

Working paper

5-year journey with Shishu-kan and
its contribution to future development

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Abstract

The 5-year journey at Shishu-kan with talented colleagues and wonderful supporters was very much fruitful with many new findings and learnings. Shishu-kan programs, Special Lectures I/II, International/Domestic Service Learning, Lectures on integrated academic foundations, International Field Training and PBL/R enabled Mr Shiraishi to increase his technical and human skills including his responsibility, high sense of mission and perspectives and management ability that a global leader must have. Especially during the International Field Training and PBL/R, together with his expertise, microbiology, he showed his abilities in implementing his planned projects both in Japan and overseas. These programs also made him realize that 1) communication with external experts, 2) handling official data/information with high responsibility and 3) international environments with many talented officers are his top priority matters that he may seek for his future work. Based on his learning at Shishu-kan, Mr Shiraishi declares that he would play an active and important role as a global leader in solving global issues.

Acknowledgements

Mr Shiraishi would like to express his deepest gratitude to his mentor, Prof Shuichi Kawai for helpful advice, valuable discussions, and continuous warm encouragement during the course of this programme.

Sincere appreciation goes to Prof Yosuke Yamashiki for valuable discussion and warm encouragement especially on the 4th year's overseas fieldwork. I also want to thank Prof Yasuyoshi Sakai for his support and supervision on various activities from his research perspective.

Mr Shiraishi has learned many things through Shishu-kan's 5-year program and increased his personal and technical skills. In line with this, he would like to thank you all the people involved in his fruitful experiences as a Shishu-kan student and express his special appreciation. At last, but not least, he wants to thank Kyoto University to give him a big support for this entire programme, Graduate School of Advanced Leadership Studies.

Terminology

CBD	Convention on Biological Diversity
CBIJ	Council of Biotechnology Japan
FAO	Food and Agriculture Organization of the United Nations
GM	Genetically Modified
GSA	Graduate School of Agriculture
GSAIS	Graduate School of Advanced Integrated Studies in Human Survivability
GSALS	Graduate School of Advanced Leadership Studies ¹
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEXT	Ministry of Education, Culture, Sports, Science and Technology - Japan
OECD	The Organisation for Economic Co-operation and Development
PBL/R	Project Based Learning/Research
SDGs	Sustainable Development Goals
Shishu-kan	Shishu-kan is a name commonly used to indicate both GSAIS and GSALS

To avoid confusion, in this paper 'Shishu-kan' or 'Shushu-kan Programme' is mainly used to indicate the implementing organization or its programs, respectively.

¹ Graduate School of Advanced Leadership Studies (GSALS), Kyoto University was selected in fiscal 2011 for the Program for Leading Graduate Schools (All-Round Model) project by the Ministry of Education, Culture, Sports, Science and Technology - Japan (MEXT). The Graduate School of Advanced Integrated Studies in Human Survivability (GSAIS), Kyoto University, is a new graduate school established in 2013 that is formed to implement Kyoto University's 'Shishu-Kan (GSALS) Programme (Fiscal 2009)'. Hence, both GSAIS and GSALS are commonly referred to as 'Shishu-Kan'.

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1. Background

Mr Kosuke Shiraishi, belonging to Graduate School of Agriculture (GSA²), was selected as a special student in 2012 to take an additional programme named Graduate School of Advanced Leadership Studies (GSALS³) and successfully completed all the necessary lectures, field studies and project-based learning (PBL) at GSALS under the overall guidance of Prof Shuichi Kawai (GSAIS⁴) as his mentor. Prof Yosuke Yamashiki (GSAIS) and Prof Yasuyoshi Sakai (GSA) provided various advice and suggestions to Mr Shiraishi whole through the course of this programme.

Mr Shiraishi has been studying and working at Laboratory of Microbial Biotechnology⁵ and obtained microbiology-related practical techniques, the ability to use technical equipments with accuracy, knowledge/experience on plant-microbe interaction, time management skills in order to work on several different projects at the same time, etc. Mr Shiraishi consolidated the basis of his specialization (microbiology/cell biology) and would tackle complicated global problems with various perspectives obtained through Shishu-kan's programs. Mr Shiraishi's research experiences and achievements are described as [Annex 1](#).

In addition to Shishu-kan Programme and specialization, he has implemented several extracurricular activities which enabled him to develop more advanced personal and technical skills. Mr Shiraishi's experiences and achievements obtained from extracurricular activities are shown as [Annex 2](#).

2. Objective

The objective of the GSAIS Working Paper is to describe Mr Shiraishi's educational experience at Shishu-kan and its contribution to his career and future development.

3. Activities and Outputs

This chapter reviews all of Mr Shiraishi's performances done during the course of Shishu-kan programme. Summary of his activities and related outputs is shown below. However, the focus is on the last two years' activities, international practical training and PBL/R.

3.1. Special Lecture (熟議) I

Special lectures and discussion for leadership are intended to increase students' consciousness as global leaders and have them practice via simulated experiences. In their first year, students attend lectures given by experts from outside of the university (specially appointed professors) who are leaders of international organizations and industrial, official, and business circles around the world,

² GSA (Graduate School of Agriculture): <http://www.kais.kyoto-u.ac.jp/>

³ GSALS (Graduate School of Advanced Leadership Studies): <http://www.gsais.kyoto-u.ac.jp/sals/en/about/aim.html>

⁴ GSAIS (Graduate School of Advanced Integrated Studies in Human Survivability): <https://www.gsais.kyoto-u.ac.jp/>

⁵ Laboratory of Microbial Biotechnology: <http://www.seigyo.kais.kyoto-u.ac.jp/>

and engage in discussion on chosen subjects so that they can locate issues and explore them. (This sentence is cited from GSALS webpage.)

List of lecturers

Series	Lecturers (Professors)
1 st	Masao Horiba & Tateo Arimoto
2 nd	Junya Nishimoto
3 rd	Tateo Arimoto
4 th	Motoyuki Ono
5 th	Shinichi Fukushima
6 th	Masahiko Mori
7 th	Shuzaburo Takeda
8 th	Tamotsu Tokunaga

Outputs

- Reports on all the lectures

Reflections

- **Inputs from the frontiers.** Discussing with the lecturers was valuable for Mr Shiraishi to picture the current challenges/difficulties that the world is facing and their counter-plans in various fields such as education and science & technologies. Lecturers' actual experiences as the frontiers stimulated him to study/work hard for his ideal futures that they had in their minds. Lectures also helped Mr Shiraishi to make up his mind to work internationally using his expertise, microbiology.

3.2. Domestic service-learning (国内サービスラーニング)

Students join volunteer activities not only to learn the volunteer spirit, but also to understand the numerous positions and perspectives that leaders must assume and the variances that are to be found among different cultures and societies. With the aim of helping students to acquire such social skills, service-learning is conducted in Japan during their first year. Students are engaged in volunteer work at various institutions through cooperation with local governments, etc. (This sentence is originally cited from GSALS webpage and slightly modified for insertion.)

Activities

Mr Shiraishi and his colleagues did volunteer work at nursing homes named Kosei-en and Dowa-en from December 2012 to March 2013. Following activities were performed.

- Communication with elderly people
- Preparation for and tidying up meals
- Experience of actual cares for elderly people (bathing, eating, etc.)
- Experience of various forms of cares (day service, home helper, etc.)
- Discussion on foods for elderly people with nutritionists
- Final presentation on the volunteer activities both for the nursing homes and Shishu-kan

Outputs

- Final report

Reflections

- **Sociality.** Sociality is one of the most important skills that leaders have to work with people with different background. Leaders need to appreciate people involved in a project and work with them in flexible manners. Through this program, Mr Shiraiishi successfully enhanced his social skill by deeply considering and actually taking care of the elderly people some of whom have dementia.

3.3. Special Lecture (熟議) II

Following to the Special Lecture I, as their second year program, students are invited to join a series of special lecture and discussion lasting for several months that is led by leaders from various circles in order to become familiar with how leaders think and offer evidence-based solutions to issues that currently have no definitive answer. Through such experiences, students are expected to develop their sense of mission as a leader, humanity, and linguistic skills. (This sentence is cited from GSALS webpage.)

List of lecturers and discussed themes

Term	Themes	Lecturers (Professors)
1 st term	Cross-bridges between science technology and society	Tateo Arimoto
2 nd term	By 2020 - Human resource development in Japan -	Shuzaburo Takeda

Outputs

- Final reports on both of the themes

Reflections

- **Logical thinking and communication skill.** Logical thinking and communication skill are important to put necessary pieces into reasonable order to convince partners and/or other parties.

Two series of lectures helped Mr Shiraishi to increase his ability of logical thinking and persuasive power with the help of Prof Arimoto and Prof Takeda. These skills were found to be important especially in his research life that needs to persuade rivals in appropriate languages.

3.4. International service-learning (国外サービスラーニング)

Following to the Domestic service-learning, to obtain social skills and international understanding, service-learning is conducted overseas during their second year. Overseas, they join volunteer activities with cooperation from international organizations. (This sentence is originally cited from GSALS webpage and slightly modified for insertion)

Activities

Mr Shiraishi and his colleagues stayed in Bangladesh from 9 August to 8 September in 2013 to experience volunteer activities as Japan Overseas Cooperation Volunteers (JOCV) with the help of Japan International Cooperation Agency (JICA). Volunteer activities were performed mainly in Dhaka, Comilla and Narsingdi as follows.

- **Introduction of Bangladesh life and office visits in Dhaka (9 Aug – 17 Aug).** Mr Shiraishi stayed in the capital city, Dhaka in the first week of his volunteer experience in Bangladesh and obtained some insights on the overall JOCV's activities from seniors. During his stay in Dhaka, he visited Bangladesh Rural Development Board (BRDB) office to learn about its history and framework as well as one of the ongoing projects, Participatory Rural Development Project – phase II (PRDP- II) which he was actually involved in during his stay in Comilla. He also had chance to visit other two offices on Family Planning and National Institute of Local Governance (NILG).
- **Participation in a project in Comilla (18 Aug – 29 Aug).** In the next ten days, Mr Shiraishi did the main volunteer work in a rural area called Comilla. He joined one kind senior, Ms Mami Yamaoka, to attend various local meetings including Union Coordination Committee Meeting (UCCM), Gram Committee meeting (GCM) and Field Proposal Type Training (FPTT). As he has been studying microbiology, he explained the importance of washing hands before meals to kill pathogenic microbes and demonstrated how to do it with soap. This demonstration was extremely important for people in Bangladesh who use their right hands for eating. During his activity in Comilla, he stayed with a local family, which was particularly important to understand their daily lives, religious believes, habits, ways of thinking, etc.
- **Learning about other ongoing projects in Narsingdi (1 Sep – 4 Sep).** Following to the local experience in Comilla, Mr Shiraishi visited some local hospitals with a senior, Ms Masako Miura, to monitor the effect of Safe Motherhood Promotion Project (SMPP) project. Activating community clinics and improvement of Total Quality Management (TQM) of hospitals were the main activities in the project to protect mothers from various diseases.

