



Tokyo Tech-AYSEAS 2015

Tokyo Tech-Asia Young Scientist and Engineer
Advanced Study Program 2015

Final Report

—From Asia to the World—



ACKNOWLEDGEMENT

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PT. NIPPON SHOKUBAI INDONESIA
PT. TOYOTA Motor Manufacturing Indonesia
PT. DENSO INDONESIA, Sunter Factory
CV. Karya Hidup Sentosa
PT. Sarihusada Generasi Mahardhika (SGM)
Balai Besar Kulit, Karet dan Plastik
JICA Project (Urgent Disaster Reduction Project: Mt. Merapi)
Universitas Gadjah Mada
Institut Teknologi Bandung
Chulalongkorn University
Kasetsart University
King Mongkut's Institute of Technology Ladkrabang
Hanoi University of Science and Technology

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About the Program

1. Program Information

A) Outline

Tokyo Institute of Technology (Tokyo Tech) launched the Tokyo Tech-Asia Young Scientist and Engineer Advanced Study Program (Tokyo Tech-AYSEAS) in 2013. It is the successor to the highly successful Japan-Asia Young Scientist and Engineer Study Visit (JAYSES), which was launched in 2007 with the aim of establishing networks of promising young persons in Asia. Tokyo Tech-AYSEAS continues in the spirit of JAYSES while developing as an integral part of the Global Scientists and Engineers Course, of which it recently became a part. Tokyo Tech-AYSEAS provides opportunities for participants to broaden their horizons through collaboration with students from different backgrounds and to experience the dynamism of rapidly growing Asian industry, education and government.

This year, we visited Indonesia, and learned from many people working for manufacturers, government organizations, and educational institutions.

Tokyo Tech-AYSEAS 2015's main theme was "From Asia to the World." The program primarily consisted of the three parts outlined below:

1) Preparatory studies

The Tokyo Tech participants had preparatory study sessions to deepen their understanding of the technical visits planned in Indonesia.

- Lectures about several topics
- Visit to TOYO GLASS Co., Ltd
- Basic Indonesian
- Study and presentations (in English) on the institutions to be visited in Indonesia
- Discussion sessions to improve oral English

2) Activities in Indonesia

- a. Technical visits to Japanese and Indonesian companies, government organizations, universities and JICA project sites.
- b. Group discussions and presentations

At the end of each day, students discussed what they learned at the institutions and exchanged opinions. Based on the discussions, each group

chose one topic and made a presentation on the last day. The topics are below:

- Motorization and traffic jam
- Urbanization and economic discrepancy
- Development of energy resources and protection of environment
- Generation of electricity by nuclear energy and risk assessment for severe accident
- Economic growth and gap between the rich and the poor
- Education and industrial management
- Innovation and regional/global competition
- Technology transfer between countries and the effect on business growth in each country
- Cultural difference and understanding on different culture (Understand others/Let others understand us)

3) Reporting

Tokyo Tech students published the Final Report (this report) and held a final reporting session after their return to Tokyo.

B) Objectives

- 1) To learn how the latest technologies and methodologies are applied to the practical stage in Indonesia, and to learn about the support from and control by government organizations.
- 2) To experience collaboration with students from different nationalities, cultures, languages, viewpoints or fields of study.
- 3) To brush up on their English skills as a tool for international communication.
- 4) To develop close and international friendships.

C) Participating Universities

Japan	Tokyo Institute of Technology (Tokyo Tech)
Indonesia	Universitas Gadjah Mada(UGM) : Host university of Tokyo Tech-AYSEAS 2015 Institut Teknologi Bandung (ITB)
Thailand	Chulalongkorn University(CU) Kasetsart University(KU) King Mongkut's Institute of Technology Ladkrabang(KMITL)
Vietnam	Hanoi University of Science and Technology (HUST)

D) Benefits for the participants

- 1) Participants can develop an international human network.
- 2) Participants can learn the latest technologies in Indonesian industry and about the relationships between ASEAN countries and Japan through private investment or Official Development Assistance (ODA).
- 3) Participants receive certificates issued by an Executive Vice President of Tokyo Tech.
- 4) Participants can collect useful information about studying at Tokyo Tech.
- 5) Participants can improve their English skills.

