some field surveys composed of observations of the site, interviews to the relevant persons including Vann Molyvann to compensate my hypothesis.

PARTICIPATION TO CAMBODIAN PROJECTS

THE BACKGROUNDS OF THEIR PARTICIPATION

Born in 1930 in Tokyo, Gyoji Banshoya studied at the Tokyo Institute of Technology (TIT) under the supervision of the famous Japanese architect Kiyoshi Seike. After his graduation and realization of his first masterpiece, the Square House characterized by its one-pillar structure, he went to Paris in 1953 with the scholarship from the French government. He studied modern architecture under supervising of George Candilis, Vladimir Bodiatsky and Gerald Hanning. Following Hanning, Banshoya then went to French-ruled Algiers and worked for the planning agency for some years to become a French modernist architect. Hanning finished his work in Algiers in 1959 and then started to work for the Service of Urban Planning and Housing in Cambodia as UNDP specialist for 4 years.

In January 1962, Banshoya was also appointed as a UNDP technical assistance officer thanks to the recommendation by his ex-supervisor Hanning¹, and was sent to the Direction of Urban Planning of the Ministry of Public Enterprise and Information in the Kingdom of Cambodia². Just after gaining independence from French Indochina in 1954, Cambodia had asked the United Nations to cooperate in the reconstruction of their new capital. His main counterpart was Vann Molyvann who graduated from the Ecole des Beaux Arts in Paris. Banshoya's mission was only for one year, and he worked as a member of a team led by ATBAT members, just as he had in Algiers.

Here, Banshoya met a man eight years his junior, Nobuo Goto, who also graduated from TIT. He would later become Banshoya's most trusted collaborator in Damascus. Goto, who soon joined them, was so strongly fascinated by the project in Cambodia, especially the Olympic Stadium, that he dropped out his graduate program at TIT. Seike stated that he nicknamed Goto "Kume Sennin (an unworldly man from Kume)", because he frequently traveled and never settled down. Kume is a name of place in Japan where Kume Sennin used to live. There is a legend saying the origin of Kume is from Khmer. That is why Seike gave him this nickname. After this first visit in Cambodia, he started his own field work about traditional Khmer houses in Phnom Penh and Angkor Wat. Later, he went to Damascus to support Banshoya elaborate the master plan of 1968, and then went to Paris to work for French planner Michel Ecochard's office.

According to Seike, one reason why Banshoya and Goto went to Cambodia was the fact that Michio Fujioka (1908-1988) had been carrying out an architectural investigation in Cambodia during and after the World War II. Fujioka was a great architectural historian at that time and he wrote some books about Angkor Wat. As an intellectual at that time, Fujioka recognized the importance to introduce Japan to the culture of Cambodia under French rule. Becoming a TIT professor of after the war, he taught architectural history, including his research on Khmer architecture. And for certain, Banshoya and Goto, who were the TIT students, learned plenty of knowledge in his lecture about this oriental culture which was still largely unknown in Japan, and became interested in Cambodian architecture³.

TEAMWORK UNDER BODIANSKY

Regarding the management of these international projects, I quote a reminiscence of Bodiatsky, the senior member of the team. According to Bodiatsky, the most important work on this project was the promotion of the collaboration between the French and Cambodians. For Bodiatsky, a strict construction manager who made efforts to support CIAM and his own team ATBAT, a well-organized collaboration was the sole solution for the problems such as limited time for investigation, and the delay of building materials. He made a rationalized construction site where young Cambodian members and French specialists trained themselves. As a result, he made a strong Cambodian team headed by Van Molyvann of that Banshoya and Goto were members. Banshoya's wife recollects that he was a very serious and gruff man, like a mathematician.