Reflections

- **Communication skill.** Communication with local people was one of the most challenging things during the international service learning in Bangladesh since they use ‘Bengali’ which Mr Shiraishi has never heard before. What was important for being close to them was to try to learn their language and actually use to talk to them. This was his first experience to put himself in an environment where he totally could not understand what people say. Looking back on his Italian life, however, this must have been a base for communicating with people who speak a language that Mr Shiraishi does not know. In Italy, based on his experience in Bangladesh, he quickly created a strategy to communicate with the local people and finally learned how to speak Italian language.
- **Understanding of cultural differences.** In order for people to commit to working on diversity, every person needs to feel that they are included and important. Whether the person is a Japanese-American woman, a white man, a Jew, a gay person, an African-American, an Arab-American, a fundamentalist Christian, or speaks with an accent, has a disability, is poor, or is wealthy--each person needs to feel welcomed in the effort to create a diverse community. And each person needs to know that their culture is important to others. In line with this, the first difficulty that Mr Shiraishi encountered was to recognize the difference of their way of thinking. He had a difficulty in understanding how they think and act that was different from how he, a Japanese person, does since they behaved in a way that Mr Shiraishi did not expect. This experience was, however, extremely helpful for him to be a part of an international organization during his internship at FAO.



Photo with local children in Comilla

Outputs

- One-month volunteer experience in Bangladesh

- Presentation on the activity report both for JICA Bangladesh and Shishu-kan
- Final report

3.5. Lectures on integrated academic foundations (八思)

Offered in the 8 fields of: humanities / philosophy, economics / business, law / politics, linguistics, science and technology, medicine / life, information / environment, and art, the lectures on integrated academic foundations support students' abilities to put diverse disciplines into perspective and integrate them, and help them to establish fundamental knowledge and problem solution capabilities, which are essential for holding discussions on equal footing with leaders from Japan and abroad. (This sentence is originally cited from GSALS webpage and slightly modified for insertion). Since Mr Shiraishi's specialization is considered as medicine / life, he took two lectures from every category except for medicine / life.

List of lectures

#	Name of lectures	Category
1.	Mutual Linkage between Human Activity and Nature	Information & Environmental Studies
2.	Science of complex systems	Information & Environmental Studies
3.	Introduction to Materials Science	Science & Engineering
4.	Special Lecture to Crisis Management	Science & Engineering
5.	Education Policy and Research	Humanities & Philosophy
6.	History of Civilizations	Humanities & Philosophy
7.	Energy Finance	Economics & Management
8.	Risk Management	Economics & Management
9.	Constitutional Law II	Law & Politics
10.	Comparative Culture of Law	Law & Politics
11.	Global Communication I	Linguistics
12.	Certificazione di Italiano come Lingua Straniera (CILS)	Linguistics
13.	Cultural Practice I (Chado: The way of tea)	Art
14.	Cultural Practice II	Art



Photo from Cultural Practice I (Chado) class

Reflections

- **Diversified perspectives.** Since the global issues are complicated with entanglement of many related matters, leaders need to see those problems from different perspectives. Through this program, Mr Shiraishi developed flexible thinking habits, which in turn would aid in the process of resolving complex interdisciplinary issues. He was also able to connect these subjects to his specialization, microbiology, and think of application of new methods learned in various lectures to his daily lab research. That could be a basis for him to challenge global issues in the near future.

3.6. International practical training (海外武者修行)

To acquire practical knowledge and experience that can be applied anywhere in the world, during students' fourth year they are required to undergo international practical training in accordance with their respective fields of expertise and career plans for feeding their research outcomes back to society. (This sentence is originally cited from GSALS webpage and slightly modified for insertion.)

Activities and outputs

According to the Terms of Reference (ToR), Mr Shiraishi performed activities and provided related outputs. Prepared documents, PPT slides and other related materials were reviewed and cleared by the relevant supervisors. Summary of his activities and related outputs is shown below.

Activity I: FAO GM Foods Platform

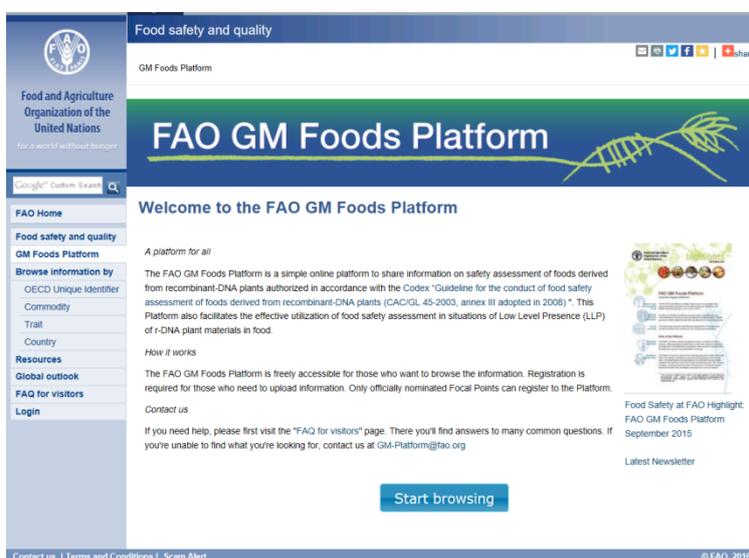
Mr Shiraishi contributed to the day-to-day work on the FAO GM Foods Platform⁶ and follow up with

⁶ FAO GM Foods Platform: <http://fao.org/gm-platform>

communications with the platform’s national focal points, according to the “Standard Operating Procedures (SoP)” as a self-explanatory document. The reflections and future strategies are summarized in the “Strategy document”. The activities were performed and outputs were reviewed under the supervision of Ms Masami Takeuchi.

Activity I- I: Assist in the daily management of the Platform

The objective of the following activities is to make the Platform an ideal database on the GM food/feed safety assessment. FAO supports all the Member countries on participating in the Platform activities and populate the high quantity/quality data/information.



Top page of the FAO GM Foods Platform

Activities

- Passive follow-ups for received emails and active follow-ups for populating high quality/quantity of data/information on the Platform.
- Platform editing and record keeping on the website.
- IT improvements on the interface and visibility of the Platform.
- Development of communication materials including eNewsletter, SoP and strategy document.
- Plan and organization of 2 side events at the occasion of CCNE8⁷ and CAC38⁸.
- Plan and organization of 1 webinar.

Outputs

⁷ The 8th Session of the joint FAO/WHO Coordinating Committee for Near East (CCNE8): <http://www.codexalimentarius.org/roster/detail/en//c/286547/>

⁸ The 38th Session of the Codex Alimentarius Commission (CAC38): <http://www.fao.org/fao-who-codexalimentarius/meetings-reports/Audio/CAC38/>

- Population of the information/data on the Platform is shown in the below table. The latest version of the “Platform status” is available in the FAO’s S drive.

Item	23 Mar. 2015	28 Feb. 2016	Total contribution
Focal Points nominated	160	172	12 Focal Point nomination
Percentage of nominated Focal Points that registered	155	167	12 Focal Point registration
Filled out country profile pages	95	117	21 country profile shared
Number of countries submitted records	12	17	5 new countries that shared the GM food safety assessment
No. of records submitted	409	846	437 GM food safety assessments
Link created	13	36	23 links

Detailed activities and outputs are further described as [Annex 3](#).

Activity I- II: Country profile project

The objective is to highlight the added-value of the collected official data/information on the Platform. Specific objective is to provide a global outlook on key elements of regulatory framework on the safety of GM foods/feeds shared by focal points on the Platform.

Activities

- Development of the global outlook on the Platform statistics and the data synthesis on the regulatory frameworks

Detailed activities and outputs are further described [Annex 4](#).

Outputs

- “Global Outlook” page that includes 5 world maps, 3 pie charts and 9 bar graphs. The relevant website is available at http://tiny.cc/platform_global_outlook

Activity II: Internal knowledge transfer on the GM food/feed safety assessment

Mr Shiraishi contributed to the internal knowledge transfer on the GM food safety assessment. The activities were performed and outputs were reviewed under the supervision of Ms Masami Takeuchi. The objective is to improve the internal (FAO officers) knowledge on the GM food/feed safety assessment.

Activities

- Plan and organization of a seminar by Dr Andrew Bartholomaeus.

Outputs

- Final report and website that includes the presentation file and video. The final report is available at <http://www.fao.org/documents/card/en/c/7b999ba4-5736-4295-807d-214c005271d1/>

Detailed activities and outputs are further described as [Annex 5](#).

Activity III: Other duties in food safety area

Mr Shiraishi carried out the following other duties in the area of food safety and quality, and completed and reviewed/approved the assignments by the respective supervisors.

Activity III- I: Scoping review on the biocontrol for mycotoxin

The objective is to collect all the relevant information on the biocontrol of mycotoxin available from the beginning to the current time.

Activities

- Conduct scoping review of 263 documents and articles on the biocontrol for mycotoxin under the supervision of Ms Yamei Qi.

Outputs

- Reviewed documents and articles with the comments. Excel files are shared on the FAO's S drive.

Activity III- II: VTECs/STECs

The objective is to collect all the relevant information on the VTECs/STECs to respond to the request from Codex. The data will serve as inputs to the development of scientific advice which will guide the elaboration of Codex risk management guideline.

Activities

- Drafted the call for data on STECs/VTECs under the supervision of Ms Sarah Cahill.

Outputs

- Draft call for data. Word files are shared on the FAO's S drive.

Detailed activities and outputs are further described as [Annex 6](#).

Activity IV: MISC. assistance

When required, Mr Shiraishi carried out the following other duties in the area of food safety and quality, and completed and reviewed/approved the assignments by the respective supervisors.

Activities

- Preparation for promotion materials including the Platform calendar, brusher and highlight.
- Development of the 5 YouTube instruction videos.
- Plan and organization of the various meetings including the 2nd FAO/CBD/OECD webinar.
- Participation in the various staff meetings and minutes taking.
- Development and/or updating relevant publications/tools including the FAO/CBD/OECD joint paper on stacked events and GM training tool.
- Development of FAO's Work on Climate Change 2015 for COP21⁹.

Detailed activities and outputs are further described as [Annex 7](#).

Activity V: Other activities outside of food safety area

Activities

- Development of Japanese translation of a brusher distributed in the Youth and United Nations Global Alliance (YUNGA¹⁰).
- Video interview as one of the interns at FAO
- Participation in the event “Strengthening the Partnership with Japan - Tea Ceremony”
- Delivered one practical presentation entitled “Internship report – My journey at FAO and contribution to my career development –”.
- Prepared the internship report (present document).

Detailed activities and outputs are further described as [Annex 8](#).

Reflections

This part describes the most interesting/important points for Mr Shiraishi to work at FAO and some of the key learning points during the year. Mr Shiraishi also describes some of his weaknesses that need to be overcome and provide feedbacks and recommendations for the Unit.

