FY2020 Inter-University Exchange Project Utsunomiya University

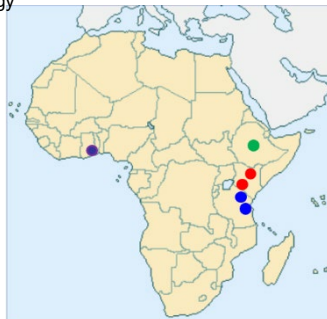### Support for the Formation of Collaborative Programs with African Universities

【Name of project】(Adopted year: FY2020,（Type A①）)
Programme for Developing Human Resource to Contribute to SDGs by Merging African Potential and Japanese Scientific Technology

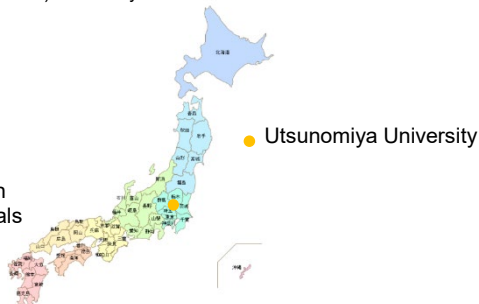【Summary of Inter-University Exchange Projects】
・Establishment of high-productivity agriculture based on molecular agriculture and smart agriculture
・Construction of sustainable local communities based on high-productivity agriculture

● (Kenya) Jomo Kenyatta University of Agriculture and Technology
● (Kenya) Meru University of Science and Technology
● (Ethiopia) Addis Ababa University
● (Tanzania) University of Dar es Salaam
● (Tanzania) Nelson Mandela African Institution of Science and Technology
● (Ghana) University of Ghana

● Utsunomiya University

Complementary education in line with the 17 Sustainable Development Goals

SDG 1~9 : Challenges of Africa
SDG 11~15 : Challenges of Japan

Graduate School of Regional Development and Creativity(GRDC)
Education and research integrating liberal arts and sciences

Establishment of high-productivity agriculture
- Graduate Program in Molecular Agriculture
- Graduate Program in Agricultural Biological Chemistry
- Graduate Program in Agricultural and Environmental Sciences

Construction of sustainable local communities
- Graduate Program in Agricultural and Rural Economics
- Graduate Program in Irrigation, Drainage and Rural Engineering
- Graduate Program in Global and Area Studies

Short / Long term exchange program : 3 months ~ 1 year
Summer / Spring program : 2 weeks
Short term internship program (carried out at companies in Tochigi prefecture and Japanese companies in Africa) : 3 weeks

【 Summary of Exchange program 】

Education and research integrating liberal arts and sciences
The GRDC is a division which enables creation and challenge to the new field.

Promotion of an understanding of local communities
We will approach based on an understanding of the social structure of local communities and focus on its potential. Based on the understanding, we will make good use of molecular agriculture and smart agriculture technology and establish high-productivity agriculture which will improve the food production rapidly, and construct a system of distribution, processing, and sales based on it. We will develop glocal highly specialized professionals who can contribute to the sustainable development of local communities.

Cooperation with companies
We will cooperate with companies in Tochigi prefecture and Japanese companies in Africa, and provide opportunities for improving practical skills through fieldwork and internship.

Promoted by GRDC, Utsunomiya University

Community / City / Region
[Area]
International / Land

SUSTAINABLE DEVELOPMENT GOALS

Programs of high-productivity agriculture
Conducted in Graduate Programs in Molecular Agriculture, in Agricultural Biological Chemistry, and in Agricultural and Environmental Sciences of the GRDC with a focus on molecular agriculture and smart agriculture

Programs aimed at sustainable development of local communities
Conducted in Graduate Programs in Agricultural and Rural Economics, in Irrigation, Drainage and Rural Engineering, and in Global and Area Studies of the GRDC

Human resource development which can contribute to SDGs
We will make a Potential-finding, Problem solving Project team related to SDGs with exchange students from Africa and Japanese students, and contribute to making policy by learning from related lectures, and contribute to the establishment of high-productivity agriculture in Africa.

【Global Human Resource on the project】
This program aims to develop glocal highly specialized professionals who can understand the social structure and potential of local communities in Africa, establish high-productivity agriculture including a system of distribution, processing and sales, and contribute to the sustainable development of Japan and Africa. The program will be conducted in the educational programs based on Agriculture and International Studies of the GRDC at Utsunomiya University. The GRDC is characterized by the education and research integrating liberal arts and sciences.

