2ND UMS-NU JOINT SYMPOSIUM ON PLANETARY HEALTH

THEME: FOOD, CULTURE, COMMUNITY & ENVIRONMENT

VENUE:
Universiti Malaysia Sabah
Kota Kinabalu, Sabah
MALAYSIA

25-27 SEPT 2024

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Introduction

Universiti Malaysia Sabah - Nagasaki University 2nd Joint Symposium on Planetary Health:

Food, Culture, Community & Environment

25 – 27 SEPTEMBER 2024
SABAH, MALAYSIA

Symposium Co-Chairs:
Dr. Trixie M Tangit (UMS)
Assoc. Prof. Dr. Yasuaki Sato (NU)

At the start of the 2020 pandemic, food was a primary concern, particularly in terms of its security and availability during repeated lockdowns. Many people felt isolated not just because of social distancing, but also because they could not foster social bonds over meals, something that was often taken for granted. As societies began to recover from the slump brought on by the past years, it became clear that commensality will forever be the cornerstone of food culture and should be celebrated.

However, COVID-19 taught us all to be vigilant on all sides. Food sovereignty is vital to changing landscapes. Its cultural and innovative potential is still being underestimated. So too is the pivotal role of the community in raising for example, the world's most consumed fruit, the banana and its potential. Communities are urged to document and demonstrate the significance of this humble plant in their respective cultures. Furthermore, the intersectionality of food, culture, community, and environment has vast potential. For instance, how do humans innovate food (production) based on culture (needs, diffusion, change) and their natural environment? Thus, it is important to revisit the shifting relationship between people, their food, and their circumstances, and to carefully examine how adaptive strategies, particularly in the Asian and Pacific regions, can help us understand the connections between food, culture, community, and the environment.

For more information:

Contact us at our.planetary.health@gmail.com.
Or, directly contact Dr. Trixie Tangit at trixie.tangit@ums.edu.my or AP Dr. Yasuaki Sato at y-sato@nagasaki-u.ac.jp

Schedule at a Glance

Time	Content	Remarks
Day 1: September 25th, 2024 (Wednesday)		
0800-0900	Registration & Morning Coffee/Tea	BMQA (3rd floor)
0900 - 0945	Welcome Speech by Dean of UMS FSSK: Prof Dr Asmady Idris Keynote Speech: AP Dr Yasuaki Sato (NU) *Planetary health through the biocultural history of bananas*	Moderator: Dr. Trixie Tangit
0945 - 1000	Break Time	
1000 – 1200	Panel 1: Banana Presenters: 1. Wang, Li-Wei (YouthBanana, Taiwan) 2. Fujimoto, Takeshi (Toyama Univ.) 3. Yano, Nagomi (NU) 4. Wolyna Pindi (UMS)	Chair: Dr. Yasuaki Sato & Dr. Azwan Awang (UMS Sandakan)
1200 - 1245	Lunch (Bento)	
1245-1445	Panel 2: Food Culture and Health Presenters: 1. Uddin, Md Sayed (UMS) 2. Kounnavong, Thidatheb (Angela) (NU) 3. Shimmi, Sadia Choudhury (UMS) 4. Yong, Pauline (UMS)	Chair: Dr. Thidatheb Kounnavong & Dr. Md Sayed Uddin
1445-1500	Break Time	
1500-1700	Panel 3: Biocultural Landscape Presenters: 1. Ota, Masakiho (NU) 2. Sharif, Shahida Mohd (UMS) 3. Sasaki, Ayako (Nihon Uni) 4. Fujisawa, Natsuho (Uni. of Tsukuba) 5. Shikata-Yasuoka, Kagari (Kyoto Uni.)	Chair: Dr. Masahiko Ota & Ms. Shahida Mohd Sharif

Schedule at a Glance

Time	Content	Remarks
Day 2: September 26th, 2024 (Thursday)		
0930-1130	Panel 4: Food Sovereignty: Local Crops and Wild Edibles Presenters: 1. Md Sayed Uddin and Ahsan Habib (UMS & Green University of Bangladesh) 2. A.H. Borhan, A. Awang and Z. Sulaiman (UMS & UPM) 3. Nota F. Magno (Ateneo de Manila University) 4. Eiichiro Kamada (NU) 5. Alayna Ynacay-Nye (NU)	Chairs: Dr. Jurry Foo & Dr. Eiichiro Kamada
1130-1300	Lunch (bento) UMS Exhibition (Ground floor, FSSK foyer) (Bananayouth, Taiwan | Oupus Organics | Sambal (Kadazan-Dusun Chair)	
1300-1500	Panel 5: Food Innovation in Intercultural Settings Presenters: 1. Horie, Ryota (NU) 2. Ahmad Suffian, Ahmad Iman Hamzah (NU) 3. Khongyot, Thanawat (NU) 4. Foo, Jurry (UMS) 5. Tangit, Trixie M. & Souti, Merelyn P. (UMS)	Chair: Dr. Taeko Moriyasu & Dr. Trixie Tangit
1500-1515	Break Time	
1515-1630	General Discussion for Research Collaboration	Chair: Dr. Jury Foo & Dr. Yasuaki Sato
1800-2100	Farewell Dinner Party (Kampung Nelayan, Bukit Padang) (RM50) - UMS bus will leave from FSSK foyer at approximately 1645 - 1700.	

Schedule at a Glance

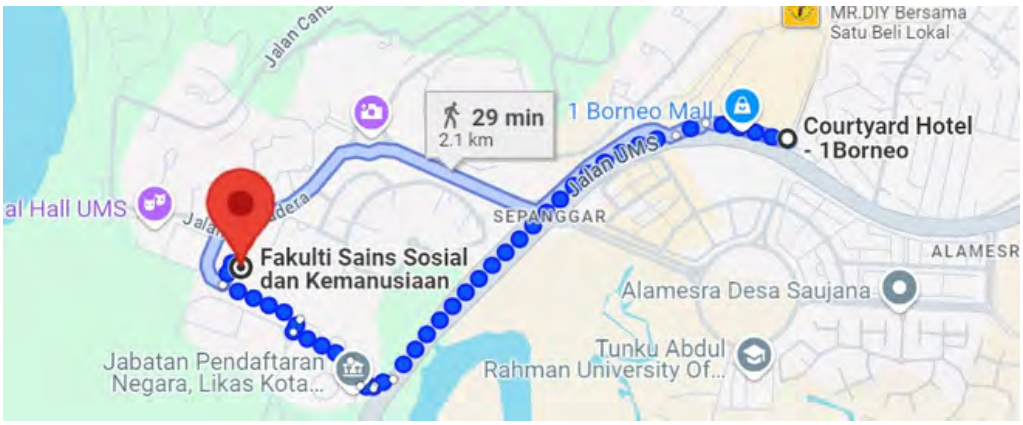
Time	Content	Remarks
Day 3: September 27th, 2024 (Friday)		
	Field Trip to Tambulion Village, Kota Belud (Meet in front of Courtyard Hotel at 9:30am)	Coordinator: Dr. Jurry Foo (Please pay fee (RM100) on Sept. 25th to Dr Trixie)
	Field Trip Program: 12:00pm - 13:00pm Lunch (Linopot)* 13:00pm - 15:00pm • Visit to paddy field • Tagal** Visit (*Tagal* is an Indigenous cultural principle of conservation focusing on the temporary fishing ban in rivers]	*Linopot is a traditional leaf-wrapped rice. The menu is as follows: (1) Main food 1. Linopot 2. White rice 3. Salted fish (or river fish if available) 4. Village vegetables (2 types) 5. *Tuhau* (wild torch ginger) 6. White pepper 7. Fried *bosou** (if available) [bosou is fermented vegetables/ meat] 8. Bosou (not fried) 9. Pickled *bambangan** (if available) [bambangan is wild mango] 10. Pickled tuhau* (2) Side dishes 1. Fried banana fritters 2. Boiled yam 3. Boiled bananas 4. Banana (fruit) 5. *Tapai** manis [tapai is fermented rice] (3) Drinks 1. Mineral water 2. Lemon cordial

Announcements

VENUE:

1) All presentations will be held at BMQA (Bilik Mesyuarat Qasim Ahmad) on the 3rd floor of the Faculty of the Social Sciences & Humanities (FSSK), UMS.
2) Exhibition space is on the ground floor of the faculty (in the foyer).