⁹ The 21st Conference of Parties (COP21): <http://www.cop21paris.org/>

¹⁰ Youth and United Nations Global Alliance (YUNGA) <http://www.fao.org/yunga/home/>

Most interesting/important points

- **Communication with external Focal/Contact Points and experts.** Mr Shiraishi was required to discuss with external Focal/Contact Points and experts by emails and phones, which needs enough preparation to obtain the expected outputs and response. Also, many of the contacts and experts are at very high level, and from Japanese cultural perspective it was extremely difficult to request/ask, sometimes insist, them to work for goals that FAO sets. These communications were challenging but one of the most exciting things for him to work at FAO.
- **Handling official data/information.** The data/information on the FAO GM Foods Platform is official. Handling (Checking, editing and/or approving) the official data are challenging and requires him to have careful and neutral perspective. However, this made him excited since the data/information is very much important.
- **International environment.** Working with people from different countries with different culture, language and habitat is one of the beauties in international organizations for Mr Shiraishi. Interacting with those people needs patience and rethinking of his idea but this process let him have different way of thinking and seeing things in the world.
- **Many internal intelligences.** Mr Shiraishi was very much motivated by many internal officers and young talented interns/consultants during the course of his internship at various occasions. Interacting those people enabled him to find his weaknesses, but at the same time strong points, and let him have a feeling that he would like to improve his various skills to fit himself in such international environments where lots of talented people are working. He is sure that even after 10 years or more of working at FAO he would be eager to learn and study many more things.

Key Learning points

- **Output/Objective-oriented thinking.** During the internship, Mr Shiraishi was able to be engaged in some events including webinars, side events and seminars. All the events needed specific outputs/objectives and their oriented activities. This showed him how events that had clear objectives and expected outputs achieve the goals, which would be very helpful for his future works and assignments.
- **Time management.** Especially during the preparation for the event organizations that required the involvement of many people including external experts, time management was extremely important for getting things done in time. This required good communications with external people, organization of what he did and efficiency of working.

- **Administrative skill.** Since Mr Shiraishi came from a laboratory and have never been trained with administrative works, various administrative works at FAO enabled him to have basic but important secretarial skill to work in an international organization.

My weak points

- **Technical discussion skill.** During events, meetings and seminars Mr Shiraishi was expected to provide his own opinions. However, it was challenging due to his limited knowledge, discussion skill and also cultural background. To overcome and increase the technical discussion skill, more study as well as proficient language skill is necessary. Those two might be the priorities to be overcome in the next couple of years and he will develop his work plan taking this fact into consideration.
- **Professional writing skill.** Working at FAO needs a professional writing skill to concisely document what is required. Japanese and English work in a different way in constructing sentences. This skill is also necessary to be successfully obtained in the near future.
- **Logical thinking.** Handling science-based evidences/results requires logical thinking and logical thinking might refer to the output/objective-oriented thinking described above. Writing scientific articles during the rest of the PhD period helps him improve this skill.

Recommendations

- **Overwhelming amount of work.** In the beginning of the internship, Mr Shiraishi was struggling with overwhelming amount of tasks and assignments. To deal with those works, he needed to enhance his capacity to carry out all the required duties. Thinking from the end, juggling of many works which exceeded his capacity let him have continuous efforts and enthusiasm toward the works.
- **Final evaluation.** Ms Takeuchi shared with Mr Shiraishi a list of evaluation contents for his internship in the middle of his intern period, which let him have chance to think of his strong points as well as skills that needed to be improved. Also, at the end of the internship, she conducted the evaluation together with Mr Shiraishi and gave him her feedback for each item on the evaluation form. This process was very much valuable for him to evaluate himself objectively.
- **Interaction with Team members.** Since Mr Shiraishi came from a scientific lab where regular discussions (once per week) are held with supervisors and other colleagues, his group members all know what other people are doing and how they obtain the good results and sometimes solve the issues. These discussions and interactions are also important to establish good relationships with Team members. In this unit, on the other hand, the Team meeting was organized irregularly once per 2-3 months and for this reason it was difficult to understand what is going on and the future direction “as a Team”. It might be helpful not only for temporary interns/consultants but also for officers to share the work experiences a bit more often and “Team” goals.

- **Hiring the general staff who can work on IT stuff.** During one seminar organizations we recorded the speakers presentations and discussions

Conclusion

The journey at FAO was very much fruitful with many new findings and learnings. Output/Objective-oriented thinking is extremely important to obtain expected results in an efficient way and this helps him achieve in his future works and assignments. During the course of this one-year internship Mr Shiraishi was able to think of his interests that he might seek for the future works. Communication with external Focal/Contact Points and experts and handling official data/information were found to be exciting. Also, working in an international environment with many talented officers needs to be prioritized for his future career.

Considering the fact that he would like to come back to FAO as a professional, technical discussion skill, professional writing skill and logical thinking need to be fur more improved in the near future. One of the possible ways to improve those skills and become a talented professional is to be a posdoc in a microbiology or biotech field abroad. Working abroad as a postdoc requires enough scientific knowledge/experiences and excellent language skill to have deep discussions with experts. Another way might be Junior Professional Programme (JPP) which was developed in FAO 4 years ago with which young talented people could obtain trainings for 2-3 years. Working as a JPP officer might also help him obtain the necessary skills.

In conclusion, this one-year internship enabled him to find his strong points and interests in works. At the same time, some of the important but missing skills were highlighted and possible ways to improve the skills were identified. Mr Shiraishi declares that using the networks that have been established during this year, he would come back to FAO in the future.



Picture with colleagues after Mr Shiraishi's final presentation on the one-year internship at FAO

3.7. Project-based learning (プロジェクトベースラーニング)

In their fifth year, students are required to draw up an original project by tapping into the outcomes of special research in their areas of expertise during their first 3 years, a future plan for feeding such outcomes back to society, and their experiences in international practical training. They then carry out the project with the involvement of concerned persons from Japanese enterprises and government agencies. Project-based learning is aimed at helping students to acquire the abilities to plan, act, negotiate, and communicate that are necessary to offer multidisciplinary and interlinked solutions to general issues. (This sentence is originally cited from GSALS webpage and slightly modified for insertion.)

Project I: Implementation of Public Symposium on Food Security and Safety - Potentials of agricultural biotechnologies for the improvement of yields and quality of food -

Mr Shiraishi implemented the Public Symposium on Food Security and Safety as PBL. The activities were performed and outputs were reviewed under the supervision of Prof Yosuke Yamashiki, Prof Shuichi Kawai and Prof Fumihiko Sato.

Summary of the symposium

Public Symposium on Food Security and Safety - Potentials of agricultural biotechnologies for the improvement of yields and quality of food – was jointly organized by Science Council of Japan and Kyoto University in Tokyo on 9 October 2016. Council of Biotechnology Japan (CBIJ) joined this event as a supporting organization.

Dr Ryu Osugi (Science Council of Japan) explained the background and objectives of the symposium in his opening remarks. He also introduced Science Council of Japan to the participants, saying that this is a representative organization of Japan for summarizing opinions from cultural/social/natural sciences and disseminating the relevant information both domestically and internationally. Next, Dr Mbuli Charles Boliko (FAO) stated that FAO believes elimination of world hunger and malnutrition is possible for achieving the Sustainable Development Goals (SGDs) and works for it.

Dr Masami Takeuchi (FAO) explained that ‘food safety’ is one of the most important pillars to achieve ‘food security’ and all the foods including Genetically Modified (GM) foods need to be evaluated on their safety. She stressed that information sharing on the results of safety assessment is crucial for preventing food crisis, indirectly though. Dr Yasufumi Imai (CBIJ) and Mr Satoshi Takashima (Ministry of Agriculture, Forestry and Fisheries (MAFF)) introduced the current status of GM crops and their related activities. Cultivation land for GM crops has been increasing and as of now it is estimated to be 180 million hectares. However, there are still many consumers who are worried about GM foods and thus, appropriate and sufficient communication and increase of social understanding need to be further addressed. Dr Fumihiko Sato (Science Council of Japan) stated that Japanese plant science is at the world forefront, while applications of the research results have been limited to several spices. In order for Japan’s technology to be expanded in a global scale, it is hoped that field experiments of GM crops are actually conducted. Mr Masami Kojima (Mainichi shinbun) pointed out that social understanding on GM crops has not been improved. To end this current status, it is important for individuals and groups who have the common goals to cooperatively set concrete action goals for the improvement of social acceptance and make efforts on these goals. Mr Kosuke Shiraishi (Kyoto University) kicked off the panel discussion by sharing his internship experience at FAO. He stated that Japan’s challenges on this topic are the internationalization of the relevant information and its dissemination. During the panel discussion, it was recognized that Japan’s system of safety assessment on GM crops are advanced. It was also acknowledged that developers are expected to make sustainable crops that are easily accessible and beneficial to consumers. Prof Sato (facilitator) concluded the panel discussion by saying that he would share the discussing points with the member of Science Council of Japan and discuss how science technology should be developed and how those technologies could be used by Japanese citizens.



Picture of Mr Shiraishi’s opening declaration



Picture of the panel discussion

Activities of the symposium

- Prepared the concept note and teamed up the organizing committee (see [Annex 9](#)).
- Organized three meetings with the organizing committee in Tokyo.
- Selected and discussed with the speakers.
- Published a webpage for announcement (See at <https://www.gsais.kyoto-u.ac.jp/blog/2016/07/13/20161009>).
- Advertised through several companies and agencies as follows.
 - ✓ みんなの農業広場¹¹ (See at <http://www.jeinou.com/event/2016/10/09/114936.html>).
 - ✓ 暮らしとバイオプラザ2 1¹²(See at <http://www.life-bio.or.jp/event/index.html>).
 - ✓ CBIJ (See at <http://www.cbijapan.com/information/news/detail?key=20160000015>).
 - ✓ Japan Society for Bioscience, Biotechnology, and Biochemistry (JSBBA)¹³ (See at http://www.jsbba.or.jp/info/news_other/sympo20161009.html).
 - ✓ Bulletin of Japan Bio industry Association (JBA)¹⁴: <http://www.jba.or.jp/pc/bi/>
- Prepared the poster (See at https://www.gsais.kyoto-u.ac.jp/wordpress/wp-content/uploads/2016/07/20161009_poster.pdf) and the proceedings (to be published).
- Officially invited Dr Masami Takeuchi as a keynote speaker and discussed at FAO, Rome.
- Travel arrangement of Dr Takeuchi.
- Implementation of the registration for participation in the symposium (See at <http://goo.gl/forms/ROCMxkpqW75t1xFi2>).
- Prepared the discussion guide.
- Organized the symposium on 9 October at Science Council of Japan, Tokyo.
- Published a webpage for report (See at https://www.gsais.kyoto-u.ac.jp/blog/2016/10/14/20161009_report).
- Prepared the summary report (to be published).

Foundations of the symposium

The implementation of the symposium was financially supported by Shishu-kan and CBIJ as follows. Details of the income are shown as [Annex 11](#).

