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1. Research Staff

1.1 Nature-Based Tourism Unit

Takashi KOSAKI  
Professor/ Doctor of Agriculture (Kyoto University)  
Terrestrial Ecosystems Management, Ecotourism, Environmental Education

Tosho KIKUCHI  
Professor/ D. Sc. (Geography) (The University of Tsukuba)  
Agricultural and Rural Geography, Rural Tourism and Rurality-based Tourism, Sustainable Rural System, Food System and Food Tourism, Resource Management and its Sustainable System

Shinya NUMATA  
Associate Professor/ Ph.D. (Tokyo Metropolitan University)  
Tropical Biology, Urban Ecology, and Nature-based tourism

Koun SUGIMOTO  
Assistant Professor/ Ph.D (Tourism Science), Tokyo Metropolitan University  
Tourism Geography, Applied Geography, Geographic Information System

Soh SUGIHARA  
Assistant Professor/ Ph.D (Kyoto University)  
Natural Resource Conservation, Ecotourism, Environmental Soil Science

Tetsuro HOSAKA  
Research Associate Professor/ Ph.D. (Kyoto University)  
Tropical Ecology, Forest Entomology, Urban Ecology, Science communication

Ranaweerge ERANGA  
Research Assistant Professor/ Ph.D. (Tourism Science) Tokyo Metropolitan University  
Wildlife Tourism, Human Dimensions of Wildlife

1.2 Culture-Based Tourism Unit

Hideki AZUMA  
Professor/ M.Phil. (UCL)  
MRTP  
Town Planning in Tourism, History of City & Architecture

Tetsuro SHIMIZU  
Professor/ Ph.D. (Tokyo Institute of Technology)  
Transport Studies, Tourism Planning

Susumu KAWAHARA  
Associate Professor/ Ph.D. (Waseda University)  
Urban planning & design, community-based development and tourism

Yu OKAMURA  
Assistant Professor/ Ph.D. (the University of Tokyo)  
Town Planning, Urban Design, Conservation Planning, Community-Based Tourism Planning

Yukiko KATAGIRI  
Assistant Professor/ Ph.D. (Keio University)  
Landscape Planning

Naoaki Furukawa  
Project Assistant Professor/ MArch. (Waseda University)  
Historic Environment Conservation, Regional Development, Dwelling Environment Improvement, Urban and Regional Planning

1.3 Tourism Policy and Tourism Information Unit

Yohei KURATA  
Associate Professor/ Ph.D. (Spatial Information Science) (University of Maine, USA)  
Tourism Informatics, Spatial Information Science

Taketo NAOI  
Associate Professor/ Doctor of Philosophy (The University of Surrey)  
Tourism

Hisatoshi AI  
Assistant Professor/ Ph.D. (the University of Tokyo)  
Urban analysis, GIS, City planning

Yoshiaki HOMPO  
Research Professor / M.A. (Tokyo Institute of Technology)  
Tourism Policy

Yumi TAKAZAWA  
Research Associate Professor / Ph.D. (Kobe University)  
Regional Planning, Community-based tourism planning

Makiko ASO  
Research Assistant Professor/ MA in Tourism(University of the Ryukyus, Japan), MBA (Graduate School of Management, Kyoto University, Japan)  
Learning from experience of business in Tourism
2. Research Summaries

2.1 Nature-Based Tourism Unit

Mechanism of radio-active cesium fixation in the soil and risk assessment of its movement into plants under different ecosystems. (Dr. Kosaki)

The pollution hazard of radio-active cesium is one of the major environmental problems in the world. The objectives of this study are 1) to understand the mechanism of cesium fixation in the soil with reference to soil formation processes and 2) to construct a model to predict the risk of cesium accumulation in the crops under different ecosystems. The results obtained in this year include 1) establishment of study site in humid tropics (Kota-Kinabaru, Malaysia) for monitoring weathering and fixation processes of cesium-baring minerals and 2) identification of the factors of cesium fixation in temperate soils, i.e. organic matte in the surface soil and Al-polymers in the subsoil.

Classification of rural commodification in Japan (Dr. Kikuchi)

The commodification of rural spaces in Japan has progressed in a number of ways. Rural commodities in Japan can be classified into four types, according to Perkins (2006). The first is the commercial supply of ordinary farm products, such as rice, vegetables, fruit, and various livestock products. The second is the supply of new farm products related to the health and well-being of consumers. These include health foods, as well as beauty products derived from rice, vegetables, fruit, tea, milk, and meat. In recent years, the demand for organically cultivated farm products and chemical-free food has increased, along with products with traceable origins. The third type of commodification concerns rural residences for urban workers, which have rapidly increased. Recently, the number of people working in cities and residing in rural areas has increased. The number of people who have retired from jobs in cities and begun farming or enjoying country life has also increased. This includes urban residents who have purchased second homes in the country to relax during weekends and holidays. The fourth type of commodification of rural spaces involves recreation and tourism, facilitated by walking paths and hiking routes, farm produce stands, orchards for fruit picking, allotment gardens, farm stays for experiencing agriculture, farmhouse restaurants, Kleingarten, guest houses, magnificent natural landscapes and hot springs, large-scale ski resorts, swimming beaches, pastures for horse-riding, and agricultural museums (Butler, 1998).