THE WORK OF JAPANESE SPECIALISTS

HYPOTHETICAL CONTRIBUTION OF GYOJI BANSHOYA ON THE URBAN AND ARCHITECTURAL PLANS

According to the CV of Bانشoya written in French, the projects in which he participated were as follows:

- 1 *Stade olympique (70,000 personnes), piscine, gymnase (8,000 personnes), de Seop Games à Phnom-Penh.*
- 2 *Plan d'aménagement de détails de la ville de Phnom-Penh (400,000 habitants)*
- 3 *Plan de masse au1/500ème de Front de Bassac à Phnom-Penh (5,000 habitants)*
- 4 *Plan d'exécution des nouveaux quartiers de Sihanoukville*
- 5 *Réseau routier de Sihanoukville*

Project No. 1 was realized for the 3rd South Asian Football Cup in 1964⁴. It is well known that the planners tried to reconstitute the spatial composition of Angkor Wat and reflected it in the design of the stadium. In particular, the pools surrounding the stadium, stages simulating the stairs, and the effective use of water (Fig.1). Project No. 2 was a district plan for Phnom-Penh, which had a population of 400,000 that was rapidly growing. The figure 2 shows a district plan centering around a new international hotel beside a tributary from Tonlé Sap, which is the Bassac, a tributary of the Mekong. Project No. 3 was a district plan composed of a pair of apartment buildings called “White House” and “Gray House”, and a national theater⁵. The district plan was realized along the Bassac and later the district became a popular quarter⁶.

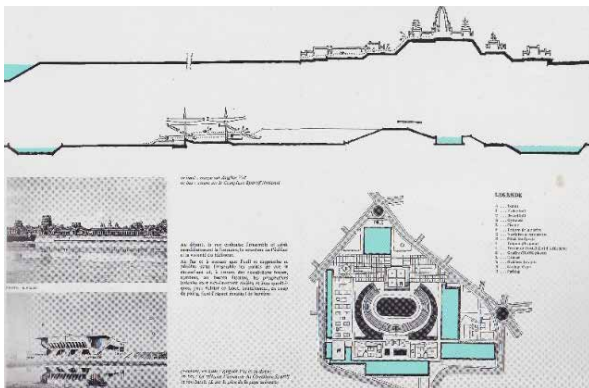


FIGURE 1 Concept of the Olympic Stadium based on the spatial composition of Angkor Wat

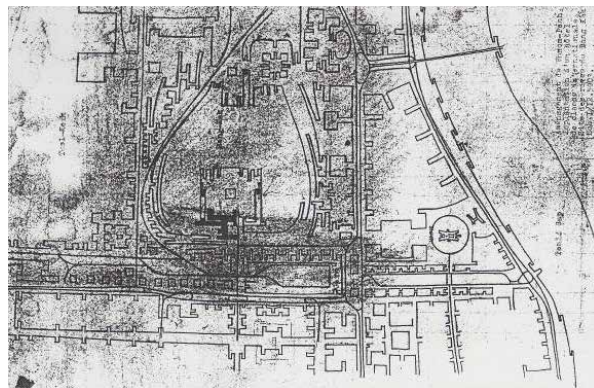


FIGURE 2 1962 District Plan centering around a new international hotel.

Surrounded by the Cardamom Mountains, Sihanoukville was a new city planned for the first deep sea port in Cambodia. Project No. 4 was also a district plan of the seacoast elaborated in 1962 (Fig.3) along the city's first master plan elaborated in 1959 thanks to BCEOM (Bureau central d'études pour les équipements d'outre-mer) and USOM (United States Operations Mission). As Figure 3 shows, the plan includes rationally planned modern collective houses and facilities for leisure and tourism. Project No. 5 is supposed to be some complementary work to finish the National Road 4 connecting Sihanoukville with Phnom Penh.

However, their implementation was cancelled due to the civil war⁷. The city was later developed to be the second city of Cambodia under a new master plan in the 1990s.

