No.7
May 2013

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Equatorial Biomass Society

Reports from Project Members

Grant-in-Aid for Scientific Research (S)
Planted Forests in Equatorial Southeast Asia:
Human-nature Interactions in High Biomass Society

The Edible Birds' Nest Commodity Chain between Sarawak and East Asia

Daniel Chew (University of Malaysia Sarawak)

Edible birds' nest, which are moulded from the saliva of the aerodramus swiflets, forming white and black nests, are a highly prized culinary food product reputed to have health benefits. The uniqueness of the appeal of the nests is its association with the dynastic past of China as a special food for rulers and the wealthy, an appeal which carries on to this day as an expensive and prestigious food product for the ethnic Chinese wherever they live. The nests are collected from cliffs in caves and man made structures in maritime and mainland Southeast Asia. The process of collecting the nests in Southeast Asia for consumption in China and by the Chinese diaspora can be described as a commodity chain. The concept of commodity chain was first used by Wallerstein and Hopkins in the 1980s to describe and analyse trade and capital movements in the global economy before 1800 (Wallerstein 2008). The framework of commodity chains has been used in the study of global networks and movements of products and services. In a review essay, Bair (2005) identified two distinct types of commodity chains, value commodity chain analysis (VCC) and global commodity chain (GCC). VCC looked at the range of range of activities in the process of bringing up a product or service to its final destination as a consumed product or service, whereas GCC examined power relations and the roles of producers and consumers in a product chain.

The framework of producers and consumers in a product chain is broad, a point recognized by Wallerstein when he said that the commodity chain "… is a total phenomenon that we cannot see no matter what we do. The point is to figure out how this total phenomenon operates, what are its rules, what are its trends, what are its coming and inevitable disequilibria and bifurcations. It requires imagination and audacity along with rigor and patience. The only thing we have to fear is looking too narrowly" (Wallerstein 2008). The process of the birds' nest commodity chain, when approached with Wallerstein's suggestion of not "looking too narrowly", is extensive. In this preliminary write-up, I take up the perspective of relationships and networks, which are historical and have embedded economic and social contexts, a framework which may not be adequately covered by the VCC and GCC approaches mentioned above. Besides, birds' nest are a commodity chain which is ecologically grounded as procurement depends on the "production" of nests by swiflets in suitable habitats, and this ecological factor is mediated by the actions of human actors in collecting and trading in the product, which is in turn stimulated by demand. As a process of high value trans-regional trade, political ramifications in the commodity chain come to the fore and affect production and consumption when decision and policy makers take an interest in the commodity.

Daniel Chew (left) with Albertus, at the foot of Gunung Staat, Siniawan, Sarawak where black cave nests are collected. (photo by courtesy of Albertus)

The historical backdrop of the birds' nest commodity chain lies in the longue duree of economic

relations between insular Southeast Asia and China. Lim and Earl of Cranbrook (2002:62) and Chiang (2011:410-411) have highlighted the search for birds' nests in the caves of maritime Southeast Asia for the imperial court of 16th century Ming China. Chiang (2011) referred to references on the therapeutic value of birds' nests in old Chinese medicinal texts for the Ming (1368-1644) and Qing (1644-1911) dynasties and linked the demand for the prized commodity with the social production of cave nests in Niah and Baram in Sarawak. The tropical rainforest and littoral coast of Borneo and adjacent islands such as Java, and even on mainland Southeast Asia where the swiflets built their nests, were known for their natural emporium riches of birds' nest and other products which attracted traders from China, India, the Middle East and Europe. The intensification of these procurement activities took place during the high noon of European colonialism in the 19th century and the arrival of the Chinese who played a middleman role in trading activities. At the source of products in Southeast Asia, the interactions of three principal actors, the colonialists, the Chinese and the indigenous inhabitants were played out, with the objective of exporting the valued commodities to markets elsewhere in China or Europe.

Taking Sarawak as a local example, birds' nest collection and trade is a case study where birds' nest were significant to the 19th century Brooke raj as a source of taxable revenue, with trading in the hands of the Chinese, and the work of procuring the nests on cave cliffs the specialty of indigenous cave owners and collectors. The line of the commodity chain extended to Singapore in the 19th century, an island entrepot which tapped into regional trade. The entrepot trade which dealt with jungle and marine products was in the hands of the Chinese with the links further extended to Canton which became a western treaty port in the mid 19th century, together with the ceded island of Hong Kong to Britain. These ports of Canton and Hong Kong capitalized on the China-Southeast Asian trade. Birds' nest were a suitable low volume and high value product collected and transported from the caves of maritime Southeast Asia across the seas to China, fitting the bill of exotic tropical emporium riches for the China market. This commodity chain continues to the present with Hong Kong as the world centre for trade in birds' nests for internal consumption, and exporting to China and the ethnic Chinese diaspora such as in north America.