Commodification of rural space in British Columbia, Canada (Dr. Kikuchi)

The commodification of rural spaces, in other words, utilizes the regional resources found in rural spaces. These resources are familiar to regional residents, and involve local landscapes, natural environments, industries, products, lifestyles, annual events, culture, and histories. The diversified commodification of rural spaces can be observed in British Columbia. Diversified rural commodities such as hobby farms, farm product markets, Circle Farm Tours, pick-your-own farms, horseback riding, and country residences characterize the Lower Mainland region. Many residents of Vancouver and other cities visit to consume rural spaces during the weekend. A number of people live in the countryside to enjoy rural life and hobby farming. The slow food movement that concentrates on locally produced food is typical of the rural consumption in the Cowichan Bay region of Vancouver Island. City residents, primarily from Vancouver, Victoria and other nearby cities visit on weekends to consume rurality. Wine tourism is important in the Okanagan region, and ranch tourism and the sales of branded dairy products characterize the commodification in the Thompson-Cariboo region. Since both regions are far from the large population centres in British Columbia, most visitors stay for a relatively long term. There are regional differences in types of commodification, as defined by physical conditions, accessibility to metropolitan centres, and local agricultural activities. In short, the commodification of rural spaces in British Columbia, which is much more advance and diversified than that of Japan, plays an important role in sustaining the rural economy and society.

The various phenomena occurring in rural areas of developed countries, including Japan and Canada, can be understood to a substantial degree, using the concept of the commodification of rural spaces. One effective measure to develop regional economies is to commodify rural spaces. Furthermore, promoting the commodification of rural spaces could possibly lead to the development of healthy societies. Therefore, generalizations and
Growing began. The grape acreage continued to increase steadily over the next 50 years, but grape growers were damaged by the Free Trade Agreement between Canada and United States in the 1980s. Approximately 50 percent of Okanagan grape growers went out of business in the years following the agreement (McGillivray, 2011). Fortunately, the provincial government introduced new regulations for producing wine from locally grown grapes, and both vineyard acreages and wineries have increased since the end of the 1980s. Since the latter half of the 20th century, amenity industries, including retirement communities, vacation homes, and wine tourism have been developing in the Okanagan region.

A high quality wine industry based on tourism has developed since the 1980s, due to (1) the mild, dry climate; (2) the introduction of capital, techniques, and entrepreneurs from other regions; (3) government protection; and (4) cooperation with local food activities. There are approximately 140 wineries, some of which have restaurants. In addition, there are many resort hotels, wine festivals, a wine museum, wine shops, and visitor centres. There is a strong relationship between wine and tourism industries in the Okanagan region. Wine tourism facilitates the consumption-production overlap through tours, tasting rooms, and cellar door sales. An increase in small-scale local consumption has become central to both quality wine production and quality tourism production (Senese et al., 2012).

One of the examples of the wineries in the Okanagan Valley is Quail’s Gate Winery on Okanagan Lake, a place known for its scenic beauty. Tourists can enjoy wine tours, tastings, shopping, and lunch and dinner in the restaurant. Another example is the Mission Hill Winery, which has a large green space with uniquely decorative architecture, a huge collection of sculptures, wine tours, tastings, shops, and a first-class restaurant facing Okanagan Lake.

Study on the sustainable development of nature-based tourism (Dr. Kikuchi)

Nature based tourism is increasing throughout the world and particularly in Japan. Most is based in national parks and restricted areas. As the increase of the population in Japan, it is difficult to protect the flora and fauna unless there are economic benefits to the country as well as to the local people. The conversion of more and more land to agriculture and resort areas leads to loss

Enjoyment of local food and wine in farm tours of Cowichan Valley, British Columbia, Canada

Activities of Satoyama conservation as nature-based tourism in Hachiohji, Tokyo, Japan
of habitats that are crucial to animals and plants; disappearance of forests, pollution and construction works also contribute to loss of habitat. Due to the increasing demand of tourism industry in Japan, more land is being converted to resort areas and new roads. Such hotel and road constructions lead to the destruction of the natural environment. This research suggests that nature oriented tourism can be one means to help achieve sustainability as well as protecting the important world heritage site. Well-planned tourism could provide economic and political incentives for proper management and for conservation and could bring additional benefit to local communities and regional economies.

**General flowering phenomenon in Southeast Asia (Drs. Numata and Hosaka)**

General flowering (GF) is supra-annual community-level synchronization of reproduction of many plant taxa in Southeast Asian rainforests. In this region, diverse tree species including dipterocarp species represent reproductive synchronization with 5-7 months at irregular intervals of 1–10 years. GF results in a massive number of flowers in the forests, and therefore GF plays a central role in the successful regeneration of dipterocarp forests in Southeast Asia. In this fiscal year, we quantified interspecific variation of flowering and fruiting behavior of 112 dipterocarp species and identified reproductive synchronization events for 35 years using long-term monthly record of dipterocarp trees grown in dipterocarp arboretum, in Forest Research Institute Malaysia (FRIM). We found a significant interspecific variation in reproductive frequency and timing of dipterocarp species. Both drought and low temperature were strongly related to the reproductive behavior of the species, but their response to climatic factors were different.

**Conservation and sustainable use of biodiversity in urban and peripheral ecosystems (FY2012-2016) (Drs. Numata, Hosaka, Kikuchi, Kosaki, Sugimoto, Shimizu, Kawahara and Katagiri)**

The world’s urban population is predicted to reach nearly 5 billion by 2030 with much of this growth in developing countries and in cities with < 500,000 inhabitants. Green areas have been justified on the basis of ecological and social services such as improved climate, hygiene, aesthetics, recreational opportunities, environmental protection and biodiversity. In order to improve and optimize urban biodiversity, participation of local people is essential. However, the increasing human population and the associated increase in rates of resource use and habitat loss are forcing competition between wildlife and people for space and food resources (human-wildlife conflict). Towards an achievement of conservation and sustainable use of biodiversity in urban and peripheral ecosystems, we have conducted 1) evaluation of natural environment and biodiversity in urban and peripheral areas, 2) understanding of natural resource use by local community in urban and peripheral areas, and 3) identification of current and emerging human wildlife conflict in urban and peripheral areas.