Organization	Total amount of money (yen)
CBIJ	700,000
Shishu-kan*	500,000

¹¹ みんなの農業広場: <http://www.jeinou.com/event/2016/10/09/114936.html>

¹² 暮らしとバイオプラザ2 1 : <http://www.life-bio.or.jp/event/index.html>

¹³ JSBBA: <http://www.jsbba.or.jp/>

¹⁴ JBA: <http://www.jba.or.jp/pc/bi/>

* Shishu-kan's foundation is used for the project I and II.

Outputs of the symposium

Organization of the symposium at the auditorium of Science Council of Japan.

Publication of the symposium report (to be published)

Project II: Implementation of Kyoto University – FAO seminar

Mr Shiraishi implemented the Kyoto University – FAO seminar as PBL. The activities were performed and outputs were reviewed under the supervision of Prof Yosuke Yamashiki, Prof Shuichi Kawai and Prof Yasuyoshi Sakai.

Summary of the seminar

Kyoto University – FAO seminar was jointly organized by GSAIS and GSA at Higashi Ichijo-Kan on 11 October 2016.

Prof Yasuyoshi Sakai delivered the opening remarks and explained the history of the Memorandum of Understanding (MoU) between Kyoto University and FAO. He also introduced several activities of Kyoto University that officials from FAO were involved in.

Dr Masami Takeuchi explained the mandate of FAO and its activities as well as the importance of food safety for achieving food security. She also talked about attractiveness of working for an international organization like FAO, skills that need to be obtained for being an international civil servant, and various programs that student can join.

Subsequently, Mr Kosuke Shiraishi introduced his internship experience at FAO to the participants. He stated that the journey at FAO was very much fruitful with many new findings and learnings. Output/Objective-oriented thinking is extremely important to obtain expected results in an efficient way and this helps him achieve in his future works and assignments.



Picture of Dr Takeuchi's keynote speech



Picture of Mr Shiraishi's presentation

Activities of the seminar

- Prepared the concept note and teamed up the organizing committee.
- Published a webpage for announcement (See at https://www.gsais.kyoto-u.ac.jp/20161011_fao) and its leaflet (see [Annex 10](#)).
- Advertised through emails and bulletin boards for students of GSAIS and GSA.
- Prepared the poster (See at <https://www.gsais.kyoto-u.ac.jp/wordpress/wp-content/uploads/2016/09/20161011.pdf>).
- Travel arrangement of Dr Takeuchi.
- Teamed up the student assistant group.
- Prepared the discussion guide.
- Organized the symposium on 11 October at Higashi Ichijo Kaikan, Kyoto University.
- Published a webpage for report (See at https://www.gsais.kyoto-u.ac.jp/blog/2016/10/14/20161011_fao_report).
- Prepared the summary report (See at https://www.gsais.kyoto-u.ac.jp/blog/2016/10/14/20161011_fao_report).

Foundations of the seminar

The implementation of the seminar was financially supported by Shishu-kan. Details of the income are shown in the section of project I.

Outputs of the seminar

Organization of the seminar at Shishu-kan hall, Higashi Ichijo-kan, Kyoto University.

Publication of the seminar report (See at

https://www.gsais.kyoto-u.ac.jp/blog/2016/10/14/20161011_fao_report)

Reflections

Most interesting/important points

- **Communication with external experts.** Mr Shiraishi was required to discuss with external experts by emails and phones, which needs enough preparation to obtain the expected outputs and response. Also, the experts are at very high level, it was sometimes difficult to request/ask, sometimes insist, them to work for goals that I set. These communications were challenging but one of the most exciting things for him to work especially for organizing the symposium.
- **Handling all the matters needed for these two events.** Compared with the work done at FAO, the plans and preparations of the two events were performed mainly by Mr Shiraishi although a lot of advice was

given by the related persons. Thus, the sense of duty and responsibility of the work were very high but all the works were worth conducting.

- **Working with two different authorities.** For the symposium organization, working with two different authorities, in this case, Science Council of Japan and Kyoto University (also FAO) was challenging. Mr Shiraishi needed to consider the objectives and benefits of the symposium for all of the authorities. Since he has limited knowledge on the Science Council of Japan and work experience in Japan, it was a big deal to consider and implement the symposium.

Key Learning points

- **Output/Objective-oriented thinking.** In the same case as the internship, Mr Shiraishi was able to consider the events with outputs/objectives oriented thinking. He successfully applied his experience at FAO to the organization of the two events.
- **Goals of ‘public’ symposium.** This was Mr Shiraishi’s first experience to organize a publicly opened symposium. He obtained seminar/symposium organizing skill mostly at FAO where the concrete goals needed to be achieved. Thus, he had to think and set the goals that would be accomplished at the symposium with a different way of thinking.

Recommendations for juniors

- **Importance of financial support.** Financial support is one of the most important points in conducting PBL/R. In his case, CBIJ joined the event as a financially supporting organization. That foundation enabled him to conduct the relatively huge size of the symposium. Without the foundation, he would not have invited Dr Masami Takeuchi, prepared the nice proceedings, paid rewards to Mr Masami Kojima, etc.
- **Consideration of authorities that are involved in our PBL/R.** The symposium was jointly organized by Science Council of Japan and Kyoto University. Thus, Mr Shiraishi was in need of thinking of the position of Science Council of Japan and making the reasonable objectives, goals and agenda for the symposium, some of which were different from his first idea. The consideration of the position and character of the authority was challenging but at the same time enabled him to have some sense to work with for the near future.
- **Time frame.** Since students are expected to involve external experts and other related organizations/agencies to their PBL/R, time frame needs to be carefully considered. The more people are engaged in, the more time is needed. PBL/R conductors should set a time frame containing enough buffer time.

Conclusion

Implementation of the symposium and seminar as PBL was very much fruitful with many appreciations from the organizing committee and speakers. The idea of the organization of the symposium was first discussed at MAFF in March 2015 which was one and half years back from now (October 2016) and Mr Takashima positively and kindly accepted the initial thought. During the course of one-year internship at FAO, Mr Shiraishi learned many new things including the importance of the output/objective-oriented thinking for event organization. This learning was extremely important for the implementation of these two events in the sense that he already established his own way to plan and organize symposia/seminars/conferences.

Considering the fact that the students are assigned to plan and carry out their own projects together with related people including the government officials and university professors as PBL/R, the symposium was successfully conducted with Kyoto University (academia), Science Council of Japan (research organization), MAFF (government), CBIJ (industries), FAO (international organization) and Mainichi Shinbun (media). Also Mr Shiraishi's PBL was satisfied with Shishu-kan's expectation that the PBL implementation should be based on the students' research experiences/knowledge and various Shishu-kan's activities including the international internship.

In conclusion, the PBL implementation enabled him to reconsider his interests and use the skills obtained from one-year internship at FAO. At the same time, some of the important recommendations for juniors were highlighted and possible ways to achieve the Shishu-kan's expectations were identified. Mr Shiraishi declares that using the networks that have been established during this year, he would work both internationally and domestically.



Picture of the speakers and organizers

4. Reflections

The Shishu-Kan programme is a newly established graduate school programme that focuses on the

development of future top-level leaders to resolve complex global issues. We live in the 21st century, where societal, socio-economic, cultural and industrial structures are becoming increasingly complex. This complexity brings with it a wide array of problems that must be tackled. To address these issues, an innovative system is necessary that is able to adapt to the ever-changing global challenges that human being face. This, in turn, raises the need for individuals who can lead the process of implementing such new systems.

According to the description of Shishu-kan's mission, followings are the most important abilities that students need to obtain whole through the 5-years' activities. Mr Shiraishi reviews and evaluate his overall performances from the three perspectives.

Responsibility as a global leader. According to the final evaluation done by Ms Masami Takeuchi, Mr Shiraishi's direct supervisor, this is one of his strengths and he often demonstrated his never-give-up spirit in the work situations. He is always enthusiastic about the work and although challenges kept coming down to him, he was aware of his responsibility paying close attention to good ethical practices. Mr Shiraishi had worked with a relatively high responsibility and leadership in various situations even before the enrolment of Shishu-kan programme. However, all through the courses of the programme, he surely and highly increased his responsibility as a future global leader in a situation where his leadership is needed.

High sense of mission and perspectives. Implementation of PBL/R demonstrate his increased sense of mission and perspective. Compared with the work done at FAO and other assignments, the plans and preparations of the two events as PBL/R were performed mainly by Mr Shiraishi although a lot of advice was given by the related professionals. Thus, high sense of mission and perspectives that enabled him to involve external experts and discuss with them in various occasions were necessary. These senses and abilities were usable when implementing PBL/R.

Management skill. A manager is responsible for making sure that things are done properly. Through various experiences including the foundation of student research committee (2014) and internship at FAO (2015), Mr Shiraishi developed his management skill and put it to use for implementation of PBL/R as the compilation of his 5-years' learning. He must have had an extensive set of skills – from planning and delegation to communication and motivation with external experts. At the same time, however, he needed to manage everything in his hand to make the event happened with the expected outcomes. According to the reflections from the participants and other related people in his projects, two events as PBL/R projects were successfully done with a lot of admiring voices. These fact suggest that his management skill was good enough to conduct the country level/size symposium and seminar.

5. Conclusion

The 5-year journey at Shishu-kan with talented colleagues and wonderful supporters was very much fruitful with many new findings and learnings described above. Shishu-kan programs, Special Lectures

I/II, International/Domestic Service Learning, Lectures on integrated academic foundations, International Field training and PBL/R enabled Mr Shiraishi to increase his technical/functional abilities as well as human skills that a global leader must have. Through these programs, Mr Shiraishi deeply considered his interests that he might seek for his future works. Communication with external Focal/Contact Points and experts and handling official data/information were found to be exciting. Also, working in an international environment with many talented officers needs to be prioritized for his future career.

The education at Shishu-kan is centered on the traditional philosophy that learning occurs through hearing, thinking and practicing (a Buddhist term “mon-shi-shu” on which the program’s name is based). Mr Shiraishi successfully enhanced his ability to adopt an all-encompassing perspective across various fields by building a broad spectrum of professional learning, ranging from the humanities through sciences and based upon the body of academic knowledge acquired during undergraduate studies.

Mr Shiraishi remembers the interview test with the former president of Kyoto University, Prof Hitoshi Matsumoto. At the end of the interview, Prof Matsumoto asked him “Would you quit the Shishu-kan programme in the middle of the up-coming 5 years since the programme is very tough and needs strong/unshakable mentality?”. Mr Shiraishi answered to the question, saying “I would never give up. Never, until all the necessary programs are successfully performed.” Then Prof Matsumoto responded to him with a big smile and a warm word, Ganbatte-kudasai. Now, Mr Shiraishi is very happy to look back on the start of the Shishu-kan programme with a confidence of his obtained knowledge/skills.

Mr Shiraishi would like to recommend juniors to believe the effects of the Shishu-kan programme and learn as much as possible within 5 years. The president of Graduate School of Agriculture, Prof Hisashi Miyagawa, said “Considering Mr Shiraishi’s growth in this last 5 years with Shishu-kan, education could change the persons.” This means that Shishu-kan programme enabled Mr Shiraishi to greatly improve his capacity of being a global leader through sophisticated programs. Establishment of the network with the talented student colleagues as well as the external professionals is extremely important for future works. Mr Shiraishi also would like to advise his juniors to connect to as many officials/professionals/experts as possible during the course of Shishu-kan programme.