E) Expected Results

- 1) More Japanese students will study abroad
- 2) More ASEAN students will study in Japan
- 3) Build a strong, international student network between top-ranking universities in ASEAN countries and Japan

2. Schedule of Tokyo Tech-AYSEAS 2015

April ~ May 2015	Announcement and application
May	Selection
June ~ July	Preparatory studies
September 6~16	Activities in Indonesia
November 2	Final presentation session at Tokyo Tech

Schedule of Preparatory studies

Date	Theme
June 9	Orientation, Lecture by Prof. Hanamura
June 16	Lecture by Prof. Hope
June 23	Lecture by Prof. Hayashi
June 30	Lecture by Prof. Fujisawa
July 7	Visit to TOYO GLASS Co., Ltd
July 14	Lecture on Indonesia and Indonesian lesson by Indonesian students
July 21	Pre-trip presentation

Schedule of Activities in Indonesia

Date	Event
September 6	Participants arrive in Jakarta
	Ice Breaking Session
September 7	PT. NIPPON SHOKUBAI INDONESIA
September 8	PT. TOYOTA Motor Manufacturing Indonesia
	PT. DENSO Indonesia, SUNTER
	Trip to Jogjakarta
September 9	Opening ceremony at UGM
	CV. Karya Hidup Sentosa
September 10	PT. Sarihusada Generasi Mahardhika (SGM)
	Tokyo Tech Seminar (Information about study abroad to Tokyo Tech)
September 11	Balai Besar Kulit, Karet dan Plastik
	JICA Project (Urgent Disaster Reduction Project: Mt. Merapi)
September 12	Kraton, Taman Sari and Malioboro Street
September 13	Borobudur
September 14	Preparation for presentation and Cultural Exchange Party
September 15	Final Presentation and Closing ceremony
	Participants leave Jogjakarta
September 16	Tokyo Tech Students arrive in Tokyo

3. Selection

A) Tokyo Tech students

1) Announcement at Tokyo Tech

The Tokyo Tech-AYSEAS administration office announced the program through its website and flyers in April. They had briefing sessions on several occasions including the Study Abroad Fair and English events on campus.

2) Application

Applicants submitted an essay with their application titled “What is your purpose and expectations for joining Tokyo Tech-AYSEAS?” within 500 words in English by May 18, 2015.

3) Interviews

Tokyo Tech-AYSEAS panel meeting members interviewed the applicants in May. The applicants were divided into some groups of 3-5 persons. They were asked to have a discussion for 20 minutes and to give a presentation about their conclusions.

The topic was as follows.

“Recently, we have seen news broadcasts about trouble relating to miniature helicopters, such as a 'Drones', which were first developed in the US as aircraft for spying. For example, recently a Drone was found on the roof of the Official Residence of the Prime Minister of Japan. Generally, technologies are developed to improve the quality of life for citizens. On the other hand, sometimes those technologies are used for military strategies, even when aiming for peace in the world. For example, Russia recently held a military parade for the 70th anniversary of the end defeat of Nazi Germany in the 2nd World War.

Discuss the following: Should technology be for military or civil development?”

4) Criteria for Selection

The essays were scored based on the applicant's English ability, logical composition, and eagerness. In group discussions, applicants were appraised by assertiveness, cooperativeness, logicity, calmness, and attitude by Tokyo Tech-AYSEAS panel meeting members.

5) Result of Selection

As a result of the selection process, Tokyo Tech-AYSEAS panel meeting members selected 15 participants.