**Development of sustainable wildlife tourism in Endau Rompin National Park, Malaysia (Drs. Numata and Hosaka)**

Southeast Asian rainforests support much of the region’s biodiversity and habitats of endemic species. In Malaysia, the Malaysian Tourism authorities assume that ecotourism is a growing segment of tourism, although still small compared with the generated by all kinds of tourism in Malaysia. Endau Rompin National Park is located in the south of Peninsular Malaysia at the border of Johor and Pahang. This National Park provides habitats for rare mammal species, for example Sumatran rhinoceroses which are endangered. However, there are fewer studies about wildlife in Endau Rompin; it’s not sure that wildlife habitats are protected by the designed park area. This study aims to contribute a sustainable management for wildlife tourism and conservation in the Endau Rompin National Park. Installation and maintenance of video-camera system (May and August 2015). We placed a total of 9 video camera traps (Ltl Acorn 6210 trail camera, Little Acorn Outdoors, Denmark) at the height of 0.5-1.0 m along nature trails, old logging roads, and around the tourist attractions in Endau Rompin Peta in May 2015. More than 500 video clips of animals were taken from May to August 2015. Tiger, leopard, tapir, sambar, and sun bear were captured by the traps. The data have been analyzed in our laboratory.

**Spatio-temporal analysis and visualization of tourist dynamics (Dr. Sugimoto)**

Using spatio-temporal analysis, a series of studies on tourist dynamics were conducted to elucidate the phenomenon of tourism and to elicit acquired knowledge that could be applied to tourism marketing and impact evaluation for tourism. First, tourist dynamics in metropolitan areas on single days were analyzed using a large people-flow dataset derived from “person-trip data.” Second, web-based GIS systems were developed in order to visualize domestic tourist flows among prefectures in Japan and international tourist flows among countries; this was performed in order to enable macro-scale tourist dynamics to be elucidated. Third, the patterns of tourist movements at a specific tourist destination (Ueno District) were investigated and analyzed using GPS and GIS. Future research will focus on other aspects of analysis, such as differences in tourist behavior based on age and gender; furthermore, future research will focus on the use of more advanced spatial analysis and geo-computation techniques in order to determine the mechanism and general characteristics of tourist dynamics.

**Fundamental study on effective space utilization for MICE strategy in Tokyo (Drs. Sugimoto and Kikuchi)**

With the intensification of global inter-city competition, attracting MICE has been regarded as one of the most important measures for strengthening a city’s international
To evaluate the effect to human activity on land resource quantitatively. Then, we evaluated the effect of various land management on land resource, e.g., soil health, biodiversity, and so on, in the tropical Asia-Africa, where is suffering from the land degradation. To do this, we had conducted the field and laboratory study. In this year, we conducted the field research and laboratory analysis in Tanzania, Camero, India, and so on.

As a result, we found the follow things; (1) Decomposition of soil organic matter is relative larger and faster in tropical cropland compared with in temperate cropland, possibly due to different microbial composition and its characteristics, (2) Soil erosion in Tanzanian croplands were critically occurred but their controlling factors were clearly different for clay mineral composition and soil textures, and (3) Some phosphorus (P)-efficient legume can solubilize and absorb the recalcitrant soil P in Tanzanian cropland soils.

**Terroir for Sake (Japanese rice wine) (Drs. Sugihara and Kosaki)**

Like Wine Tourism and Whiskey Tourism, “Sake (Japanese rice wine)” is becoming a tourism objective in Japan. “Terroir” is a topic that tourists are interested in when traveling in a specific area with appreciating their own brands of wine. It is a real story about the relationship between the taste of wine and the environmental conditions based on the history of research thereof. It has, however, not studied well in Japan.

We are trying to establish such a terroir story based on Japanese Sake, starting the study the relationship between rice quality and the soil beneath. Based on the research in one of the major brewer’s rice producing area, Hyogo, Japan, we found the chemical composition of rice was affected by the type of soil in that area, i.e. magnesium, manganese, zinc and iron were higher in the soils derived from basalts and serpentines than those in the alluvial deposits and it was also true in the elemental composition of rice plants grown on the respective soils. How is the taste of those wines? Will come next!

**Urban biodiversity and residents: conflicts and public acceptability (Drs. Hosaka, Numata and Sugimoto)**

Toward conservation and restoration of urban biodiversity, understanding the current status of human-wildlife conflicts and public acceptability for nuisance wildlife is important. We analyzed data on wildlife consultations in Tokyo, and found that the number of consultations on wasps and snakes were high in the greener areas. Also, we conducted a questionnaire survey to 1,030 residents in and around Tokyo, and found than acceptability toward nuisance wildlife was affected by socio-demographic factors such as gender and age and affective attitudes (like or dislike) toward wildlife in general.

**Development of research tourism to as a new tool for science communication (Dr. Hosaka and Numata)**

For sustainable land resource management, it is necessary to provide a method for solving these issues and for facilitating the reconstruction of urban tourist destinations, a comprehensive research project on regional and tourism dynamics was conducted in the Ueno District, Tokyo. In FY2015, spatial changes and relevant driving forces were analyzed and clarified by using several geographical techniques: GIS was used to visualize commercial and tourist spaces in the modern and Edo periods and key persons in the Ueno District were interviewed. Moreover, questionnaire surveys were administered to tourists through SNSs to determine their evaluation and spatial cognition of the Ueno area and its local festival.

**Comprehensive study on regional and tourism dynamics to facilitate problem solving and the reconstruction of urban tourism destinations (focusing on Ueno District in Tokyo) (Drs. Sugimoto and Kikuchi)**

The number of urban tourism destinations in Tokyo Metropolis has been growing; stable foundations for management have been established in response to huge market demand, including among city residents. However, various issues related to regional and tourism management have emerged due to changes in the city structure caused by urban development, population changes, globalization, the growth of competitive regions, etc. To provide a method for solving these issues and for facilitating the reconstruction of urban tourist destinations, a comprehensive research project on regional and tourism dynamics was conducted in the Ueno District, Tokyo. In FY2015, spatial changes and relevant driving forces were analyzed and clarified by using several geographical techniques: GIS was used to visualize commercial and tourist spaces in the modern and Edo periods and key persons in the Ueno District were interviewed. Moreover, questionnaire surveys were administered to tourists through SNSs to determine their evaluation and spatial cognition of the Ueno area and its local festival.