MAP TO FSSK: (from Courtyard Hotel, 1B Mall)



1) Take the sidewalk to UMS's main gate. If security stops you, please show your invitation letter to the symposium. Or, call Dr. Trixie, and she will speak to security for you [Security will be informed ahead of time].
2) You may follow the sidewalk all the way to the faculty or cut across the lawns for a short cut.
3) If you want, you can take a Grab (it will cost approximately RM5.00 one way).

CAMPUS TOUR ON 24/9/2024:
For those who interested, please assemble in front of Courtyard Hotel at 2:00pm. The tour should take around 1.5 hours and end at UMS's ODEC Beach. Please enjoy!

PAYMENTS FOR DINNER & FIELDTRIP:
Please pay the fees during registration (8:00-9:00) or, sometime on day 1. There will be a registration table on the 3rd floor of the FSSK building, just outside the lift. Ms. Elpidia Juli, a FSSK postgraduate student, will be in charge of the registration table.

Keynote Speech

Planetary health through the biocultural history of bananas

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Keywords: Planetary health, banana, biocultural history, familiarity, cultural exchange

This study presents the concept of considering planetary health from the perspective of the biocultural history of bananas. Planetary health is realized through harmonious relationships among multiple species across the planet. In the times we live in, it has become necessary not only to pursue the interests and prosperity of a particular species but also to look at the relationship between them. Banana is one of the most popular crops worldwide, and has a high affinity for humans. From prehistoric times to the present, banana cultures have adapted to new environments. Therefore, it reflects an important aspect of the planetary health.

I think of the relationship between bananas and people on earth in three “waves”. First, bananas were cultivated in Southeast Asia and Oceania to develop agriculture and food culture in the humid tropics. Second, as commercial fruit, it is exported on a large scale, plantation agriculture has developed in the tropics, and food culture has grown in temperate and cool zones. It has spread bananas throughout the world and has brought about unequal regional relationships and environmental problems. Most banana history books refer to these two wave types. And while based on this, I also focus on the contemporary third wave.

The third wave can be observed in banana production in colder zones that were previously considered unsuitable for cultivation and social activities that are friendly to bananas growing as living creatures. This has been observed in Japan, where cold-tolerant banana plants and improved cultivation methods are being developed. In addition, the Japanese Archipelago, with its continuous series of subtropical and temperate zones, is a prime location for the mutual exchange of culture within the country. The third wave, involving a change in people's perception of bananas, is taking place in Japan and is expected to expand worldwide.

Bananas are familiar to all segments of the population. It is a crop with a presence that changes with the local landscape and world economy. In recent years, areas based on the same or different waves have been actively interacting with each other. In particular, banana scientists and farmers are gathering an interest in dealing with diseases caused by Fusarium spp.. Through bananas, regions with different concepts and values can interact to create new cultures that will affect the planet. Further exploration of the biocultural history of bananas may provide the key to addressing the future of humankind and planetary health.

DAY 1: WEDNESDAY, SEPTEMBER 25TH, 2024

PANEL 1: BANANA

Time: 10:00-12:00
Chairs: Sato, Yasuaki (NU) and Azwan, Awang (UMS)

PANEL 1 OVERVIEW

The banana has developed relationships with humans, and is regarded as one of the most popular fruits. Originating in Southeast Asia and Oceania, they are now widely cultivated in the tropics. Their consumption reaches all parts of the world. To promote food sovereignty and planetary health, we need to consider how to harmonize opposing concepts such as producer and consumer, traditional and modern technology.

Bananas are a versatile and valuable plant due to their diverse attributes. They are extensively utilized in various tropical regions, with both their pseudostems and leaves finding application. However, the way these processes unfold can vary significantly depending on the location. By incorporating knowledge from global traditions as well as modern technology, we can devise more effective methods to harness bananas for the betterment of our planet's health.

This panel aims to explore the various aspects of bananas and banana-like plants, such as wild bananas and enset, in terms of their diverse uses and assess the current state of affairs in each community. Furthermore, it seeks to reevaluate the significance of bananas as a source of sustenance for human life, which ultimately helps to elucidate the interconnection between local survival and global well-being.

SPEAKERS

• **WANG, Li-Wei**, Youthbanana, Taiwan
Creating new banana farmers' style in Taiwan
• **FUJIMOTO, Takeshi**, Toyama University
Culture and Agriculture of Ethiopian Enset, a Local Root Crop of the Banana Family: Indigenous Practices and Current Challenges
• **YANO, Nagomi**, Nagasaki University
Why is the Basho-fu Production Process not Mechanized: Challenges Faced by Artisans and Their Commitment to Handiwork
• **PINDI, Wolyna**, Universiti Malaysia Sabah, **MOHD. ZAINI, Hana,** Universiti Malaysia Sabah, **SULAIMAN, Nurul Shaeera,** Universiti Malaysia Sabah
Banana Peels as a Bioactive Ingredient and Their Potential Application in Meat Products

Creating new banana farmers' style in Taiwan

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Keywords: banana, industry, Qishan, Taiwan

This study reviews the history of Taiwan's banana industry and discusses the significance of this new trend initiated by Youthbanana team in Qishan.

Since the introduction of bananas from southern China to Taiwan, their ancestors' footprints have been characterized by the prevalence of bananas. The Pingpu people utilized bananas in various aspects of their lives, ranging from fruits, leaves, and fibers to weaving, which formed a unique context of life.

Located in Kaohsiung, Qishan is a small town with significant importance in the banana industry. The planting of bananas in Qishan, along with the local terroir and climate, has provided opportunities for production and life. In its early years, this town was renowned for exporting bananas and earning substantial foreign exchange for Taiwan. Since 1910, owing to Japan's colonial policy, the industry in Qishan has flourished, leading to Taiwan's agricultural development. The city has become a veritable banana city. In the days when bananas were grown from house to house, Qishan emerged as a core town for regional development in the Kaohsiung region, serving as a hub for agriculture, collection, forestry, commerce, and transportation. Banana cultivation has flourished, transforming the region into a prosperous center for various banana cultures. Bananas became synonymous with Taiwan's industrial development.

Production declined after the 1960s, following Taiwan's withdrawal from the United Nations in 1971 and the severing of diplomatic relations with Japan in 1972. The banana peeling case in 1989 and Taiwan's entry into the World Trade Organization (WTO) in 2002 further impacted local agriculture, prompting further decline in the banana industry.

In 2008, the Youthbanana team began to address the various actions that utilized rock music to revitalize the banana industry and promote six national modernization policies. The processing of agricultural products has gradually penetrated the outline and industrial characteristics of the banana industry into society, promoting various transnational actions. The banana industry in Qishan has evolved into a thriving local enterprise. In addition to traditional practices, the Youthbanana team aims to establish new industrial connections by employing the concept of "full utilization of bananas" to bolster the industry, culture, and processing sectors.

This approach will create the potential for fresh banana culture as a new style of farming and solidify bananas and agriculture as the foundation for Qishan Town's development. This innovative model of local banana culture will connect the past, present, and future and continue to drive the growth of the industry.

Culture and Agriculture of Ethiopian Enset, a Local Root Crop of the Banana Family: Indigenous Practices and Current Challenges

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Keywords: enset (Ensete ventricosum), local crop, resilience, Malo, Ethiopia

Enset [*Ensete ventricosum* (Welw.) Cheesman] is a perennial crop of the banana family, although it is not a fruit crop, but basically a root crop. While it grows wild throughout tropical highland Africa, it is cultivated only in Ethiopia. It is a very local crop mostly grown for domestic consumption, unlike bananas, which are grown globally and often as a cash crop.