The most significant change which impacted on the commodity chain on the supply side has been the decline in birds' nests due to relentless harvesting which does not allow the swiftlet population to reproduce itself sustainably. Niah caves in Sarawak which is one of the main local sources of cave nests, has experienced a rapid decline in nests and swiflets over the years due to over and careless harvesting. The decline in cave nest supplies is matched by an ever increasing demand by consumers in Hong Kong and China where the nests, regarded as prestigious health food products, may be consumed daily by those who believe in their therapeutic value, are served in restaurants, or given away as expensive and high status gifts.

Collecting cave nests by climbing up tall scaffolding bamboo inside the cave of Gunung Staat.
(photo by courtesy of Albertus)

A fortuitous discovery that swiflets could build nests in buildings and houses in Java besides just in caves, led to enterprising traders turning man made structures into nesting havens for the swiftlets. An industry based on swiftlet "ranching" in buildings sprang up in Java in the early 20th century, and spread to Peninsular Malaysia by the end of the century, and then to Sarawak. With natural cave nests suffering from declining quantities due to over harvesting, the birds' nest industry in Sarawak, and indeed in the rest of Malaysia and in neighbouring Indonesia is now reliant on buildings specially designed or converted from existing ones to entice swiftlets to build nests.

This end of the product chain where existing and new buildings accommodate the swiftlets has become an industry (Lim 2012), even a capital intensive one requiring high financial outlay. A 'knowledge' industry on how to attract swiftlets to build nests in buildings has developed, with trade secrets well guarded. Experts and those professing to be experts organise seminar circuits, promising hefty returns on investments. Tan Jak Kuang of Daro, Sarawak who converted a shophouse into a swiftlet farm attended paid seminars on the subject in Jakarta. There are other links which connect the adjoining regions of Sarawak and Kalimantan. Chai Poh Kiong, a successful swiftlet rancher in Samarahan, Sarawak, who owns about twenty swiftlet buildings has a few swiftlet farms in Pontianak. As the cleaning and processing costs of birds' nests are cheaper in Kalimantan, nests are over sent from Sarawak for this labour intensive work.

When the tentacles of this part of the commodity chain are spread out, the different layers may take on the shape of a commodity web instead of a chain. In Sarawak there are architects who draw up elaborate building plans for the houses, and there are builders and suppliers who build the structures. Some expensive elaborate buildings look like fortresses, and at the other end of the scale are much simpler looking structures. In towns, shophouses are converted into

Swiftlet house in Daro, Sarawak.

Fortress-like swiftlet house in Daro.

Swiflets in the sky, Daro bazaar.
There are shophouses in Daro which have been converted into swiftlet houses.

swiftlet farms. With an estimated 5000 buildings in Sarawak devoted to swiftlet ranching, it is becoming an industry. Where land on which the bird houses are built, is indigenous owned, investors, mostly ethnic Chinese, will make arrangements to buy or lease the land, or form partnerships with the owners. The interlinked roles of indigenous land/cave owners and nest collectors and Chinese traders in the product chain require investigation. A co-management model with the objective of sustainability on collecting cave

nests at Bukit Sarang in upper Tatau in the Kemena river basin in northern Sarawak was initiated where the trader and cave owners share responsibilities in the management and collection of nests (Lim 2011 and Ah Kong 2011). This can be contrasted with efforts by the indigenous communities themselves such as in Siniawan where neighbouring kampung take yearly turns to harvest nests. Historical data and fieldwork indicate that the indigenous groups and individuals are active players in the birds' nest product chain as cave owners and collectors of nests, and some individuals have gone into swiftlet ranching as well.

Although the character of the industry has transformed from relying on house instead of cave nests, relationships and networks underpin the commodity chain linking Sarawak and the rest of Southeast Asia with the intermediary and end points of the commodity chain, be it Singapore, Hong Kong or China. Local and regional examples highlight the nature of these relationships which are economically and socially embedded. The Loh family in Kuching, comprising Loh Siaw Kuei and his father is a two generation family trading in birds' nest, who began with the collection and trade in cave nests and are now concentrating on, and even investing in the construction of buildings to accommodate swiftlets, with a processing factory to clean nests being planned. The Lohs export the nests to Hong Kong and even had a family member, an uncle of Loh Siaw Kuei living there since the 1960s until his recent demise, who dealt with the import and trading of nests. The types of natural products handled by the Lohs mirror the economic changes taking place in Sarawak in the procurement and trade in commodities. Before the outbreak of the second world war, Loh Siaw Kuei's father established a shop at Main Bazaar, Kuching dealing with jungle produce such as damar, gutta percha and cave nests. These products are rare nowadays, and cave nests have been replaced by house nests. There are others too like Liu Thian Leong, a trader and property developer in Kuching, who switched from cave to house nests by constructing buildings as swiftlet farms.

