Graduate School of Global Food Resources

Self-Assessed Progress Report

Period: 2017 - 2018

Hokkaido University

July 2019

北 海 道 大 学
大学院国際食資源学院
Graduate School of Global Food Resources
Hokkaido University

Contents

I. Introduction

1. Educational Principles and Goal

Originating from the four basic principles of this university (i.e., Frontier Spirit, Global Perspectives, All-round Education, and Practical Learning), the educational principle of this graduate school is to raise talented and capable individuals who;

- ✓ Have broad perspectives on a global scale combined with a deep interest in local society,
- ✓ Understand the importance of food resources as a survival strategy in the twenty-first century,
- ✓ Have a noble spirit that rejects selfishness and seeks to contribute to the human society.

Based on the educational principles above, we raise future international leaders who understand the diverse and multilayered food resource problems facing the world and are capable of presenting specific solutions to these problems and putting them into practice.

To that goal, we conduct leading, academic, and synthetic educational research that integrates humanities and sciences. The educational goal is to produce talented individuals endowed with both wide-ranging knowledge and capability of understanding the world's food-resource problems from a comprehensive perspective and the expertise to be able to suggest solutions to those problems and put them to practice.

2. History

April 1, 2017　Graduate School of Global Food Resources founded.

3. Organizational Structure　(Figure 1)

The graduate school has a dean, who manages all operations of the school as the operating director. A candidate for the dean is selected by a vote of the full-time professors in the graduate school at the Faculty Council Meeting. Information on the selected candidate is reported to the president of Hokkaido University, who appoints the dean. The school also has a vice dean, who supports the dean, and the dean appoints the vice dean from among the full-time professors at the graduate school. Graduate school faculty members are classified into the three groups of Production, Environment and Governance, and each group has a chair. The chair, who is selected from among the full-time or specially appointed professors or associate professors at the school, supervises the operations of the group on behalf of the group and acts as a liaison and coordinator within and beyond the group.

The school has a Faculty Council, which offers opinions to the president; 1) on the selection of dean candidate, 2) on the admission, expulsion, re-enrollment, disciplinary punishment, completion and degree conferment of students, 3) on the selection of faculty candidates of the school, and 4) on curriculum organization. The council also discuss important matters on the school. Members of the Faculty Council include a full-time professor, associate professors, assistant professors and specially appointed academic staff (including specially appointed professors, associated professors,

lecturers and assistant professors. In principle, the Faculty Council meets every month, and an extraordinary meeting is held if necessary.

Under the Faculty Council, standing committees on personnel affairs, general affairs, accounting, education, admission exam, public relations, etc. are established for discussions on related matters. Besides, we place special committees as needed, and discuss advice other than the above or matters in need to be addressed.

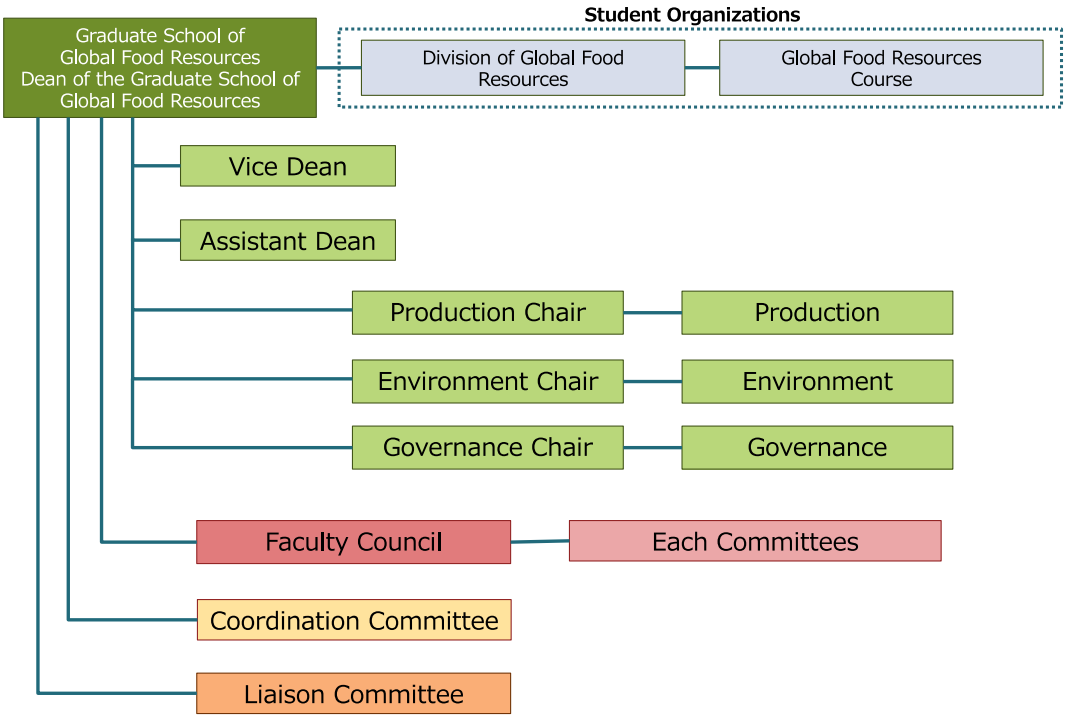

Figure 1. Organizational structure

4. Organizational Reform and Vision for the Future

1) Education that integrates the humanities and the sciences with the participation of diverse faculty members from multiple departments

Since academic 2005, Hokkaido University has gradually been introducing the “graduate school/research faculty system,” under which the previous graduate school organization has been divided into an educational organization to which students belong, and a research organization to which faculty members belong. This system has enabled us to redistribute educational resources in the university without being bound by the research areas of individual faculty members, and to forge a “multi-stream educational organization” to take advantage of the strength of the

comprehensive university.

The Graduate School of Global Food Resources has built an interdisciplinary educational system with the participation of diverse faculty members. Those are; Research Faculty of Agriculture, Field Science Center for Northern Biosphere, Research Faculty of Fisheries Sciences, Research Faculty of Economics and Business, Research Faculty of Education, Research Faculty of Media and Communication, Research Faculty of Environmental Earth Science, Research Faculty of Health Sciences, and other faculties (Table 1).