In conclusion, Mr Shiraishi declares that he would play an active and important role as a global leader in solving global issues with the obtained knowledge/skills. Mr Shiraishi would like to thank professors/officials/students and all other people who were involved in his course of learning. Sincere appreciation goes to Kyoto University for giving him a big support in his learning through the course of Shishu-kan programme.

Annex 1: Research experience and achievements

Title of PhD thesis

Studies on nitrogen utilization and stress response in the methylotrophic yeast *Candida boidinii*

Summary of PhD thesis

Microorganisms living on the plant leaf surface use their own survival strategies and molecular functions in order to adapt to various stresses including drought and UV, and environmental changes such as temperature and humidity. Recently, Mr Shiraishi's laboratory discovered that the plant-residing asporogenous methylotrophic yeast *Candida boidinii* can proliferate on growing plant leaves, assimilating methanol for its growth and survival. However, nitrogen metabolism and mechanism on stress response of *C. boidinii* surviving in the phyllosphere are remained to be disclosed.

In Mr Shiraishi's PhD thesis, it is revealed that available nitrogen source for yeast survival changes from nitrate to methylamine during the host plant aging and that nitrate reductase necessary for cell growth on young leaves is degraded via autophagy on aged leaves. His thesis also describes that Hog1, a stress response factor, forms dot-like structures in the cytosol under heat stress condition, which contributes to the yeast heat tolerance.

The chapter I describes the identification of the genes, *YNRI* encoding nitrate reductase (Ynr1) that is involved in nitrate metabolism and *AMO1* encoding amine oxidase (Amo1) responsible for the oxidation of methylamine, and the characterization of their regulatory expression. According to RT-PCR analysis, the transcript level of *YNRI* was induced by nitrate and nitrite, and was not repressed by the coexistence with other nitrogen sources. In contrast, the transcript level of *AMO1*, which was induced by methylamine, was significantly repressed by the coexistence with ammonium or glutamine.

In the chapter II, the yeast nitrogen source in the phyllosphere is described. Quantitative PCR analysis, RT-PCR analysis and microscopic observation revealed that nitrate is utilized on young plant leaves, while methylamine becomes the primary nitrogen source on older plant leaves. Subsequently, Mr Shiraishi investigated the intracellular dynamics of Ynr1 necessary for nitrate metabolism and found that Ynr1 was degraded via one of the selective autophagy pathways, Cvt (Cytoplasm-to-vacuole targeting) pathway, during the shift of available nitrogen source from nitrate to methylamine. In addition, when cells were transferred from nitrate to nitrate plus methylamine, Ynr1 was degraded in a similar manner. These results suggest that Ynr1 is transported to the vacuole for degradation under the coexisting stage of nitrate and methylamine during the host plant life cycle.

The chapter III shows the analytical results of the intracellular dynamics of Hog1, one of the representative stress response factors. Intracellular localization of Hog1 was examined under heat and osmotic stress conditions using 4 different yeast species, *C. boidinii*, *Pichia pastoris*, *Saccharomyces*

cerevisiae and *Schizosaccharomyces pombe*. It was found that all of the 4 yeast species except for *S. cerevisiae* showed dot-like structures of Hog1 in the cytosol under heat shock stress condition. Further analysis using *C. boidinii* disclosed that Hog1 was co-localized with stress granules, which contributes to the yeast heat tolerance.

Publications

1. **Shiraishi K.** Oku M, Kawaguchi K, Uchida D, Yurimoto H, Sakai Y.
“Yeast nitrogen utilization in the phyllosphere during plant lifespan under regulation of autophagy”
Sci Rep (Nature Publishing Group). 106:1148-1152. 2015
2. **Shiraishi K.** Oku M, Uchida D, Yurimoto H, Sakai Y.
“Regulation of nitrate and methylamine metabolism by multiple nitrogen sources in the methylotrophic yeast *Candida boidinii*”
FEMS Yeast Res. 15, fov084. 2015
3. **Shiraishi K.** Hioki T, Yurimoto H, Sakai Y.
“Intracellular dynamics of Hog1 MAPK under heat stress condition in yeasts”
Manuscript in preparation.

Presentations at international conferences/symposia

1. ○**Shiraishi K.** Oku M, Yurimoto H, Sakai Y. “The role of Cvt pathway in yeast during adaptation to nitrogen sources”; **Oral Presentation as a Young Selected Speaker** (Oral and poster presentations)
Gordon Research Seminar - Autophagy in Stress, Development & Disease -, Lucca, Italy, March, 2014
2. ○**Shiraishi K.** Oku M, Yurimoto H, Sakai Y. “The role of Cvt pathway in yeast during adaptation to nitrogen sources” (Poster presentation)
Gordon Research Conference - Autophagy in Stress, Development & Disease -, Lucca, Italy, March, 2014
3. ○**Shiraishi K.** Oku M, Yurimoto H, Sakai Y. “Regulation of nitrogen metabolism on plant leaves in the methylotrophic yeast *Candida boidinii*”; **Oral Presentation as a Young Selected Speaker** (Oral presentation)
Gordon Research Seminar - Molecular Basis of Microbial One-Carbon Metabolism -, Boston, USA, August, 2014
4. ○**Shiraishi K.** Oku M, Yurimoto H, Sakai Y. “Regulation of nitrogen metabolism on plant leaves in the methylotrophic yeast *Candida boidinii*” (Poster presentation)
Gordon Research Conference - Molecular Basis of Microbial One-Carbon Metabolism -, Boston, USA, August, 2014
5. ○**Shiraishi K.** Yurimoto H, Sakai Y. “Formation of mRNP granules in the methylotrophic yeast growing at the phyllosphere”; **Oral Presentation as a Selected**

Speaker (Oral and poster presentations)

Joint Australia and Japan RNA Meeting 2014, Sydney, Australia, November, 2014

6. ○**Shiraishi K.** “Microbial nitrogen utilization in the phyllosphere during plant lifespan under regulation of autophagy” (Poster presentation)
7th HOPE MEETING, Tokyo, Japan, March, 2015
7. ○**Shiraishi K.**, Oku M, Yurimoto H, Sakai Y. “Yeast nitrogen utilization in the phyllosphere during plant lifespan under regulation of autophagy”; **Oral Presentation as a Selected Speaker** (Oral presentation)
10th International Symposium on Phyllosphere Microbiology, Monte Verità Ascona, Switzerland, July, 2015
8. ○**Shiraishi K.**, Yurimoto H, Sakai Y. “Formation and function of mRNP granules in the methylotrophic yeast growing on methanol utilizing environment”; (Poster presentation)
Gordon Research Seminar - Molecular Basis of Microbial One-Carbon Metabolism -, Boston, USA, August, 2016
9. ○**Shiraishi K.**, Yurimoto H, Sakai Y. “Formation and function of mRNP granules in the methylotrophic yeast growing on methanol utilizing environment”; (Poster presentation)
Gordon Research Conference - Molecular Basis of Microbial One-Carbon Metabolism -, Boston, USA, August, 2016
10. ○**Shiraishi K.**, Hioki T, Yurimoto H, Sakai Y. “Intracellular dynamics of Hog1 in the methylotrophic yeast *Candida boidinii*”; (Poster presentation)
International Congress on Yeast 2016, Awajishima, Japan, September, 2016

[Presentations at domestic conferences/meetings](#)

Total of 9 presentations have been conducted in Japanese at domestic conferences/symposia.

[Awards](#)

1. Travel award at the Joint Australia and Japan RNA Meeting 2014, Sydney, Australia, November, 2014
2. Travel award at the 10th International Symposium on Phyllosphere Microbiology, Monte Verità Ascona, Switzerland, July, 2015
3. Best poster award at the International Congress on Yeast 2016, Awajishima, Japan, September, 2016

[Columns](#)

1. ○**Shiraishi K.**, Sakai Y. “Nitrogen utilization and autophagic control of phyllospheric yeasts in response to the host plant life cycle”; *Autophagy* forum, 48. 2015. (In

Japanese)

2. ○**Shiraishi K.** “Report on participation in JAJRNA”; Monthly article of The RNA Society of Japan, 31 p21-22. 2014. (In Japanese)

Other academic achievements

1. Selected as a JSPS* research fellow DC2 (2016-2017)
* Japan Society for Promotion of Science
2. Selected as a representative student to participate in the 7th HOPE meeting
Tokyo, Japan, March, 2015
3. Founded JSBBA* KANSAI Student Committee and chaired the first forum
JSBBA KANSAI 1st Student Forum, Kyoto University, Kyoto, Japan, January, 2015
* Japan Society for Bioscience, Biotechnology, and Agrochemistry

Annex 2: Experience and achievements on extracurricular activities

Activities

1. Special lecture “10 years has been passed since graduation – What I have been thinking at high school, university and graduate school and what I want to do in the near future? –”
Tajimikita Hight School, Gifu, Japan, June, 2016
2. Special lecture “10 years has been passed since graduation – What I have been thinking at high school, university and graduate school and what I want to do in the near future? –”
Ohshukan Hight School, Tokyo, Japan, June, 2016
3. Invited speaker “World seen from yeasts – thinking of our food from laboratories –”
Tonichi Talk, Kyoto University, Kyoto, July, 2016
4. Participated in JSPS Science Dialogue as a translator
Yamashiro High School, Kyoto, Japan, January, 2013
5. Selected as a representative student to participate in the Bio Leaders Training 2012
Makuhari Seminar House, Chiba, Japan, August, 2012

Annex 3: Assist in the daily management of the Platform

- **Passive follow-ups for received emails.** Managed and followed up all messages sent to the GM-PLATFORM@FAO.ORG from platform's national focal points and other relevant officials. Advice from the supervisor was required for the response to some emails that include specific contents such as capacity building requests, suggestions on the Platform improvement and political issues at national level. In case of necessity, Mr Shiraiishi discussed with the supervisor during the regular meetings.
- **Active follow-ups for populating high quality/quantity of data/information on the Platform.** Actively followed up national focal points and Codex contact points to engage all member countries to the Platform. This support included active email follow ups and skype/phone calls.
 - **Nomination process.** Called at all the reachable CCPs who have not yet nominated the FPs, followed by the email support. Informed Codex secretariats of correct contact information of the CCPs if it is wrong.
 - **Country profile.** Conducted country profile project (see [2.1.2. Country profile project](#))
 - **Link creation.** Consulted with FPs from Armenia and Belgium to prepare for the country case-study on the link creation and distributed in eNewsletters.
- **Platform editing and record keeping on the website.** Carefully checked and published the submitted information/data of country profiles, records of the GM food safety assessment and mutual links between the national website and the Platform.
- **IT improvements.** Assisted in improving the interface and visibility of the Platform according to the suggestions made by visitors and contributors to the platform. Suggestions were executed with the help of FAO's IT Department (CIO). The contact person for FAO GM Foods Platform is Mr Massimiliano DeLuca (Massimiliano.DeLuca@fao.org).

