

KU Today

KAGOSHIMA UNIVERSITY NEWSLETTER

Autumn
2016



学部紹介
特集

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Global Initiative Center

Research Center for Pacific Islands



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KU Today

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KUToday is a biannual publication to present information about Kagoshima University to a wider international audience. Each edition will feature one faculty for prospective overseas students as well as other topics such as educational programmes, research and alumni information. Some articles are translations from the Japanese-language publication, *Kadai Journal*, upon which *KU Today* is loosely based. Any comments or suggestions about *KUToday* will be warmly received.

PDF files on *KUToday* can be downloaded from <http://kokusai.kuas.kagoshima-u.ac.jp/kucip/>

A Note on Names
Following convention East Asian names appearing in *KU Today* are written family name followed by given name.

Autumn 2016



Global Initiative Centre



Prof. Suzuki Eiji, Director of the Global Initiative Centre

The Global Initiative Centre was established in April 2016 to consolidate the Centre for International Cooperation and the International Student Centre. It consists of three departments: the Planning and Networking Division, the Study Abroad Division and the International Student Division, each staffed by two faculty members. The Planning and Networking Division has as its main goals the promotion of a global education and research environment, the dissemination of international information, supporting international joint education and research and assisting the teaching staff participating in overseas training. The Study Abroad Division cooperates with the various faculties to develop overseas training programmes and to design and implement long-term study abroad opportunities in strategic collaboration with Kagoshima University's Academic Exchange Agreement partner institutions. The purpose of the International Student Division is to assist the university in its goal to increase foreign student enrollment, to offer Japanese language and culture education to international students, to facilitate international exchange between the local community and the foreign students and to develop, in cooperation with the faculties, a comprehensive support system for international students.

The initiatives prior to the establishment of the Centre include the launch of the Educational Program for Spirit of Enterprise in Global Contexts

(P-SEG) in 2014. As of 2015, 251 students had taken part in overseas programmes and exchanges. A further 28 Kagoshima University students are studying abroad long-term. In 2015, Kagoshima University had 289 international students. In order to better disseminate international information, the *KU Today* Newsletter magazine was launched in 2011. Published twice a year, it aims to introduce the various faculties and research activities of the university.

Currently Kagoshima University has concluded 72 Memoranda of Agreement at inter-university level and a further 52 at faculty level. 131 international joint research activities are being conducted with 850 faculty members being sent abroad in 2015 alone. Among the postgraduate students, 128 scholars took part in international conferences and 284 international researchers are pursuing their studies at Kagoshima University. The establishment and support of these academic research agreements also promotes joint research opportunities and effort at the international level. Until now, the Centre for International Cooperation and the International Student Centre have pursued these goals separately but, since their integration into the new Global Initiative Centre, they can promote the internationalisation of Kagoshima University through closer and more effective collaboration.



Planning & Network Division

Our Mission

We at the Global Initiative Centre (GIC) are here to promote the ongoing process of globalising Kagoshima University in order to make it more accessible and competitive in a rapidly changing world. The Planning and Network Division is responsible for the strategic planning, coordination, and overall support of global education and research at the university. In collaboration with university faculties and administration, we coordinate various international

programmes, advance the effort of making information about Kagoshima University available to the international community, and promote partnerships with overseas institutions.

Based on these aims we offer the students many opportunities of studying abroad, encourage the foreign students to choose Kagoshima University for their study, and welcome international guests and visitors.

Primary Activities

1. Student Support

In accordance with the vision of making Japan and Japanese young people more prepared and more open towards the international community, we strive to encourage the students to view themselves not only as Japanese citizens but citizens of the world. Naturally, this is a process that takes time, determination and effort. First and foremost the students' curiosity to meet and explore the world outside their comfort zone must be nurtured: initiative and entrepreneurship are two of the guiding forces in the global society and economy.

An increasing number of Japanese students are showing an interest in developing international connections and they often need advice and support.

It is our duty and pleasure to aid them (in cooperation with the Study Abroad Division) in their efforts: from discussing what type of international experience the students prefer to help them apply and prepare for it.

The programmes offered in the Centre include intensive language courses aiming at improving the confidence and communication skills of the students, preparation courses for foreign-language tests (especially TOEFL) and several study tours with different purposes. Furthermore, the Centre provides students the scholarship collected from the local business companies and notables to support their trips. As a rule, we aspire to provide comprehensive support to the students from idea to reality.



NDSU Summer Course

We run a summer study programme at North Dakota State University, USA based on our exchange agreement. It is a great opportunity for students to spend several weeks in a foreign university and attend classes and culture exchange events there.



Japan and Korea Exchange Programme

In collaboration with Kyushu University, Seinan University and Pusan University in Korea, an exchange programme is provided for Japanese and Korean students to learn together about each other's country, experience business internships and discuss global issues.

2. Collaboration with Faculties and Overseas Institutions

Promoting international research and education in the university, the centre supports the faculties to conclude MoU and student exchange agreements with overseas institutions. Kagoshima University has at present 124 partner universities in different parts of the world

(see map). The centre aims to play an active role in collaborative programmes with these partners, finding resources and addressing the needs of the faculties while following the policy and trends of the Japanese government in global education.

Kagoshima University Academic Exchange Partner Institutions



3. Providing Information

As part of the effort to make Kagoshima University better known and more accessible to the international community, we publish the KU Today Newsletter to encourage foreign students and researchers to choose Kagoshima University for their study activities. In each

issue detailed information about a particular faculty and graduate school is provided. Since its launch in 2011 all issues are available online on the Kagoshima University Homepage.