Manual cleaning on birds' nest by hand in Siniawan, Saawak.

Winnie Hon, a wholesale birds' nests trader in Hong Kong is a personal friend of Liu Thian Leong in Kuching with a longstanding trading relationship in the import and export of birds' nests. When I visited Hon's office in Sheung Wan, Hong Kong, the hub of birds' nests trade, in March 2012, she informed me of her personal connections to swiftlet ranch farmers in Peninsular Malaysia and Indonesia, making regular trips to Southeast Asia to inspect swiftlet buildings and to meet her suppliers. Hon is very much aware of the supply and market conditions in Indonesia and Malaysia such as the costs of "producing" the nests, the quality of the nests, and knows where to go for what she wants. Another wholesale trader, Hing Kee Java Edible Bird's Nest company which has its own processing facilities has a network of and suppliers and exporters in Indonesia and Malaysia, including Sarawak. The company staff regularly visit Southeast Asia to ensure continuity of supply and quality assurance on products. Hing Kee company has an Indonesian Chinese lady on its staff, who speaks Indonesian, useful for communicating with Indonesian clients.

The point to belabour here is that the networks, personal and built up over time, facilitate dealings across the region to ensure a steady and continuous supply of nests. These personal relationships in facilitating commerce are known as guanxi in Chi-

nese. The ethnic Chinese element in guanxi can be illustrated by this example in China street, Kuching, a heavily ethnic Teochew quarter where there are tradespeople dealing in traditional Chinese medicine (and birds' nests). A hidden and not apparent part of the product chain is itinerant travellers, tourists and traders from China who come to Sarawak and elsewhere to buy nests in tourist or big commercial quantities. Teochew from Shantou (Swatow) will make a beeline for China and adjacent Carpenter streets in Kuching where Teochew are found, to look for nests to buy. According to my informants in Kuching, the Chinese visitors buy nests by the bagfuls amounting to many kilos. Teo Teo Khoon runs a traditional Chinese medicine shop in China street, Kuching and although stocking limited birds' nests for retail sale, is not a full fledged birds' nest trader. But when Teo is approached by Chinese visitors looking for birds' nests, as an enterprising trader, he will source for the nests through his network of contacts. The Chinese government has attempted to stem this kind of trading by disallowing Chinese travellers going overseas from bringing back commercial quantities of birds' nests. Another concern for China is the extra-official or extra-legal channels for the import of nests across the Hong Kong-Shenzhen border, trade which may be regarded as illicit. Hong Kong traders we talked to, alluded to these "networks" of illegal trade, but are not prepared to talk more or divulge details. This could be, in Wallerstein's (2008) words cited earlier, "…a phenomenon we cannot see, no matter what we do…". There is a robust trans-border trade between Hong Kong and the Chinese mainland in birds' nest, and Hong Kong traders attributed the size and growth of the industry in recent years to demand from China. Hence the Hong Kong traders are wary of Chinese policy changes which can have negative consequences for the industry.

This brings me to my next point on the product chain, the political ramifications on the trade in birds' nest. A health scare erupted in China in 2011 over the contents of imported birds' nests, said to

Birds' nest shop in Sheung Wan, Hong Kong.

contain unacceptable high levels of nitrite, with the nests alleged to be imported from Malaysia. The Chinese government took drastic measures to regulate the import of birds' nests with new regulations and requirements on nitrite composition in nests. This caused a sharp drop in demand and prices as the nests were unable to meet the new requirements, and this created a crisis for the swiftlet ranching industry in Malaysia for entrepreneurs who had pinned their hopes on what was perceived to be a profitable business. Over a period of months, there was high level government intervention from Malaysia, with visits by government ministers and senior officials to China to sort out these issues. When our research team members comprising Noboru Ishikawa, Ryoji Soda, Tetsu Ichikawa and myself were in Hong Kong in March 2012 to talk to birds' nests traders, we experienced at first hand the fall-out from these trade concerns between China and Malaysia. In our discussions with the Hong Kong traders, they were quick to distance themselves from nests originating from Malaysia, and everyone we talked to, said that they only imported nests from Indonesia. Nests from Malaysia had earned a bad name and therefore had to be avoided. Previously when there were bird flu outbreaks in Indonesia and nest exports to China were

Hub of birds' nest trade in Shueng Wan, Hong Kong.

stopped from the former, the industry in Indonesia suffered.