**Sustainable land resource management in tropical Asia-Africa, with special reference to soil-plant-human nutrient dynamics (Drs. Sugihara and Kosaki)**

For sustainable land resource management, it is necessary
We conducted the survey on the status of science communication between researchers and local people around the World Heritage Area in Shirakami, which have high values in both scientific research and tourism activity. We found that both researches and tourism activities were less active in Shirakami than Yakushima and Shiretoko, which resulted in little cooperation and/or conflict between the two activities.

The extent and characteristics of insect-related events in the modern Japan (Drs. Hosaka and Numata)

The negative public perception toward insects is a general trend and prevents global conservation of insects and their habitats. Japan, however, exceptionally has a long history of appreciating insects and various insect-related recreation and tourism. We conducted extensive website surveys on the insect-related events in the modern Japan, and reported its extent and characteristics. These information would be helpful for other countries to understand how to enjoy insects and enhance insect conservation.

Plant-seed predator interaction in tropical rainforests of Southeast Asia (Drs. Hosaka and Numata)

Dipterocarps in the lowland rainforests in SE Asia are known for its community-wide masting called general flowering. During the general flowering, closely-related dipterocarps come into flower one after another staggering the flowering peak by a few weeks. We examined how the order in which dipterocarps flower affect seed predation by weevils specific to dipterocarp seeds. The weevils attack seeds of species flowering earlier more severely than those flowering later, suggesting that later flowering is better to avoid seed predation by weevils.

Tourism effects on wildlife in protected areas (Dr. Ranaweerage)

Tourism-induced disturbance is a growing concern in wildlife conservation worldwide as the target species for tourism are threatened or endangered species in many cases. It is concerned that disturbance from tourism activities can cause decrease in feeding time and increase in energy expenditure of animals, which degrade the health condition of animals and their reproductive ability. We examined the behavioral changes of free-ranging Asian elephants in a Protected area in Sri Lanka. Human impact on free ranging elephants is often studied and revealed based on elephant death or injury caused by human–elephant conflict because such impacts are extreme as well as recognizable and comparably easy to measure. Consequently, less attention is paid on issues of non-consumptive use of elephants such as tourism disturbance on elephants.

The study identified specific behavioral changes of elephants during the tourism activities and also several causes for such behavioral changes. Further, the study discusses the importance of monitoring tourism effects on endangered species such as Asian elephants and taking proper measures including controlled tourist behavior and vehicle activity in protected areas in order to reduce disturbance of wildlife behavior.

Wildlife management and rural community in the third world (Dr. Ranaweerage)

Third world countries have high biodiversity, but also face serious issues of wildlife management. One such issue is the conflicts between wildlife authorities and rural people. Establishment of wildlife management measures such as protected areas has been causing various costs to rural people including inaccessibility to resources, forced migration, wildlife damage to crops, properties and lives. Consequently, rural people are less supportive of conservation efforts. In this context, wildlife tourism is considered an important mean of connecting rural communities with wildlife authorities and rural development. This study investigated the involvement of rural community in wildlife tourism in Sri Lanka through the analysis of socio-economic data and revealed the impact of wildlife tourism in linking rural community and wildlife management by comparing the attitudes of people who are involved in tourism with those who are not involved in tourism.

1.2 Culture-Based Tourism Unit

A study of modern cultural tourism in a city (Azuma)

Since the 19th century, the urban tourism has developed with the modern arts, including literature, music, painting, and fashion. A city is the reflection of its culture and people’s way of
life. This study reveals the transition of cultural tourism in a city through the urban history.

Studies on use of big data for tourism and transport planning (Drs. Shimizu, Kurata, Ai and Katagiri)

Methodologies on big data analyses in order to understand multilaterally mechanism or factors of travel behavior are required for proposing suitable and effective tourism planning and policy in cities and regions. With the background, these three researches were conducted in this fiscal year. a) Tempo-spatial characteristics of round-trips in a tourism area were analyzed using GPS data detected by a car navigation service. Possibilities of mitigating traffic congestion on expressway links in the holiday afternoon caused by the concentration of return trips were discussed through the analysis. b) Travel behaviors in a tourism area where enjoying nature scape is the most motivated tourism resource were analyzed using the same GPS data. The effect of visible condition of the resource on the difference of time spent at tourism spots and order of stopovers were analyzed. c) Characteristics of use of share-ride cycle system for strolling in tourism area was analyzed using an open big data.

Studies on roles of transport infrastructure to regional tourism promotion (Drs. Shimizu and Katagiri)

This study conducts the following analyses on travel behavior in regions can not only contribute to revitalization of local tourism industry and improvement on accessibility condition, but also can play a role of attractive tourism resource and a symbol of unification on regional promotion. With the background, these three researches were conducted in this fiscal year. a) The review of previous researches on effects of transport infrastructure development and service level improvement on the growth of production in tourism industry was conducted. In detail, the use of Computable General Equilibrium method was focused. b) The effect of symbolic railway service such as the use of steam locomotive train on collaborative actions on tourism promotion in a region was analyzed. c) The condition in that transport infrastructure in its development stage is regarded as tourism resources was analyzed.

Studies toward proposing better policy measures on transport system development and improvement for tourism promotion in Malaysia (Drs. Shimizu and Katagiri)

Self-drive tourism has been rapidly growing in newly industrialized economy such as Malaysia owing to the successive economic growth and the income increase in the middle class. This has resulted in heavy traffic congestion on expressway links to major tourism destinations and deterioration of walking and other environment in tourism areas. With the background, these two researches were conducted in this fiscal year focusing on Malaysia. a) The effect of level of service on access expressway links to tourism destinations on satisfaction and revisit intention to the destinations was analyzed using the original questionnaire survey data. b) Methodological framework on assessment of pedestrian level of service in road network of concentrated tourism area, which can assess traffic function and attraction/amenity function simultaneously was proposed.