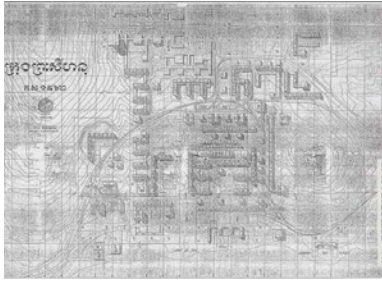


FIGURE 3 District Plan of Sihanoukville in 1962

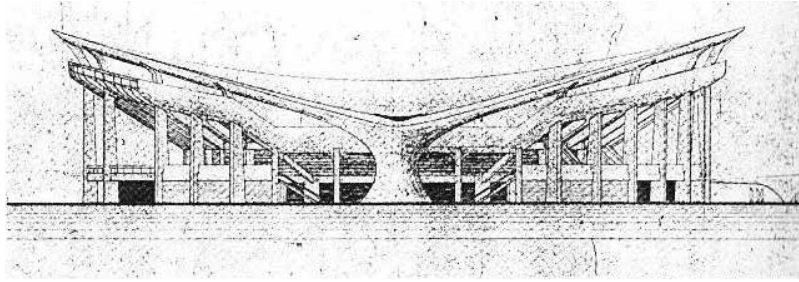


FIGURE 4 The initial design for the Olympic Stadium looks like "Karagasa Structure"

Banshoya collaborated again with some members of CIAM and completed his mission in the former French protectorate of Cambodia. Though Banshoya's mission in Cambodia was limited to one year, it was significant as his first assignment as a UNDP specialist. He would continue to be a UNDP specialist till the 1970s, when he elaborated the master plan of Aleppo.

All the projects are well known as the result of collaborative works of young Cambodian architects lead by Molyvann and French UNDP specialists. And it is considered that the role of Banshoya was also that of a young assistant. However, I think some hypothesis can be noted here. For example, the initial design and structure of the whole stadium seems as if it has only one main pillar (Fig.4)⁸. The revised and realized version of the stadium was divided into four parts, but still each part had only one pillar. Why did they stick with one pillar structure? Here I remember the fact that Banshoya's first masterpiece adopted the "Karagasa Structure," which means "having only one pillar". So my hypothesis is that some influence of Banshoya was reflected in the design of this stadium.

DESIGN SURVEY AND EXPERIMENTAL HABITAT OF NOBUO GOTO

Because Banshoya moved to Beirut, Goto succeeded Banshoya's work, but in his own way. Goto also worked on the same projects above with Banshoya, but at the same time, he worked for a housing project titled *Habitat Experimental* (Experimental Habitat) under supervision of Hanning. This project was published in the French magazine *L'Architecture d'Aujourd'hui*, explaining their concepts⁹. Here Goto worked with another young Japanese Setsuo Okada who is good at the structural engineering.

The concept of their *Habitat Experimental* was to provide functional and low cost houses that inherit the many merits of traditional Khmer houses based on their modernist policy. The method of construction applied here was so-called "Autoconstruction" which means a construction by amateurs, especially by the residents themselves. The target city was Sihanoukville, where the population was supposed to be rapidly grown because of the inflow of workers for the new port. In some villages in the Cardamom Mountains, they carried out field survey on many Khmer houses. Their survey was design survey of traditional housing areas indicating the basic plan of the area, the façades of houses, the townscapes, and the characteristics of local plants and landscaping (Fig.5).



FIGURE 5 Result of the survey in a village of Cardamom



FIGURE 6 Photo of a traditional house



FIGURE 7 Photo of Prototype built in Phnom Penh

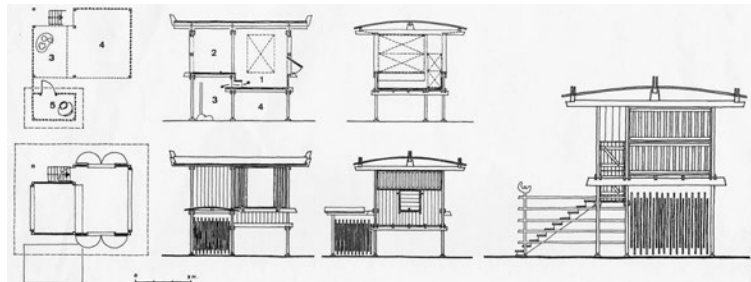


FIGURE 8 Plan of the prototype.
1. Living Room, 2. Sleeping Room, 3. Kitchen, 4. Storage, 5. Watering Place