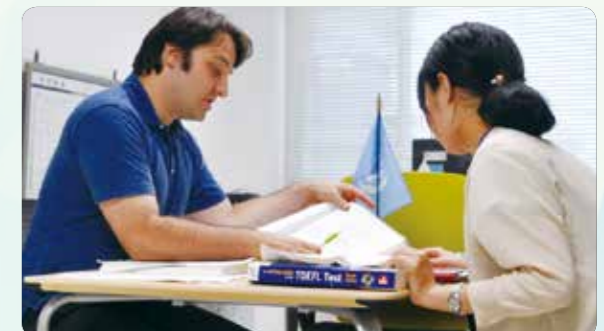
Staff

Sumie Nakatani, professor and head of the Division Joined Kagoshima University in 2009, she works in the center for global education and international collaboration.



She is engaged in the development and management of the study tours programmes. Her specialization is in social anthropology and South Asian Studies. She conducts field research in India and Japan. She is interested in the comparison of changes in family and kinship.

Nikolay Gyulemetov, lecturer Born in Bulgaria, former MEXT Scholarship grantee (2007-2014). Completed his BA and MA degrees at Kagoshima University. Joined the Centre in 2016, member of the P-SEG Programme staff (Intensive English and TOEFL classes) and the KU Today editorial team.



A TOEFL Test study meeting as a part of the P-SEG Programme



Study Abroad Division

P-SEG : Educational Programme for Spirit of Enterprise in Global Contexts

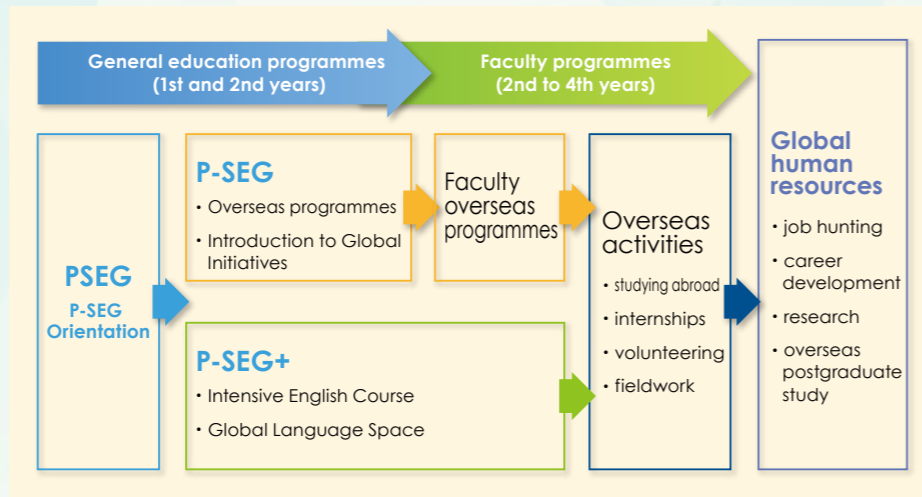
The Study Abroad Division operates a comprehensive international education programme from the time of admission until graduation in order to nurture the spirit of enterprise and globally competitive human resources. P-SEG offers first and second year students the opportunity to join overseas programmes where they can begin to understand issues that cannot be found in Japan.

After returning to Japan, the students can continue to develop their newly-acquired knowledge and experience by participating in the overseas programme reporting sessions, attending classes such as the Introduction to Global Initiatives, special lectures, or the Intensive English Course and participating in the Global Language Space, etc.

By taking part in these activities, students learn to think

globally and acquire the strength to act independently. Furthermore, information and support are offered to 3rd and 4th year students who want to study abroad or find internship opportunities overseas.

You too can take the chance to get ahead by participating in the P-SEG Programme!



Overseas Programmes

Overseas programmes are available at extra cost to both full-time and exchange international students. They are all eligible to receive course credits for participating in the various programmes. Currently, there are 12 courses run as General Education subjects, including trips to the US, Brazil, Thailand, Myanmar, Bangladesh, Iran, China, South Korea, and Singapore. A further 17 overseas programmes are administered by the individual faculties.



The 2016 Iran Study Tour Programme

Studying Abroad

The Study Abroad Division supports students who want to increase their overseas experience into full-time international study. International students on full-time degree courses at Kagoshima University are

eligible to apply to the Academic Exchange Agreement (Study Abroad) Programme and request financial support from the Study Abroad Assistance Fund for their travelling expenses.

Student Voice Choi Yeji (Korea), BA student in Economics

I got the chance to study at North Dakota State University (NDSU) in the US under the Academic Exchange Agreement Programme from August 2015 to May 2016.

The most important things I obtained from studying at NDSU are broader thinking ability and experience. North Dakota is located in the North Midwestern part of America which is a really cold area. Temperatures fell to -30°C when I was there. Nevertheless, there are always many cultural events and programmes that helped me think more diversely and understand other cultures. Also, I enjoyed American cultural events such as Halloween, Thanksgiving, Christmas, and Easter, which are popular in the United States. At Halloween, I carved pumpkins and dressed like a fairy. I made a ginger bread house at Christmas and hunted Easter eggs at Easter. These are unforgettable memories for me.