From our brief visit to Hong Kong, what was becoming apparent to us as researchers looking at this end of the product chain were the spin-offs from the industry. What was brought to our attention during discussions was how and why Hong Kong came to this pinnacle position of being a world centre for birds' nest trading. The reasons given were Hong Kong was a free port, had efficient banking services, had vast experience in dealing with the China market and the Chinese diaspora and with suppliers in Southeast Asia, and there was R & D (research and development) on quality assurance, as well as ethical business practices such as not adulterating or faking products. When asked how the Hong Kong experiences are useful and an advantage in the birds' nests trade, Winnie Hon gave this example on how Hong Kong businesspeople would deal with the Chinese restrictions placed on nest imports from Malaysia, the later giving media publicity to high level government visits and lobbying. Hon said Hong Kong traders would keep a low profile, identify the Chinese officials responsible for decision making, visit them, organize lavish banquets and work on the issues. She believed that a low key approach can achieve better results than the high level government ministerial intervention emanating from Malaysia.

The scope of the birds' nest commodity chain is indeed broad. This kind of research stretches the reach of the local-regional interfaces in the product chain. The framework of the commodity chain delves into the roles of local and regional networks and relationships in the collecting, processing, trading and consumption of this culinary and therapeutic food product. It examines the part played by humans in the context of human-nature interactions in a high biomass environment. Research into the birds' nest commodity chain requires a multi-pronged approach at different linkages which make up the chain.

Field Investigation Report on Oil Palm Cultivated by Company K and Smallholders in Sarawak, Malaysia

Yucho Sadamichi (National Institute of Advanced Industrial Science and Technology)

This is to report a cooperative survey with Prof. Ubukata, conducted at Company K in Sarawak on 14-21 September 2012. Company K is an oil palm plantation company with a processing mill, which is located in Bintulu, Sarawak. Since this company produces RSPO-certified oil, the company activities are implemented in accordance with RSPO requirements, e.g. compliance with environmental and social laws and regulations, fulfilling cooperative social responsibilities, etc. This certification requires the company to document the related activities. From the documents, our previous surveys obtained a variety of data such as the amount of oil palm production, the volumes of fertilizers and agrochemicals applied in the field, and the amount of fuel consumed for trucks and generators, etc. In contrast, the last survey focused mainly on smallholders to collect economic and environmental data of oil palm production.

14 September 2012: Visit to MPOB office

We visited the Sarawak office of MPOB (Malaysian Palm Oil Board) in Kuching to conduct an interview regarding the oil palm industry in Sarawak. MPOB is a governmental agency in charge of administration, promotion and R&D of the oil palm industry. Any businesses dealing with oil palm in Malaysia require a license issued by MPOB. It was found from the interview that this licensing scheme allows MPOB to trace product volumes and processing sites in the domestic oil palm supply chains. The products in the supply chain include oil palm seeds, seedlings, fruit and oil. Although these data are not accessible to the public, some studies based on the data can be seen in the Journal of Oil Palm Research.

Photo1: A woman demonstrating how to use spraying equipment

17-18 September 2012: visit to smallholders (1)

We visited 6 smallholders over two days, most of which reside in longhouses near Company K. Our interviews with the smallholders were conducted to comprehend how they prepare their land, cultivate, harvest and sell oil palm. My preceding study showed that the greenhouse gas emissions associated with oil palm production could be minimized by both maximizing yields in a land converted from lands with low carbon and minimizing

Photo2-3: An example of an oil palm tree in a smallholding: Some leaves turned yellow with black spot

the use of nitrogen fertilizers. In the interview, we tried to collect every piece of information that was related to greenhouse gases, e.g. gasoline consumption for use of chainsaws in land clearing, spraying equipment in applying weedicide, etc.

The interview revealed that the oil palm yield in smallholdings is significantly smaller than that of plantations although nitrogen fertilizers applied are similar in quantity. Oil palm is cultivated in plantations under strict fertilizer and pest control schemes whereas smallholders cultivate oil palm within a short time and budget with limited knowledge. As seen in the following photos, the oil palm trees and fields were not well-maintained compared with plantations. The leaves of oil palm trees turned yellow with black spots. The fields were covered with weeds. These might be some of the reasons for the low oil palm yields in smallholdings.

19 September 2012: visit to smallholders (2)

Company K provides several longhouses with a social scheme as part of the RSPO system to support smallholders' oil palm cultivation. We visited two longhouses under the company's scheme and conducted interviews regarding their cultivations. As the smallholders in these longhouses took the company's training courses to learn how to cultivate oil palm cultivation, their oil palm fields looked well-managed. As some of them depend solely on oil palm cultivation for their entire income, they spend sufficient time on its management. The condition of the oil palm trees of these smallholders appears to be almost the same as that of plantations.

20 September 2012: visit to Company K

Although we have gathered necessary data associated with oil palm cultivation in past visits, we still need some more data to complete GHG emissions accounting, for example, how much fuel was consumed in land clearance before planting oil palm. However, we have obtained only a few data because the information before the company obtained RSPO certification was not well documented and prepared. We also visited the associate manager of an oil palm processing mill. We discussed technical and economic issues in recovering methane from POME (Palm Oil Mill Effluent) as well as problems of RSPO certified oil.