In the north-western part of the country, enset is just a minor non-food crop planted in a few numbers mostly for the use of the leaf as wrapping material. In the south-west, however, it is a prominent food crop grown in several hundreds mostly for the giant underground corm, often weighing more than 30 kilograms, and used for multiple purposes by different ethnic groups. It should be mentioned that these enset-growing peoples seem to have never undergone famine and hunger crises which the country has periodically met. One of such peoples is the Malo (population ca. 200,000) among whom I have conducted anthropological fieldwork.

The Malo live over a steep mountainous area of about 2,000 meters in altitude range, and their livelihood is centered on subsistence-oriented small farming. They grow a number of crop species, but the most important of these is enset. They grow the plants in gardens through regular manuring and frequent transplanting. When the plants reach the age of 2-3 years, they can be harvested all the year round before flowering at maturity around the age of eight to ten. There are numerous (more than sixty) named varieties of cultivated enset which people strongly distinguish from wild one. The edible huge corm is commonly cooked in two different ways.

One is a simple steam-boiling. The other involves more complex and labor-intensive pre-cooking treatment for fermentation by utilizing not only underground corm but also leafsheath pulp. The mixed substance is left for fermentation for at least two weeks. Once fermented, however, it keeps long and provides a wide variety of dishes after post-fermentation tasks.

Enset has long been the most important crop for the peoples, but in recent years its importance has been declining. Although the crop does not have high economic values due to local socio-economic reasons, its high resilience against recent climate change should be more evaluated.

Why is the Basho-fu Production Process not Mechanized: Challenges Faced by Artisans and Their Commitment to Handiwork

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Keywords: Basho-fu, *Musa balbisiana*, traditional craft, Okinawa

The Musaceae family is used by indigenous people in South Asia, Southeast Asia, and Oceania to make paper and fabric. The fibers of the Musa balbisiana, also known as Ryukyu Itobasho, are used to make the traditional cloth known as Basho-fu in Okinawa, Japan. The purpose of this study is to explain the features of the Basho-fu production process, discuss the difficulties that contemporary artisans encounter, and comment on possible future advancements.

Basho-fu was widely made in Okinawa during the Ryukyu Kingdom era and was worn on ceremonial occasions as well as in daily life. However, these days, its workshop and production have greatly reduced.

The Basho-fu production process involves over 23 distinct steps, all of which are performed manually by an artisan or workplace. First, the Ryukyu Itobasho plant is cultivated for at least three years. The plants with best quality are picked between October and February. After that, the fibers are taken out, twisted into threads, and woven into Basho-fu cloth.

The production process is complex, and the fiber quality varies by season; artisans must adapt their work schedules. Because every step is done by hand, large production is difficult. Additionally, it is difficult for artisans to make a living only from the production of Basho-fu, so this results in a lack of successors.

As the production and use of Basho-fu have decreased, it is becoming more important to maintain traditional techniques and knowledge. To address this issue, artisans are setting up hands-on workshops to introduce the production process to local students and domestic and international tourists, thereby promoting the transmission of traditional culture and technique. While some artisans continue to focus on traditional Basho-fu production, others are expanding their customer base by creating more reasonably priced products for tourists, such as hats, Basho paper, and keychains. These products utilize fibers that are not suitable for Basho-fu, reflecting a commitment to efficient resource use.

These artisans' efforts to pass down their craft are expected to foster the development of future successors, and as foreign interest in Basho-fu grows, its global expansion is anticipated. However, the producing process will not be simplified because artisans emphasize traditional production methods.

Banana Peels as a Bioactive Ingredient and Their Potential Application in Meat Products

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Keywords: banana peel, functional ingredient, meat product, dietary fibre, functional food

The use of agricultural by-products as a source of functional ingredients, particularly those from crop plants, has received great interest. Banana (Musa spp.) is a common food crop worldwide, but its peel, like other agricultural by-products, is often discarded. Banana peel has the potential to be transformed into functional foods because it is historically consumed as food and medicine in some regions of the world. Moreover, banana peel powder acts as a natural binder and water-retaining agent in meat products, potentially improving texture, juiciness, and shelf life. These attributes are particularly beneficial in the production of sausages, patties, and other processed meats, where maintaining moisture and texture is crucial. Additionally, the use of banana peel powder aligns with sustainability goals by reducing food waste and repurposing by-products of banana consumption

Chicken sausages were prepared with varying percentages of banana peel powder (BPP) to assess their technological properties, composition, and sensory acceptability. The inclusion of BPP enhanced nutritional value by increasing dietary fiber and reducing fat content. It significantly improved cooking yield, water-holding capacity, and storage modulus, but also led to a harder texture and darker color. Higher BPP levels altered the microstructure, resulting in increased hardness and storage modulus but reduced stress resistance and a shorter linear viscoelastic region, impacting sensory scores. A storage study of the sausage with 2% BPP showed a 55% reduction in lipid oxidation, highlighting BPP's antioxidant potential. Overall, BPP modified the sausage’s properties and emerged as a valuable ingredient in meat preparation, enhancing nutritional quality and technological aspects.

Banana peel shows great potential to be developed into beneficial functional foods. However, proper regulation and legalization of bioactive enrichment of food products from the banana peel are required to ensure its safety for human consumption.

DAY 1: WEDNESDAY, SEPTEMBER 25TH, 2024

PANEL 2: Food Culture and Health

Time: 12:45-14:45
Chairs: Uddin, Sayed Md (UMS) and Kounnavong, Thidatheb (Angela) (NU)

PANEL 2 OVERVIEW

Nutrition and health are critical concerns that affect individuals at every stage of life, from childhood to old age, and across diverse geographical regions. While undernutrition was a significant issue before the nutrition transition, economic development has dramatically altered the global food environment, leading to the major public health challenge: "the double burden of malnutrition" where undernutrition and overweight/obesity coexist. Fast food and sweetened beverages are now superfluous, making it increasingly difficult to serve and consume healthier foods. This shift resulted in excessive intake of energy, fat, sugar, salt and alcohol, alongside inadequate consumption of important nutrients, fruits and vegetables, posing serious public health and nutrition problems. In Southeast Asia, children and adolescents are particularly affected by this double burden of malnutrition. Schools play a pivotal role in shaping their dietary habits, yet they often provide environments that are not conducive to healthy eating. Concurrently, the aging population requires targeted interventions to prevent chronic diseases, emphasizing balanced nutrition and mental health support. Traditional practices such as the Molbog community's reliance on seasonal seafood, offer valuable insights into traditional, nutrient-rich diets but are increasingly threatened by modern dietary foods. This session will explore the need for developing and implementing the innovative, context-specific, and culturally sensitive strategies to improve nutritional status and health outcomes across diverse populations and life stages.

SPEAKERS

• **UDDIN, Sayed Md,** Universiti Malaysia Sabah & **FANG, Ruo Hsi (Dami)**, “Calls Over Ridges”
Community-Driven Health Solutions: Nutritional Interventions for Marginalized Children in Kota Kinabalu
• **KOUNNAVONG, Thidatheb (Angela)**, Nagasaki University
Dietary Behaviors and Food Environment of Adolescents in suburban Lao PDR
• **SHIMMI, Sadia Choudhury**, Universiti Malaysia Sabah
Holistic Health in Ageing: A multifaceted approach of diet, habits and mental health
•**YONG, Pauline**, Universiti Malaysia Sabah
Sustaining Health through Food Culture: The Role of Seasonal Resources in the Molbog of Banggi Island

Community-Driven Health Solutions: Nutritional Interventions for Marginalized Children in Kota Kinabalu

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Keywords: Nutritional status, marginalized communities, undernutrition, obesity, nutrition education, healthcare recommendations, locally sourced foods

Malnutrition, particularly undernutrition, is a major public health concern in Southeast Asia, affecting a significant proportion of children from marginalized communities. This study investigates the nutritional status of children attending various learning centers in Kota Kinabalu, Sabah, Malaysia. It assessed the nutritional status of 250 children aged between 5 and 17 years from two learning centers situated in Kota Kinabalu, Sabah. A purposive sampling method was employed to gather both quantitative and qualitative data. In a quantitative context, the research utilized one of the anthropometric indices, namely the Body Mass Index (BMI), to evaluate the nutritional status of the children enrolled in the learning centers. Qualitatively, a series of in-depth interviews were conducted to elucidate the socio-economic determinants associated with the undernutrition of the children under investigation. The findings of the study underscore critical concerns regarding both undernutrition and obesity. Identified deficiencies in the prevailing nutritional offerings at educational institutions necessitate the enhancement of lunch menus to incorporate balanced, locally sourced food options. Furthermore, the study underscores the essential role of nutrition education for both caregivers and children. In addition, healthcare recommendations advocate for the implementation of routine health screenings and improved accessibility to health services. The research endeavors to enhance the health and overall well-being of these children through sustainable, community-oriented interventions.