Statistics of participants (by nationality and gender)

Nationality	Female	Male	Total
China	2	1	3
Japan	5	7	12
Total	7	8	15

Statistics of participants (by grade, school and gender)

Years of Study	Grade	Female	Male	Total
Undergraduate	B1	0	0	0
	B2	3	2	5
	B3	0	3	3
	B4	3	2	5
Total Undergraduates		6	7	13
Graduate	M1	1	0	1
	M2	0	1	1
Total Graduates		1	1	2
Grand Total		7	8	15

B) Students from partner universities

Students from partner universities sent their applications to Tokyo Tech. There were 43 applications from seven universities this year. The applications were sent for selection to the applicants' home universities, and 17 students participated in the program. The certificates signed by the Executive Vice President of Tokyo Tech were given to the participants.

Statistics of applicants and selected participants (by country and gender)

Country	Female	Male	Applicants	Participants
Indonesia	17	17	34	13
Thailand	1	4	5	3
Vietnam	0	4	4	1
Total	18	25	43	17

Preparatory Studies in Japan

Outline

Before departure, Japanese participants attended two kinds of preparatory sessions: lectures and discussion sessions. In addition, we visited Toyo Glass factory.

1. Lecture

The lectures we attended are listed below with the schedule and lecturers.

June 9	Energy Issues for Sustainable Community (Prof. Katsunori Hanamura)
June 16	Learning to See Other Cultures (Prof. Tom Hope)
June 23	Biological Assessment of Your Developing Technologies (Prof. Nobuhiro Hayashi)
June 30	Introduction to Nanoscience and Nanotechnology (Prof. Toshimasa Fujisawa)
July 14	Indonesian Language and Culture (Indonesian students)
July 21	Pre-study Final Presentation

We had the final presentation to share the information about the organizations that we would visit in Indonesia. Divided into groups of 2-3 students, each group presented about Gadjah Mada University, Nippon Shokubai, Toyota, Denso, Sarihusada, Karya Hidup Sentosa, and JICA project.

2. Discussion

During the summer break we held discussion sessions on our own in order to practice English discussion and conversational English. We had three sessions so that everyone could attend. The schedule and discussion topics are listed below.

August 19	“Abolition of Humanities Faculty of Japanese National Universities“
August 27	“Would you like to marry a foreigner?“
September 2	“Woody Biomass Power Generation in a Rural Area of Japan“

3. Factory Visit

We visited a Japanese company, Toyo Glass on July 7.

Detailed reports on (1) Toyo Glass factory visit and (2) lecture on Indonesian language and culture are on the following pages.

TOYO GLASS Co., Ltd.

Reporter: Yuko Hayakawa (Yuko)

Date & Time: 14:30~16:30, July 7, 2015

Program: Presentation about company, factory tour, Q&A session

Contents of Visit and Reporter's Comment

1. Presentation about company

In the meeting room, we were taught about the company, products and the factory. We knew that Toyo Glass was a leading glass bottle manufacturer. With their high technology and ambition for product development, they have produced variety of useful products since 1888. In addition, we learned the process of glass-making.

2. Factory tour

There we visitors were required to wear white coat, hair cap, mask and glasses. It was for keeping the facility clean. First, we saw samples of the product. There were various shapes of glass bottles (some of them we had seen in super markets) and their representative product, Super Lightweight Bottle. Next, we saw a mass of cullet. They were made out of used glasses collected for recycling. They were divided according to color and used as raw material for new glass. From this recycling system, we knew about their ecology-conscious business. Then, we went inside the factory. What impressed us was that there were only a few workers and almost all processes were mechanized. Large machines worked regularly, efficiently without mistakes. For example, they enabled one molding line to produce nearly 600 bottles per minute. Human resources seemed to be used just for some machine operating or product checking parts. We saw all processes from melting material to packing products. In their warehouse, mass-produced glass bottles were stocked dreaming of shipment.

Q&A

Q1: Do machines work at all times?

A1: Yes. Except the regular maintenances, all machines work 24 hours every day. For the 13 years, we have kept the furnace operation without downtime.

Q2: How is Super Lightweight bottle made?

A2: We developed technology to make thin glass uniformly. Thanks to this structure, bottles are not only light but also tough.