A study on the planning technology systematization and education development of community-based tourism development (Drs. Kawahara and Okamura)

Recently, national and local governments have high expectations for tourism as a regional revitalization method, but the scheme is still in early stages of development. The aim of this research on planning technologies is to systemize the processes of goal setting, policy-making, guidance, consensus, and implementation as a method of Community-Based Tourism Development (CBTD). It requires urban planning technology in Community-Based Development (CBD) to integrate with various methods of tourism development. Tourism and Regional Planning Sub Committee (chaired by Susumu Kawahara) of the Architectural Institute of Japan is currently carrying out this study. This fiscal year we studied how to prevent and control negative impacts of tourism by using urban planning methods, and conducted case studies on how to cooperate with companies in non-tourism industries and civic organizations. We held workshop entitled “Rethinking the Community Based Tourism Development (CBTD) -Exploring links between tourism business and area management-.” This work was supported by JSPS KAKENHI. Grant Number: 26283016.

A study on the development of a regional branding strategy implemented with local communities (Dr. Kawahara)

The aim of this research is to develop a new method of regional branding strategy (RBS). The first feature is a bottom-up approach that is a new RBS planned with city officers, local business owners and residents, who contributes Community-Based Tourism Development. The second feature is the new method that integrates three categories of tourism resources; natural and cultural environment, interactions between tourists and local residents, and local specialty products. Most of the past RBSs focused on promoting local specialty products. In 2014, as a social experiment to develop this new RBS method, we organized a series of regional branding workshops with Akiruno city officers, local business owners and residents. In addition, using this RBS method, we organized workshops to plan a new theme park for TOKYO SUMMERLAND CO., LTD., in 2014. This workshops led to the opening of “Wonderful Nature Village” by TOKYO SUMMERLAND CO., LTD., a multi-purpose dog-run outdoor and nature park with healing themes, in April 2016 (https://www.wnv.tokyo/intro) .
An action research study on an area management methods to regenerate “Satoyama” areas and to support community development at the time of large-scale residential housing development (Dr. Kawahara)

This project is an action research to promote the conservation and utilization of regional resources by using an area management method. Our laboratory has participated in “Area Management Association MINAMIYAMA (AMAM)” which aim to regenerate “Satoyama”, community-based forest, as a mitigation and to develop a sense of community in large-scale housing development in Inagi City, Tokyo. AMAM is composed of various stakeholders such as a land owner, a developer, an urban planner, a NPO worker who manages forest and vegetable fields, a designer, a community café owner, a musician and a professor. In 2014-2015 we organized a series of design workshops and events with other AMAM members to build a club house that later became the base of our area management activities, and to establish an area management organization to help start-up of activities. The construction of the club house will be completed at the summer in 2016.

A study on regenerating high streets in London, UK (Drs. Okamura and Kawahara)

This study focuses on the High Street policy promoted by Greater London Authority as one of the regeneration schemes in London. Firstly, it clarifies the process of policy making based on interviews with some key persons. University researchers on ahead insisted the social, economical and cultural significance of high streets in terms of liner urban structure and then High Street 2012 towards the London Olympic game was started as a pilot project. This success eventually led GLA to launch the high street fund scheme across London. Secondly, conducting detail analysis regarding GLA’s high street programmes, it reveals that they have stressed on its physical aspect even though they have seemed to aim at being comprehensive and restoration of historical buildings have had a spillover effect on several buildings which are ineligible for subsidies. As a result GLA’s high street programme has been contributing to enhancing physically liner urban structure at least. This study was partially conducted as Nozomi Nakagawa’s master thesis.

Explore for a comprehensive and active planning method to develop a creative town in Ota ward, Tokyo (Drs. Okamura and Kawahara)

Recently in Japan, the urban environment in industrial cities has been changing due to changes in the industrial, economical, and social structure. Ota Ward in Tokyo has small industrial districts, some of which are mixed-use areas. In the 1980’s there were 9,000 factories, but currently that number has been decreasing and although the factories still possess sophisticated skill-sets, their working environment is inadequate as it is surrounded by too many residential dwellings. In addition, it is too difficult to pass technical knowledge onto succeeding generations. In this research, we focus on a comprehensive and active planning method, specifically, on how to integrate manufacturing, community development, and city promotion so as to solve this kind of problem in mixed residential-industrial cities. Firstly, we investigated the local resources, which consisted of a small industrial network of a “mixed-used” status in Ota Ward that had access to an international airport. Secondly, we created a vision encompassing these three points: (1) Stock (property) management, (2) Supporting Creative Industry, and (3) City Promotion via Industrial Tourism. Currently two projects are in progress: One is the industrial tourism event, “Ota Open Factory”, which is a one day program where many restricted access small factories are opened to the public in the mixed-used industrial area; and the other is “Creative Town Lab. Tamagawa”, which is an active community space (usable for education, workshops, meetings, exhibitions, events) that has been converted from a vacant factory. With these projects, we are trying to realize the area’s potential through activities, recreating a more creative and active city culture and identity.

Town management system based on cultural resources (Dr. Katagiri)

Sustainable community activities requires participation of new actors and cooperation between divers stake holders. The challenges of town management of Yanaka area, one of the popular inbound tourism area in Tokyo, is to share and transmit the future vision of the town, and to find balance among policies for tourism and conservation of the historical landscape and residents’ daily life and disaster prevention. We conducted a “Project School” as a human resource development program of Tokyo Cultural Resource Alliance, collaborated with the town management activities.