The Research Faculty of Education left this cooperative framework in academic 2018 due to the retirement of a faculty member, but the Research Faculty of Engineering has joined the structure. With the cooperation of multiple departments, education that integrates the humanities and the sciences are provided.

Table 1. Number of full-time faculty members

School year	2017				2018			
Department／Job Title	Prof.	Assoc. Prof.	Lecturer	Assist. Prof.	Prof.	Assoc. Prof.	Lecturer	Assist. Prof.
Research Faculty of Agriculture	5	4	3	2	4	4	3	1
Field Science Center for Northern Biosphere	1				1			
Faculty of Fisheries Sciences	1				1			
Faculty of Economics and Business	1				1			
Faculty of Education	1							
Research Faculty of Media Communication		1				1		
Faculty of Environmental Earth Science		1				1		
Faculty of Health Sciences		1				1		
Faculty of Engineering								1
Subtotal	9	7	3	2	7	7	3	2
Total	21				19			

The Graduate School of Global Food Resources had 21 full-time faculty members when it was established in 2017, but there are 18 full-time faculty members as of April 2019. Over the past two years, circumstances such as retirement and transfer to other universities have led to the loss of three full-time faculty members. They have not yet been replaced.

Budgets of national universities, especially the Management Expenses Grants from the central government continue to be reduced at all the national universities across the country, which also leads to the tightening of faculty expenses. Hokkaido University plans to reduce faculty expenses by 7.5% during our 3rd Mid-term Goals Period (the six years from 2016 to 2021). As a result, there have been cases where handling of personnel has not been smooth. This has led to a situation where the faculty has no leeway in any department, so there is no room for cooperation between the Graduate School of Global Food Resources and other departments.

Despite these circumstances, we must secure a certain number of faculty members to ensure that the educational philosophy and goals set forth by the Graduate School are achieved. We must also continue to establish links with the institutes outside the university to bring in faculty from those institutes through cross-appointment.

2) International Education in Collaboration with GI-CoRE

To promote international collaborative research and education, the Global Institution for Collaborative Research and Education (GI-CoRE) of Hokkaido University was established in April 2014. Currently, GI-CoRE has six global stations (GS), where collaborative research and education with top-notch educational and research units from overseas are promoted. To further develop research results obtained at these global stations toward education, new educational organizations are to be established. The Graduate School of Global Food Resources is a new graduate school that was created based on collaboration with the Global Station for Food, Land and Water Resources (GSF) (Figure 2).

The GS initiative is a distinctive feature of Hokkaido University whereby faculty members from overseas universities may be assigned to Hokkaido University through cross-appointments. The Global Station for Food, Land and Water Resources has cross-appointed multiple faculty members of overseas universities. The educational system of the Graduate School of Global Food Resources has been planned through discussions with these overseas faculty members. Efforts are being made to build a stronger research and education system through multiple international forums organized by GI-CoRE, study meetings, and workshops to promote collaborative research.

In the master's course, lectures were given by 14 faculty members from overseas universities in academic 2017 and by eight such faculty members in academic 2018. The overseas universities included the University of California Davis, the University of Wisconsin, the University of Massachusetts Amherst, Iowa State University and other U.S. universities; Paris Diderot University and other European universities; and the University of Sydney.

Besides, leading researchers from overseas universities, including Washington State University (USA), Lincoln University (New Zealand), and Kasetsart University, will participate in GSF. Through seminars and other events, students of the graduate school will have opportunities for daily exchanges with overseas researchers. Such a learning environment is indispensable for the development of individuals with global perspectives.

From the long view on the faculty structure, it is necessary for us to continue securing a diverse array of human resources for our faculty. Regarding the diversification of faculty members amidst budgetary constraints, if large amounts of external funding can be introduced, the budget will allow for faculty members to be hired. The acquisition of external funding is another effort that must be promoted.

3) Inviting multiple part-time lecturers

At the Graduate School of Global Food Resources, lectures have been given not only by full-time faculty members of the graduate school and those of GI-CoRE, but also by faculty members from other departments within Hokkaido University, including the Research Faculty of Advanced Life Science and the Graduate School of Veterinary Medicine. The number of such lecturers was 14 in academic 2017 and 11 in 2018.

In addition, a former Ambassador Extraordinary and Plenipotentiary of Japan to Sri Lanka and faculty members from other universities have given lectures as part-time faculty members. The number of such lecturers was two in academic 2017 and five in academic 2018.

Excellent faculty members and researchers from Oregon State University, the University of Washington, the University of Florida, the University of Western Australia, Seoul National University, the University of Minho and other overseas universities have also given lectures as part-time faculty members. The number of such lecturers was seven in academic 2017 and 15 in 2018.