Dietary Behaviors and Food Environment of Adolescents in suburban Lao PDR

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Keywords: Adolescents; Food environment; Dietary habits; Healthy food; nutrition

The double burden of malnutrition in adolescents can have long-term impacts on their health and that of future generations. The food environment, a key component of the food system where consumers directly interact to acquire and consume food, significantly influences adolescents' nutritional status and dietary behaviors, ultimately impacting their overall health and well-being. Understanding the current food environment, the drivers of food consumption practices, and the barriers and facilitators to healthy dietary habits among adolescents is crucial. We conducted a study to investigate food intake patterns and drivers of food consumption practices among adolescents in suburban Lao PDR. The study utilized quantitative and qualitative approaches. Within the quantitative approach, the analysis of existing dietary intake data in Lao adolescents attending schools (7-day estimated food records of 405 adolescents) was performed to assess the food consumption pattern of adolescents. The qualitative approach comprised a combination of qualitative data collection methods such as photovoice, photo-elicitation interviews, and focus group discussions with the adolescents and their caregivers, teachers, and school principals. The qualitative data were collected in two schools in Phonhong District, Vientiane Province, Lao PDR. The collected qualitative data were analyzed using thematic analysis to identify themes and map out connections and contexts, together with the geolocation data collected from the geo-tagged photos during the photovoice session. The results show that ultra-processed food consumption was prevalent among Lao adolescents, while fruit and vegetable intake was insufficient. The food environment in sub-urban Lao PDR is mixed, offering availability and accessibility to both healthy and unhealthy food options. Drivers of adolescents' food choices were multi-leveled, including external, interpersonal, and intrapersonal. Barriers and facilitators to healthy food habits were also present at all levels. Notably, adolescents expressed strong autonomy in their food choices, with significant barriers to healthy options identified in their school food environment. A comprehensive approach addressing all levels of barriers and facilitators is necessary, particularly through school policies that support a healthier food environment.

Holistic Health in Ageing: A multifaceted approach of diet, habits and mental health

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Keywords: Ageing, Diet, Habit, mental health, Holistic health

Ageing is a significant challenge for both developing and developed countries today. The life expectancy of older adults is increasing due to advanced healthcare facilities and health education. Malaysia is projected to have 14% of its population over the age of 60 by 2030, with this figure expected to rise to 24% by 2050. In 2023, the population of individuals over 60 years old had increased to 3.8 million, according to the Department of Statistics Malaysia report. This growing trend will create a burden on the countries, requiring them to provide optimum healthcare systems and healthcare expenditure continuously. As a result, older people need to remain physically active, maintain healthy personal habits and have regular medical checkups. In addition, a proper balance of diet and nutrition is crucial to prevent chronic health complications and reduce the need for frequent hospitalization. Furthermore, attention should be given to their mental health condition, as mental health is related to physical disabilities. Therefore, this study is designed to evaluate the dietary patterns, personal habits and mental health status of individuals over 60 years old to assess their overall health conditions during the ageing process. This cross-sectional study will be conducted in the Government Hospitals and clinics in Sabah, Malaysia. Based on the elderly population of Sabah, a total of 384 samples will be collected using stratified random sampling methods. After getting written informed consent, the participants will be asked to provide their demographic data and answer the modified questionnaire covering diet, habit and mental health questions. Then anthropometric data (height, weight, BMI, waist circumference, calf circumference) will be collected and cardiovascular parameters (pulse, blood pressure), Peak expiratory flow meter (PEFR) and random blood sugar will be measured. This study will provide a comprehensive assessment of the overall health status in ageing populations and future interventions for improving health outcomes.

Sustaining Health through Food Culture: The Role of Seasonal Resources in the Molbog of Banggi Island

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Keywords: Traditional food practices, health, seasonal resources and Molbog

This paper delves into the intricate relationship between traditional food practices and health among the Molbog community of Banggi Island, Sabah, with a particular focus on their use of seasonal seafood. As custodians of a rich culinary heritage, the Molbog's diet is deeply rooted in their natural environment, utilizing locally sourced ingredients such as fish, shellfish, other marine resources and wild edibles that are harvested according to seasonal availability. This practice ensures a diverse and nutrient-rich diet, contributing to the community's overall health and well-being.

Through ethnographic research and interviews with community members, this paper examines how the Molbog's reliance on seasonal seafood, alongside other traditional food practices, contributes to their nutritional needs and impacts health outcomes. The study highlights the nutritional value of the Molbog diet, characterized by a balanced intake of proteins, omega-3 fatty acids, and essential vitamins and minerals. Seasonal fishing practices not only reflect the community's deep understanding of their environment but also help sustain local marine ecosystems.

However, the Molbog's dietary wisdom, including their seasonal seafood practices, is under threat due to the encroachment of modern dietary habits and processed foods, which are linked to an increase in non-communicable diseases within the community. This research underscores the importance of preserving traditional food knowledge and practices, particularly the sustainable use of seasonal seafood, as a means of promoting health and preventing disease. The findings advocate for culturally sensitive health interventions that support the revitalization of traditional diets, emphasizing the role of community-led initiatives in sustaining the health and cultural heritage of the Molbog on Banggi Island.

DAY 1: WEDNESDAY, SEPTEMBER 25TH, 2024

PANEL 3: Biocultural Landscapes

Time: 15:00-17:00
Chairs: Ota, Masahiko (NU) and Sharif, Shahida Mohd (UMS)

PANEL 3 OVERVIEW

Biocultural diversity is a concept that refers to landscapes characterized by both biological and cultural diversity resulting from historical human interventions such as agriculture, forestry, and hunting and gathering. Knowledge and practices developed to coexist with nature in pre-modern eras often shaped ecosystems capable of producing foods, fuels, and other materials. This "secondary nature" possessed its own biological richness distinct from its "primary nature." Landscapes exhibiting biocultural diversity can be termed biocultural landscapes. Traditional human-nature relationships undergo transformations during modernization. Since the 1960s, Japan's biocultural landscapes have changed significantly because of reduced human activity in terms of rural depopulation and aging, agricultural modernization, and the substitution of local resources with imports like fossil fuels. Recently, initiatives and local efforts to revive practices supporting biocultural landscapes are increasing, particularly rural revitalization efforts utilizing local resources such as tourism. In Malaysia, despite varying degrees of modernization across regions, shifts in human livelihoods, urban migration, and the decline of traditional knowledge and practices are increasingly evident. Maintaining and revitalizing biocultural landscapes thus becomes crucial for sustainable development. At the same time, in both countries, new practices of agriculture or gardening are likely to emerge in urban contexts; this could be the other side of urbanization and changing rural-urban relations. This session aims to deepen our understanding on biocultural landscapes in both Malaysia and Japan.