Group photo

Lecture on Indonesian Language and Culture

Reporter: Kaho Yamano (Kaho)

Date & Time: 16:50~18:20, July 14, 2015

Program: Introduction of Indonesian language and culture

Summary and Reporter's Comment

As a last lecture of our preparatory study, we welcomed 3 Indonesian international students and deepened our understanding of Indonesian culture and language. Their presentation was full of useful information, covering very many aspects of Indonesia as follows: geography, climate, ethnicity, tourism, food, traditional culture, religion, college life, people's character, people's impression of Japan, relationship between Indonesia and Japan, detailed information about Jogjakarta, and so on. On top of these, they taught us ABC of Indonesian such as greeting, self-introduction, or frequently-used verbs. Thankfully, they also gave us some tips about healthcare during our stay, which many of us were concerned about.

Before the lecture I knew that Indonesia and Japan have some superficial things in common: red and white national flag, island and volcanic country, and so on. But I could see that inside is totally different. Indonesia has more than 1300 ethnic groups while Japan has much less. Most of Indonesian people are very religious, being Muslims, Christians or Buddhists. They are very open and fond of gathering with families and friends, but a bit unpunctual to the extent that one calls it 'Indonesian time.'

The lecture was really informative and exciting enough to prepare my mind for the visit. Thank you very much Harish, Nabilah and Luthfan.



Typical Indonesian cuisine



Group photo after lecture

Technical Visits

Outline

Technical visits are the main activities of AYSEAS. We visited eight organizations listed below, and there we gained a lot of information and knowledge.

These experiences helped us to see and know the current situation in Indonesia and its relationships with the world, especially Japan. At the same time, it was a great opportunity for us students in science and engineering to think about the technology in terms of globalization. For example, we witnessed many machines from Japan or Germany during factory tours, and it helped us know more about technology transfer.

Mostly the visits were divided into three parts as follows; presentation about the company or institution, factory/campus tour, and Q&A session.

Each of us had different interests in each company or institution. During the Q&A session, some threw questions regarding environment or energy cycle while others asked about economics or technology. This allowed us to obtain not only the information of the organization but also understandings from various viewpoints.

Detailed reports on each technical visit are on the following pages in the same order as the schedule below. As a side note, PT is an acronym for Perseroan Terbatas, which means a limited liability company that has direct foreign investment. CV stands for Commanditaire Vennootschap, which means a limited partnership company whose capital is from only Indonesian.

Schedule

September 7 (Mon)	PT. NIPPON SHOKUBAI INDONESIA
September 8 (Tue)	PT. TOYOTA
September 8 (Tue)	PT. DENSO
September 9 (Wed)	UGM
September 9 (Wed)	CV. Karya Hidup Sentosa
September 10 (Thu)	PT. Sarihusada Generasi Mahardhika (SGM)
September 11 (Fri)	BBKPP (Center for Leather, Rubber and Plastic)
September 11 (Fri)	JICA Project (Urgent Disaster Reduction Project: Mt. Merapi)

PT. NIPPON SHOKUBAI INDONESIA

Reporter: Yuka Murofushi (Yuka)

Date & Time: 10:30~14:00, September 7, 2015

Program : Presentation about company, factory tour, Q&A session

Contents of Visit and Reporter's Comment:

1. Presentation about company

PT. Nippon Shokubai Indonesia (NSI) is the first manufacturing company that produces Acrylic Acid and Acrylic Ester in South East Asia since 1998. It still had the biggest share in ASEAN in 2013. One of the major products of this company is Super Absorbent Polymer (SAP). 1g SAP can absorb 100g of pure water or 20~60g of saline water. We actually touched SAP which absorbed water. It was like wet powder. This company values safety induction and there were several rules for that such as not smoking at all in the plant area.

2. Factory tour

First, we moved around the plant by bus. There were a lot of large tanks with raw materials in and they were closed firmly. Then we went to the conference room. Some employees were discussing products. We also saw a monitor, which enabled us to check the condition of the plant



Group photo



Q&A session

Q&A:

Q1: Where do you import raw materials from?