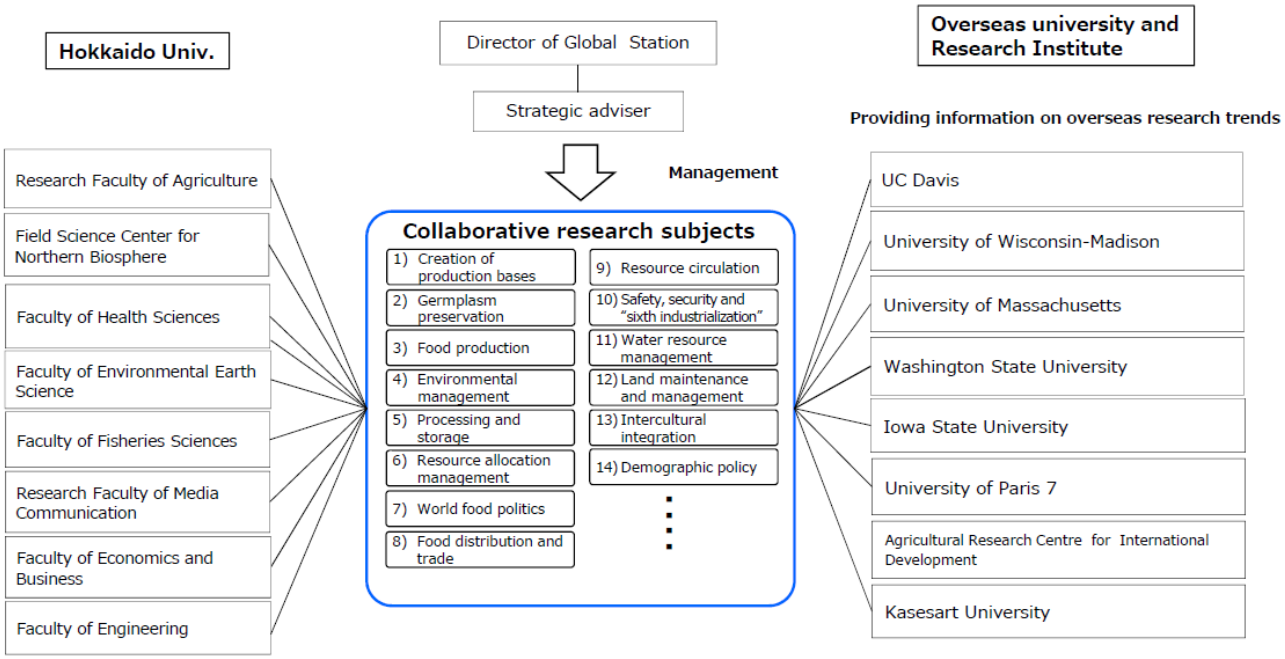

Figure 2. Global Station for Food, Land and Water Resources (GSF) at the Global Institute for Collaborative Research and Education (GI-CoRE)

5. Mid-term Goals and Mid-term Plans (Third Term: April 2016 – March 2022)

Table 2. Graduate School of Global Food Resources Mid-term Plans
(Third Term: April 2016 – March 2022)

Ⅰ. Measures to be taken to achieve the goals related to improvement in the quality of university education and research

1. Measures to achieve the goals related to education

(1) Measures to achieve the goals related to educational content and outcomes

1) Provide all lectures in English for the master's program.
2) In collaboration with the Research Faculty of Agriculture and other institutes, promote the project with emerging countries of tropical Asia to form educational and research bases in Asia.
3) Implement educational programs involving overseas faculty.
4) Provide interdisciplinary and international education beyond the boundaries between the humanities and the sciences.
5) Promote active learning through Wandervogel Study.
6) Introduce self-study programs in English.
7) Implement active learning in ethics subject.
8) Provide a lecture, "International Understanding," to develop global leadership.
9) Create a curriculum map.
10) Introduce the quarter system.
11) Formulate an assessment policy.
12) Consider the establishment of joint educational programs with overseas universities after the doctoral program is started.

(2) Measures to achieve the goals related to the education implementation system

1) Utilize the Center for Teaching and Learning of Hokkaido University, and implement an independent faculty development program to enhance the faculty's education/educational supportability.

(3) Measures to achieve the goals related to support for students

1) Establish a student guidance system featuring multiple faculties soon after admission to respond flexibly to each student's learning progress.
2) To enhance support for students with disabilities, expand the cooperative system among school staff members, and raise the faculty's awareness through the faculty development program.

(4) Measures to achieve the goals related to admission procedures

1) Circulate admission information through overseas liaison offices.
2) Expand examinations for international students by using English proficiency certification tests and other measures.

3. Measures to achieve the goals related to education and research focused on collaboration with society, social contribution and the community

1) Publicize outcomes of education and research through HUSCAP (Hokkaido University Collection of Scholarly and Academic Papers).
2) Hold a series of seminars involving overseas faculties to deepen interaction with the citizen and contribute to regional development.

4. Measures to achieve other goals

(1) Measures to achieve goals related to globalization

1) Utilize and reflect the outcomes of the international collaboration of the GI-CoRE Global Station for Food, Land and Water Resources, in the education of the Graduate School of Global Food Resources.
2) Establish education and research bases in multiple countries through the project with emerging countries of tropical Asia.
3) Promote the Summer Institute using the provided courses.
4) In collaboration with the Graduate School of Agriculture and other schools, promote the Learning Satellite program with overseas universities.
5) Develop collaborative educational programs with overseas universities to promote student exchange between Japanese and overseas students.
6) Dispatch students for exchange events at overseas universities.
7) Create and apply a safety management manual for students traveling overseas.
8) Appropriately collect students' study experiences and utilize for promotional activities.
9) Promote collaboration with Hokkaido University Ambassadors and Partners.

II. Education in Detail

1. Educational Objectives and Features

(1) Objectives

The Graduate School of Global Food Resources has established the following missions to develop personnel who can propose and implement specific solutions to the world's food resource issues, and provides multidisciplinary education that transcends the conventional boundaries between the humanities and sciences.

1. To solve global issues concerning food and the resources that essential for food production, such as water and land
2. To overcome withstand climate change issues through the development and popularization of new agricultural technology and methods for creating and preserving production environments
3. To establish systems to ensure safety for all people and fair division and supply of food on a global scale
4. To foster glocally (globally and locally) minded personnel who can think globally and act locally
5. To develop creative leaders of international teams who possess an indomitable spirit and techniques for creating new resources
6. To develop quick-acting personnel with both specialist knowledge and practical skills who can think on their feet in initiatives to contribute to economic development in Japan

The course will also provide a generalist education on problem-solving methodology, equipping future personnel with the following four skills:

1. Taking action: The ability to engage in problem-solving, based on accurate analysis of situations and strong communication skills
2. Integration: The ability to understand the realities of global and local issues from a broad, comprehensive and multifaceted perspective and apply knowledge from both the humanities and the sciences
3. Organization: The ability to engage in discussions and negotiations for the purpose of international cooperation and drive projects with strong leadership skills
4. Fundamental problem solving: The ability to identify the root of an issue and propose specific methodology that will lead to a solution

In the doctoral course, which began on April 1, 2019, education and research are deepened to develop specialists with comprehensive strengths who can present multifaceted solutions (Figure 3).