SPEAKERS

- **OTA, Masahiko,** Nagasaki University
  Connections between Japanese farm stays (Nohaku) and traditional/locally produced food: A preliminary survey of open information
- **SHARIF, Shahida Mohd**, Universiti Malaysia Sabah and, UJANG, Norisdah, Universiti Putra Malaysia
  From Soil to Society: Exploring Biocultural Landscapes through Community Gardening in Kuala Lumpur's Public Housing
- **SASAKI, Ayako**, Nihon University
  The function of "semi-naturalized tea trees" in the formation of biocultural landscapes in mountainous areas of monsoon Asia
- **FUJISAWA, Natsuho,** University of Tsukuba
  How agroforestry landscape complements local food security in a rural area in Chiapas, Mexico
- **SHIKATA-YASUOKA, Kagari**, Kyoto University
  Dynamic Biocultural Landscapes Generated by Banana-based Shifting Cultivation in Southeastern Cameroon

Connections between Japanese farm stays (*Nohaku*) and traditional/locally produced food: A preliminary survey of open information

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Keywords: rural tourism, landscape, culture, agricultural producers, experience

In developed countries, production of agricultural products is no longer the sole function expected for rural areas. Rural spaces and lifestyles have been commodified and are increasingly subject to tourism by urban residents; scenery of landscapes, atmosphere, and unique lifestyle experiences in rural areas can attract people from urban areas. In this context, building a constructive relationship between rural and urban areas is crucial.

Japan has implemented various types of rural or green tourism. Japanese farm stay is called *Nohaku* (農泊), which has been implemented since the 2000s. In *Nohaku*, tourists typically experience local lifestyle and agriculture, fishing, and forestry by staying at ordinary houses in villages. *Nohaku* has served for rural people as a secondary income source as well as a motivation for life (Tang and Ota, 2023). At the same time, *Nohaku* has been criticized because, except for few cases, it is not effectively connected to the maintenance socio-ecological production landscapes, such as rice fields and *satoyama*, by providing added value to agricultural products as done in Italy or other EU countries (Sanada, 2023). However, few studies have systematically analyzed connections between *Nohaku* and traditional/locally produced food.

I set two objectives, i.e., 1) to summarize the topics to be explored regarding connections between *Nohaku* and traditional/locally produced food drawing on previous literature, and 2) to analyze actual cases related to these topics using *Nohaku*-related websites. For the second objective, I focused on Nagasaki Prefecture.

Topics identified included A) consumption of traditional/locally produced food at mealtimes, B) experiences of (partly) producing or cooking traditional/locally produced food, C) linkages between food experiences and explanations of local culture or other educational aspects, D) linkages between *Nohaku* and the revitalization of traditional food culture, and E) linkages between *Nohaku* and the maintenance of local food producers. From *Nohaku*-related websites in municipalities of Nagasaki Prefecture, although experiences of cooking locally produced food were confirmed in most cases, other topics were not clear.

Based on these preliminary findings, I will discuss what further research can or should be conducted.

From Soil to Society: Exploring Biocultural Landscapes through Community Gardening in Kuala Lumpur's Public Housing

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Keywords: Biocultural Landscapes, Community Gardening, Urban Sustainability, Public Housing

Urbanisation in Kuala Lumpur has significantly altered the social and environmental dynamics of public housing neighbourhoods, often resulting in diminished social cohesion and weakened communal bonds. In response to these challenges, community gardening has emerged as a vital practice, contributing to the development of biocultural landscapes—spaces where cultural practices and ecological processes intersect to enhance urban sustainability. This study explores how community gardens in three public housing areas—Seri Perlis 2, Intan Baiduri, and Seri Sabah 3A—contribute to or reflect biocultural landscapes. Employing a hermeneutic phenomenological approach, the research delves into the lived experiences of residents engaged in community gardening, using semi-structured interviews selected through purposive and snowball sampling techniques. The findings reveal that these gardens serve as essential hubs for fostering social cohesion, preserving cultural heritage, and promoting ecological resilience, particularly in urban environments where green spaces are scarce. The analysis indicates that community gardening practices not only strengthen community bonds and enhance physical and mental well-being but also actively contribute to the preservation of cultural traditions and the adaptation to environmental challenges. Participants highlighted how gardening allowed them to reconnect with their cultural roots, maintain traditional agricultural practices, and develop innovative solutions to overcome urban ecological constraints. The discussion underscores the role of these community gardens as dynamic biocultural landscapes that embody the interplay between social, cultural, and ecological processes. The study concludes that community gardening in Kuala Lumpur's public housing areas not only addresses social and environmental challenges but also plays a critical role in shaping urban biocultural landscapes, thereby supporting broader goals of sustainable urban development. These findings have significant implications for urban planning and policy, highlighting the need to integrate community gardening into urban sustainability strategies to enhance the quality of life for residents and promote resilient, culturally rich urban environments.

The function of “semi-naturalized tea trees” in the formation of biocultural landscapes in mountainous areas of monsoon Asia

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Keywords: Tea trees, semi-naturalized tea, agroforestry, satoyama landscape

Tea trees (*Camellia sinensis*) initially grow in the forested areas of monsoon Asia. While tea trees are cultivated on plantations as an important cash crop in several regions of Southeast Asian counties, various ethnic groups have utilized “semi-naturalized tea trees” (called “yama-cha” in Japanese), which are either native or have escaped intensive management, as their cash resources or for self-consumption. We can find diverse landscapes with semi-naturalized tea trees, mainly mountainous areas of Southeast Asian mainland and Japan.

In mountainous areas of northern Thailand, semi-naturalized tea trees have been cultivated in secondary forests where swidden cultivation had been stopped. The smallholders maintain previously grown trees in their tea gardens to prevent direct sunlight from reaching tea leaves, causing soil erosion and water shortage. Those trees also ensured alternative sources of income for the smallholders. Smallholders have also changed land-use patterns in their gardens by introducing other tree crops, such as fruit trees or coffee trees, which have adapted to the market demand in each era. Northern Thai people call the tea gardens in mountainous areas “*pa miang*” (tea forest) and the tea-producing villages are generally named “*muban pa miang*” (villages with tea forests). It indicates that landscapes with semi-naturalized tea are common among northern Thai people, as is Satoyama in Japan. Such landscapes have recently been recognized for their function in biodiversity and carbon sequestration.

In Japan, tea trees were naturally grown in rural areas, especially where swidden farming had been widespread. People engaging in lowland rice cultivation also planted tea trees in their home gardens or footpaths between rice fields and harvested tea leaves during off-farm seasons. They used those tea leaves for self-consumption and sold them in markets. However, neither the official documents nor previous studies have mostly recorded “yama-cha” as an agricultural product.

While studies focusing on “yama-cha” in Southeast Asia have highlighted its ecological, economic, and social functions, the cultural aspects of yama-cha have been emphasized in Japan; therefore, the function of yama-cha as a resource in rural areas of Japan has been overlooked. It is expected that interdisciplinary study on yama-cha in Japan could facilitate future comparisons with studies on the regional history of Southeast Asia or other regions.

How agroforestry landscape complements local food security in a rural area in Chiapas, Mexico

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Keywords: Agroforestry, subsistence agriculture, food diversity score, local food consumption

In tropical rural areas, different land use types are combined, forming agroforestry landscapes. It is difficult to frame these complex landscapes with simple dimensions, and they are often regarded as ineffective land use in terms of conservation and production objectives. However, the landscapes have been shaped by farmers' diverse livelihood activities over time. It is crucial to evaluate such multifunctional landscapes to discuss how to manage landscapes to fit local realities appropriately. This study aims to understand the importance of the landscape from the perspective of local food security. We link farmers' daily food consumption with different types of agroforestry in the landscape of migrant communities in the Marques de Comilla region in Chiapas, Mexico. The contribution of 7 different food sources, including five different types of agroforestry, (homegarden; milpa; pastureland; agroforestry project plots; other land use types; purchasing; gifted) on the consumption patterns of 9 food categories (staples; pulses and nuts; vegetables; fruits; meat, fish, and eggs; dairy products; sugar and sweets; fats and oils; condiments and tea) are revealed. We conducted a food record survey with 33 households through 9 consequent days. We counted the Dietary diversity score, the number of food categories consumed per day, and the Food variety score, the variety of ingredients. The result shows that a wide range of food categories and food varieties are purchased. On the other hand, maize, the main staple, and pulses were mostly gained from milpa, the swidden land. Also, more than half of the fruits consumed were derived from their land, mainly homegarden and also from agroforestry project plots and pastureland. More than one-fourth of the vegetables and animal proteins are also derived from homegarden and milpa. Although purchasing is a fundamental food source, the food categories with high potential for micronutrients, such as fruit, vegetables, and meats, are available to a certain extent from their land, while oil and sugar are solely available from purchasing. Fruits may be introduced to a wide range of farmland and improve diet quality as local people have the habit of fruit consumption. Fruits were also gifted to neighbors when households had a surplus, thus contributing to food security beyond the household. The study suggested different land uses can complement food diversity and improve diets even in places where purchasing food is widely available.