Tourism resouces in infrastructure tourism (Drs. Katagiri and Shimizu)
This study aims to clarify the future of Infrastructure Tourism from viewpoint of the suppliers and travel agencies. We focused on the infrastructures under construction or the operating system and examined the purpose and program of the tours. The features of infra-tourism resources are the rare opportunities and the dynamic form and movement, and strong relationship with local culture and nature, social context. From a profitability standpoint, the tour with infrastructure under construction are not efficient because of the rare opportunities.

Development of sustainable living index from residents’ viewpoint (Dr. Katagiri)

In recent years, statistical data and various indices to evaluate status of the cities have been offered by nation or research institute. These indices and data are organized mainly on the local government level. This study aims to develop a sustainable living index for residents to town management mainly for suburban area. To evaluate the quality of life in the town from personal level to community level, we set four viewpoints; “Diversity of the place”, “diversity of the activity”, “diversity of the people” and “Sensitivity to change of the town” and discuss each items based on case studies.

On the lifestyles and the living techniques in harsh monsoon climate: focusing on the methods of broadening “Habitability” of the flood-prone areas, Hue-Vietnam (Furukawa)

Is Flood a boon or a bane for Hue?

In the mid-stream area of the Huong River (known as Sông Huong), many settlements have been formed and developed around the Citadel City (known as Kinh Thành Hue), despite having suffered from repeated floodwater damages until now.

For the purpose of mitigating flood disasters, Vietnamese government had built hydroelectric dams in the upstream region of the Huong River. However, such huge environmental control techniques of civil engineering works threaten to not only affect the environment of this region negatively but also change the inhabitants’ perception about life with water.

Understanding the how and why settlements could sustain their living in flood-prone areas is synonymous with learning the methods how local inhabitants have actively adapted their lifestyles to the harsh water environment and broadened “Habitability” of the areas.

This research tries to build models of settlement reorganization for the areas of potential flooding in Hue-Vietnam that respect various types of water-friendly lifestyles, through defining the topographical features of each area and extracting the characteristics of lifestyles which can be seen in such flood-prone areas of Hue-Vietnam.

Action research on the community development in the peripheral villages potentially-relevant with the sustainable management of the historical environment in Hue-Vietnam (Furukawa)

This research, with local planners’ first-hand assistance, takes the peripheries of the successive Imperial Tombs in Hue-Vietnam as precedents for investigating the distinct historical-eco system of East Asia, and tries to establish the sustainable management model of the peripheral villages around the Imperial Tombs, where local inhabitants can sustain their self-sustaining improvement of the dwelling environment.

As the second step of this research, I have organized the community participatory seminar “the Legacy of our ancestors, the Future of our children” for a week in mid-August 2015 under the cooperation with the Hue Monuments Conservation Centre and Thua Thien Hue Provincial Institute of Planning and the local authority and Waseda University team, Japan. Based on the analysis of inventory in 2014, our research team had came up with 6 main principles for the appropriate conservation of the Imperial Tomb and the sustainable development of the peripheral villages on a hypothetical action scenario. Thus, during the participatory seminar, workshop facilitators collected opinions on the scenario and several pilot project proposals from the participants. As a result of the seminar, participants have developed tentative ideas in their own ways and eventually achieved a general consensus on a local manifesto composed of 6 principles for the community development associated with historical environment conservation around the Imperial Tomb in this area.

This research seeks consequently to conduct the collaborative pilot projects with locals, which contributes to improvement of the dwelling environment as well as to management of the integrated historical-eco system around the heritages.

3. 3 Tourism Policy and Tourism Information Unit

Improvement and social implementation of web-based interactive tour planner (Dr. Kurata)

Together with Hara Lab at RACE Institute, Univ. of Tokyo, we kept our work toward social implementation of CT-Planner, a web-based interactive tour planner which we had developed
since 2009 (http://ctplanner.jp). This year, we increase its covering destinations to 34, made preparation for the support of five languages, revise the program to support smartphones and tablet PCs, and exhibit our work at Tourism Expo Japan 2015. In addition, in collaboration with us, two IT companies started to use our CT-planner for the service on hotels’ in-room/in-lobby devices, and two railway companies are currently preparing for the use of our CT-Planner at their information center and website.

**Improvement and Social Implementation of Web-based Virtual Tour Tool (Drs.Kurata and Ai)**

By revising our Zensekai Guide-san, we developed Daredemo Guide, a web-based virtual tour tool with which ordinary people can view and also create virtual tours making use of Google Street View and their own panorama photos. We exhibited this tool at G-Kukan Expo 2015 and Miyako Festival, and conducted a workshop at GIS Day 2015. We also provided this tool to other schools (a university, a junior college, and a high school) and let them utilize our tool in their education of tourism/localities.

**Extraction of Valuable Tourist Information from Big Data (Drs.Kurata and Ai)**

In collaboration with Ishikawa Lab at Graduate School of System Design, TMU, Nanba Lab at Hiroshima City University, and so on, we worked on the development of c techniques for extracting attractive tourist spots, topics, and characteristics from social big data, which is made from the user post to social media and word-of-mouth site. This year, we particularly focused on online photos that show tourist parties, from which we attempted the extraction of tourist characteristics of destinations and the comparison of photo-taking places of different types of tourist parties.

**Visitors’ evaluations of aspects of local lives in historical districts (Drs.Naoi and Kurata)**

This project supported by the Grant-in-Aid Scientific Research investigates the formation of visitors’ gaze on the aspects of local lives in historical districts. The results of a questionnaire surveys to visitors in the historical districts in Takayama City, Japan, regarding the relationship between differences in the objects that visitors gaze on in a historical district and the perceived fulfillment of their objectives, were presented at an overseas tourism conference. The results imply that the visitor’s gaze, especially when focused on locals, may relate to the visitors’ better understanding of the district and encourage interaction with locals. The findings of another questionnaire to foreign visitors in the same districts, which aims to elucidate differences between tourism spaces and local spaces from their viewpoint, were also presented at an international conference in Tokyo. The presentation reported that, while both spaces differ from each other in light of mentioned spots, both spaces were suggested to have been evaluated based on the same evaluative criterion in that the regression analyses revealed positive effects of old and touristic senses on the overall evaluations of both spaces.