A1: We import those from ASEAN countries, especially natural gas is imported from Saudi Arabia.

Q2: Do you reuse wastewater in other places?

A2: For now, we dispose of wastewater with Liquid Catalyst (LC), so we do not.

PT. TOYOTA Motor Manufacturing Indonesia

Reporter: Kou Lee (Kou), Ayako Yamagishi (Ayako)

Date & Time: 9:00~11:00, September 8, 2015

Program: Presentation about company, factory tour, Q&A session

Contents of Visit and Reporter's Comment:

1. Presentation about company

At first, TAM (PT. Toyota-Astra Motor) was established in 1971, and started production in 1977 in Sunter factory. Then a new factory in Karawang opened in 1998. In 2003, this company split into TAM and TMMIN. TAM is for sales while TMMIN is for manufacturing. TAM and TMMIN's 2 factories are around Jakarta. Its main products are "Fortuner", "Kijang Innova", "Avanza". As well as in Japan, Toyota has great influence on Indonesia. In Indonesia, the biggest share of cars are from Toyota.

2. Factory tour

We visited Sunter 1 Plant, which produces engines for IMV (Innovative International Multi-purpose Vehicle). After the presentation, we had a factory tour and saw the process of making engines. They said they do not know exactly the percentage of automation in the entire process. But as they explained, we saw machines carrying unfinished engines or parts of engines, and employees assembling and checking the products. We saw some places to take a rest and talk with each other for employees near the production lines.

Q&A:

Q1: Why are you not able to make 100% localization of production?

A1: Because we need to import high quality strength steel which is not available locally.

Q2: What do you do about part interchangeability of engine components like ECU and fuel injector for different target countries that you export?

A2: We use the same production line because the parts are all adaptable to the base model.

Q3: What do you do to reduce traffic jam and greenhouse effect which is caused by emissions?

A3: We already help the government to plant tree and create new traffic system.



Group photo

PT. DENSO INDONESIA, Sunter Factory

Reporter: Hiroyuki Fuse (Hiro), Tianzi Lu (Denko)
Date & Time: 12:00~15:00, September 8, 2015
Program: Presentation about company, Factory tour, Q&A session.

Contents of Visit and Reporter’s Comment:

Denso has been the biggest auto-parts manufacturer around the world in terms of Annual Avenue since 2009. As the name of the firm represents, the firm establishes a dominant market in electric devices. The firm has strong technology and know-how which stems from the firm’s long history.



First of all, we had a brief introduction of Denso, and Denso Indonesia. Then we learned about the expansion of Denso Indonesia, what the each factory produces, and where to export their products. Denso is trying to meet the increasing demand by expanding their business.

Next, we had a factory observation of the Sunter facility. The facility produces mainly radiator, spark plug, and oxygen sensor. The producing line is composed of both human power and automatic robot. Their utmost motto is “Kaizen”, the improvement. They hold “Asakai”, the morning meeting every day to share any good and bad information in terms of safety, productivity, and efficiency. Not only that, they encourage themselves to get the productivity better by showing Line Operation Ratio (LOR). They are making everlasting improvement as long as they can. I am sure that the spirit of Japanese industry surely succeeded to them.

Q&A:

Q1: Is there any possibility for local Indonesian to be the leader?

A1: Not so much currently, but it should be and under consideration.

Q2 : What is the motivation to work abroad?

A2 : It’s difficult to say, but I say I would like to work for Indonesia! I wanted to work abroad too when I was young. I hope the participants of AYSEAS2015 will be the leader of the world, not but the leader of the Japan. Go abroad, expand your wings!