Dynamic Biocultural Landscapes Generated by Banana-based Shifting Cultivation in Southeastern Cameroon

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Keywords: shifting cultivation, plantain, non-timber forest products, cocoa, agroforestry

Agricultural activities in tropical forests have often been considered the main cause of deforestation and biodiversity loss. Recently, however, the importance of "secondary nature" created and maintained by human activities has become recognized, thereby changing the concept of forest conservation. This study describes the banana-based shifting cultivation system of the Bangando farmers in southeastern Cameroon and examines its agro-ecological functions for sustainable forest use and biodiversity conservation.

The Bangando people grow a variety of plantains as a staple food and harvest them throughout the year, which is achieved by staggering the planting times and by planting varieties with different growth rates. They practice this banana-based shifting cultivation system in secondary forests dominated by the fast-growing tree Musanga cecropioides R. Br. After clearing a forest, they weed for only one year and let the vegetation thrive. Plantains continue to grow and bear fruit even in such shrubby "fallow fields", and people can therefore continue to harvest plantains from several fields created in previous years. The landscape created by this system contains secondary forests at different stages of ecological succession stages and provides a variety of non-timber forest products (NTFPs). In addition, the people have integrated cocoa cultivation into the system. The introduction of cash crop production often leads to a dramatic change in land use and threatens subsistence crop production. However, Bangando's system remains unchanged because they plant cocoa seedlings in the plantain fields together with other crops, and grow cocoa trees under the ecological succession. This landscape (and the practice) is often referred to as “cocoa agroforestry”. However, I argue that Bancando’s practice of cocoa growing should be understood as a variation of shifting cultivation. This system can reduce the risk of uncertain fluctuations in cocoa prices and productivity through stable plantain production and various NTFPs derived from the landscape consisting of a mosaic of young and old fallows.

This case has the following implications for sustainable forest use and biodiversity conservation in southeastern Cameroon. First, crop production should be recognized not as a deforestation process, but as a part of a dynamic forest-field circulation generated by shifting cultivation. Second, the biocultural landscapes generated by human activities should be appreciated.

DAY 2: THURSDAY, SEPTEMBER 26TH, 2024

PANEL 4: Food Sovereignty: Local Crops and Wild Edibles

Time: 9:30-11:30
Chairs: Foo, Jurry (UMS) and Kamada, Eiichiro (NU)

PANEL 4 OVERVIEW

Where did the crops we grow and eat today come from? When and how did they become established in the regions where we live? Local crops, both ancient and modern, have evolved along with regional and cultural preferences and have become established through various means of trade with the outside world. These crops include both cultivated and wild species, and among cultivated species, there are both native and new varieties. There is a need to reevaluate local foods with a focus on use, function, preference, and sustainability. The role of these crops, including those not yet cultivated, in maintaining dietary diversity and cultural practices should be clarified, and the discussion should be expanded to include not only agriculture and food production, but also regional sustainability, including the relationship between producers and consumers, rural and urban areas, and producers and growers. The discussion must be expanded to include the state of the region as well. This presentation will discuss the current state of local crops in terms of regional identity, food sovereignty, agricultural production, and the future development of food production.

SPEAKERS

• **UDDIN, Md Sayed,** Universiti Malaysia Sabah, and HABIB, Ahsan, Green University of Bangladesh
The Role of Uncultivated Edibles in Food Practices and Security in Rural Bangladesh and Sabah
• **MAGNO, Nota F.,** Ateneo de Manila University
Food Sovereignty by Culture and by Design in Philippine Permaculture Systems
• **BORHAN, Abdul Haya,** Universiti Malaysia Sabah, **AWANG, A**, Universiti Malaysia Sabahand **SULAIMAN, Z.**, Universiti Putra Malaysia
The Potential of Durian Merah as A New Economic Resource in Sabah
• **KAMADA, Eiichiro**, Nagasaki University
A Study of Native Species and Characteristics of the Local Food Culture in Tsushima
• **YNACAY-NYE, Alayna,** Nagasaki University
A Political Economy Approach to Rural Revitalization in Nagasaki: Illuminating Power Dynamics Behind Tairagai Fishers' Food Sovereignty

The Role of Uncultivated Edibles in Food Practices and Security in Rural Bangladesh and Sabah

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Keywords: Uncultivated Edibles, Food Practice, Food Security, Rural Food System, Wild Plants

This study explores the role of uncultivated edibles—wild plants, fruits, uncultivated vegetables, and abandoned crops—in shaping food practices and security in rural Bangladesh and Sabah, Malaysia. These informal food sources, naturally growing in forests, along riverbanks, roadsides, land boundaries, wetlands, and unused land, are integral to the socio-cultural practices of local communities. Despite their importance for marginalized communities with limited access to market-based food sources, these foods are often overlooked in research and policy frameworks. The study employs a mixed-methods approach, combining qualitative interviews and focus group discussions with local farmers and indigenous groups, alongside quantitative surveys to assess the prevalence and nutritional contribution of uncultivated edibles. Spatial analysis will map the availability and distribution of these food sources. Additionally, we will compile a comprehensive list of these edibles, detailing their uses and their socioeconomic and cultural significance. The research aims to provide a thorough understanding of how uncultivated edibles contribute to dietary diversity, household resilience, and the preservation of cultural practices. The anticipated outcomes will emphasize the sociological and anthropological significance of these foods, highlighting their role in sustaining traditional practices and community identity, and will inform policy recommendations for their sustainable management. Ultimately, this study seeks to advocate for the inclusion of uncultivated edibles in food security policies, ensuring their protection and sustainable use for future generations.

Food Sovereignty by Culture and by Design in Philippine Permaculture Systems

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Keywords: food sovereignty, permaculture, agricultural development

Permaculture systems are, not just “consciously designed landscapes” for doing sustainable and localized food production (Holmgren 2020), but are also sites for the promise of a “sustainable culture” (ibid). Like other emergent social movements that propose alternatives to address the global food crisis and resist the neoliberal food regime, permaculture brings a transnationally conveyed sustainable agriculture framework that must contend with the existing organization of local relations in as well as outside of agricultural production. Various iterations of permaculture in the world (e.g., ecovillages, intentional communities, transition towns, food forests and local gardens) reveal that context-based sociocultural relations and political economies mediate the intentions of permaculture ethics and design (Flores 2020; Kristensen 2018; Leahy 2021). This qualitative research is an initial exploration of sociocultural configurations in Philippine permaculture projects. After all, food is embedded within social reproduction; to attain food sovereignty is to contend with the social embeddedness of permaculture and other approaches, and thus to problematize its localization. As an initial part of this exploration, this research presents the findings pertaining to a permaculture association with one urban and one rural site. It utilizes ethnographic research methods to gain the perspectives of permaculture actors on how permaculture ethics and design are localized in the sociocultural relations of the specific site/s. Particularly, this study looks at this in three dimensions that reflect the essential sociocultural elements of food sovereignty: 1) relationships in ownership and management of the permaculture system and its resources, 2) relationships of food production and distribution, and 3) relationships in knowledge curation and skill building relating to permaculture and food. Finally, as an anthropological research, inquiring into the localization of food sovereignty through the example of permaculture serves as a window into the simultaneity of the global and local in “situated yet interrelated” knowledges and practices (Pottier 1999; Moore 1996) and the flows and disjunctures of process geographies (Appadurai 2000) that are creating new assemblages of agricultural development.