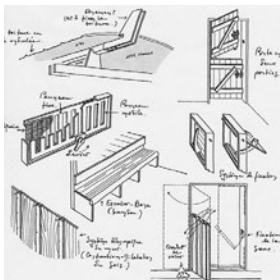


FIGURE 9 Illustrations of the devices of the prototype

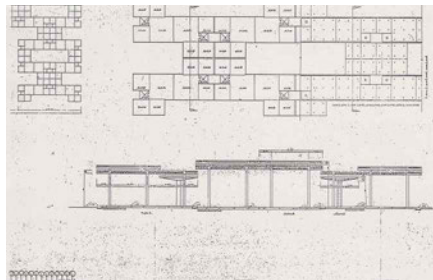


FIGURE 10 Plan of Market Place

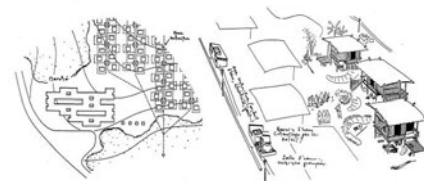


FIGURE 11 Layout plan composed of Housing Area along a corridor and Marketplace

Figure 6 shows a raised-floor-style houses which are quite popular in the area. It is small and simple, but it is obvious that a great deal of traditional wisdom accumulated by the residents is adopted here. For example, the use of natural and low cost building materials, good ventilation in the house thanks to the openings, and safety assured by the raised-floor, etc. Goto and Okada took many pictures of traditional houses and analyzed them thoroughly in their own way. For example, it is interesting that they even referred to the traditional architecture of South Japan from the viewpoint of using of wood and aesthetics.

Figure 6 shows a raised-floor-style houses which are quite popular in the area. It is small and simple, but it is obvious that a great deal of traditional wisdom accumulated by the residents is adopted here. For example, the use of natural and low cost building materials, good ventilation in the house thanks to the openings, and safety assured by the raised-floor, etc. Goto and Okada took many pictures of traditional houses and analyzed them thoroughly in their own way. For example, it is interesting that they even referred to the traditional architecture of South Japan from the viewpoint of using of wood and aesthetics.

Under the supervision of the Service of Urban Planning and Housing, they realized a prototype of their experimental habitat in 1962 in a city area of Phnom Penh. As a characteristic of “Autoconstruction”, this house was constructed by few people within two days. The first day is for making the framework, while the second day is for roofing and installing the walls.

As Figure 7 shows, the wooden prototype house was so-called raised-floor-style, which was clearly influenced by the traditional houses they researched. In fact, as the plan (Fig.8) shows, principal elements of the traditional house such as living room, sleeping room, kitchen, storage and watering place were adopted, as was a traditional layout. So there is no essential difference between new and old as far as the general plan is concerned.

However, the prototype was rationalized in some points. For example, building materials are standardized. As the sketches (Fig.9) show, many small but new ideas are adopted in the details (Table 1). Two stages doors, windows with ventilation system, stairs as benches, ornament-supporting roofs, tin roofs and expansible wall systems, etc. These are not traditional, but some devices they invented through their experience abroad were inlaid. For example, Hanning had much experience in low cost housing, incorporating traditional elements from Algiers and other African countries. Goto had also learned many things from Seike, who was struggling to balance the new and old in the context of Japanese low-cost housing. It seems clear that they were trying here in Cambodia as well to reconstitute the historical spatial composition based on their modernism.

In addition to the housing project, they also suggested a method to build a marketplace (Fig.10). Its basic idea is just to provide a structure of roofs and pillars to make a covered market. They explained it was standardized and “is applicable to any size and site condition, and extensive anytime”. The appearance of the structure remind us of the results of the village survey in Cardamom.

Finally, they suggested a layout plan for a housing area composed of their raised-floor houses and standardized market place (Fig.11). The houses are built along some “corridors” or streets planned in parallel and equipped with water and sewer services and electricity. According to their explanation, stations containing one shower, toilet, and kitchen are built to be a utility center for four families. Also, further modernization in near future was supposed based on the corridors.

Now, the overview of their plan was roughly clear. Corresponding the demand of housing in the new city of Sihanoukville, the planners suggested a modern Khmer housing area along with a marketplace. Certainly, this type of housing area was supposed to be realized in some area described in the 1962 district plan to which Banshoya contributed. It can be said that Banshoya contributed to the elaboration of the district plan, and Goto lead the planning of housing areas to compliment the district plan. This is the essential relationship between Banshoya and Goto’s contributions.