【Feature on the project】
Firstly, this program will focus on high-productivity agriculture and be conducted in the Graduate Programs in Molecular Agriculture, in Agricultural Biological Chemistry, and in Agricultural and Environmental Sciences of the GRDC, which is centered on molecular agriculture and smart agriculture. Secondly, this program will aim at the sustainable development of local communities in African countries through the construction of a system of distribution, processing, and sales based on the potential and high-productivity agriculture in Africa. In cooperation with the universities and institution in Japan and Africa, this program aims to develop highly specialized human resources who can contribute to the sustainable development of local communities by constructing a system of distribution, processing and sales in Africa based on the understanding of the social structure of local communities, the practical use of the potential, and the establishment of high-productivity agriculture which improves the food production rapidly by using biotechnology and smart agriculture. Therefore, this program is characterized by developing glocal highly specialized professionals who have a thorough technique and knowledge of multiple academic fields not only agricultural science but also engineering, business administration, area studies, international development studies, jurisprudence, and sociology, which are necessary to establish high-productivity agriculture.

【Exchange number】

		2020	2021	2022	2023	2024
Out bound	Students studying abroad		2	3	6	6
	Students taking online international education and exchange programs in their home countries	0	5	10	15	15
In bound	Students studying abroad		2	3	6	6
	Students taking online international education and exchange programs in their home countries	0	5	10	15	15

1. FY2020 Progress 【Utsunomiya University】

【Name of project】(Adopted year: FY2020, (Type A ①)
Programme for Developing Human Resource to Contribute to SDGs by Merging African Potential and Japanese Scientific Technology

■ Exchange Programs

〈Program Logo〉

We have listed the English-mediated courses of the six programs (Graduate Program in Molecular Agriculture, in Agricultural Biological Chemistry, in Agricultural and Environmental Sciences, in Agricultural and Rural Economics, in Irrigation, Drainage and Rural Engineering, and in Global and Area Studies) of Graduate School of Regional Development and Creativity (GRDC), which is our university's Master course, and summarized the English outline of those subjects. In addition, we discussed preparing the English syllabus for the subjects. We are continuing these efforts to formulate the content of the educational program.

Student-Mobility

○ **Outbound**
It is scheduled to start in 2021. This year, we promoted public relations activities such as opening the website and distributing pamphlets.

○ **Inbound**
It is scheduled to start in 2021. This year, we strengthened cooperation with six partner universities in Africa and worked to improve the environment for acceptance.

	2020	
	Plan	Results
Outbound	0	0
Inbound	0	0

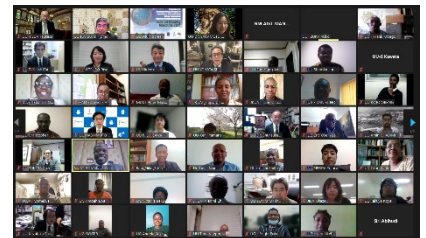## ■ Forming the University Network with Quality Assurance

- We have set up the Office for Inter-University Exchange Project, which consists of the Executive Director (Research and Global Strategy) of our university, the faculty members of School of Agriculture, School of International Studies, and Center for International Exchange, and the staffs of Administrative Office for International Exchange Center.
- We improved facilities and pieces of equipment used for online lectures and international conferences.
- The faculty members of School of Agriculture and School of International Studies of our university are playing a central role in establishing the Education Management Steering Committee. The selection of committee members is proceeding at the three cooperating universities in Africa.
- We are going to hold a monthly meeting centered on the Education Management Steering Committee from the next fiscal year, and we requested African universities for cooperation.

■ Promotion of Student-Mobility Environment

- It is expected that academic exchange agreements can be concluded with all cooperating universities in the next fiscal year. Regarding the agreement with Addis Ababa University in Ethiopia, we received the consent of the university and is expected to be concluded around May of the following year. The draft agreements with University of Dar es Salaam, Nelson Mandela African Institution of Science and Technology in Tanzania, and Meru University of Science and Technology in Kenya have been prepared and discussions are underway with the universities on the details of the contents.
- We requested three companies belonging to Tochigi Association of Corporate Executives to carry out internships online, and held a web conference with Association of African Economy and Development (AFRECO) and requested cooperation, especially in Africa.

■ Internationalization of the university, Information disclosure and Publication of outcome

The Japanese and English website (https://uu-a.utsunomiya-u.ac.jp) of this program was launched in March. In addition, we published Japanese and English leaflets of this program and arranged to distribute them to new students of the master's course of the GRDC and also 6 universities in Africa. Through these efforts, we provided information about student majors, scholarships, and accommodation to students of the GRDC and African universities.