Q&A session

Gadjah Mada University

Reporter: Sota Kato (Sota), Ryosuke Kobayashi (Ryo), Yasuhiro Tada (Yasu)

Date & Time: 8:45~12:20, 15:30~17:00, September 9, 2015

Program: Opening ceremony, campus tour

Contents of Visit and Reporter's Comment:

Gadjah Mada University (Indonesian: Universitas Gadjah Mada; abbreviated as UGM) is a public research university located in Jogjakarta, Indonesia. It was founded on December 19, 1949 and it is the oldest and largest institution of higher education in Indonesia. It has about 55,000 students (about 12,600 students belong to Faculty of Engineering) and they are from all parts of Indonesia with different backgrounds.

First, we went to the building of the Faculty of Engineering and held the opening ceremony. In the ceremony, student leaders explained the purpose and content of AYSEAS program and next the professors of UGM gave us some information about UGM. After the opening ceremony, we took a bus to see around the campus (because the campus is so large and it's too hard for us to see around the campus by foot). We were surprised to see a lot of people, facilities, and motorcycles in the campus. Many students come to the campus by motorcycle. Then we had lunch at UGM Food Park in the campus. It was so clean and the Indonesian food was good.

Subsequently, we went on a technical visit to CV. Karya Hidup Sentosa and came back to this building and had some discussions in each group. After the excited discussions, we went to the hotel by bicycle. There were no traffic lights and the traffic was so heavy on each street, so we had a little bit dangerous, but exciting experience at that time.



Group photo at Balairung UGM



Opening ceremony

CV. Karya Hidup Sentosa

Reporter: Hironao Miyamoto (Miya), Hironobu Kiuchi (Nobu)

Date & Time: 13:00~15:00, September 9, 2015

Program : Presentation about company, factory tour, Q&A session

Contents of Visit and Reporter's Comment:

1. Presentation about company

CV. Karya Hidup Sentosa (KHS) is an agricultural machinery manufacturer and it was established in 1958 by Mr. and Mrs. Kirdjo Suseno. KHS produces agricultural equipment using "QUICK" brand name. This company has about 2,300 employees and has 70% of shares in Indonesia. In this company, all process: design, simulation, manufacture, are operated by 100% Indonesian people. However, this company does not produce engines. Quick tractor's engine is made by Kubota: machinery manufacturer in Japan. In 1973 KHS has made a joint venture with Kubota Corps to establish a machinery factory of PT. Kubota Indonesia (PT KI). And also KHS is the agency of Kubota engine in Indonesia. KHS has deep relationship with Kubota.

KHS is constructing new factory now. In Indonesia, farm mechanization will be promoted. It is expected that KHS continues grow to grow.

2. Factory tour

In the factory, most of the staff were Indonesian, and we noticed most staff were men. Compared with other companies which we visited, the number of staff is fewer and on the other hand, a lot of machinery was equipped. Most of them are from foreign countries and we can observe one case of the transfer of technology.



Q&A session



Group photo

Q&A:

Q1: Do you have any exchange programs between Kubota and KHS?

A1: Actually we don't exchange, but we trade the know how in order to train staff.

Q2: Why are QUICK tractors small?

A2: In Indonesia farm land sections are small and big tractors are not efficient.

PT. Sarihusada Generasi Mahardhika (SGM)

Reporter: Takumi Koga (Takumi)

Date & Time: 9:30~11:30, September 10, 2015

Program: Presentation about company, factory tour, Q&A session

Contents of Visit and Reporter's Comment

Sarihusada is a company that produces various nutritional products for mothers and children with a focus on taste, affordability and international standards. The company was founded upon the initiation of the government of Indonesia and The United Nations (UN) to address the problem of nutritional deficiencies that occurred in children at that time.

1. Presentation about company

We learned early-life nutrition is essential for children's growth and development and affects lifetime health. They also explained about a lot of products and a lot of social activities that Sarihusada does. They hold events or give support related with education, economy, environment, and emergency. They said these are not only for their promotion but also for the better education for contributing to next generation.

2. Factory tour

There are two processes (wet and dry) in making products and we saw the dry process only. Compared to the industries we have already visited such as Toyota, Denso and KHS, there were a lot of automatic machines and few workers. Inside the factory, because we smelled milk, it was so realistic.