Photo4: A field was covered with weeds:
The weed management is important for the growth of oil palms in the early stage of cultivation

Photo5: A man showing us how to harvest oil palm fruit bunches

Summary

In the field survey, we collected all the necessary information to estimate financial flow and GHG emissions from both plantations and smallholdings. The important outcome from the survey was smallholders' information on oil palm cultivation. Although some are still not available, those could be presumed from other data sources. We are now analyzing the data obtained in the visits and writing a paper to be submitted to a scientific journal soon.

This article originally publisihed in the 10th issue of Japanese newsletter (p.7-8) and translated by the editors for this issue.

The motherland of oil palm – a travel journal of West Africa

Noboru Ishikawa (Center for Southeast Asian Studies, Kyoto University)

The landscape of a myriad of oil palm trees has now become a familiar sight in Sarawak, Malaysia where we have been working on our project. Oil palm trees originate from Africa and just like rubber, oil palm has flourished as a commercial crop in insular Southeast Asia, very far from its original birth place. Today, oil palm (Elaeisguineensis) is grown in plantations, and now has considerable impacts on the local communities and ecological environment of Southeast Asia. The following outlines the thoughts that crossed my mind during my field trip to South Africa to study the origin of oil palm.

From August 12-21 of 2011, I had the opportunity to take a field trip to Guinea and Senegal with Gen Yamakoshi of the Graduate School of Asian and African Area Studies, Kyoto University (primatology, African area studies), Masayuki Yanagisawa of the Center for Integrated Area Studies, Kyoto University (agricultural ecology, Vietnamese area studies), and Masaaki Hirai of Center for African Area Studies, Kyoto University (ecological history, African area studies). The details and information of this field trip I shall put aside for another occasion. Therefore, the following outlines my thoughts on the discussions and exchange of views and opinions I had with my three colleagues who come from different academic fields.

As I watched the scenery pass by from the window of my car, I noticed the ubiquity of the landscape of oil palm trees in this country. For a long time people in this land have continued swidden farming, while maintaining the presence of oil palm trees. People set fire to the fields as necessary to cultivate cassava, rice and peanut. Oil palm trees have a fireproof nature and can survive bush fires. This is the reason for the plantation-like appearance of groups of oil palms among the fields from time to time. I saw oil palm trees scattered from flat land to the top of a ridge, and the landscape seemed very strange to me as it was so different from the landscape of the oil palm plantations in Borneo. Yamakoshi said, judging from the old photos, that today's landscape of this land is not so different from that of the colonial-era when it comes to oil palm trees. It comprises secondary forest, the landscape human intervention has created and maintained. The scenery changed as we headed south and soon oil palm trees were blending into some parts of the jungle. We paid a visit to the forest of Bossou village where the Primate Research Institute of Kyoto University has built and maintained a field station for more than 30 years to observe chimpanzees in the forest. The forest of Bossou is somewhat similar to Japanese "sacred forest" at Shinto shrines (chinjyu no mori), and it is culturally contraindicated with the local people. The jungle is surrounded by vast slash-and-burn fallowed forests where oil palm trees grow wild. Some portion of the wild oil palm trees has been spread by the chimpanzees. They eat the oil palm fruit and disperse the seeds in other areas through their excrement. However, oil palm fruit is not always the chimpanzees' first choice for their daily food; it is nothing more than a substitute food they choose when no other fruit is available.

Photo1: A stable landscape of oil palm trees

Palm oil is indispensable to the daily lives of people in West Africa. It is in constant use in their cooking because it simply adds extra flavor. The oil palm fruit of Sarawak tastes bitter and it inevitably makes us wonder how much chemical fertilizer has been used. But here, when you bite into it, oil palm fruit tastes somewhat sweetish, and its oil is quite tasty and versatile for any kind of meal. People put palm oil on their food just like extra virgin olive oil to add extra flavor. In this way oil palm is very popular among

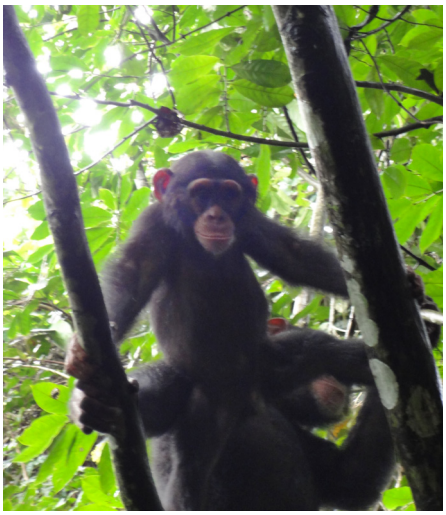


Photo2: Chimpanzees in the forest of Bossou

the people in West Africa as a condiment for their meals once extracted; the oil has become a stable source of income. No wonder the crop has become widely prevalent in this country.