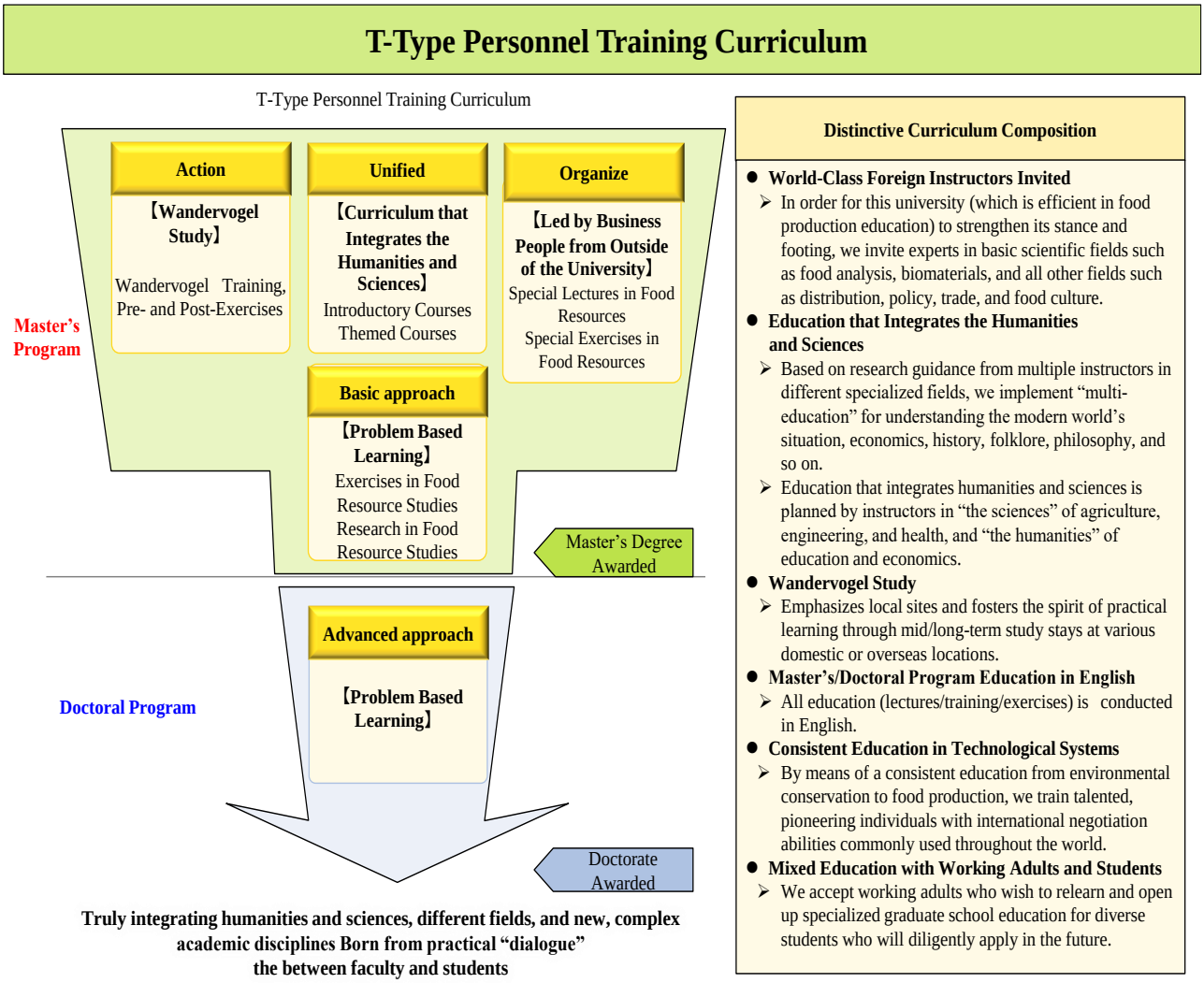

Figure 3. Education in the Graduate School of Global Food Resources with T-type personnel training curriculum

(2) Features

1) Comprehensive education covering “Production, Environment, and Governance”

To provide education toward the resolution of growing global food resource problems, a comprehensive understanding of the food resource problems from the three perspectives is necessary. 1) Production, a field involving food production, food processing, fishery product and other food manufacturing, fungi, genomes, genetic resources, and food health management; 2) Environment, a field involving land and water resource management and conservation, forest resources, agricultural machinery, molecular materials, biological environments, geosciences, and ecosystem monitoring; 3) Governance, a field involving global economy, international politics, agricultural economy, agricultural statistics, and regional economy. To this end, it is essential to provide interdisciplinary international education that integrates the humanities and the sciences.

In the first year, students take an introductory subject that is common to all the food resource fields as well as taking individual intro subjects in Production (P), Environment (E) and Governance (G) as compulsory subjects. Subjects related to P/E/G other than introductory subjects are also provided. Concerning the wide range of topics, four subjects are provided for each of P, E, and G, and to complete the course; students are required to take at least six subjects (six credits) from among them. A variety of subjects are also provided for each of P, E, and G as elective subjects. Students can take them not only in the first year but also in their second year.

This curriculum allows students to learn about systematized food resource knowledge and technologies and expecting them to acquire flexible thinking and profound insight to deal with food resource problems.

2) Wandervogel Study

The Graduate School of Global Food Resources holds fieldwork subjects called Wandervogel Study (Table 3). Through these subjects, students visit locations in Japan and overseas to gain firsthand knowledge of the realities of issues concerning food resources. This provides educational development as they become aware of food resource issues around the world, and autonomously and proactively link these issues to their areas of interest.

Table 3. Outline of Wandervogel Studies

Course Name	Main Year	Number of Credits		Objective/Content	Main Training Site
Wandervogel Study in Global Food Resources I	1	Compulsory	1	Independent study efforts for solving and improving food-resource problems in Developed Countries.	Denmark
Wandervogel Study in Global Food Resources II	1	Compulsory	1	Independent study efforts for solving and improving food-resource problems in Developing Countries.	Myanmar
Wandervogel Study in Global Food Resources III	2	Compulsory elective	1	Independent study efforts for solving and improving various food-resource problems in various parts of the world.	Multiple (various overseas locations)
Wandervogel Study in Global Food Resources IV	2	Compulsory elective	1	Recognize the challenges within agricultural groups/local governments, and independently study efforts for solving and improving food-resource problems within Japan.	Multiple (various domestic locations)
Wandervogel Research Internship in Global Food Resources V	2	Compulsory elective	[1]*	Deepen expertise and conduct master's thesis research/research on designated topics at sites outside of school such as governments, research institutions, and corporations at home and abroad.	Multiple (various overseas / domestic locations)

※Subjects where the number of credits is in [ ] are taken through multiple class titles, and they may be taken as any one of those subjects.