The Potential of *Durian Merah* as A New Economic Resource in Sabah

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Keywords: Durian; *D. graveolens*, Durian Merah, Alau, Orang Sungai and Durian Paste

Globally recognized durian varieties such as Musang King (D197) and Black Thorn (D200) all fall under the species *Durio zibethinus*. Beyond this, Malaysia is home to several other durian types, including *D. graveolens*, *D. kutejensis*, and *D. oxleyanus*, which are wild durians primarily found in specific regions of the Borneo archipelago. Among these, *D. graveolens*—commonly known as Durian Merah or Alau—stands out for its unique characteristics. Unlike other durians that naturally fall from the tree when ripe, *D. graveolens* splits open upon ripening and must be harvested by climbing. Its red flesh, distinct from the cream, white, yellow, or orange flesh of other durians, is notable for lacking the strong odor and taste typically associated with the fruit. Additionally, while other durians are usually consumed on their own, *D. graveolens* is traditionally made into durian paste and eaten with rice, a practice particularly prevalent among the Sungai people. Previously, this durian was little known and sold at a low price of RM15.00 per cluster (containing eight durians). However, it has since gained widespread recognition, not only among the people of Sabah but also beyond. Customers are now willing to pay a premium for this durian, with prices reaching up to RM50 per kilogram. When it can't be eaten fresh, producers use the flesh of this durian to make durian paste, which sells for RM100 per 100ml bottle. Recognizing the economic importance of this durian species, research efforts to investigate its nutritional benefits are crucial, especially the effects of durian paste in stimulating the appetite of those who consume it. For this purpose, the Faculty of Sustainable Agriculture (FPL), Universiti Malaysia Sabah (UMS) has identified areas where this species grows wild or is cultivated, specifically in regions such as Tongod, Kinabatangan, and Lahad Datu.

A Study of Native Species and Characteristics of the Local Food Culture in Tsushima

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Keywords: Aromatic rice, Local food, Native species, Tsushima

Rice cultivation was introduced to Kyushu and the rest of Japan through the Korean Peninsula around 500 B.C. Some of the rice varieties introduced had a unique aroma and were widely cultivated during the Edo period. At that time, small amounts of aromatic rice were added to cooked rice for flavor and to mitigate the smell of stale rice.

In the Kyushu area, aromatic rice is called ‘Kabashiko’. There used to be many varieties of aromatic rice, particularly in Kumamoto Prefecture. While these varieties were once widely grown, they were not cultivated over large areas. Today, the acreage for native aromatic rice cultivation has significantly decreased. This shift occurred due to postwar food shortages, which led rice production to focus on varieties that prioritized high yield and taste. However, in some areas of Nagasaki Prefecture, aromatic rice varieties are still grown and consumed as part of the local food culture.

Our research area was the Nagasaki Prefecture island of Tsushima. Historically, Tsushima a border island, served as a trading hub with the outside world. As a result, many rice varieties were introduced to the area, and several original native crops have persisted. Additionally, Tsushima is actively involved in green tourism, where local farmers and households prepare traditional foods for visiting guests. In this study, we investigated the daily food culture through green tourism in Tsutsu, southern Tsushima. We interviewed local residents about their native rice varieties and food traditions. The results showed that Kabashiko is still cultivated and consumed in Tsushima. However, the local aromatic rice variety has the drawback of growing very tall, so it is often grown alongside modern shorter rice varieties in shared paddies. Previous surveys indicated that Kabashiko was also grow in central Tsushima, but today its cultivation is limited to certain areas in the southern part of the island. Other native crops, such as green onions and taro root, were also part of the survey. These easily cultivated crops have been continuously grown due to their nutritional value.

Kabashiko is now cultivated on a small scale and is limited to local consumption. While it is possible to commercialize this rice, doing so would require reviewing quality and scaling up production. To ensure the survival of the local food culture, it is crucial to instill a sense of value and pride in these traditions. Discussions on preserving local food culture must consider multiple perspectives, including cultivation, cooking practices, and economic viability.

A Political Economy Approach to Rural Revitalization in Nagasaki: Illuminating Power Dynamics Behind *Tairagai* Fishers' Food Sovereignty

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Keywords: food sovereignty, rural revitalization, power dynamics, tairagai, Nagasaki

The food sovereignty movement is an alternative vision to the capitalist global food system to reinforce the rights of small-scale producers. In critical food studies, the concept of food sovereignty is borrowed from the international peasant movement, La Via Campesina, which defines it as, "*...the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems*." In this sense, the equitable role of small-scale producers in decision-making is necessary for sustainable food system transitions. In Japan, rural revitalization projects are on the rise to combat increasing rural decline. However, the concept of food sovereignty, or the representation and legitimacy of small-scale fishers' participation in decision-making has yet to be critically analyzed. Therefore, my research aimed at uncovering the power dynamics behind the decision-making of the case of the Isahaya Bay Land Reclamation, a rural revitalization project developed by the Japanese government in 1952. For decades, strong opposition by fishers and fishery groups ensued due to fears of the potential impacts to the resource-rich wetland. Despite this, by 2008 the project was completed, and fisheries dependent on the fragile ecosystem, such as the local treasure, *Tairagai* (comb pen shellfish), were lost.

This research incorporates data from interviews with local actors and secondary data analysis into a power lens framework (Fuchs et al 2016; Newell and Levy 2006) to uncover lessons learned. This research found: 1) how regime actors utilize various exercises of power to pursue their own political and/or economic interests and, 2) in consequence, small-scale fishers and the fishery cooperatives (and allies) are ignored or disempowered in decision-making. This research demonstrates how regime actors evolve their exercises of power over time depending on landscape pressures or social change, limiting the space for food sovereignty processes to emerge. Finally, this presentation will conclude with exploring the activities of a local volunteer group in Isahaya, and the role they play in improving food sovereignty and sustainable rural revitalization for their community.

DAY 2: THURSDAY, SEPTEMBER 26TH, 2024

PANEL 5: Food Innovation in Intercultural Settings

Time: 13:00-15:00
Chairs: Moriyasu, Taeko (NU) and Tangit, Trixie (UMS)

PANEL 5 OVERVIEW

Food culture consists of the shared dietary practices that have become established and passed down within ethnic groups, communities, regions, and time periods. It diversifies based on cultures and religions worldwide. Globalization has facilitated the diversification of food and the exchange of food cultures, enriching dietary practices while also bringing about various impacts.
From the perspective of multicultural coexistence, this session will discuss the innovation of food development and food culture in environments of cultural diversity. The discussion includes the development of new food products that cater to diverse cultural preferences and religious restrictions, which can contribute to the promotion of cultural diversity and inclusivity. By incorporating traditional ingredients, cooking methods, and flavors from various cultures, food innovation can serve as a bridge that connects people from different backgrounds through shared culinary experiences.
This session will explore ways to promote the coexistence of diverse food cultures while addressing challenges related to the loss of traditional culinary practices and ensuring food safety. Through open dialogue and collaboration, we aim to create a harmonious culinary landscape that respects and embraces the varied food cultures present in today's globalized world.