I also took several classes, including Elements of Economics. I major in Economics at Kagoshima



University so that class was interesting and useful for me. I also found out that my credits are transferable and the professor was very enthusiastic and helpful. Classes at NDSU are larger and there are a lot of tests and homework assignments. Also, most classes have discussions about



the topics being taught. My English level wasn't very high when I got there but I took an ESL class and, together with my everyday efforts to use English, my communication skills and confidence improved a lot. Furthermore, NDSU has many attractive elective classes

such as dancing, aikido, make-up, etc. I took two of those because I don't have the chance to take them in Kagoshima. One is named Floral Design and the other is Stagecraft. Floral Design teaches about how to artistically arrange flowers and leaves. It was really fun, and the greatest part of this class was that I could keep my designs. Stagecraft is a class on making props and background painting. It was the first time I used tools like electric saws and drills. I even had to sign a safety agreement at the beginning of class because this class was dangerous! However, I felt a sense of accomplishment at the end of the class. Studying in another country is not easy; however, you can get many things and have a great experience by doing so.

Exchanges between Japanese and International Students



Japanese students studying English with the help of an exchange student

Students from all over the world have come to study at Kagoshima University. Through studying, debating and participating in activities with them they can certainly expand their world view.

What is happening around the world, how do foreigners see Japan, what kind of lifestyle do the international students have in Japan, how are they learning Japanese? Japanese and foreign students alike discover so much through cross-cultural exchange. Would you like to open your mind and widen your world through active exchange with Japanese and international students?



International Student Division

Our Mission and Activities

Together with their academic advisors in the faculties, the International Student Division has established a support framework to help international students adapt more smoothly to life in Japan, especially at the beginning of their stay.

The Japanese Language Programme offers classes for all levels: from Level 1 with beginner-level greetings and sentence structures all the way to the Level 7 (comparable with the JLPT N1) for students doing research and academic presentations in Japanese. In classes of any level the four skills: speaking, listening, writing and reading can be acquired. Classes covering the need for everyday Japanese communication for students who do their research in English are offered as well as classes designed for those who want to do scientific work or learn business Japanese.

In addition, we make sure there is no lack of knowledge or understanding about Japanese society and culture so that students can build a comfortable relationship with Japan and its people and avoid unnecessary trouble. The Japanese Culture and Cultural Understanding classes are offered in both English and Japanese depending on the students' Japanese language skills.

Occasionally you can see interesting things in the Japanese class, like a Chinese-speaking German interpreting in Japanese the conversation between a Chinese student and a French student. As their Japanese level increases the students start to talk to

Subjects related to the Japanese Language



Subjects related to the Cultural Studies

Introduction to Japanese Culture

Introduction to Japanese Culture

Japanese Culture (General Education Classes)

each other in Japanese even when the teachers are not around. One of the major results of their study in Japan will be this network of friends from all over the world as well as Japanese.

Sometimes the Japanese classes can be a place of respite for the international students. Problems with research, problems with the Japanese language, homesickness, culture shock: every foreign student has experienced some of these. So being in class together with people experiencing similar trouble can offer some relief.

In 2015, Kagoshima University had 289 international students from 39 countries. Getting to know Japan, getting to know the world, getting to know yourselves, that is the kind of student life, we strive wholeheartedly to support!



Annual study trip to Kyoto



Check out our homepage for details of our Japanese classes

The International Student Division's Year

	Activities and Events	Japanese Classes
April	Spring term orientation Information for new students about life in Japan and at the university	Spring Term Class
May		
June	Japanese Poster Session Students of all levels make posters and introduce their home country and culture in Japanese. Every year about 100 people come to this event, asking questions and learning in a lively international exchange atmosphere.	
July		
August		
September	Student Tutor Briefing (for autumn arrivals) Explanation meetings for Japanese student tutors	
		SUMMER HOLIDAY
October	Autumn term orientation	Autumn Term Class
November	Yakushima cross-cultural seminar Field trip to the beautiful World Heritage site of Yakushima. The programme includes cultural exchange with local junior high school students and learning about Yakushima's environment: an opportunity to leave the campus and learn about other areas.	
December		
January	University Festival, KUFSA International Night	
February	Study trip to Kyoto A must-visit city after coming to Japan: Kyoto. Going to a place different from Kagoshima and learning about Japanese culture with fellow international students.	
March	Student Tutor Briefing (for spring arrivals)	
		Final Exams (February)
		SPRING HOLIDAY



Overseas Researcher & Student Accommodation Facilities

Places to experience both local and overseas culture

Hafiz Ur Rehman (Assistant Professor, Graduate School of Science and Engineering)

Kagoshima University hosts more than 300 overseas students and researchers from across the globe. Those coming as post-doctoral fellows or studying at post-graduate degree levels are actively involved in high-quality research whereas many others are busy in their studies to obtain bachelor and master degrees in all the faculties. To provide residence to a significant number of overseas researchers and students, there are several residential facilities such as the Guest House for Foreign Researchers and the International Residence Hall, which welcome everyone warmly from their arrival in Japan. There are permanent management staff and a few selected resident student tutors who guide and receive overseas students and help them settle in.

The International Residence Hall comprises of three buildings. Building 1 has 35 single, 3 double, and 2 family rooms. All the rooms are furnished (bed, desk, chair, wardrobe, and wash basin) however kitchen, shower



rooms, and toilets are shared among residents of each floor. Building 2, similarly, has 30 single, 4 double, and 2 family rooms. The rooms have toilets but kitchen and shower rooms are shared. In Building 3, there are 57 single rooms with all facilities included.