2. Education Implementation System [the analysis item]

(1) Faculty Organization

This graduate school is comprised of 21 full-time faculty members (at the time of establishment on April 1, 2017; 18 as of March 31, 2019) under university-wide cooperation beyond the previous undergraduate and graduate education (Figure 4, Table 4). Each of the members belongs to one of the following groups:

Production: Group of the full-time faculty members from the Research Faculty of Agriculture, the Field Science Center for Northern Biosphere, the Research Faculty of Education, and the Research Faculty of Health Sciences.

Environment: Group of the full-time faculty members from the Research Faculty of Agriculture, the Research Faculty of Engineering, and the Research Faculty of Environmental Earth Science.

Governance: Group of the full-time faculty members from the Research Faculty of Agriculture, the Research Faculty of Fisheries Sciences, the Research Faculty of Economics and Business, and the Research Faculty of Media and Communication.

Teaching staff from other departments at Hokkaido University and those from overseas universities are assigned to the school as part-time staff. Teaching staff from overseas research institutes and other domestic universities are also assigned as part-time staff to provide a wide variety of educational programs that integrate humanities and sciences. Teaching staff from the Research Faculty of Fisheries Sciences on the Hakodate Campus also teach as full-time staff.

Table 4. Numbers of faculty members

Group Name	Prof.	Assoc. Prof.	Lecturer	Assist. Prof.	Total
Production	3	2	1	1	7
Environment	1	4	1	1	7
Governance	3	1	1	0	5
Total	7	7	3	2	19

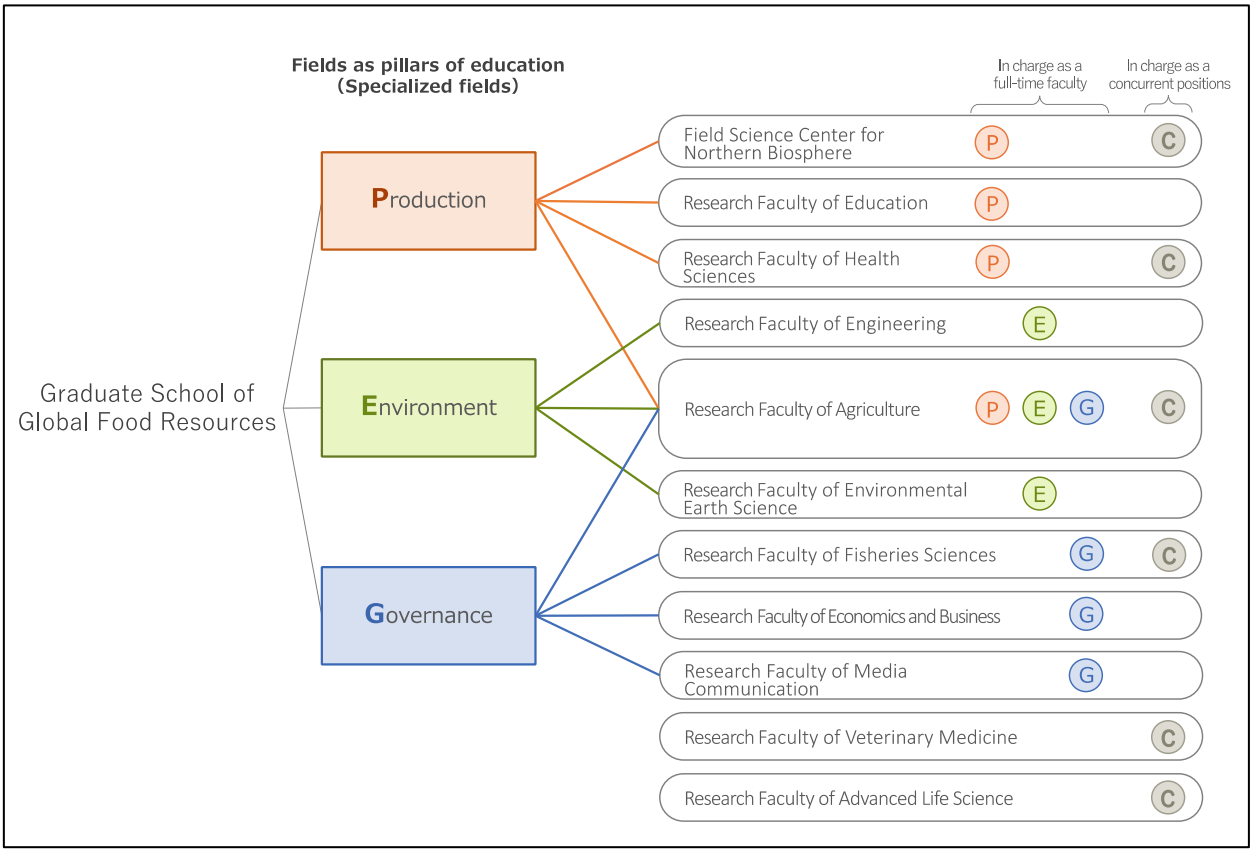

Figure 4. Faculty Organization

(2) Education Implementation System

1) In the graduate school, matters of curricula, education, and operations are discussed by the Student Affairs Committee before being determined at the Faculty Council of the graduate school.

2) An Educational Guidance Committee comprising an instructor and two assistant instructors is formed for each student shortly after the course begins (mid-April). The faculty makes use of the benefits of this multi-instructor approach, building a flexible instruction framework that approaches the subject matter from a wide range of perspectives. Care is taken to ensure that each committee comprises faculty from different areas of study (*see attached material 1, "Organization policy of the Educational Guidance Committee")*.

3) In the academic degree examination of the graduate school, after the preliminary examination by the Educational Guidance Committee and the examination of eligibility to submit a thesis, the oral defense is evaluated by the Thesis Examination Committee based on the thesis

evaluation standards, and then degree conferment is determined by the Faculty Council and the result is sent to the president of Hokkaido University (*see attached material 2, "Organization Policy of the Thesis Examination Committee"*).