In Guinea, oil palm is a major part of the national landscape, national income and national diet. Interestingly, in this country no one owns oil palm trees. There is a common view of the oil palm as an "ownerless property" among the people of Guinea. People share the mutual understanding of "Tu peux le prendre, si tu peux" (You can take it, if you can) regarding oil palm. There's no ownership of trees by kindred groups as in the case of Borneo.

We must, however, pay close attention to the production process of palm oil and its social and human relations to understand the state of ownerless oil palm trees. Yamakoshi explains the key to understanding the ownerless state of the oil palm trees lies in the phrase, "if you can". Using a special tool, climbing up the tall trunk of an oil palm tree, cutting down clusters with a machete, is dangerous and labor-intensive work. Ants, nesting in the trees are troublesome enough but the snakes are even worse. Extracting palm oil is grueling work; the oil palm fruit needs to be boiled over high heat for a long period of time. As a result, this extraction process requires group work that exceeds the boundaries of personal territory or family units. In this country, there are traditional gender roles for

Photo3: People use palm oil for extra flavor

Photo4: Palm oil sold in the local market

Photo5: "Rice producing forest" in Guinea
(oil palm trees in swidden land)

this complicated production process of palm oil. If viewed from the aspect of production, oil palm can be described as natural goods, which have a certain production process style and a unique position in society. "Si tu peux" (You can have it, if you can collect oil palm fruit and refine its oil) and once we focus on the uniqueness of oil palm, its biology and its position in society, soon we notice that "ownerless property" is a multilayered term. Most forest products we are familiar with in Borneo are on the global

market today. Oil palm, lumber, rubber, coconut, engkabang, cane, jelutong, dammar, gutta percha and bird's nest have been introduced into the markets of Europe, the Middle East and Far East. Forest resources, collected by the Penan, Kayan and Iban people have been used for a number of things: cable material for undersea cables, grenade holders used during European wartime, tanning agents for harnesses, ceremonial incense, and an exotic food for expensive restaurants. In comparison to the commercial network of non-wood forest products in Borneo, the exchange network of South African forest products is more regional. Ivory, copal and coffee are South African forest products that have been distributed worldwide but the volume seems to be less compared to that of Southeast Asia. Kola nut is widely known as it is an ingredient of Coca-Cola, but its distribution area is mainly inside Africa. Why is it that tropical African forest products have not been distributed worldwide while those of insular Southeast Asia have built tight connections with the markets overseas like Singapore or London and have become global commodities? I guess there's no short cut to getting an answer to this question. Perhaps all I need to do is walk around both Africa and Asia.

Currently, large-scale oil palm plantations are becoming the mainstream in West Africa. The oil palm prevailing in those plantations is different from traditional local oil palm, a relatively shorter and leafier hybrid that is common in Malaysia and Indonesia. An oil palm plantation that we visited in Guinea resembled the plantations we are familiar with in Malaysia. The palm oil from those plantations has a different system of production and channels of distribution to the traditional local palm oil production. The oil palm plantation in Guinea is at an early stage of development and the business scale is still smaller than that of Southeast Asia. The future of the oil palm business in this country is dependent on constructing a framework for the plantation business, the path of which both Malaysia and Indonesia have followed. Can African oil palm plantations attract cheap foreign laborers like Malaysia or can they build a new production system based on smallholders?

During this field trip in West Africa I looked at the scenery through the lens of the oil palm plantations of Sarawak which I kept in mind all the time. It provided a good opportunity to see the issue from the viewpoint of interregional comparison. The next step, I am thinking about, is to retrace the pathway of the spread of rubber to the riverine society of the Amazon. Taking a long look at the map, we notice that the Amazon is not that far away from the west coast of southern Africa. I am thinking about traveling from the African west coast to Brazil, crossing the South Atlantic Ocean, while giving thought to the slave trade era.

This article originally published in the 7th issue of Japanese newsletter (p.6-8) and translated by the editors for this issue.

Photo6(L): A handmade tool used to climb oil palm trees
Photo7(R): The process of oil mill in the forest

Photo8: A seller of oil palm seeds at a local market

2012 General Meeting
Jan. 26-27 2013 at CSEAS, Kyoto University

Before entering the fourth year of the project, we held annual general meeting on 26-27 January 2013.

Each member presented the progress of one's study, getting together research outcome as well as nailing down new challenges to tackle with for further research, through the discussion with other members. During the two-day meeting we spent enough time to outline our goal of this project.