SPEAKERS

• **HORIE, Ryota**, Nagasaki University
A Study of Taste and Preference for Dashi among International Students at Nagasaki University
• **AHMAD SUFFIAN, Ahmad Iman Hamzah Bin**, Nagasaki University
Adapting to the Japanese Food Environment: A Study of Muslims in Nagasaki, Japan
• **KHONGYOT, Thanawat**, Nagasaki University
Adapting Food Habits in a Cross-Cultural Environment through Agricultural Self-Sufficiency: A Real Case Study in Japan
• **FOO, Jurry**, Universiti Malaysia Sabah
The Plant based Food Innovation trend in Sabah
• **TANGIT, Trixie M., & SOUTI, Merelyn P.,** Universiti Malaysia Sabah
Sambal: Blending Flavours, Binding Communities (Sabah, Malaysia)

A Study of Taste and Preference for Dashi among International Students at Nagasaki University

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Keywords: dashi, umami, taste, international students, Japan

Today, opportunities for people from different countries and regions to collaborate in one place have significantly increased. The question arises as to what type of food should be served on such occasions. This study considered the types of dishes suitable for multinational gatherings based on the results of a taste test conducted on international students at Nagasaki University.

Although personal food preferences are generally viewed as individual choices, each ethnic group has a rich culinary heritage. (Fushiki 2006). A research on food preferences among Japanese people (Asakura 2006) revealed that sex and age have a greater impact on food preferences than the region of residence. However, when targeting foreign students, the country/region of origin and religion may have a more significant influence. However, given the global prevalence of Japanese food, it is conceivable that Japanese tastes are widely accepted, although with some modifications. This study focuses on dashi and "umami" as the fundamental flavors of Japanese cuisine.

The taste test was conducted at Nagasaki University's International Student Event in 2024. The participants were 14 individuals from various countries, including Japan, China, Vietnam, Myanmar, the United States, Germany, Kenya, and Guinea. The concept of "Umami" was defined simply as "Umami contributes to the savory taste of food," and four types of dashi broth (two each of animal and vegetable origin: niboshi, bonito, kelp, and shiitake mushroom) were used. The participants tasted the four dashi and were asked three questions: (1) the intensity of umami on a scale of 1 to 5, (2) the degree of fishy smell on a scale of 1 to 5, and (3) the overall taste of the dashi broth on a scale of 1 to 5. The participants were then asked to determine the best combination of the four types of dashi broth.

The data demonstrated that kelp has the potential to be a widely accepted dashi owing to its low fishy scent and predominantly umami taste. Furthermore, the findings indicate that blending kelp with other dashi ingredients, such as bonito and niboshi, enhances the umami flavor while reducing the fishy odor. Kelp is a plant-based ingredient that is suitable for both Muslims and vegetarians. To expand the global appeal of Japanese cuisine, it is advisable to explore further the uses of kelp in dashi broth.

We will add data from further events to the above survey and present our findings.

Adapting to the Japanese Food Environment: A Study of Muslims in Nagasaki, Japan

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Keywords: Adaptation, Muslims, Community, Halal, Food, Nagasaki

Nagasaki, located on Japan’s western island of Kyushu, has a unique and profound place in world history as one of the first Japanese ports to open to Western trade in the 16th century. This, in addition to a strong Chinese influence, significantly shaped the city's cultural and economic landscape. This rich history of cultural exchange, set against the backdrop of Japan's era of isolation, shaped Nagasaki into a city with a distinctive blend of cultures. However, the emergence of Islamic Culture is relatively new, and Muslims are a very small religious and cultural minority in Nagasaki. The Muslim community of Nagasaki is mostly centered around the presence of educational institutions such as Nagasaki University, as well as migrant workers, mostly Indonesian, who reside and work in other surrounding cities within Nagasaki Prefecture. This study, through online questionnaires and semi-structured interviews, looks into the adaptations to food-related habits and practices made by Muslims of various demographics in Nagasaki, as well as comparisons with Muslims residing in other parts of Japan. The role of food in cultural and communal settings, particularly due to differences in awareness and/or understanding of halal food, is also explored. Furthermore, the standpoint of local non-Muslim residents in their interactions with Muslims in cultural and food-related settings is also discussed, as well as a brief look into Environmental and Economic aspects.

Adapting Food Habits in a Cross-Cultural Environment through Agricultural Self-Sufficiency: A Real Case Study in Japan

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Keywords: Food Habits, Foreign Students

Introduction: Living in a cross-cultural environment, such as studying abroad, brings challenges, including adapting to new dietary habits. While trying local cuisine can enrich your experience, familiar foods provide comfort during the transition. However, culture and cost can make accessing your cuisine in a foreign country complex. This case study collected all experiences of maintaining familiar eating habits and offered strategies for adapting in Japan.

The strategy maintains food habits: Adapting to new food environments in Japan requires effective strategies for sourcing and preparing ingredients. The first approach is online shopping, as many shops in Japan offer international ingredients, though these can be expensive. Alternatively, finding local substitutes with similar flavors or textures can help recreate traditional dishes when exact ingredients are unavailable. Sharing ingredients and cooking tips with friends and locals can help. Starting with simple cooking using available ingredients builds confidence, and then exploring more complex dishes. Food fusion can help utilize both local and your ingredients while maintaining familiar flavors.

Once settled in a new country, you can start growing your vegetables and herbs based on self-sufficiency. Even if space is limited, containers or vertical gardening can supply your ingredients. Moreover, gardening can be a relaxing hobby that reduces stress. My experience in Japan, growing basil, chili, tomato, etc., on a small balcony and small garden help me to survive. However, there are challenges; for instance, Japan's climate may not be as conducive to growing plants as in your country. Additionally, soil composition might differ from the home country, necessitating modifications in gardening techniques. The duration of the plantation will be short, only from May until October. Therefore, collecting and freezing the vegetables and seeds is necessary. This case study came from the actual situation of a student who lived in Japan for a few years. However, it's essential to explore the factors that affect the food behavior of people living abroad. This understanding can help provide food education for foreigners, making adjusting to a new environment and enjoying a happier life in an overseas country more manageable.

Conclusion: Living abroad and maintaining familiar eating habits is challenging. Despite the potential obstacles, these challenges can be overcome in various ways.

The Plant based Food Innovation trend in Sabah

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Keywords: Plant, innovation, food, trend

Plant-based food innovation is a popular trend nowadays in Sabah. Many food products are easily available in the market. This is due to the freedom to produce new food products in the community. This presentation will discuss the types of innovative plant-based food products available in the market, factors influencing food innovation, and issues related to food safety. The information presented is based on preliminary research conducted in Sabah through field research and online surveys. Generally, innovative plant-based food products can be classified into controlled products and non-controlled products. While the factors that influence the culture of food innovation include freedom to innovate, opportunities, viral power and demand from consumers. Food safety issues include food provider health certificates, food quality certificates and food shelf life.

Sambal: Blending Flavours, Binding Communities (Sabah, Malaysia)

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Keywords: sambal, food innovation, food diversity

Sambal, the veritable side dish, of the Southeast Asian cultures, may go by many a name, among them, sambar or sambel, but the concoction of chilli, spice, salt and sugar and other ingredients does more than enhance the food culture of the region: it speaks to the heart of its people and plays the unexpected role of cultural ambassador. In food innovation, the sambal is bridging a flavour gap allowing people from differing cultural backgrounds to share and build upon a common food diversity. This presentation discusses the foray of the Indigenous people in Sabah, Malaysia, into the spicy world of sambal. Traditionally a culture that specialises in food fermentation, in recent years, many Indigenous chefs attempt to fuse sambal, local edibles and fermented foods with surprising results.

Exhibition Booth Information

Participants, please visit the exhibition booths from 11:30-13:00 on September 26th (Thursday). The exhibition will be held in the foyer. Note that the exhibition is open to the public from 10:00-16:00.

Booth 1 - Youthbanana

by Mr Jiwei Wang, Taiwan, https://youthbanana.blogspot.com/
“Banana. Culture. Industry”

Booth 2 - Sambal

by Kadazan-Dusun Chair, FSSK-UMS (contact person: Ms. Merelyn P. Souti)
Featuring the sambal of Ms. Brenda Abbigail Masiang.

Booth 3 - Oupus Organics

by Ms. Vellary Yong, www.oupus.my
“Empowering Communities, Nurturing Skin, Sustaining Earth”

Symposium Planning Committee

A special thanks to the hard work done
by all our committee members.

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