(3) Approach Toward Educational Improvement and Reforms

To develop global leaders who are engaged in resolving growing problems of global food resources, the Graduate School of Global Food Resources has developed a curriculum that gives students exposure to food resource problems in national and international settings and allows them to resolve the issues based on that exposure, and provides "T-type" personnel education system that combines comprehensive basic education and field-oriented specialized education (Figure 3). The establishment of a graduate school that develops global leaders will lead to the formation of an international hub for education and research on food resources.

1) Comprehensive education covering Production, Environment and Governance

To provide education toward the resolution of growing global food resource problems, it is necessary to comprehensively understand food resource issues from the three perspectives of Production, Environment and Governance. To this end, the school provides interdisciplinary international education that integrates the humanities and the sciences. An Educational Guidance Committee comprised of a supervisor and sub-supervisors is also formed for each student to create a system under which the student can learn systematized food resource knowledge and techniques from faculty members in specialized fields.

2) Education in English

The graduate school provides its education all in English. In addition to full-time educators, researchers and non-Japanese part-time lecturers in diverse fields who gather at GI-CoRE have discussions in English at the class and the Luncheon Seminar.

Students who have been admitted to the master's course immediately have opportunities to improve their English skills at the Intensive Course and the E-learning Course taught by lecturers from language education company.

3) Wandervogel Study

The Graduate School of Global Food Resources holds field work subjects called Wandervogel Study (Table 3). Through these subjects, students visit locations inside and outside Japan to gain firsthand knowledge of the realities of issues concerning food resources. This provides educational development as they become aware of food resource issues around the world and autonomously and proactively link these issues to their own areas of interest.

Wandervogel Study is provided as a fieldwork subject, which is a distinctive feature of this graduate school. Wandervogel I to V are provided in the master's course, and VI in the doctoral

course. The last two year's Wandervogel Study implemented in the master's course achieved a significant learning effect; students recognized various initiatives in the real world through fieldwork that included pre- and post-study. According to the follow-up survey, participating students themselves feel a high sense of achievement.

In Wandervogel Study, full attention is given to the safety of students, such as by having multiple faculty members to accompany the students up to the study location, and by arranging for vaccinations before training.

Level of this analysis item and the reasons

[Level] At the expected level

[Reason] We judged to be at the expected level from the following reasons: Enough faculty members to maintain the educational activities have been secured since the school's establishment in academic 2017. An educational guidance system and an academic degree examination system are prepared. The first master's course student of this graduate school finished their degree at the end of academic 2018.

3. Educational Quality Improvement and Educational System [the analysis item]

(1) Educational Reform and Implementation System

In order to continue to achieve high levels of student satisfaction and educational achievement, we need to continue to improve our curriculum, develop an appealing syllabus, and catch up with even better teaching and learning methods.

In part of our curriculum, however, there is overlap in the extent of the subjects. Also, some students from various backgrounds may find some classes overly technical. We recognize that the curriculum must be constantly checked and reformed.

(2) Faculty Development

We are recommending to all our affiliated faculty members to take and learn numerous and wide variety of training course and lectures arranged for the faculty development of our university teaching staff. Notably, in keeping with the graduate school's focus on overseas education such as the Wandervogel Study and fieldwork, we invited a speaker from the Otaru Quarantine Station (Ministry of Health, Labour and Welfare) in January 2018 and had a lecture on infectious diseases and its preventive measures during traveling overseas.

(3) Class Questionnaires

A class questionnaire was conducted in academic 2017 and 2018.

The results for academic 2018 showed that more than 75% of answers were favorable for all items. In some items, the percentage of favorable responses exceeded 80% and showed excellent results: "the goal and details of courses and evaluation method in the syllabus were easy to understand" (88%); "classes were satisfying as a whole" (84%); and "classes were intellectually stimulating, and made me want to study more" (84%).

Level of this analysis item and the reasons

[Level] Exceeds the expected level

[Reason] We judged to exceed the expected level, because more than three-fourths of all questions on the class questionnaire received favorable answers on average, which means high ratings from students. It is also so judged because awareness of educational quality enhancement is maintained at a high level through the faculty development seminar on overseas training and fieldwork and through efforts to improve the curriculum for higher levels of student satisfaction and academic achievement.

4. Admission of Students [the analysis item]

(1) Admission Policy for Master's Course

Under the four basic principles of Hokkaido University (i.e., Frontier Spirit, Global Perspectives, All-round Education and Practical Learning), the Graduate School of Global Food Resources call for the students who;

- ✓ acquire both wide perspectives on a global scale and deep understanding on local societies,
- ✓ are aware of the importance of food resources in the 21st century's strategy for survival,
- ✓ have a noble spirit and a willingness to abandon selfishness and contribute to human society

In more specific terms, we are seeking students who are keen to;

- ✓ approach and solve problems with a broad perspective that encompasses the humanities and sciences,
- ✓ receive hands-on, practical education in both national and international settings,
- ✓ take the initiative to search for, identify, solve, raise and examine issues,
- ✓ work in a global society with a pioneer spirit,
- ✓ develop strong communication skills, team work and turning ideas into action,
- ✓ seek the diverse practical job opportunities beyond academic research.

The Graduate School of Global Food Resources willing to accepts students from a wide variety of backgrounds, with the aim of finding highly ambitious and talented students and providing them with an education that encompasses the humanities and sciences to foster personnel that will meet society's wide-ranging needs.

(2) Admission Procedures

For Master's course, students are selected through a comprehensive assessment comprising 1) an English proficiency test, 2) a short essay exam, and 3) an oral test. Selection is conducted by the Admission Exam Committee, undertaken by the dean, the vice dean, a faculty member from each field and other person deemed necessary by the dean.

The general entrance exam is carried twice a year. In addition, we have a special entrance exam for international students. They can make their applications online, and interviews are conducted by email or Skype to make the process easier for overseas nationals who wish to apply for the course.

(3) AO Exam

It is no AO Exam system (admission based on recommendation) for this school.

(4) Admission Quota and Capacity

The admission quota for the master's course has been 15 students since its establishment on April 2017 (Table 5).