These rooms are available to rent for overseas students for a minimum of six months and a maximum of one year. Post-doctoral fellows and visiting professors can stay for a period of up to two years. Internet facility (Wi-Fi and LAN) is provided in all the residences.

There are lobbies on the ground floors in Building 1 and 2, where students can get together or watch cable TV. There are also halls in Building 1 and 2 where various international events are held and you can experience international culture and cuisine (such as events organised by KUFSA, the foreign students' association) on a regular basis. Japanese students groups also provide opportunities for overseas students and researchers to experience Japanese culture and traditions on their doorstep before they are used to the Japanese environment. Besides, the International Residence Hall, Kagoshima University also has a guest house for overseas short-/long-term researchers and visiting faculty. The guest house comprises 3 blocks where 22 single rooms, 2 double rooms, and 6 family rooms are available. It will not be an exaggeration to say that at the Kagoshima University's overseas residence facilities one can experience global and local cultures during their stay. Fulfilling their research or studies, they can bring back home their degree(s) along with a treasure of good memories of Japan.

課外活動

Exploration Club

Tsukasa Nao, BA student



Our club explores nature: mountains, rivers, the sea, caves, or any other outdoor challenge we wish to try. Our main activities are mountain traversing, caving, rafting, sea-kayaking and survival skills, but, following the true meaning of "exploration", we go to unknown places to experience new things and the range of our activities is hard to define. We visit islands, experience the locals' way of life, we go on bicycle trips across Japan and we believe we have a greater degree of freedom than other outdoor clubs.



The club has over 50 years of history. Throughout that time, our members have kept activity reports to provide information, techniques and knowledge to be passed on to future members. These valuable reports are carefully kept in the club room.

Since most of our activities take place outdoors, sometimes danger is involved. To avoid accidents and to allow everyone to test their limits in a safe and enjoyable environment, we have thorough safety measures. Every possible situation in which an accident can happen is considered, and even when the chance of it is very slim, all the members join in devising the countermeasures before starting the activity. All members frequently attend first-aid seminars to make sure that we will be prepared in the face

of danger.

Our recent activities include distant trips like traversing mountains in Hokkaidō, camping on uninhabited islands in Okinawa, as well as local adventures such as sea-kayaking around Sakurajima. Of all our activities, caving expeditions are unique to our club at the university. The limestone caves on Okinoerabujima (Kagoshima Prefecture) and Akiyoshidai (Yamaguchi Prefecture) as well as volcanic caverns at the foot of Mt. Fuji are the goals of such trips. Even though caving has started to become popular, due to insufficient knowledge and the small number of enthusiasts (especially when compared to the large numbers of mountaineers), cave environments remain a "world of the unknown". Many caves are dark and narrow, but in a space far removed from everyday life unique scenery awaits. The stalactites on Okinoerabujima are so immensely beautiful that you forget the gruelling soaking wet crawl through the cave. Also, during the trip to the caves at the foot of Mt. Fuji this March, we were deeply impressed when we saw cave floors covered with thick ice and massive ice pillars.

There are usually a lot of intense, tiring and difficult moments during our expeditions, but we believe a deep bond between us and nature is born while overcoming hard times as a team, looking at beautiful scenery together and sharing stories about hardships and joys in our tents late at night. To go where we want to go and to face challenges together with our friends, that is what we want to continue doing in the exploration club.





Lifestyle-related disease prevention and longevity in Amami

The Island Medicine and International Health Course's efforts in researching the connection between Amami's regional characteristics and people's health

A nationwide epidemiology study (the Japan Multi-Institutional Collaborative Cohort (J-MICC) Study) is currently in progress. It aims to assess both genetic and living environment factors involved in the occurrence of lifestyle-related diseases such as cancer. Surveys started in 2005 and throughout the country 100,000 men and women have been examined with follow-up disease surveys to continue for over 20 years. A team from the Island Medicine and International Health Course of the Graduate School of Medical and Dental Sciences led by Professor Takezaki is currently conducting research centred on Kagoshima's Amami Islands.

Towards "tailor-made" disease prevention

"Excessive drinking is bad for the liver,' 'smoking poses a health hazard,' these are well known facts. They were discovered through epidemiological studies." The goal of epidemiology is to investigate a large number of factors (for example regional and occupational) in order to statistically assess and clarify the origin and primary causes for the occurrence of illnesses and incidents. People and their lifestyle have been the subjects of research in the past. However, in recent years there has been an increasing degree of attention on the influence of genetic factors: a certain study has revealed the large impact of genetic predisposition on the connection between alcohol consumption and oesophageal cancer. According to the study, people with a genetic weakness to alcohol who continue to drink face a 50 times higher risk of developing oesophageal cancer compared to people without it. "It's about choosing the right lifestyle according to your genetic predisposition; in short, finding the main cause in order to create a "tailor-made" disease prevention method is the direction taken by modern epidemiology research".

A medical travelling circus?!

As a part of this new trend in the medical world, the J-MICC Study was started with the aim of examining larger population groups and study the causal relationship between diseases and both lifestyle and genetic factors. After his appointment to this university, Professor Takezaki has been setting up his original research projects on various islands. For him, participating in this



nationwide project was an opportunity offered by fate. Starting on Okinoerabujima in 2005, about 5000 citizens of the Amami islands of Tokunoshima, Amami-Ōshima, and Kikai, were examined. For data comparison, 3000 citizens of mainland Kagoshima cities such as Kanoya, Izumi and Isa were also subjected to examination.