NO.	ORIGINAL TEXTS IN FRENCH	SYNOPSIS IN ENGLISH
1	Porte en deux parties	Two Stages Door
2	Système de fixation, Panneau mobile, Panneau fixe	Window with Ventilation System
3	Escalier-Banc	Stair as Bench
4	Ornement et à fixer la toiture	Ornament supporting Roof
5	Toiture en tôle ondulée	Tin Roof
6	Système télescopique sur murs	Expansible Wall System

TABLE 1 List of the devices (Translation from French)

CONCLUSIONS

In conclusion, I pointed out that two Japanese architects Banshoya and Goto did in fact work on projects in Cambodia in 1960's the golden age of modern Khmer architecture. Banshoya participated in huge projects such as the stadium, collective houses and the master plans. While Goto also supported the work of Banshoya, he investigated his own interests and found his own way with his experimental habitat.

What is important is that these French-influenced Japanese architects always tried to cherish the historical composition of space and incorporate it in their modern planning policy.

In concrete, Banshoya's first piece "the Square House" was a low cost house which harmonized Japanese tradition and modernism. His work in Algiers titled "Temporary Housing Replacing Tin-Roofed Shelters" was also adopting the traditional housing plan with patio supporting the separation of public and private. And here in Cambodia, under supervising of Banshoya, his senior Goto tried to reconstitute the spatial composition of traditional Khmer house and suggested the plans of modern Khmer house and housing area.

Based on the findings of this paper, I will continue to examine the master plans in Beirut, Damascus and Aleppo of that evaluation has not yet been justified.

Acknowledgements

This paper was firstly appeared without peer review in the proceedings of the 15th SCA conference and international symposium in May 2015. This work was supported by JSPS KAKENHI Grant-in Aid for Young Scientists (A) Number 24686067.

Notes on contributor(s)

Kosuke Matsubara is associate professor of the university of Tsukuba, Japan. Specializing in the urban planning history of the MENA region, he published a book in French titled *Conservation et Modernisation de la ville historique de Fés, Maroc*, ILCAA, 2014. He received in 2016 the East Asia Planning History Prize for his article "Gyoji Banshoya (1930-1998): a Japanese planner devoted to historic cities in the Middle East and North Africa" published online in *Planning Perspectives*.

Endnotes

- 1 Here Banshoya supported his former colleagues, V. Bodiansky and G. Hanning, who had been sent to the ministry as well. Their Cambodian counterpart was Vann Molyvann, the director of Urban Planning, who had just come back from France. Vann Molyvann, *Modern Khmer cities*. (Phnom Penh : Reyum), 2003.
- 2 From Banshoya's CV.
- 3 Kazuo Shinohara, a classmate of Banshoya, testified that he studied in the lecture of Fujioka, Kazuo Shinohara, *Jutaku Kenchiku (Housing Architecture)*. (Tokyo : Kinokuniya Shoten), 1964.
- 4 Guy, Lemarchands. «Phnom Penh: Capitale de l'Etat indépendant du Cambodge» In *Phnom Pemh, Développement urbain et patrimoine* (Paris : Atelier parisien d'urbanisme, 1997), 44-49.

- 5 Lisa Ros, «Logements du « front Bassac » ou cité Sihanouk,» In *Phnom Penh à l'aube du XXIe siècle* (Phnom Penh :Atelier Parisien d'Urbanisme, 2003), 66-69.
- 6 Julien Mingui, «Front du Bassac: histoire triste d'un grand immeuble blanc,» In *Phnom Penh à l'aube du XXIe siècle* (Phnom Penh :Atelier Parisien d'Urbanisme, 2003), 62-65.
- 7 Molyvann, *Modern Khmer cities*, 185.
- 8 Nobuo Goto, *Goto Nobuo Works*, (Tokyo, 2003) 25.
- 9 Gerald Hanning, Nobuo Goto and Setsuo Okada, "Readapter l'Autoconstruction Tentative Cambodgienne (1963). « *L'Architecture d'Aujourd'hui* 167(1973) : 20-22.