Table 5. Admission quota and capacity in the Graduate School of Global Food Resources

2017

Major Name	Master's Degree Program			
	Admission quota	Number of Enrollees		Subtotal
		1st year	2nd year	
Global Food Resource Studies Major	15	17 (3)		17（3）
Total	15	17 (3)		17（3）
Replenishment rate of student quotas		113 %		113 %

2018

Major Name	Master's Degree Program			
	Admission quota	Number of Enrollees		Subtotal
		1st year	2nd year	
Global Food Resource Studies Major	15	16 (3)	17 (3)	33 (6)
Total	15	16 (3)	17 (3)	33 (6)
Replenishment rate of student quotas		107 %	113 %	110 %

* Figures in parentheses indicate international students.

(5) Enrollment and Capacity

Enrollment in the master's course exceeded the quota in both academic 2017 and 2018 (Table 6).

Table 6. Master's Degree Program (Admission quota: 15）

School year	Number of enrollments	Numbers of successful examinees			Number of people declining enrollment
		General Admissions (1st term)	For International Students	General Admissions (2nd term)	
2017	17	15	5	1	4
	(3)	(1)	(5)	(0)	(3)
2018	16	13	2	3	2
	(3)	(2)	(2)	(0)	(1)

* Breakdown of international students in parentheses

(6) Admission of Working Students

There are no working students because the admissions exam for working students has not been established.

(7) Admission of International Students

As shown in Table 5. *Admissions quota and enrollment in the Graduate School of Global Food Resources*

Level of this analysis item and the reasons	
[Level]	At the expected level
[Reason]	We judged to be at the expected level, because of the establishment and publication of its admissions policy and because of the admissions quota exceeded 100% of the planned quota.

5. Educational Content and the Good Practices [the analysis item]

(1) Curriculum Organization

1) The number of credits necessary for completion is shown in Table 7.
2) All 51 subjects (12 required subjects, 17 required electives and 22 electives) are taught in English. As all of the subjects at this school are taught in English, all students are able to complete their course entirely in English.
3) As one of the typical subjects of this school, an elective subject "International Understanding" is offered. Japanese and overseas lecturers who are working in a global society are invited to give talks to equip students with the knowledge and training they will need in their future work as global leaders.

Table 7. Number of credits required for completion

Division Name	Compulsory subjects	Compulsory elective subjects	Compulsory elective subjects (fieldwork subjects)	Total
Division of Global Food Resource Studies	At least 21 credits	At least 6 credits	At least 2 credits	33 and above

(Source: Hokkaido University Graduate School of Global Food Resources Regulations

(2) Educational Good Practices

1) Luncheon seminars were held for our faculty and students with talks by experts in each field who have been invited from universities and other institutions overseas. Nine luncheon seminars were held in 2017 academic year and seven were held in 2018 academic year.
2) Field work courses (Wandervogel Study I (Compulsory subject)) is held in Denmark every June and Wandervogel Study II (Compulsory subject) is held in Myanmar every February to promote exchange between our students and the students in these two countries. Wandervogel Study I and II employ active learning methods such as a presentation session in English at the end of each course.
3) From 2018 academic year, Wandervogel Study III is held in Australia, the Philippines and New Zealand in September and Wandervogel Study IV is held in Furano City in October. Active learning is used, with plenty of discussions with local faculty and engineers.
4) The English education program combines intensive courses with small class sizes taught by external lecturers and a self-study program using e-learning.
5) An elective course on International Understanding is offered. Japanese and overseas lecturers who are working in a global society are invited to give talks to equip students with the knowledge and training they will need in their future work as global leaders.
6) In keeping with the graduate school's focus on overseas education such as the Wandervogel Study and field work, a speaker from the Otaru Quarantine Station (Ministry of Health, Labour and Welfare) was invited in 2018 academic year for a faculty development session on

infectious diseases to be aware of when traveling overseas and preventive measures that can be taken.

7) An Educational Instruction Committee comprising an instructor and two assistant instructors is formed for each student shortly after the course begins (mid-April). The faculty makes use of the benefits of this multi-instructor approach, building a flexible instruction framework that approaches the subject matter from a wide range of perspectives. Care is taken to ensure that each committee comprises faculty from different areas of study.
8) When selecting international students, applications are made online and interviews are conducted by email and Skype to make the process easier for overseas nationals who wish to apply for the course.
9) From the academic year of 2018, a summer course was established with mutual acceptance between Hokkaido University and the National University of Singapore (NUS). One student from the Graduate School of Global Food Resources participated and attending lectures at NUS, a plant factory and oil palm plantation to receive a local education, as well as receiving pre-departure support and attending joint classes in Hokkaido.
10) Two overseas learning satellites are held: Wandervogel Study I (project name: Dairy Farming and Resource Recycling in a Developed Country: Learning from Denmark) and Wandervogel Study II (project name: Tackling Food Resource Issues in a Developing Country: Field Work in Myanmar).
11) The graduate school functioned as a summer institute, teaching three classes: “Diversity in Agriculture”, “Agricultural Resource Economics” and “Special Course in Food Resources: Economic Statistics on Food Resources”.
12) The Hokkaido University Teaching Assistant (TA) System is used to financially support excellent graduate students (Table 8).

Table 8. Adoption of the Teaching Assistant (TA) and Research Assistant (RA)

School year	TA			RA
	Classification	Adopted number	Number of course subjects	
2017	Special education	0	0	0
	Graduate education	7	5	
	Sub total	7	5	
2018	Special education	0	0	0
	Graduate education	8	8	
	Sub total	8	8	

Level of this analysis item and the reasons

[Level] Exceeds the expected level

[Reason] We judged to exceed the expected level, because the following are well underway in the second year after the school was established: Wandervogel Study in Japan and elsewhere, which is a distinctive feature of the graduate school; the Luncheon Seminar, which is held with invited overseas experts; and the Summer Course, which is a student exchange program with the National University of Singapore.

6. Educational Outcomes [the analysis item]

(1) Students' Acquired Academic Skills, Qualities and Abilities

As indicated in the curriculum policy, the curriculum of the graduate school is intended to develop individuals with extensive knowledge, expertise and acting/unifying/organizing abilities who can understand global food resource problems from a comprehensive perspective and can resolve such problems. In this curriculum, the degree conferment rate of the master's course is very high, at 97% (Table 9), which supports the idea that students have acquired the academic skills and abilities expected of them by the graduate school.