All of the examinations are conducted by Professor Takezaki and his team. For each island they need between two weeks and a month. The team has to load their equipment (such as centrifuges and refrigerators) on two-tonne trucks and ferry it around, then set up makeshift laboratories in the medical institutions' spare rooms. "We set up our machines and equipment, then pack them up again. We are just like a travelling circus! (Laughs)."

Generally examinations are conducted on citizens subjected to group health check-ups who have given their consent. Sometimes that means 300 people in a single morning. "If we make people wait for too long, they might refuse to cooperate," the examinations were like human wave attacks. Many islands do not have enough nurses so during visits to remote islands nursing staff members from within and outside Kagoshima Prefecture were invited. The success of the study relied on the cooperation of each municipality's personnel and health care workers. "People are the deciding factor in field studies." Professor Takezaki is grateful to the many people whose assistance helped the study progress.

No better treatment than precaution

Blood sampling and surveys are taken nationwide, but Professor Takezaki adds an arteriosclerosis examination. "Outlying islands are isolated and healthcare resources are scarce. Helicopter transportation takes time as well. Precaution against strokes and heart attacks is particularly important." Also, as the results of arteriosclerosis examinations are available immediately, it is



possible to inform the subjects right away. "When a 50-year old learns they have the blood vessels of a 40-year old, they are happy. Conversely, they can start paying more attention to their lifestyle." Talking with the local residents is also useful. "It makes people who cooperate with us happy, and I think the idea of the arteriosclerosis examinations was a hit."

According to the survey results to date, people from the Amami Islands have a lower rate of arteriosclerosis compared to the same age and gender groups from the mainland. "Perhaps this is one of the main causes for the local people's longevity. I think that at the very least an increased possibility for longer lifespans is present in people with youthful blood vessels." Professor Takezaki is brimming with enthusiasm over the possibilities of future research.

Japan Multi-Institutional Collaborative Cohort Study

The study will monitor the health situation of more than 100,000 people over 20 years in order to understand what illnesses are likely to occur depending on the person and their environment. Twelve research institutions across Japan are leading the research, including Nagoya University Graduate School of Medicine, Aichi Cancer Centre Research Institute and Kyushu University Graduate School of Medical Sciences.

Professor Takezaki Toshiro Graduate School of Medical and Dental Sciences

Graduated from Nagasaki University Faculty of Medicine (March 1982), Kagoshima University Doctor of Medicine (November 1991) Aichi Cancer Centre Research Institute (February 1993) Current position (November 2003) Affiliated Institutions: Japan Epidemiological Association, Japanese Cancer Association, Japanese Society of Cancer Epidemiology, Japan Primary Care Association, Conference for Emergency Medicine in Rural Areas and Isolated Islands, Kagoshima Association of Rural Medicine Fields of study: cancer epidemiology, remote islands healthcare studies Research topics: island-based cancer prevention, arteriosclerosis molecular epidemiology



Research Centre for the Pacific Islands

Kagoshima University Research Centre for the Pacific Islands (KURCPI) promotes interdisciplinary research on island-related issues in Kagoshima Prefecture and the Asia-Pacific region under the charter of Kagoshima University. It has the support of researchers from throughout the university and other domestic and overseas universities and institutions. The results of its studies are combined to enhance the comprehensive understanding of island environments and further the welfare of island communities. These objectives

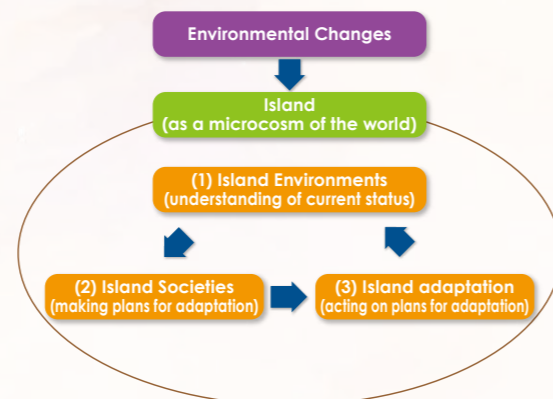
are pursued primarily through three interrelated projects: natural and social environments of islands and their sustainability; island development problems relating to medical care, information provision and social change; self-sustaining development in islands through technological progress in fields such as agriculture, fisheries and education. Since April 2015, KUCRIP has a station in Amami-Ōshima, the largest of the Amami Islands, which supports research and education activities and advances regional goals.

Research Projects

Islands are characterised by their confined space and vulnerability. However, each island has its own nature, culture and socio-economic system, therefore inspiring the concept that "every island is a small world". In addition, changes of the natural and social environment (such as global warming or the globalisation of the economy) have a significant impact on small islands. As the most prominent example, the rising sea levels are leading to a serious crisis in many South Pacific countries. Because islands are quickly and strongly affected by environmental changes, we can assume that islands are "a microcosm of the world". In other words, to understand the impact of the environmental changes all over the world, and to make plans to adapt to these changes, islands are an ideal area to study.

To carry out research projects on island issues, KURCPI has three divisions: 1) Island Environments (Diversity, Environment, Symbiosis) focusing on the interaction of nature and society, studying the current process and the transition from past to future; 2) Island Societies (Society, Medicine, Island Information)

investigating the effectiveness of past, present and future changes in the island society and consider the direction of adaptation; 3) Island Adaptation (Agriculture, Fisheries, Education) conducting research and practical education on adaptation measures to respond to changes on the islands. KURCPI is conducting the following projects.