**The interaction effects between touristic characteristics of other people and places on visitors’ place evaluation (Dr. Naoi)**

This study empirically investigates the touristic characteristics of other people and places on potential visitors’ evaluation of the places. Sixty undergraduate residents of Tokyo rated slide photographs of six sites in Okinawa, Japan, on 13 bipolar adjective scales and a scale regarding the overall evaluations. For each site, photographs with no people, photographs with four decoys dressed as locals, and photographs with four decoys dressed as visitors were prepared. The 13 scales generated three factors, ‘Harmony’, ‘Activity’, and ‘Touristic Novelty’, and cluster analysis using the factor scores generated three ‘touristic sites’ and three ‘non-touristic sites’. For both clusters, the higher scores of ‘Harmony’ and ‘Activity’ led to better overall evaluations, and the photographs with visitor-like decoys showed the lowest scores of ‘Harmony’. Regarding ‘Activity’, while the photographs featuring no people showed the lowest score for both clusters,
the photographs with visitor-like decoys showed higher scores than the photographs with local-like decoys for ‘touristic sites’. The results imply that the presence of other visitors may degrade visitors’ overall place evaluation by weakening the sense of harmony, and that it may also enhance them, particularly at touristic sites, by strengthening the active aura.

**Visitors’ gaze inside and outside historical houses (Dr. Naoi)**

This study compared visitors’ gaze inside and outside historical houses. Because individuals often personalise rooms to express themselves as suggested by the concept of personalisation of space, it is conceivable that visitors sense the residents’ lives inside the houses. Twenty-three undergraduate non-residents photographed objects that interested them inside and outside four preserved Western-style houses in Yokohama City, Japan. Each participant selected 32 particularly impressive photographs and rated the pictured objects on 17 bipolar adjective scales, including some concerning historical districts and others regarding local lives, and a scale regarding the overall evaluations. Consequently, 207 data for the outside and 344 for the inside were collected. The 17 scales generated four factors: ‘Luxury/Must-see’, ‘Local Lives’, ‘Harmony’, and ‘Antiquity’. A t-test revealed the higher scores of ‘Local Lives’ for the indoors. A multiple regression analysis revealed that the overall evaluations of indoor objects were affected positively by ‘Local Lives’ and negatively by ‘Antiquity’ while ‘Luxury/Must-see’ and ‘Harmony’ showed positive effects for all the objects inside and outside the houses. As a result, compared to the outside, visitors are implied to sense the residents’ lives and respond positively, which implies that the inside of historical houses can be leveraged to enhance visitors’ experiences.

**Relationship between participants’ evaluation of a marathon event and the fulfilment of their desires (Dr. Naoi)**

In Japan, marathon events have recently been attracting an increasing number of participants. In the case of a marathon event, not only attributes of the event but also those of the venue may act as pull factors. Furthermore, the influences of the event’s attributes and the venue’s attributes may vary depending on participants’ inclination towards the event and that towards the venue. Using a questionnaire to participants in Toyama Marathon held in Toyama prefecture, Japan, this study examined relationship between their evaluation of the event’s and the prefecture’s attributes. The effects of their involvement in running, the strength of their motives to participate in the event, and their attachment to the prefecture on such relationship were also investigated. As a result, whether participants were attached strongly to the prefecture or to running, their favourable evaluation of the prefecture’s attributes, especially its natural attractions, was found to enhance both their intention to participate in the event again and their intention to revisit the prefecture through the fulfilment of their desires for self-actualisation/self-esteem, appreciation of the prefecture and refreshment. This way, this study points to the importance of event venues’ attributes as supplementary pull factors.

**Characteristics of tour guides that enhance participants’ mindfulness (Dr. Naoi)**

Interpretation is an educational activity to clearly present the values of objects to appreciators, and one of its roles is to enhance their mindfulness, which refers to the state of them being proactive, interested, explorative, and inclined to reevaluate what they are appreciating. A tour guide has been regarded as a way of interpretation that is particularly effective to make visitors mindful. However, there has been scarcity of studies on relationship between the characteristics of tour guides, particularly their personal characteristics, and visitors’ mindfulness. Thus, in order to elucidate tour guides’ characteristics that enhance visitors’ mindfulness, the authors conducted a questionnaire survey to participants in a guide tour at Edo-Tokyo Open Air Architectural
 drivers on driving time and toll fare are derived for both weekday and weekends, and for morning peak hours, daytime, evening peak hours, or midnight. Further discussion is made on relationship between route choices and existence of congestion or traffic jam based on travel speed data collected from roadside traffic counter device.

**Study on Inbound Tourism Policy (Hompo, Shimizu, Kurata and Naoi)**

Study Group on Inbound Tourism Policy organized and managed by myself in corporation with Grunavi Research Institute Inc. and composed of Japan Tourism Agency, local governments, scholars and private sectors has been conducting a series of research on inbound tourism policy.

**The impact of regional cooperation for sustainable tourism community development (Dr. Takazawa)**

This research aims at realizing the impact and features of regional cooperation for sustainable tourism community development through the case study. The results of the previous studies are 1) Setting up the clear concept and goal, and share it with stakeholders, 2) Working in a wide range of areas, 3)Effective strategy of marketing, 4) Partnership with diversified bodies. However, further discussion needed 1)actual condition of reducing the environmental load and 2)cooperative structure in local level.