The sessions covered during the meeting were as below

Day 1 (Jan.26)

Opening speech:
(report on the progress of the project)
by Noboru Ishikawa

"On the Four Determinants of the Basic Structure of Tropical Biomass Society"
by Kaoru Sugihara

"The development of the city of Bintulu"
by Masahiro Ichikawa

"Transformation of governance and trade in inland West Kalimantan: 1820s-1850s"
by Atsushi Ota

"Judicial Reform, Credit Improvement, and Trade Growth in Sarawak, c. 1900-1940"
by Atsushi Kobayashi

"Kayan-related ethnic groups in Asap: living strategies after the relocation in 1998"
by Makoto Tsugami

"Rethinking "Penan, a hunter-and-gatherers"
by Katsumi Okuno

"A model for oil palm smallholders'ecosystem management"
by Noboru Ishikawa

Day 2 (Jan.27)

"Smallholder's Oilpalm Cultivation with High Quality Nature Matrices"
by Noboru Ishikawa

"Diversity of wildlife inside an oil palm plantation-forest mosaics in Bintulu, Sarawak, Malaysia: A preliminary assessment of camera trapping activity"
by Jason Hon

"The trend of oil palm production by indigenous smallholders in Bintulu: smallholder-company relations, RSPO certification, urban-rural continuum"
by Ryoji Soda, Yumi Kato

"Hunting Activity in Different Landscapes"
by Yumi Kato, Hiromitsu Samejima

"Biodiversity in Anap-Muput Forest Management Unit
(1) Tree Biomass (2) Tree species diversity
(3) Animal species diversity "
by Hiromitsu Samejima, Jason Hon, Miyako Koizumi, Malcom Demies

"The oil palm production of the companies and smallholders in Sarawak: an aspect of cost-revenue analysis"
by Fumikazu Ubukata

"An analysis on greenhouse gas emissions of oil palm production: smallholders and plantations"
by Yucho Sadamichi

"Foraging pattern of the swiftlets in the bird farm house"
by Motoko Fujita

"The edible birds' nest business of recent years in Sarawak: making use of natural environment and luxury food trade"
by Tetsu Ichikawa

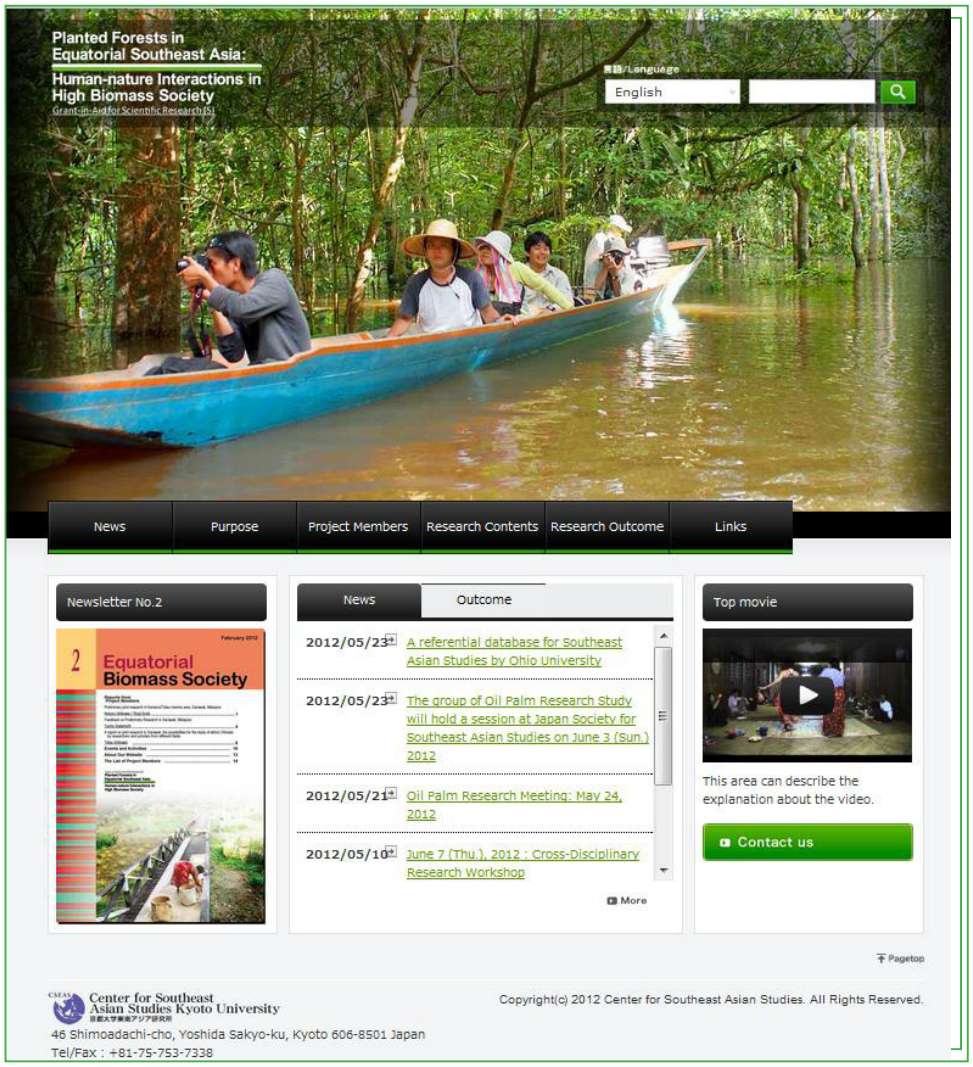
"Intriguing points of birds' nest trade – the case of Baram River and Mulu areas"
by Kyoko Sakuma