The three divisions of Kagoshima University Research Centre for the Pacific Islands

Project: "Adaptation to Environmental Changes in Island Regions"

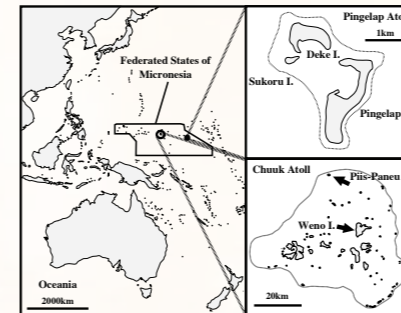
The Federated States of Micronesia

Dengue fever is closely associated with poor sanitation, inferior water quality and inadequate water supplies. The first dengue fever outbreak in the Federated States of Micronesia occurred in Yap State in 1990. After that, several other outbreaks occurred. The dengue virus is transmitted by a particular

mosquito species. First, we surveyed the mosquito species in each state, and determined the vector species of dengue virus. The vector species uses water-holding containers as egg-deposit sites. To prevent a dengue virus outbreak, it is important to remove water containers around the houses of residents. In 2012, we started control programmes of the dengue fever mosquito on two small islands, Pingelap Island



Children joining a survey of mosquito habitat in Piis-Paneu Island



Maps of Pingelap Island (upper left) in Phonpei State and Piis-Paneu Island (bottom left) in Chuuk State, Federated States of Micronesia.

in Phonpei State and Piis-Paneu Island in Chuuk State. The small islands do not have doctors or hospitals and therefore mosquito control is more important

on such small islands than on the states' main islands. From the surveys, we confirmed that on both islands the vector mosquito species used artificial containers (plastic bottles, empty cans, tyres and concrete water tanks) and natural objects (coconut shells, tree holes and banana leaves) to deposit its eggs. Most of the plastic containers and empty cans are used for cooking, so mosquito habitats are connected with food consumption. We also surveyed dietary patterns, and found that people on both small islands often consume imported foods (rice, canned fish, canned meat and instant noodles), but their staples are traditional foods (banana, breadfruit, fish, etc). We held many seminars about dengue fever and the vector mosquito species. Moreover, social systems were surveyed to offer effective information on dengue fever and mosquitoes in the communities on such small islands. As a result, the number of water-holding containers in 2014 has been reduced by about 30% compared to 2012. However, some residents still use them extensively, suggesting that it is difficult to make all people of the islands understand the importance of mosquito control to combat dengue fever, and that it is necessary to continue raising awareness.

Fiji

In Fiji, we have been conducting integrated disciplinary research on the relation between humans and nature. In our study of Fiji, different research fields are integrated in three stages. In the first stage, the coexistence between humans and nature was set as a key issue and we have researched the topic of resource utilisation with a view to quantifying the factors related to the economic system and natural environment in coastal fishing villages. In the second stage, we classified the villages' lifestyles into different types according to the popularity of the monetary economy and on the basis of statistical analysis. Finally, in the third stage, a project on ecosystem services was started. In this stage we pointed to the importance of the kaikoso, a



Marine survey in Fiji

bivalve mollusc, in the ecosystem and then studied the relationship between traditional village institutions and current domestic and international influences.

Indonesia

The distribution of the chilli pepper species (*Capsicum pubescens* and *C. chinense*) in Southeast Asia remains unknown. Literature, specimen, field, and market surveys of the two species were conducted in Indonesia to investigate their introduction into Indonesia and to reveal their present distribution. The chilli peppers have probably been in Indonesia since before World War II. This suggests that Indonesia has more genetic resources and much more potential to breed species of Capsicum compared to other countries in Southeast Asia.



Interview about chilli peppers at a market in Sumatra



Project: Small Island Autonomy

Nakanoshima Island

The island of Nakanoshima Island in the Tokara Islands is notorious for blood-sucking black flies. The popular local legend of pirate, Higashi Yōsuke, is based on that problem. According to the legend, the pirate was tormenting the people of Nakanoshima Island in the 16th century. Unwilling to suffer any longer they rose up against him, killed him and buried his body under a rock. However, the vengeful ghost of the pirate came back as a swarm of black flies to suck the blood of the islanders. The rock from the legend can be seen along the road from the port to the settlement of Hinode. Astoundingly, more than 1000 black flies were caught in just one hour while swarming a single person in 1980. The huge number of black flies made it impossible to work outside the house. From 1981, insecticides were released into rivers where the larvae of the black fly live and dramatically decreased the number of black flies. Since then, using the insecticide has continued. The insecticide was also used on neighbouring Kuchinoshima Island and on Kuroshima



Kuchinoshima Island from Nakanoshima Island. Both islands are suffering from the black fly.

Island in the Ōsumi Islands where people were also suffering from the black flies. However, continuous use of insecticide causes concern about its effect on nature. KURCPI have been surveying the population of black fly on Nakanoshima Island and Kuroshima Island from 2007, suggesting that numbers of black flies were stable and not as high as they were 30 years ago. KURCPI is seeking alternative methods to suppress the black fly populations to maintain the community and nature of the islands.