As outputs, a list of all the additions/changes are shared in an excel file saved on the FAO's S drive. The main outputs are listed below.

- A new category under the Platform entitled "Global outlook" ([described below](#))
 - The automatic checker to decline the submitted records that contain incorrect Unique Identifier (UI).
 - The automatic email receiving system when a new UI is added by countries.
 - Links to the country profile page under the Biosafety Clearing House (BCH) from the respective country profile page on the Platform.
 - Timely change of the format of the top page of the Platform.
- **Development of communication materials: Monthly eNewsletter.** Drafted 12 eNewsletters for further review by the supervisor and sent them out. After sending out, updated the latest versions and archived the previous ones on the Platform.

As outputs, the latest version of the eNewsletter and the archive are saved on the Platform under the “Resource” section and available at <http://tiny.cc/FAO-GM-RESOURCE>. All the relevant documents are shared on the FAO’s S drive.

- **Development of communication materials: SoP and strategy document.** Drafted SoP and strategy document for further review by the supervisor. SoP was prepared to provide an overview on the standard operating procedures for the Platform. Strategy document was to identify the possible steps to make the Platform an ideal database on the GM foods safety assessment.

As outputs, the latest version of the SoP and strategy document are accessible through FAO’s S drive.

- **Plan and organization of the side event to the 8th session of FAO/WHO Coordinating Committee for Near East (CCNE8): 2 June 2015.** Assisted in planning and organizing the side event as the promotion activity for the Platform. Followings were the activities.
 - Analysed the Platform situation of all the near east countries and checked the registered delegates. Results were further used to prepare slides for the presentation on the Platform, draft the concept note and bullet points of follow-up actions during the CCNE8 for populating data/information on the Platform.
 - Worked with delegates from Sudan and Saudi Arabia to prepare for the country presentation. Draft presentations were created according to the country information on the Platform and shared with the presenters. Emails and phone calls were followed time to time.
 - Worked with CPAM group to prepare for the name plates of the presenters.
 - Assisted in preparing for the various draft documents including opening remarks made by the chair, internal agenda, external agenda and special invitation.
 - Helped with preparing for the relevant website containing all the necessary information on the event.
 - Prepared hard copies of all the necessary documents and PPT slides and brought for the events.
 - Helped organizing the events with an administrative assistances (PC setting, lighting, microphones, papers distribution and taking pictures) and took meeting minutes.
 - Assisted in preparing for the summary report and worked with a general staff to insert the final report into FAO Doc Rep.

As outputs, the followings were prepared.

- Draft concept note.
- A paper describing the bullet points of follow-up actions for the specific delegates.
- Two country presentations by Sudan and Saudi Arabia.
- Various draft documents including opening remarks made by the chair, internal agenda, external agenda and special invitation.
- Website on the side event
- Published summary report

Other relevant documents and PPT files are shared on the FAO's S drive.

- ❖ The summary report is available at FAO Doc Rep.
PDF URL: <http://www.fao.org/3/a-az144e.pdf>
Card URL: <http://www.fao.org/documents/card/en/c/ce99a9dd-5c6d-4aad-b09c-347a10d0b709/>

- ❖ The relevant website is available at <http://tiny.cc/ccne8-side-event>

- **Plan and organization of the side event to the 38th session of Codex Alimentarius Commission (CAC38): 6 July 2015.** Assisted in planning and organizing the side event as the promotion activity for the Platform. Followings were the activities.
 - Analysed the Platform situation of all the member countries and checked the registered delegates. Results were further used to prepare slides for the INF paper, presentation on the Platform, draft the concept note and prepare bullet points of follow-up actions during the CAC38 for populating data/information on the Platform.
 - Worked with delegates from the Philippines and Canada to prepare for the country presentation and from Australia, Mexico, Sudan and Japan to prepare for the country speaking points. Draft presentations were created according to the country information on the Platform and shared with the presenters. Emails and phone calls were followed time to time.
 - Worked with CPAM group to prepare for the name plates of the presenters.
 - Drafted the various draft documents including opening remarks made by the chair, internal agenda, external agenda and special invitation.
 - Drafted the relevant website containing all the necessary information on the event.
 - Prepared hard copies of all the necessary documents and PPT slides and brought for the events.
 - Helped organizing the events with an administrative assistances (PC setting, lighting, microphones, papers distribution and taking pictures) and took meeting minutes.
 - Worked with a supervisor to prepare for the CRD document.
 - Drafted the summary report and worked with a general staff to insert the final report into FAO Doc Rep.

As outputs, the followings were prepared.

- Draft concept note.
- A paper describing the bullet points of follow-up actions for the specific delegates.
- Two country presentations by the Philippines and Canada, and speaking points from four countries; Australia, Mexico, Sudan and Japan.
- Various draft documents including opening remarks made by the chair, internal agenda, external agenda and special invitation.
- Website on the side event to the CAC38.
- Published INF and CRD documents available at Codex website.
- Published summary report available at FAO Doc Rep.

Other relevant documents and PPT files are shared on the FAO' S drive.

- ❖ The summary report is available at FAO Doc Rep.
PDF URL: <http://www.fao.org/3/a-az886e.pdf>
Card URL: <http://www.fao.org/documents/card/en/c/759b1f43-c2f9-437c-9f84-ac9cdb75bc33/>
- ❖ The relevant website is available at <http://tiny.cc/cac38-side-event>
- ❖ The INF paper is available at ftp://ftp.fao.org/codex/meetings/cac/cac38/if38_09e.pdf
- ❖ The CRD document is available at
ftp://ftp.fao.org/codex/meetings/CAC/CAC38/CRDs/cac38_CRD35.pdf

- **Plan and organization of the 3rd FAO/CBD/OECD webinar on International Databases on Biosafety: 9 Dec 2015.** Assisted in planning and organizing the side event as the promotion activity for the Platform. Followings were the activities.
 - Worked together with the supervisor to prepare for the concept note.
 - Worked with delegates from the Philippines, Malaysia and Canada to prepare for the country presentation and from Moldova, Serbia, Thailand, Bahrain and Germany to prepare for the country speaking points. Draft presentations were created according to the country information on the database information and shared with the presenters. Emails and phone calls were followed time to time.
 - Gave technical instructions for all the speakers except for a participant from Moldova to explain how to use the Adobe Connect during the webinar.
 - Drafted the various draft documents including opening remarks made by the chair, internal agenda, external agenda, special invitation, registration form and certificate.
 - Drafted the relevant website containing all the necessary information on the event.
 - Arranged 4 online meetings and discussed the contents of the webinar together with secretariats from CBD and OECD. Drafted the relevant meeting minutes for further feedbacks from all the attendees.
 - Prepared hard copies of all the necessary documents and PPT slides and brought for the events.
 - Delivered short presentation on the previous webinars, gave technical supports to the participants and took meeting minutes during the webinar.
 - Edited and uploaded all the presentations on YouTube.
 - Drafted the summary report and worked with a general staff to insert the final report into FAO Doc Rep.

As outputs, the followings were prepared.

- Website on the seminar.
- Recordings available on YouTube.
- Published summary report available at FAO Doc Rep.

Other relevant documents and PPT files are shared on the FAO's S drive.

- ❖ The summary report is available at FAO Doc Rep.

PDF URL:

http://www.fao.org/fileadmin/user_upload/gmfp/Webinar/FAO_CBD_OECD_Webinar03_Report_Final_to_share.pdf

❖ The relevant website is available at <http://tiny.cc/FAO-GM-WEBINAR3>

Annex 4: Development of the global outlook on the Platform

- **Global outlook on the Platform statistics.** As the first step, data visualization was conducted using the data/information already shared on the Platform. Overview of the development process is shown below.
 - Proposed ideas on “what” data could be visualized with “which” form (world map and/or bar graphs) and discussed with the supervisor.
 - Discussed time-to-time with Mr Massimiliano DeLuca on all the related matters to create a new page with 5 visualized charts/maps.
 - Created a new category named “Global Outlook” and drafted the web pages.

As outputs, “Global Outlook” page hosting the following statistical charts from the data/information submitted to the Platform was developed. Other relevant documents are shared on the FAO’s S drive.

- ❖ The relevant website is available at http://tiny.cc/platform_global_outlook
- ❖ World map on the participating countries (by registration) available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/maps/world-distribution-registration/en/>
- ❖ World map on the number of records by countries available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/maps/world-distribution-record/en/>
- ❖ Bar graph on the leading countries in data sharing available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/ranking-record-sharing/en/>
- ❖ Bar graph on the registration status by region available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/regional-distribution/en/>
- ❖ Bar graph on the number of records by commodity available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/ranking-commodity/en/>

- **Global outlook on the Data syntheses on the regulatory frameworks.** In order to provide a guidance in completing the useful country profile information and to eventually develop a global outlook with the data/information syntheses, the editing page of the country profile was slightly revised. Overview of the development process is shown below.
 - Worked together with the supervisor to prepare for the concept note
 - Conducted three types of analysis: 1) country profile analysis to understand common types of information shared on the Platform; 2) Analysis of FAO LLP survey items to understand key issues commonly included in discussing LLP matters and 3) Analysis of other relevant researches to understand other commonly studied themes that have significant relevance to the Platform.
 - Drafted the criteria for selecting the possible themes.
 - Drafted the set of options each on 9 topics for describing the regulatory framework on the GM food safety assessment.
 - Conducted a focus group consultation with 26 countries to validate the options and finalized the concept note.

- Discussed time-to-time with Mr Massimiliano DeLuca on all the related matters to create a new interface of the editing page of the country profile and generate 3 world maps, 3 pie charts and 6 bar graphs.

As outputs, revised version of the country profile page is available at the country page on the Platform. <http://tiny.cc/FAO-CANADA> is an example of Canada. The following new 12 maps, charts and graphs were added in the “Global Outlook” page. Other relevant documents are shared on the FAO’s S drive.

- ❖ World map on the regulatory framework is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/maps/regulatory-framework/en/>
- ❖ World map on the GM food/feed production is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/maps/feed-production/en/>
- ❖ World map on the GM food/feed imports is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/maps/feed-imports/en/>
- ❖ Pie chart on the GM food/feed production is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/feed-production/en/>
- ❖ Pie chart on the GM food/feed imports is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/feed-imports/en/>
- ❖ Pie chart on the labelling requirement is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/labelling-requirement/en/>
- ❖ Bar graph on the regulatory framework is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/regulatory-framework/en/>
- ❖ Bar graph on the structure for GM food safety assessment is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/structure-safety-assessment/en/>
- ❖ Bar graph on the GM food safety assessment guideline is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/safety-assessment-guidelines/en/>
- ❖ Bar graph on the conduct of Bar graph is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/conduct-safety-assessment/en/>
- ❖ Bar graph on the LLP/AP incidents is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/llp-ap-incidents/en/>
- ❖ Bar graph on the regulation on stacked events is available at <http://www.fao.org/food/food-safety-quality/gm-foods-platform/graph/regulation-stacked-events/en/>

Annex 5: Internal knowledge transfer on the GM food safety assessment

- **The seminar by Dr Andrew Bartholomaeus: 13 October 2015.** Assisted in planning and organizing the side event as the promotion activity for the Platform. Followings were the activities.
 - Drafted two internal promotion materials used for elevator posters and TV screens.
 - Assisted in preparing for the building pass and visitor information.
 - Worked with CPAM group to prepare for the name plates of the presenters and participants.
 - Drafted the relevant website containing all the necessary information on the event.
 - Prepared hard copies of all the necessary documents and PPT slides and brought for the events.
 - Helped organizing the events with an administrative assistances (PC setting, lighting, microphones, papers distribution and taking pictures) and took meeting minutes.
 - Worked with a Codex secretariat to upload the presentation video on YouTube.
 - Assisted in preparing for the summary report and worked with a general staff to insert the final report into FAO Doc Rep.