Bibliography

- Anon. *Anlong Romeat Village Type Existant Façades Est des groupes 1, 2 & 4*. Direction de l'Urbanisme et de l'Habitat, circa 1962.
- Bodiansky,Vladimir. «Collaboration Architecte-Ingenieur», *Techniques & Architecture*, 25, vol.4 (1965) : 122-124.
- Goto, Nobuo. *Kompong Som Cité Portuaire Zones Mixte et Administrative*. Ministère des Travaux Publiques du Cambodge, 1962.
- Goto, Nobuo. *Palais des Sports*, Royaume du Cambodge, Ministère des Travaux Publiques, Agence des Opérations, 1962.
- Goto, Nobuo. *Layout Plan*, circa 1973.
- Hanning, Gerald, Nobuo Goto et Setsuo Okada, «Réadapter l'Autoconstruction Tentative Cambodgienne (1963)», *L'Architecture d'Aujourd'hui*, 167(1973) : 20-22.
- Julien Mingui, «Front du Bassac: histoire triste d'un grand immeuble blanc,» In *Phnom Penh à l'aube du XXIe siècle*, 62-65. Phnom Penh :Atelier Parisien d'Urbanisme, 2003.
- Lemarchands, Guy. «Phnom Penh: Capitale de l'Etat indépendant du Cambodge» In *Phnom Penh, Développement urbain et patrimoine*, 44-49. Paris : Atelier parisien d'urbanisme, 1997.
- Lisa Ros, «Logements du « front Bassac » ou cité Sihanouk,» In *Phnom Penh à l'aube du XXIe siècle*, 66-69. Phnom Penh : Atelier Parisien d'Urbanisme, 2003.
- Matsubara, Kosuke. "Japanese Cooperation for Evolutional Housing and Slum Upgrading Projects under Mayor Chevallier : Spatial Experience of Gyoji Banshoya in Algiers", In *Sustainable North African Society : Exploring Seeds and Resources for Innovation*, edited by Hiroko Isoda, Marcos Neves, and Atsushi Kawachi, 267-284. New York : Nova Science Publishers, 2015.
- Molyvann, Vann, Vladimir Bodiansky, et Gérard Hanning. «Forum de la ville de Phnom-Penh, Cambodge», *Cahiers du Centre Scientifique et Technique du Batiment*, 73(1964) :1-16.
- Molyvann, Vann, Vladimir Bodiansky. «Complexe Olympique de Pnom-Penh», *L'Architecture d'Aujourd'hui*, 116(1964) : 30-33.
- Molyvann, Vann, Vladimir Bodiansky. «Cambodge Complexe Olympique et Forum de Phnom Penh», *Techniques & Architecture*, 25(1965) : 9-15.
- Molyvann, Vann. «A l'école des maîtres angkoriens», *Nokor Khmer*, 1, octobre-décembre, 1969.
- Molyvann, Vann. *Les Cités Khmères Modernes*. Phnom Penh : Reyum, 2003.
- Ross, Helen Grant, and Collins Leon Darryl, *Building Cambodia: 'New Khmer Architecture' 1953-1970*, Bangkok: The Key Publisher Co. Ltd., 2006.
- Sangkum Reastr Niyum, *Photos-Souvenirs du Cambodge Urbanisme et Tourisme*, 6(1970).

Image Sources

- Figure 1 : Lemarchands, Guy (1997)
- Figure 2 : Private library of Nobuo Goto
- Figure 3 : Private library of Nobuo Goto
- Figure 4 : Private library of Nobuo Goto
- Figure 5 : Private library of Nobuo Goto
- Figure 6 : Hanning, Gerald, Nobuo Goto et Setsuo Okada (1973)
- Figure 7 : Hanning, Gerald, Nobuo Goto et Setsuo Okada (1973)
- Figure 8 : Hanning, Gerald, Nobuo Goto et Setsuo Okada (1973)
- Figure 9 : Hanning, Gerald, Nobuo Goto et Setsuo Okada (1973)
- Figure 10 : Private library of Nobuo Goto
- Figure 11 : Private library of Nobuo Goto