Education Programme

KURCPI plays a central role in the special Small Island Studies course, which is open to students of all graduate schools at Kagoshima University. The course provides lectures in different fields related to the islands, and aims to develop globally competent human resources that can work in the international island society. In Introduction to Island Studies class, students learn the features of the lifestyle, society, environment and natural resources on the islands of Japan and the Pacific Ocean, explore promotion policies for the islands, and visit Iōjima in the Ōsumi Islands and Nakanoshima Island to experience the society and culture of the islands, and to explore the problems encountered on small islands. The Advanced Programme for Pacific Islands takes place in



Just before boarding the ferry on Nakanoshima

Guam and the Federated States of Micronesia. Students stay on a small island of an atoll, and learn the history, society, culture and economic system of the Federated States of Micronesia directly from the local people.

Amami Station

The Amami Station of the Research Centre for the Pacific Islands opened in April 2015 to support research and education activities and to contribute to the local communities of the Amami Islands. There is one full-time staff member of KURCPI at the station, the only facility to have a full-time Kagoshima University staff member in the Amami Islands. Professor Takamiya

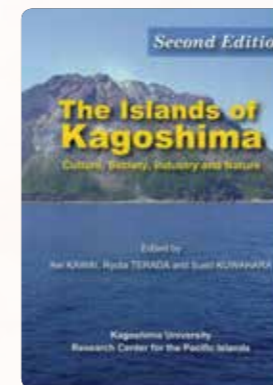


Hiroto has stayed at the Amami Station for the longest period. He studies the prehistory of the Amami and Okinawan islands, and recently found that these islands have a very rare prehistorical cultural phenomenon. They were continuously occupied by hunter-gatherers for several thousand years during the Holocene (ca. 10,000 years ago to present). This occupation represents a unique example of island settlement by hunter-gatherers. Homo sapiens had expanded into all continents except Antarctica by 10,000 years ago, demonstrating a high adaptability to various environments, but few islands had been settled by that time. Most islands appear to have been too small to support hunter-gatherer subsistence. Many islands

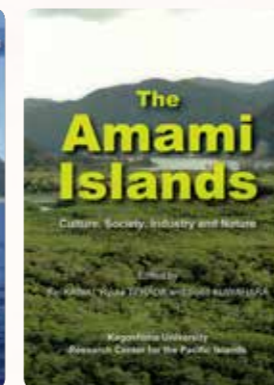
were indeed first colonised by agricultural societies. Some islands located close to large landmasses, having a large surface area, or with reliable sea mammal populations or translocated plants and animals were successfully colonised by hunter-gatherers, but none of these features characterise the prehistory of the islands of Amami and Okinawa, which were successfully colonised by hunter-gatherers by at least the early-middle Holocene. Furthermore, this colonisation was likely accomplished with smaller populations and foraging territories than previously documented for hunter-gatherers. This cultural phenomenon appears to have occurred only on the islands of Amami and Okinawa. Professor Takamiya introduces this miracle phenomenon as "Island Civilisation".

The Amami Station has three important roles. 1) Research: Kagoshima University is currently conducting a project on the Biodiversity and its Conservation in the Satsunan Islands (covering the Ōsumi Islands, the Tokara Islands and the Amami Islands). These islands have been internationally recognised as an important area for the preservation of biodiversity. Especially the Amami Islands have habitats for important endemic species and other endangered wildlife. This is why the Amami Islands (with the Ryukyu Islands) have been chosen as a candidate as a World Natural Heritage Site. This project accelerates the surveys of biodiversity and conservation in the Amami Islands. Moreover, cultural and social differences are investigated to carry out conservation programmes effectively. The Amami Station leads this project as the main facility of Kagoshima University in the Amami Islands.

2) Offering information outside of Japan: Although the Amami Islands have great nature and culture, information on them in English is limited, so we offer information on them by publishing books based on the research conducted by the university in English. The Islands of Kagoshima 2nd edition (2015) introduces the islands of Kagoshima Prefecture. The Amami Islands (2016) focuses on the culture, society, industry and



The Islands of Kagoshima 2nd edition (2015)



The Amami Islands (2016)

nature of the Amami islands. KURCPI plans to publish The Ōsumi Islands in 2017, and The Tokara Islands in 2018.

3) Bring the results of research to the people of the islands: A lot of research has been done in the Amami Islands by Kagoshima University and other research institutes. Some local people complain that "many researchers came to the Amami Islands, but took only the data without explanation of the results". Of course, the researchers presented the results at academic meetings and published papers in academic journals. Nevertheless, these almost never reach the islanders. Therefore the Amami Station holds seminars and symposiums for the local people based on the results which outside researchers obtained in the islands. The Amami Station also connects to the monthly seminar held at KURCPI in Kagoshima via the internet. Local people can join the seminar from the Amami Station. And, nature observation meetings were also held on tidal flats in Sumiyō and the forests of Tatsugo, both on Amami-Ōshima Island. Some young people,



Nature observation meeting at the Sumiyō tidal flats in Amami-Ōshima Island

such as high school students, joined these events. Moreover, visiting professors from KURCPI held lectures at Ōshima High School in Amami. They introduced the uniqueness and the problems of the islands from a foreign researcher's point of view and had discussions with the students in English. We believe that these lectures and discussions gave a global perspective to the students who are responsible for their home islands: this is one of the most significant contributions by the Amami Station. It is the hope of its staff members that the local students will themselves join the research on the Amami Islands in the future with the Amami Station helping them taking the first steps toward that goal.



Visiting Professor Stephen Arthur Royle discussing with students from Ōshima High School after his lecture

Researcher takes part in important astronomical discoveries

Professor Takakuwa Shigehisa (Physical Sciences, Graduate School of Science and Engineering), in collaboration with a research group from the Institute of Astronomy and Astrophysics of Taiwan headed by Dr. Yen Hsi-Wei, has found reliable evidence of the formation of a Jupiter-sized planet in the gas disc around the young star HL Tauri. The announcement was made on 25th May.

