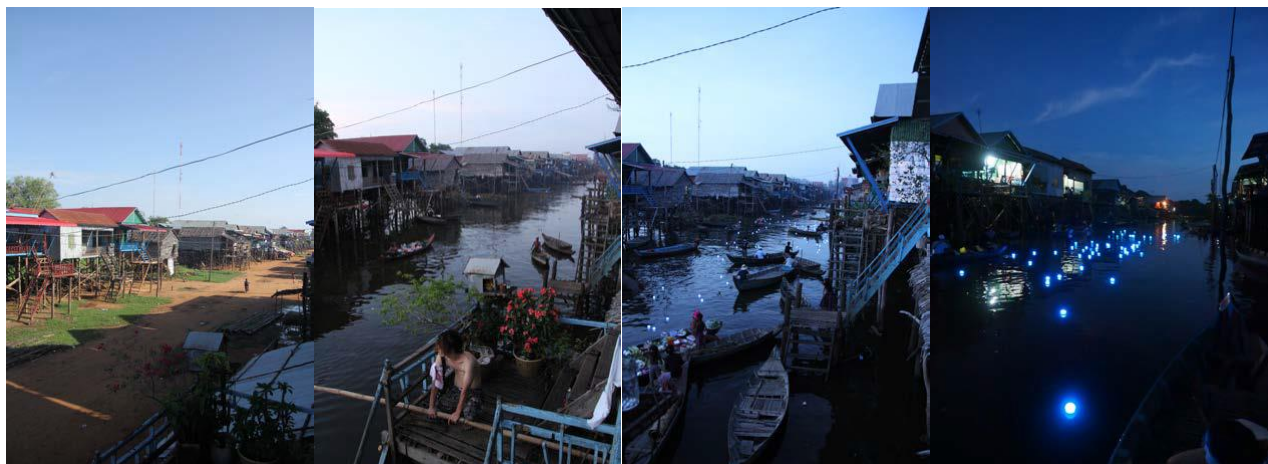


[Casebook of International Activities at Kansai University]

Measurement survey and continuous transformation research in Kampong Phluk, Cambodia

Professor Naoki Egawa

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Inori Boshi illumination shows the water and space where local people live.

(See page 4 onwards for details.)

[Activity Outline]

Main activity	Research survey conducted overseas
Duration	Ongoing since April 2005
Number of participants	Approximately 150 persons in total (2005: 6 persons in the dry season, 10 persons in the flood season; 2006: 14 persons in the dry season, 14 persons in the flood season)
Cooperators	Shuji Yamada (Photographer, clay-tile maker) Hiroyuki Marumo (Former Professor at the Faculty of Environmental and Urban Engineering, Kansai University) Eriko Oka (Professor at the Faculty of Environmental and Urban Engineering, Kansai University)

[Outline of Kampong Phluk]

In the center of Cambodia lies Tonle Sap Lake, the largest lake in Southeast Asia. It known as an “elastic water world” due to drastic changes in its size: it is more than three times larger in the flood season (autumn) than in the dry season (spring), and the water level also rises by over eight meters in the flood season. Kampong Phluk is a village located on a floodplain, which is land during the dry season and is submerged under water during the flood season. Therefore, the village consisting of houses on stilts rising high in the air during the dry season becomes a floating village in the flood season, in harmony with the local natural environment. During the dry season, which is the fishing season, villagers construct and move to temporary dwellings on a shallow water area by the lake edge located two kilometers south of the village, looking for surface water for fishing. The village features a unique co-living environment not found anywhere else in the world, with its outstanding adaptability to the natural environment supported by very simple techniques. It suggests a perspective that modern science has been missing.

[Interview with Professor Egawa]



**KANSAI UNIVERSITY**

— Could you tell us how this activity started?

Prof. Egawa:

I took my post at Kansai University in spring 2004, and started teaching based on the idea that “villages” are the origin of studying architecture and urban design. In autumn that year, I went to Ho Chi Minh, and two of my students (M1 and B4) planned to join me there. They made a side trip to Cambodia before meeting me, and took with them their favorite photo of a floating village contained in a book I had in the laboratory, and succeeded in finding the village. The floating village is a place that becomes a village of stilt houses when the flood subsides. I began conducting measurement surveys of this village to support their master’s theses, and that was the beginning.

— Could you elaborate on the activity?