As outputs, the followings were developed.

- Website on the seminar.
- Recordings available on YouTube.
- Published summary report available at FAO Doc Rep.

Other relevant documents and PPT files are shared on the FAO's S drive.

- ❖ The summary report is available at FAO Doc Rep.
PDF URL: <http://www.fao.org/3/a-bc091e.pdf>
Card URL: <http://www.fao.org/documents/card/en/c/7b999ba4-5736-4295-807d-214c005271d1/>
- ❖ The relevant website is available at http://tiny.cc/Dr_Bartholomaeus_Seminar
- ❖ The presentation video is available at http://tiny.cc/Dr_Bartholomaeus_Video

Annex 6: Other duties in the area of food safety

- **Scoping review on the biocontrol for mycotoxin: Jun - Oct 2015.** Assisted in conducting the scoping review on the biocontrol for mycoroxin. Followings were the activities.
 - Read and understood a document describing the method of scoping review. Carefully reviewed three articles for the practice of further work and discussed with the supervisor.
 - Reviewed 103 articles and investigated 1) the type of mycotoxins, 2) the target fungi and 3) the methods of biological control to judge whether the articles were relevant to the objective.
 - Reviewed 130 articles and extracted information/data on 1) the document types, 2) the publication types, 3) the authors' nationalities, 4) the research types, 5) relevant texts for introduction, 6) the types of mycotoxins, 7) the target fungi, 8) the aims of the biological control (food/feed or others), 9) the experiment methodologies, 10) the phases of the plants, 11) the mechanisms of the control and 12) output of the biological control.

As outputs, the followings are developed.

- Judgement of all the reviewed article summarized in an excel file. 28 were relevant to the objective, 54 were not relevant and 21 were not able to categorize due to the limitation of the access to the full texts.
 - All the necessary information available from 130 articles summarized in an excel file.
Excel files are shared on the FAO's S drive.
- **VTECs/STECs: Dec - Feb 2016.** Assisted in developing the reports requested CCFH held in November 2015. Followings were the activities.
 - Participated in the relevant meetings including skype call.
 - Drafted the call for data on STECs/VTECs, discussed and finalized it with the supervisor.

As outputs, the followings were developed.

- Draft call for data.
All the related documents are shared on the FAO's S drive.

Annex 7: MICS. assistance

- **Preparation for the promotion materials.** Assisted in preparing for the various promotion materials for the FAO GM Foods Platform.

As outputs, the following materials were prepared.

- ❖ FAO highlight on the FAO GM Foods Platform is available at FAO Doc Rep.
PDF URL: <http://www.fao.org/3/a-i4937e.pdf>
Card URL: <http://www.fao.org/documents/card/en/c/4b3f77c2-557f-4399-85f4-3630a6a47c0e/>
- ❖ Promotion materials used for the side event to the CAC38 are saved on the S drive at [S:¥FAO GM Foods Platform¥17_CAC_Side_Event¥CAC_38_Side_Event¥Promotion_Materials](#) (only available from FAO side).

- **Development of 5 YouTube instruction videos.** Assisted in recording 5 instruction videos using “CamStudio2.7” on how to browse the Platform to obtain information/data and uploaded all the videos on YouTube.

As outputs, the following instruction videos are available on YouTube.

- ❖ Instruction video on browse by Country is available at <https://www.youtube.com/watch?v=WxqD5ivnFc4>
- ❖ Instruction video on browse by UI is available at <https://www.youtube.com/watch?v=x3peC5awBOQ>
- ❖ Instruction video on browse by Commodity is available at <https://www.youtube.com/watch?v=Zh7aNybaGJ8>
- ❖ Instruction video on browse by Trait is available at <https://www.youtube.com/watch?v=wcpMcgf098I>
- ❖ Instruction video on browse by Resource is available at <https://www.youtube.com/watch?v=RT7HkXehRUo>

- **Organization of Food safety lunch event on the World Health Day: 7 April 2015.** Assisted in preparing for and organizing the event. Followings are the activities.
 - Drafted two internal promotion materials used for elevator posters and TV screens.
 - Assisted in taking photos of staffs used for a presentation and the event summary report.
 - Helped organizing the events with the administrative assistances (PC setting, lighting and microphones) and took meeting minutes.
 - Assisted in preparing for the event summary report.

As outputs, the followings were developed and saved in the S drive (only available from FAO

- side)
 - Two PPT slides used for elevator posters and TV screens as internal promotion materials.
 - Summary report.
- **Organization of the 2nd FAO/CBD/OECD webinar on International Databases on Biosafety: 25 May 2015.** Assisted in preparing for and organizing the event. Followings are the activities.
 - Helped organizing the events with administrative assistances (recordings and technical support for the participants).
 - Assisted in preparing for the event recordings updated on YouTube.
 - Worked with a general staff to insert two relevant meeting reports into FAO Doc Rep.
- **Organization of the FAO symposium on Whole Genome Sequencing (WGS).** Assisted in developing the technical paper during the expert workshop held on 7-8 December 2015. Followings are the activities.
 - Assisted in preparing for the information document on the FAO internal activities of related to WGS.
 - Helped with drafting the relevant website containing all the necessary information on the event.
 - Helped organizing the events with an administrative assistances (PC setting, lighting, microphones, papers distribution and taking pictures) and took meeting minutes.
 - Drafted the proceedings of the workshop.
 - Assisted a consultant in a various occasions when necessary.
- **Organization of the Biotechnology Symposium: 15-17 Feb 2016.** Assisted in organizing the parallel session during the biotechnology symposium held on 15-17 December 2015. Followings are the activities.
 - Participated in the relevant meetings and took meeting minutes.
 - Drafted the summary of the presentations.
 - Helped organizing the events with an administrative assistances (PC setting, lighting, microphones, papers distribution and taking pictures).
- **Staff meetings.** Participated in and took minutes of 5 AGFF team meetings. Arranged and discussed the work progresses and issues during the regular meetings with the supervisor.

All the minutes are saved on the FAO's S drive.

Minutes from the regular meetings conducted in the first 6 months are saved on the FAO's S drive.

- **Development of the FAO/CBD/OECD joint paper on stacked events.** Assisted in developing the joint paper. The followings are the activities.
 - Arranged online meetings with CBD and OECD and participated in all of them.
 - Analysed the regulations on stacked event using the information shared on the Platform or obtained by the consultation through the country profile project.

- Drafted the FAO part in the joint paper.

As outputs, followings are developed.

- Analysis results on stacked event.
- Draft of the FAO part in the joint paper.

Other relevant documents are shared on the FAO's S drive.

- **Update of the GM training tool.** Assisted in updating the GM training tool. The followings are the activities.

- Participated in the relevant meetings and took notes.
- Assisted in preparing for the concept note.
- Outlined the updated version of the training tool.
- Drafted a chapter for the FAO GM Foods Platform.

As outputs, followings are developed.

- Draft concept note.
- Outline of the updated version of the training tool.
- Draft of a new chapter for the FAO GM Foods Platform.

Other relevant documents are shared on the FAO's S drive.

- **Development of the FAO's Work on Climate Change 2015.** Assisted in developing the "Climate change and food safety" for the document shared in COP21. Followings are the activities.

- Collected relevant information from FAO articles, Food Research International journals, Nature, Science and other few related organizations and summarized the effects of climate change on food safety area. The summary was used for preparing for the document entitled "FAO's Work on Climate Change 2015" to be shared in COP21.
- Reviewed the draft "FAO's Work on Climate Change 2015" and looked/saw whether our food safety contribution was reflected to the draft document. Further recommended that the words "food safety" to appear on the paper.

As outputs, the followings were developed.

- ½ summary paper on the climate change and food safety.
- Comments and recommendations on the draft "FAO's Work on Climate Change 2015".

Annex 8: Other activities

- **Development of Japanese translation of a brusher distributed in the Youth and United Nations Global Alliance (YUNGA): June 2015.** Drafted the Japanese translated version of the leaflet to be distributed at the 23rd World Scout Jamboree that is going to take place at the end of July in Japan (<http://www.23wsj.jp/>). The draft was reviewed and cleared by the officers in FAO Liaison Office of Japan. YUNGA Leaflet in Japanese available at <http://www.fao.org/yunga/resources/>.
- **Video interview as one of the interns at FAO: June 2015.** Was interviewed by OPCC officers on the first impression of FAO. A video available on the intranet at http://intranet.fao.org/fao_communications/fao_talks/detail/c/36208/.
- **Participation in the event “Strengthening the Partnership with Japan – Tea Ceremony”:**
February 2016. Participated in the event that was a unique opportunity for FAO staffs and the members of the Japanese delegation to share a bowl of tea and to strengthen 65 years of collaboration and partnership with Japan, with a view to achieving a world free of hunger. Assisted in preparing for tea and Japanese sweets at the event.
- **Development of Final internship report.** The final internship report (present document) is saved on FAO’s S drive.
- **Conduct a final presentation.** The presentation file is saved in the S drive at FAO’s S drive.

Annex 9: Concept note on the symposium

Concept note

Symposium on Food Security and Safety

- Potentials of agricultural biotechnologies for the improvement of yields and quality of food -

1. Background and Aim

World population is now more than 7.3 billion and the Food and Agriculture Organization of the United Nations (FAO)¹⁵ estimates that about 795 million people, or one in nine, were suffering from chronic undernourishment in 2014-2016¹⁶. Furthermore, it is predicted that the effects of global climate change caused by the human activity are serious on food security¹⁷. We need urgent task force on food security and safety.

Whereas modern agriculture considerably improves the food production during the last several decades, we also face their environmental effects. Thus, we need more advanced agricultural systems for the sustainable production of food. Agricultural biotechnologies including genetic modification has great potentials for improving the yield and quality of crops. Whereas agricultural biotechnologies have provided large benefits in our daily life, there are many public debates to use agricultural biotechnologies on the biodiversity, ethical problems and the safety issues. Japan is one of the largest countries to import genetically modified (GM) crops and maintains very high research activities in agricultural biotechnologies. Those GM crops are authorized for food/feed use and cultivation after scientific risk/safety assessment under the related laws. However currently there is no field to grow them.