Q&A session



Group photo

Q&A:

Q1: What is "Merapi project," one of the social activities of Sarihusada?

A1: Merapi project is a project to provide food for citizens for free in a time of disaster in cooperation with government.

Balai Besar Kulit, Karet dan Plastik (Center for Leather, Rubber and Plastics)

Reporter: Sota Kato (Sota), Ryosuke Kobayashi (Ryo)

Date & Time: 10:00~12:00, September 11, 2015

Program: Presentation about company, factory tour and Q&A session

Contents of Visit and Reporter's Comment:

1. Presentation about organization

Balai Besar Kulit, Karet dan Plastik (BBKPP) is a technical implementation unit under the Agency of Research and Development of Industry, Ministry of Industry. The main task of this agency is to carry out activities on research, development, standardization, testing, certification, calibration, and development of competences in the fields of leather, rubber and plastics. Many pieces of equipment in this agency are from Japan and they send some staff to Japan. Most of their clients are from China and Taiwan for certificate of tires in order to export their products to Indonesia.

2. Factory tour

We saw the process of smoothing leather's surface and removing water from the surface. We were able to see many leather products in the end of the factory tour.



Presentation



Factory tour

Q&A:

Q1: Are there any relationships with local universities?

A1: We sometimes hold some special classes and we allow students to use our machines which are not in the universities. Three years ago, we were told that our machines were out of date. So we spent money to change them.

Q2: Why do you have two different process of tanning?

A2: The first process of tanning is rough and we need neutralization after the first process. In the second process, we insert some characteristics to the leather.

JICA Project (Urgent Disaster Reduction Project: Mt. Merapi)

Reporter: Ouran Sinn (Ouran)
Date & Time: 14:00~16:00, September 11, 2015
Program: Visit to Sabo dams in Mt. Merapi built by JICA project, Q&A session

Contents of Visit and Reporter's Comment:

Since 1970, when the first Sabo expert was dispatched, various technical and financial cooperation projects have been implemented under Japanese government. To solve the problems of eruption and following disasters in Mt. Merapi, JICA (Japan International Cooperation Agency) experts have conducted technical guidance and support for Sabo planning in many regions. Besides, several loan projects also have been implemented in Mt. Merapi area where project scale is large.

This time we had honor to meet Mr. Mizuno Naoto, who is the expert in charge of this project, and the professor Djoko Legono from UGM for introducing us Sabo dams of Gendol River built by the JICA project.



Sabo dam in Mt. Merapi



Group photo

Q&A

Q1: How about the O&M in the Sabo Dam? Who will do the maintenance?

A1: The Indonesian engineers will perform maintenance on the Dam once in 2 years, and they will check it regularly.

Q2: Who will check the data collected by the Water Level Monitoring (which is supplied by the solar-cell panel)?

A2: All the data collected by the monitor will be uploaded to the BPS (Badan Pusat Statistik), everyone can check it by the internet. Not just the Water Level Monitoring, we also use Meteorological balloon and other equipment to observe the whole situation in Mt. Merapi.

Discussion and Presentation

Outline

We visited nine companies and organizations. In order to share what we learned from them and pursue deep understanding of current topics in ASEAN countries, we had a discussion and presentation at UGM. We were divided into 5 groups and each group decided their own discussion topics which were provided by professors. Each day had a discussion and preparation for the final presentation. In the final presentation, each group had 20 minutes for presentation and 10 minutes for questions. Here are the schedule and brief introduction of each group.