"River runoffs / Land-atmosphere interactions"
by Osamu Kozan

"Water quality in Kemena, Tatau riverine – the findings of the researches in 2011 and 2012 and challenges for 2013 research work"
by Keitaro Fukushima, Naoko Tokuchi, Hiromitsu Samejima, Osamu Kozan

Please visit our website

http://biomasssociety.org/en/



Our project, “Planted Forests in Equatorial Southeast Asia: Human-nature Interactions in High Biomass Society” has its own website.

It covers articles, event information, videos, research outcomes newsletters and much more.

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The List of Project Members

Noboru Ishikawa	Anthropology	Center for Southeast Asian Studies, Kyoto University
Ryoji Soda	Geography	Graduate School of Literature and Human Sciences, Osaka City University
Yasuyuki Kono	Natural Resources Management	Center for Southeast Asian Studies, Kyoto University
Kaoru Sugihara	Global History	National Graduate Institute for Policy Studies
Kosuke Mizuno	Agriculutural Economics	Center for Southeast Asian Studies, Kyoto University
Naoko Tokuchi	Forest Ecosystem Ecology	Field Science Education and Research Center, Kyoto University
Motomitsu Uchibori	Cultural Anthropology	Faculty of Liberal Arts, The Open University of Japan
Hiromitsu Samejima	Ecology	Center for Southeast Asian Studies, Kyoto University
Motoko Fujita	Bird Ecology	Center for Southeast Asian Studies, Kyoto University
Osamu Kozan	Hydrology	Center for Southeast Asian Studies, Kyoto University
Keitaro Fukushima	Forest Ecosystem Ecology	Field Science Education and Research Center, Kyoto University
Makoto Tsugami	Cultural Anthropology	Liberal Arts, Tohoku Gakuin University
Katsumi Okuno	Cultural Anthropology	College of Liberal Arts, J.F.Oberlin University
Masahiro Ichikawa	Southeast Asian Area Study	Faculty of Agriculture, Kochi University
Miyako Koizumi	Ecological Anthropology	Graduate School of Agriculture, Kyoto University
Fumikazu Ubukata	Natural Resource Economics	Graduate School of Environmental Science, Okayama University
Tetsu Ichikawa	Cultural Anthropology	The Asian Institute for Intellectual Collaboration, Rikkyo University
Yucho Sadamichi	Life Cycle Assessment	The National Institute of Advanced Industrial Science and Technology
Nathan Badenoch	Southeast Asian Studies	Center for Southeast Asian Studies, Kyoto University
Koji Tanaka	Southeast Asian Studies	Kyoto University Research Administration Office (KURA)
Kyoko Sakuma	Cultural Anthropology	Graduate School of Asian and African Area Studies (ASAFAS), Kyoto University
Atsushi Kobayashi	Historical Science	Graduate School of Asian and African Area Studies (ASAFAS), Kyoto University
Wil de Jong	Forest Governance	Center for Integrated Area Studies, Kyoto University
Daisuke Naito	Area Studies	Research Institute for Humanity and Nature
Jason Hon Shung Sun	Laboratory of Ecology and Planning	Kyoto University Alumni, Japan
Yumi Kato	Cultural Anthropology	Center for Southeast Asian Studies, Kyoto University
Atsushi Ota	History of Early Modern and Modern Indonesia and the Malay World	Graduate School of Letters, Hiroshima University,
Yuichi Kano	Ecology	Kyushu University Faculty of Engineering
Yayoi Takeuchi	Ecology	National Institute for Environmental Studies
Kuniyasu Mokudai	Physical Geography	Pro Natura Foundation Japan

Center for Southeast Asian Studies, Kyoto University
46 Shimoadachi-cho, Yoshida Sakyoku, Kyoto 606-8501
TEL/FAX: +81-75-753-7338
http://biomasssociety.org
E-mail: nakane@cseas.kyoto-u.ac.jp
Editors: Hiromitsu Samejima, Hideki Nakane