Prof. Egawa:

During AY 2005 and 2006, we completed survey maps of the 1.3 kilometer-long village, including the insides of the buildings there, for both the dry season and the flood season. Through this process we discovered the following:

- (1) The villagers change their fixed dwellings by season (flood season and dry season) to adapt to the seasonal change.
- (2) During the dry season, approximately 50 to 100 households in the village (the number differs according to how much the water level rises) construct temporary dwellings on a nearby shallow water area of Tonle Sap Lake and conduct seasonal migration for fishing (harvesting and cultivation).
- (3) The dwellings for seasonal migration are made of portable materials using techniques for easy construction and removal. These are closely associated with the technology for adapting to the natural environment in fixed dwellings.
- (4) A fire broke out after the survey in the dry season of 2005, yet the region recovered with astonishing speed. The sustainable resilience owes a lot to the technology related to temporary dwellings for seasonal migration.

In AY 2007, we completed survey maps of the seasonal village made up of temporary dwellings, and almost completely clarified the structure of temporary dwellings and related technology.

— What is the significance of this study?

Prof. Egawa:

This study considers that the aggregation of sustainable systems designed to adapt to ordinary and extraordinary changes comes from minor technology related to “the details and systems of dwellings” (and their succession). Based on this perspective, we aim to clarify the construction principle of a co-living environment that puts publicness, communality and privacy in order, and this is the characteristic of our study. This is a unique perspective, whereas the dominant standpoint these days is to divide architectural planning and urban planning and individually establish the whole picture with major technology. In order to form and pass down a sustainable co-living environment for the next generation, I believe it is important to focus on, and renew our recognition of, this perspective of “cultural stock.” Our study has social significance from this standpoint as well.

Originally, no Cambodian villages had been researched. In addition, due to the long civil war and cultural destruction including massacre of intellectuals, few studies have been done even now. *Higashi Aja Hyokaimin no Ebune Kyoju to Rikuchi Teijuka ni Kansuru Hikaku Kenkyu* (Comparative Research on East-Asian Sea Nomads’ Boat Dwelling and Their Settlement on Land), written as a report of basic research supported by Grants-in-Aid for Scientific Research (C2) 2001–2003, refers to floating dwellings of boats and rafts in its eighth chapter *Tonresappuko no Suijo Kyoju—Ebune, Ikadajukyo, Takayukajukyo* (Floating Residence on Tonle Sap



Lake—Dwelling Boats, Dwelling Rafts and Stilt Houses). However, our research, which started in AY 2005, is the first comprehensive research on permanent villages on the floodplain of Tonle Sap Lake. Our research has enjoyed a high evaluation from APSARA (Authority for the Protection of the Site and Management of the Region of Angkor), and we have been asked to continue the study.

— What is the feedback from the students who participated in the on-site research survey?

Prof. Egawa:

As the material from page 4 onwards shows, this project has been conducted by students on an ongoing basis, which reflects how the students think of this survey. Some graduates continue visiting there as well.

— How was the research funded?

Prof. Egawa:

We used subsidies both from the university and other institutions as shown below, and each researcher has also been paying costs.

- Support Program for Urban Studies, The Obayashi Foundation (AY 2008, 1.5 million yen)
  - Kansai University Research Grants for joint research (AY 2008, 1.5 million yen)
  - Grants from UNION Foundation for Ergodesign Culture (AY 2007, 1.5 million yen)
  - Kansai University Special Research Fund (AY 2006, 6 million yen)
- \* The Principal Investigator for the above four programs is Naoki Egawa.

— How would you like to develop this program from now and into the future?

Prof. Egawa:

When we started this activity, Kampong Phluk was a fishing village without any tourists. Recently, however, the village has turned into a tourist site, and our new task is to monitor the structural changes of the village. Currently, our laboratory considers the village as a continuous research field shared by students coming and going, rather than a simple survey object.

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- *Kanbojia no Utsukushii Ryosei Shuraku, Nanfutsu no Utsukushii Shoshuraku, Soshite Nihon no Atsumatte Sumu Kankyo no Dezain* [Design of Co-living Environment in a Beautiful Amphibious Village in Cambodia, Beautiful Small Villages in Southern France, and Japan] by Naoki Egawa for Kotsu Machizukurigaku Kenkyukai at Campusport Osaka, Osaka Ekimae No. 2 Building 4F Meeting Room on February 8, 2013.
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