The graduates of academic 2018 obtained their jobs where extensive knowledge and expertise are required, such as national government employees, local government employees and private company employees. This outcome is also evidence supporting the above.

Table 9. Degree awarded

Degree	2018	
	Number of awards	Award rate within the standard term
Master's degree	16	97.0%

(2) Students' Evaluation of Learning

In the questionnaire at completion of the course in academic year 2018, most of the respondents gave 4 out of 5 points for almost all evaluation items on learning, showing that student satisfaction was high.

(3) Students' Evaluation of Educational Outcomes

The questionnaire at completion of the course in academic 2018 also showed that student satisfaction with educational outcomes was high. For example, students gave 4.3 out of 5 points for "the ability to find and resolve problems," which is the educational goal of the graduate school, 4.4 out of 5 points for "presentation ability," and 4.3 out of 5 points for "foreign language (English) skills."

Level of this analysis item and the reasons

[Level] Exceeds the expected level

[Reason] We judged to exceed the expected level, because students showed high satisfaction in the questionnaire after the course in academic 2018, and because the rate of degree conferment was very high.

7. Support for Students [the analysis item]

(1) Guidance for Students

After the entrance ceremony, a student handbook and materials for registration guidance are distributed and then registration guidance is provided. The entrance ceremony and guidance are in English. After the guidance, the research of faculty members in each field is outlined.

(2) Guidance for Working Students

There are no working students because the admission exam for working students is not implemented.

(3) Guidance for International Students

As well for international students, as is the case for general students, a student handbook and materials for registration guidance are distributed after the entrance ceremony, and then registration guidance is provided. No special care for international students is given.

Since all lectures are in English at this graduate school, every student can complete the course in English alone.

(4) Admission/Tuition Fee Waivers and Scholarships

Students with excellent academic records who have difficulty paying admission and tuition fees for financial reasons are exempted from admission and tuition fees.

Financial support is provided to students who study overseas using the overseas study support system of the Japan Student Services Organization (JASSO) (Table 10).

Table 10. Applications for overseas travel support for students

School year	Number of applicants	Adopted number
2017	15	15
2018	17	11

Note: Only applications under the overseas study support system are counted.

(5) Commendation System

1) In the presentation meeting of master's thesis research/research on designated topics, prizes are given for excellent presentations (Most Outstanding Research Presentation Prize and Outstanding Research Presentation Prize) based on an evaluation of the day's presentations and Q&As by all faculty members.
2) The Poster Presentation Prize is awarded based on the results of an examination of student poster presentations at international symposiums.

Level of this analysis item and the reasons

[Level] At the expected level

[Reason] We judged to be at the expected level, because all the events including the entrance ceremony and guidance are in English and because overseas travel support systems and commendation systems are well prepared.

8. Implementation of Educational Activities (outside the educational organization) [the analysis item]

The following talks such as lectures for local citizens, public seminars and international symposiums were held.

1) 2017 academic year
   i. Public talk for Hokkaido University Sustainability Week 2017: “How Can Ancient Agricultural Practices in Japan and the USA Inform Modern Agriculture Sustainability?”
   ii. Joint seminar between Hokkaido University and the Research Institute for Humanity and Nature: “Rediscovering Agriculture -Insights from Fields Around the World”
   iii. Special lecture on agriculture and international food resources: “Young people! Why not be a global talent!?”
   iv. Special lecture on agriculture and international food resources: “Integrated Management of Water Resources and Reuse of Waste Water”
2) 2018 academic year

International Symposium for the Recovery of the World’s Food Resource Systems (hosted by GI-CoRE’s Global Station for Food, Land and Water Resources and jointly hosted by the Graduate School of Global Food Resources). A poster presentation session was held for students in the master’s course at the same symposium, with awards given to four students.

Level of this analysis item and the reasons

[Level] Exceeds the expected level

[Reason] We judged to exceed the expected level because various lecture meetings for students are actively held.

Attached Materials

Attached material 1

Organization Policy of the Educational Guidance Committee

1. Members

1) Number of members: three (one supervisor, two sub-supervisors). However, members should be from at least two different fields to ensure the absence of bias.

2) Scope: The above three members should be full-time faculty members (excluding GI-CoRE faculty members (part-time faculty members from other departments at HU) and invited faculty members (part-time faculty members from other universities)). However, if necessary, faculty members from other graduate schools/faculties, other universities and overseas universities may be assigned as sub-supervisors.

3) Eligibility for supervisor: Any full-time faculty member, regardless of the job title, may become the supervisor.

2. The Committee Organizing

During a certain period of time after admission, the student, the student's desired supervisor and sub-supervisor candidates should deliberate to select two sub-supervisors. The plan is submitted under the supervision of the Educational Guidance Committee, and then the Student Affairs Committee makes a decision.

If many students want the same faculty member as their supervisor and if adjustments are necessary, the Student Affairs Committee will make adjustments after asking the faculty member and students for their feedback.

3. Major tasks of the Educational Guidance Committee

1) Confirmation and guidance on choice of courses
2) Confirmation and guidance on research progress and learning situation
3) Advice and guidance on the relationship between Wandervogel Study and the student's research
4) Judgement of need to review the members of the Educational Guidance Committee at the completion of the first year in the master's course
5) Advice and guidance on the selection of master's thesis research and the selection of the theme
6) Preliminary examination for the master's thesis research and doctoral thesis
7) Examination of the master's thesis research topics and doctoral thesis and the examination of eligibility to submit a thesis

4. Report on activities of the Educational Guidance Committee

The Educational Guidance Committee confirms and gives advice on the student's research progress and learning situation, and reports its activities on a regular basis.

1) Time for report: twice a year (at the completion of term II for terms I and II, and at the completion of term IV for terms III and IV)
2) Details of report: dates and details of activities

Attached material 2

Organization Policy of the Thesis Examination Committee

Members

Master's course

Number of members:	three (one chief examiner, two vice examiners)
Chief examiner:	Any full-time faculty member, regardless of the job title, may become the chief examiner. The supervisor may also become the chief examiner.
Vice examiners:	If necessary, faculty members from other graduate schools, other universities and overseas universities may be assigned as vice examiner.

Doctoral course

Prescribed separately.