**Study on the key factors of familiarization trip effectively resulting in the commercialization of destinations: A case study on measures taken by prefectural government of Gifu (Aso, Ai and Hompo)**

Tourism promotion as the activating solution to the region of the change in the population decline and industrial structure has been attracting attention.It in particular is gaining importance. Because of Japanese travel market is shrinking attract foreign travelers.This study is focused on the familiarization trip. It is expected to increase to be exposed to the media and to be organized the trip by the foreign travel agency and the staff of media are invited to tourist attractions. This is what kind of measures to discuss whether it is effective.Study area is the Gifu Prefecture, in recent years the national trend more to foreign visitors hotel guest has been increasing. Organization of measures to discuss whether it is effective.Study area is the Gifu Prefecture, in recent years the national trend more to foreign visitors hotel guest has been increasing. 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3. Publications

3.1 Nature-Based Tourism Unit

Takashi KOSAKI

Presentations

- Kosaki, T. 2015. What have we learnt from the history of soil degradation?, Annual Symposium on Soils and Fertilizers, Tokyo, April 4, 2015
- Kosaki, T. 2015. Soil degradation in the world; Mechanism and remediation., Annual Symposium of Japan Association of Soil Conditioners, Tokyo, May 28, 2015
- Kosaki, T. 2015. IYS achievements of East and Southeast Asia Federation of Soil Science Societies, IUSS Celebration of International Year of Soils 2015, Vienna, Austria, December 7, 2015

Articles


Books • Reports

Toshio KIKUCHI

Presentations


• Kikuchi, T. 2015. Horizontal division system of truck farming production as alternative strategy around the Tokyo metropolitan area: geographical study on the strategy for sustaining and developing Japanese agriculture (2). The Association of Japanese Geographers, Ehime University, Matsuyama.


• Kikuchi, T. 2015. Cooperation with local communities in activities of Satoyama conservation through the program of Tokyo green campus. Geography, 60-12, 20-27. (in Japanese)


Books • Reports


Shinya NUMATA

Articles


• Sakurazawa, H., T. Hosaka and S. Numata 2015. Consumption Behavior of Tourists to Ban’ei Horse Racing, Obihiro, Japan.
International Journal of Tourism Science. 8: 125-131


Koun SUGIMOTO

Presentations


- Sugimoto, K. 2015. Exploration of day trippers’ movement in the Tokyo metropolitan area through the pattern mining of people flow data. The 10th China-Japan-Korea Joint Conference on Geography (The 1st Asian Conference on Geography). 9-12, October 2015, Shanghai, China.


Articles


Books • Reports


Soh SUGIHARA

Articles


- Cao, L., Ikazaki, K., Kadono, A., Siriguleng, Sugihara, S. and

Tetsuro HOSAKA

Articles

Books • Reports

Ranaweerage Eranga

Presentations

Articles

3. 2 Culture-Based Tourism Unit

Hideki AZUMA

Books • Reports
• ‘The Mysteries of the relocations of the capital in the Nara era by Emperor Shomu’ and ‘Why did Ieyasu Tokugawa decide Edo to be the capital of the Tokugawa shogunate’ in ‘The decisions of the heroes in Japanese history, broadcast in June and July in 2015

Tetsuo SHIMIZU

Articles

Susumu KAWAHARA

Presentations

Articles

Books • Reports

Yu OKAMURA
Presentations
• Nohara, T., Okamura, Y., and Kawahara, S. 2015. Research for a comprehensive and active planning method in an industrial-residential mixed area -focused on Ota Creative Town Vision in Ota Ward, Tokyo-, APSA201513th International Congress of Asian Planning Schools Association (APSA), Universiti Teknologi Malaysia, 2015.08

Arts

Yukiko KATAGIRI
Presentations
• Katagiri, Y. 2015. City Dwellers Create Landscape of Agriculture, Mini-forum in the 2015 annual meeting of the Japanese Institute of Landscape Architecture “City Dwellers Create Landscape of Agriculture”, 2015.5.24.

Articles

Books • Reports

Naoaki FURUKAWA
Presentations

3.3 Tourism Policy and Tourism Information Unit
Yohei KURATA
Presentations
• Ikeda, T., Kurata, Y., and Ishikawa, H. 2016. A Study on the


**Articles**


**Books • Reports**


Taketo NAOI

Presentations


Artsles


Hisatoshia A

Presentations

- Ai, H., Naoi, T., Kurata, Y. and Tanaka, K. 2015. Analysis of
walking speed for extraction of stroll behavior using GPS data, Proceedings of the annual meeting of GIS Association of Japan, 24, CD-ROM. In Japanese


**Articles**


**Makiko Aso**

**Articles**

4. Awards and Honors

Toshio KIKUCHI
- An Award for Distinguished Service of Meguro City College, Meguro City

Koun SUGIMOTO
- Incentive Award, Japan Association on Geographical Space, June 2015.
- The Winner of Excellent Poster, The 10th China-Japan-Korea Joint Conference & The 1st Asian Conference on Geography, October 2015.

Tetsuro HOSAKA
- Kira Award (Japan Society of Tropical Ecology)

Yohei KURATA
- Best Prize, Geo-Activity Festa, in G-Kukan Expo 2015

Taketo NAOI
- Presentation Award, "Visitors’ evaluation of houses in historical districts: Focusing on the aspects as historical houses and those as shops [Homonkyaku ni yoru rekishiteki machinami ni okeru tatemono no insho hyoka: rekishiteki tatemono oyobi shoten toshite no sokumen ni chakumokushite]" (*The Japanese title is not available. The title is translated into English by the authors for this report), The 22nd Annual Conference of Man-Environment Research Association.

Department of Tourism Science
Tokyo Metropolitan University Faculty of Urban Environmental Sciences

1-1 Minami-Osawa, Hachioji-shi, Tokyo, 192-0397, Japan
Tel: +81 42 677 2664
Fax: +81 42 677 2665
Email: sugimoto@tmu.ac.jp
http://www.ues.tmu.ac.jp/tourism/index.html