The principal aim of this symposium is to promote discussion on the current and future situation of global food security and safety, on present status of application of agricultural biotechnologies, and on its potentials for food security and safety, and also what Japanese science and technologies can contribute to food security and safety since we are one of the largest consumers of agricultural biotechnological crops. To fulfil above goal, we invite stakeholders on this issue from an international organization (i.e, FAO), the government, academia, private industries as well as consumers to discuss how we challenge food security and safety in near future.

2. Expected contribution from FAO in Japan

FAO documents on food security and agricultural biotechnologies are already reported, but unfortunately not so popular even for academia. Thus, we would like to provide opportunity to exchange and share the outline of FAO achievements (i.g, FAO GM Foods Platform¹⁸) in global scale from an experts in the area

¹⁵ Food and Agriculture Organization of the United Nations. <http://www.fao.org/home/>

¹⁶ FAO, IFAD and WFP. 2015. *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome, FAO. <http://www.fao.org/3/a-i4646e.pdf>

¹⁷ FAO. 2008. *Climate change and food security: a framework document*. Rome, FAO.

<http://www.fao.org/forestry/15538-079b31d45081fe9c3dbc6ff34de4807e4.pdf>

¹⁸ FAO GM Foods Platform. <http://www.fao.org/food/food-safety-quality/gm-foods-platform/>

of food safety, and disseminate their perspectives among Japan, as leading country in this field to promote discussion of the potential contribution of Japanese science and technology with stakeholders including Ministry of Agriculture, Forestry and Fisheries¹⁹ (MAFF) (government), Council for Biotechnology Information (CBI) Japan²⁰ (industries), Science Council of Japan²¹ / Kyoto University²² (academia) as well as citizen's groups to exchange information on biotechnologies in establishing global policy and perspective. Since Mr. Shiraishi (PhD candidate, Graduate School of Agriculture, Kyoto University) has been spent for one year in Rome as a FAO intern on agricultural biotechnology achievement, we expect that he can coordinate this symposium smoothly. Thus, we seek for organizing symposium jointly either as one of the co-organizers of the event, or supporting organization. No financial support is needed except for providing representative from LOJ. We'll provide traveling fee for inviting Dr. Takeuchi as Key-note speaker).

This symposium will benefit FAO to know Japanese public-private partnership in the field of biotechnologies as one case study that can be applied to developing countries. The output, summary report, from this symposium can be shared with other member countries. This symposium will also be a basis for FAO to explore another collaborative opportunity with Japan in the field of biosafety and biotechnologies.

3. Scope

The scope of the symposium is the science based and neutral discussion on the use of the agricultural biotechnologies, targeting the students being involved in the relevant research field and consumers. Other interested governmental officers and research experts in the area of biosafety are also welcome to join the event. Political factors related to the use of biotechnologies are excluded from the scope of the symposium since these issues should be addressed in another opportunity.

4. Date/Venue

- 9 October 2016 (Sunday) from 13:00 to 17:30
- Conference hall of HQ Science Council of Japan²³ (tentatively booked)
- About 200 people are expected as participants (20 people from industries, 10 from the government, 75 from academia including students, 75 from public, 5 from media and 20 as organizers)

5. Agenda

Time	Item	Note
13:00—13:10	House-keep announcement	Kyoto University

¹⁹ Ministry of Agriculture, Forestry and Fisheries. <http://www.maff.go.jp/>

²⁰ Council for Biotechnology Information. <http://cbijapan.com/index>

²¹ Science Council of Japan. <http://www.scj.go.jp/en/index.html>

²² Kyoto University. <http://www.kyoto-u.ac.jp/>

²³ Conference hall of HQ Science Council of Japan. <http://www.scj.go.jp/ja/other/info.html>

		Kosuke Shiraishi
13:10 – 13:25	Opening remarks	Science Council of Japan Ritsu Osugi
13:25 – 13:35	Opening remarks FAO and Japan	FAO liaison office in Japan ²⁴ (FAO LOJ) Charles Boliko
13:35 – 14:05	Key note speech Report of FAO activities on agricultural biotechnologies	FAO HQ Masami Takeuchi
14:05 – 14:25	Report on industries' activities	CBI Japan Yasufumi Imai
14:25 – 14:45	Report on the governmental activities	MAFF Satoshi Takashima
14:45 – 15:05	Report on academic activities	Science Council of Japan Fumihiko Sato
15:05 – 15:25	Report on consumers' activities	Mainichi shinbun Masami Kojima
15:25 – 15:50	Questions	All
15:50 – 16:10	Coffee break	
16:10 – 17:10	Panel discussion <ul style="list-style-type: none"> • Japan's challenges and social understanding towards GMOs • Contribution of Japan's science technology including new plant breeding techniques to the global food supplies 	Facilitator Science Council of Japan Sato Panelists Takeuchi, Imai, Takashima, Kojima Youth commentator Shiraishi
17:10 – 17:20	Closing remarks	Kyoto University Shuichi Kawai

6. Implementation structure

Co-organizers: Subcommittee on Genetically Modified Crops, Committee on Agriculture, Science Council of Japan²⁵ and Kyoto University

Supportive organizers: CBI Japan

7. List of organizers

A) Academia

²⁴ FAO liaison office in Japan. <http://coin.fao.org/cms/do/en/office.html?officeCode=LOJ>

²⁵ Member list of Subcommittee on Genetically Modified Crops, Committee on Agriculture, Science Council of Japan. <http://www.scj.go.jp/ja/member/iinkai/bunya/nougaku/pdf23/identsikumikae-kousei.pdf>

- Fumihiko Sato (Chair, Subcommittee on Genetically Modified Crops, Science Council of Japan, Professor, Graduate School of Biostudies, Kyoto University)
- Shuichi Kawai (Dean, Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University²⁶)
- Yasuyoshi Sakai (Professor, Graduate School of Agriculture, Kyoto University²⁷)
- Yosuke Yamashiki (Professor, Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University, Focal point for FAO-Kyoto U collaboration)
- Kosuke Shiraishi (PhD student, Graduate School of Agriculture, Kyoto University, former FAO intern)
- 3 voluntary students from Kyoto University
 - Yuki Oku (PhD student, Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University).
 - Haruka Ueda (Master's student, Graduate School of Agriculture, Kyoto University).
 - Rin Ishikawa (Bachelor student, Department of Agriculture, Kyoto University).

B) Industries

- Yasufumi Imai (Director, CBI Japan)
- Fumie Sasaki (Corporate Engagement Lead, Monsanto Japan Limited)
- Rei Ozaki (Biotechnology Affairs and Regulatory Representative, Du Pont Kabushiki kaisha)
- Rieko Hatta (Senior Specialist, Regulatory and Stewardship, Seeds, Syngenta Japan K.K.)

8. Considerations

- Other possible organizations that support this symposium in terms of public relations: Japan Society for Plant Cell and Molecular Biology²⁸, Japan Bio industry Association²⁹, Life & Bio Plaza 21³⁰, etc.

²⁶ Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University. http://www.kyoto-u.ac.jp/en/about/profile/faculty/faculties_and_graduate/human_survivability.html

²⁷ Graduate School of Agriculture, Kyoto University. <http://www.kais.kyoto-u.ac.jp/>

²⁸ Japan Society for Plant Cell and Molecular Biology. <http://www.jspcmb.jp/english/index.html>

²⁹ Japan Bio industry Association. <http://www.jba.or.jp/pc/>

³⁰ Bio Plaza 21. <http://www.life-bio.or.jp/>

Annex 10: Leaflet of the seminar

京都大学－FAO国際セミナー

- 講演者： 武内真佐美 (Food Safety Officer/FAO)
講演題： “Taking food safety to the corners of the world:
your understanding contributes to the international
efforts”.
「食の安全を世界へ！ -理解から始める国際貢献-」
日時： 10月11日(火) 18:15～19:45
場所： 京都大学東一条館地下一階 思修館ホール

京都大学と国連食糧農業機関(FAO)は、2016年6月7日付けで包括的協定を締結した。本協定は、食料の気候変動に関する影響評価、食品安全や収量予測に関する研究協力、人材交流などを掲げている。協定締結後初めて開催される本京都大学－FAO国際セミナーでは、Food Safety Officerとしてローマ本部で働く武内真佐美氏がFAOの責務とその仕事内容、食糧安全保障における食品安全の重要性について語る。また、FAO含め国際機関で働く魅力を話すとともに、国連職員となるために必要とされるスキル、学生から参加することの出来るプログラムを紹介する。さらに、フォーカルポイントの山敷教授および阪井教授に京都大学とFAOの交流の経緯を、昨年1年間インターンシップを行った農学研究科博士課程・思修館プログラム履修生の白石晃将氏よりその経緯を紹介する。

- 主催： 総合生存学館(代表:山敷庸亮 教授)・農学研究科(代表:阪井康能 教授)
言語： 日本語 (English can also be used for discussions)
事前登録： 不要(どなたでもご参加いただけます)
問い合わせ： 白石晃将(農学研究科博士過程/思修館プログラム履修生)
メール shiraishi.kosuke.57x@st.kyoto-u.ac.jp
関連HP https://www.gsais.kyoto-u.ac.jp/20161011_fao

Annex 11: Details of the income and expenditure of the foundation

The implementation of the symposium was financially supported by Shishu-kan and CBIJ.

Details of the income are shown below.

Organization	Total amount of money (yen)
CBIJ	700,000
Shishu-kan	500,000

Details of the expenditure are described as follows.

For the symposium

#	Item	Amount of money (yen)	Source
1.	Proceedings	47,340	CBIJ
2.	Rewards for Mr Kojima	100,000	CBIJ
3.	Travel expense for Dr Takeuchi	398,290	CBIJ
4.	Terminal expense for Dr Takeuchi	15,775	CBIJ
5.	DSA in Tokyo for Dr Takeuchi	30,202	CBIJ
6.	Lunch box	19,000	CBIJ
7.	Marker pens	500	CBIJ
8.	Hard Disk for data saving	6,570	CBIJ
9.	Spare battery	299	CBIJ
10.	Laser pointer	7,770	CBIJ
11.	Waters	2,700	CBIJ
12.	Small dinner meeting	69,660	CBIJ
13.	Communication costs	1,894	CBIJ
14.	Pre meetings in Tokyo *3	85,620	Shishu-kan
15.	Travel expense for Prof Yamashiki and Prof Sakai	59,080	Shishu-kan
16.	Travel expense for 6 voluntary students and Shiraishi	199,780	Shishu-kan

Total: 700,000 yen from CBIJ + 344,480 yen from Shishu-kan

For the seminar

#	Item	Amount of money (yen)	Source
1.	Travel expense for Dr Takeuchi	29,540	Shishu-kan
2.	DSA in Kyoto for Dr Takeuchi	21,300	Shishu-kan

Total: 50,840 yen from Shishu-kan

Settling a balance of the income and expenditure

Organization	Total amount of money (yen)
CBIJ	0
Shishu-kan	+ 104,680