By analysing data collected by the ALMA Telescope in Chile, he observed the gap left by the planet's orbit in the gas disc. These gaps in the dust were known to exist, but this study confirmed for the first time that dust gaps can be seen even when the amount of gas is 100 times larger than that of dust. This can provide strong clues on how planets form. The findings have been published in the American scientific magazine, *Astrophysical Journal*.



Academic receives the Gambo Award

Professor Maki Masayuki from the Research and Education Centre for Natural Hazards received the Gambo Award at the 2016 Spring Meeting of the Meteorological Society of Japan. His development of the cutting-edge X-band polarimetric radar and using it in his own research as well as implementing it in the Ministry of Land, Infrastructure and Transport's X-band Multi-parameter radar observation network (XRAIN) have been cited as the main reasons for this distinction.

He has undertaken high-value work in the field of understanding precipitation mechanisms and creating

a more precise early warning system for extreme weather such as torrential rain and heavy snowfall. Through his data collection, he has contributed to the development of meteorology and thus to creating a safer society.



The university has shown great support for the victims of the Kumamoto earthquakes. Kagoshima University

Offering support in the aftermath of the Kumamoto earthquakes

Hospital dispatched a Disaster Medical Assistance Team immediately after the tremors in April and, since the end of that month a 6-member Japan Medical Association Team team has also been on site. Furthermore, university staff and students collected almost 5.4 million yen in a charity fundraiser on campus and around the city. The money has been sent to the affected areas through the Kagoshima Branch of the Japanese Red Cross Society.

Faculty of Science teams win prizes at the Tanegashima Rocket Contest

The XII Tanegashima Rocket Contest was held at the Tanegashima Space Centre in March. There, a team lead by the Department of Physics (Faculty of Science) won first prize in the rocket category with their payload winged flight project. Another university team was awarded the Kawasaki Heavy Industries Prize for best design. The event is a competition in developing and manufacturing model rockets, then test flying them at the Space Centre to try to achieve the

longest flight time or to land them as close as possible to their launch pads.



Researchers help develop a robot tea-picking machine

A team from the Information Science and Biomedical Engineering course of the Graduate School of Science has conducted joint research with Matsumoto Machine Works and Nihon Keiki Kagoshima and has succeeded in creating a robot tea-picking machine. It uses cameras



to establish its position and can move independently. Kagoshima's tea production has about 800 years of history,

its current yield ranking second in Japan and expanding even further. Kagoshima is also famous for its early tea harvests due to its southerly location. Traditionally the tea is harvested by hand but in recent years a process of automatization has begun. It is hoped that the success of the robotic tea picker will contribute to the expansion of Kagoshima's tea production.



Students win national prize for environmental activities

The 13th National University Student Environmental Activities Contest (Ecocon 2015) was held at the National Olympics Memorial Youth Centre over several days in December 2015 and January 2016. Eleven students from the university's Sustainable Campus Project (SCP) participated and won the Grand Prix: the Environment Minister's Award. The keywords of their activity presentation were "involvement" and

"commitment". With extensive use of impressive slides and the uniqueness of their Eco Sweets idea, they highlighted their plans and their enjoyment, and continued to develop their work well into the night. The project received a lot of support and praise from the public as well.





Kagoshima's hidden island paradise

Nikolay Gyulemetov, Global Initiative Centre



Diving among the corals of Tokunoshima © Itō Shōji

When talking about Japan's subtropical islands, people are always reminded of the warm seas of Okinawa and UNESCO's Natural Heritage island of Yakushima.

While their fame is undoubtedly deserved, there are in fact many more outstandingly beautiful islands to visit and explore, dotting the sea between Kyushu and Okinawa. Tokunoshima is one such place, rich in both nature and culture. Located about 400 km south of Kagoshima City, the island is surrounded by coral reefs and covered with lush laurel forests, home of endemic species such as the Amami rabbit and the Tokunoshima spiny rat;

the island's beaches are among the most beautiful in Japan and the coral reefs teem with sea life. The people of Tokunoshima are friendly and hard-working, and their traditions like *shimauta* (folk songs about filial

piety and family loyalty) and *tōgyū* (a form of bull wrestling involving two bulls trying to push each other into submission) are a source of pride and distinct identity, with many festivals dedicated to traditional folklore. The island is also known for having the highest birthrates in Japan, thanks in no small part to the strong sense of community and childcare services and financial support offered and funded by the islanders themselves.

Unfortunately, Tokunoshima is also experiencing the effects of climate change: longer and harsher typhoon seasons and coral bleaching are taking their toll on the island's flora and fauna. Floating marine debris washes up on the pristine shores, endangering the fragile habitat and human-introduced invasive species threaten local wildlife. Officials and scientists from Kagoshima and across Japan are dedicated to tackling the environmental and social problems facing this beautiful island in order to preserve its outstanding beauty and biological diversity for the future generations.

The island of Tokunoshima provides a unique opportunity to enjoy recreational and cultural activities in equal measure: whether going fishing and diving among the corals or listening to the *shimauta*, a visit to this hidden island paradise would never leave anyone disappointed.



A bout of tōgyū © Nikolay Gyulemetov



Shimauta performers © Hayashi Ruriko



Front Cover: Students in the International Student Division

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