〈Kick-Off Meeting on March 24〉

■ Good Practices

The Kick-Off Meeting for this program was held on Wednesday, March 24th as the agenda below, and there were a total of 93 participants. The presentations are published in the "Report" of the website.
1. Welcome speech by the next president of Utsunomiya University, 2. the introduction of congratulating message from the president of the AFRECO, 3. Introductions of the seven universities involved in the program, 4. Introduction of the program by the team leader of the program, 5. Closing address from Vice-President of Utsunomiya University.
The breakdown of the participants is 7 from Jomo Kenyatta University of Agriculture and Technology, 3 from Meru University of Science and Technology, 2 from Addis Ababa University, 3 from University of Dar es Salaam, 7 from Nelson Mandela African Institution of Science and Technology, 19 from University of Ghana, 38 from Utsunomiya University, and 14 from outside (including 1 from JICA Tsukuba). In this way, we were able to successfully hold this Kick-Off meeting. This meeting is expected to have an advertising effect on students at six African universities and Utsunomiya University, and to greatly contribute to student exchanges in this project in the future.

2. FY2021 Progress 【Utsunomiya University】

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■ Exchange Programs

〈Pamphlet Cover of Student Recruitment for the Compulsory Intensive Course 〉

〈Program Abstracts Cover of Student Summit〉

- Due to the Corona disaster, student exchanges were postponed, and three online projects were implemented in consultation with six African universities. (1) The Compulsory Intensive Course "Global Management" was jointly offered. (2) The international symposium series was held four times to delve deeper into the issues. (3) "Student Summit 2022" was organized by students of 7 universities as international research conference on the contribution of their research results to SDGs.
- Students participating in these events were more than expected. In (1), out of 223 applicants, certificates were issued to 147 (45 from Utsunomiya University (UU) and 102 from Africa), and sub-prizes were awarded to the top 20%. In (3), which was held as on-demand international conference style, out of 90 applicants, certificates were issued to 53 (22 from UU and 31 from Africa) who presented their research, and the Best Presentation Award was given to 10.

Student-Mobility

○ Outbound

Due to the COVID-19 pandemic, we offered the Compulsory Intensive Course "Global Management" which is required for participants in this program. The course contained 15 lectures, 13 were conducted on-demand and 2 in real time via Zoom, with consideration to the time difference. Certificates were issued to students who scored above the prescribed level and granted them 2 credits. In addition, as alternative to field research and laboratory practice, the international symposium series and the Student Summit were held in English, and credit was granted to participants. The scores will be used in the selection of students to be dispatched for the following year.

○ Inbound

We offered the required course "Global Management" and issued certificates to students who scored above the prescribed level. Certificate awarding ceremonies were held at two African universities. In addition, the international symposium series and the Student Summit were held. In the process, the program strengthened cooperation with six African universities to improve the environment for receiving African students. The scores will be used in the selection of inbound students for the following year.

	2021	
	Plan	Results
Outbound	7	45
Inbound	7	102

〈Meru University of Science and Technology "Post Graduate Award Ceremony"〉

■ Forming the University Network with Quality Assurance

In the Compulsory Intensive Course, an e-learning application, C-learning, was used to ensure strict quality assurance. A certificate was awarded to only students who scored 90 or more points out of 150. The data was shared with six African universities. In the Student Summit, students without Internet literacy were not allowed to present in order to experience the same level of the on-demand international conference. Students' presentations were evaluated by participating faculty members from 7 universities, and the 10 best presenters were awarded.

■ Promotion of Student-Mobility Environment

Questionnaires were collected to improve each online project. In addition, C-learning enabled individual contact with students, and a system was established for selected dispatched and inbound students to smoothly participate in online pre-training and actual face-to-face classes when student exchanges became possible.

■ Internationalization of the university, Information disclosure and Publication of outcome

The Japanese and English versions of the program website (https://uu-a.utsunomiya-u.ac.jp/en/) are continuously maintained and updated with the latest information. In addition, brochures in Japanese and English versions of the program have been prepared and publicized not only within the UU but also at the six African universities. The details of the international symposium series are available not only on the website but also on JV-Campus.

〈Poster of the 4th Symposium〉

■ Good Practices

- Program Management in Collaboration with Partner Universities
Zoom meetings are held regularly as monthly with 6 African universities to promote the program, and this has been the foundation for many students to participate in jointly offered the Compulsory Intensive Course.
- Many students participate in online Compulsory Intensive Course and Student Summit
"Global Management" and "Student Summit 2022" indicated the potential of online programs to provide educational and research opportunities for many students with quality assurance, depending on how they are managed.