Schedule and Discussion Topics

September 7 (Mon)	Nippon Shokubai, topic of final presentation
September 9 (Wed)	Toyota, Denso, KHS, topic of final presentation
September 10 (Thu)	Sarihusada, topic of final presentation
September 11 (Fri)	BBKPP, JICA project, topic of final presentation
September 14 (Mon)	Preparation for the final presentation
September 15 (Tue)	Final presentation

Group1 “Motorization and traffic jam”

Member: Adi, Kou, Miya, Oka, Plan, Vidya, Yuka

Group2 “Economic growth and gap between the rich and the poor”

Member: Akhsanto, Hani, Hiro, Ich, Kaori, Ryo

Group3 “Enlarge Overseas Market for Indonesian Companies”

Member: Aulia, Cahyo, Denko, Hammad, Sota, Yasu

Group4 “Education and industrialized agriculture”

Member: Ifan, Izhar, Maryam, Ouran, Takumi, Yuko

Group5 “Technology Transfer between countries and the effect on economic growth”

Member: Ayako, Han, Jamie, Kaho, Nasir, Nobu, Tia

Group 1: Motorization and Traffic Jam (Study Case in Indonesia, Thailand and Japan)

Member: Adi, Kou, Miya, Oka, Plan, Vidya, Yuka

1. Introduction

Recently, Motorization has advanced in Asian countries, especially in developing countries. The number of cars has increased in recent years. The more GDP increased, the larger the number of cars became. In other words, economic growth has accompanied Motorization. The economy keeps growing from now on. And also it is expected that Motorization still continues to develop.

However, Motorization has many problems. Main problems are environmental pollution and Traffic jams. Jakarta and Bangkok and other Asian big cities have serious traffic jams. Therefore we focused on traffic jams caused by Motorization.

2. Traffic Condition

Some problems happen on the road in Indonesia and Thailand. There are quite heavy traffic jams in the major cities, sidewalks are used in a wrong way, and the infrastructures are immature. On the other hand, Japan especially Tokyo has problem with trains. Many train passengers are packed in crowded trains. According to the figure from 1 to 3, Indonesian and Thai people tend to use motorcycles, but Japanese people use cars and particularly trains. In fact, the number of fatalities in Indonesia and Thailand are higher than that in Japan.

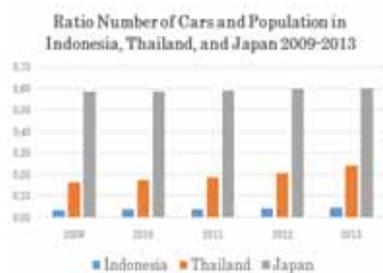


Fig.1

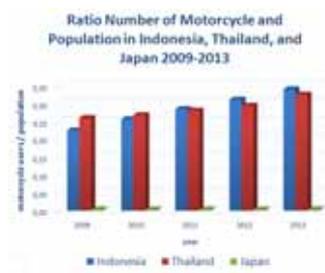


Fig.2

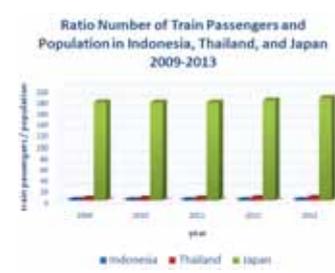


Fig.3

3. Our suggestion

i. Solution

Traffic jams occur because the transportation supply (transportation facilities and infrastructure) can't meet the transportation demand. There are 2 approaches to solve this problem: Supply oriented and demand oriented.

The supply oriented approach strategies are by increasing the transportation facilities and infrastructure to meet transportation demand. To construct new railway

or subway, and to make new road are supply oriented strategies.

On the other hand, the demand oriented approach strategy is by managing transportation demand to fit with the transportation supply. For example, by distributing city's power into some areas, destination is separated and traffic jam become fewer. They are based on the demand oriented approach strategies.

The supply oriented approach strategies have their limits. Thus it is important to combine supply oriented and demand oriented strategies.

ii. Ideal transportation system

To begin with, we considered the imaginary city for the ideal transportation. Proper social systems such as regulating of population, installing electrical calculation on highway and assuring drivers of their rest time are important to maintain the imaginary city.

Next, we suggest the ideal utilization of each means of transportation. To decrease the number of passengers of trains and subway, it would be effective to shift opening times of each company because we can avoid the peak of density. From the viewpoint of supply oriented approach, increasing the number of carriages of train is also valid. For the road vehicle, we would strictly divide a road into three parts, for car and motorbike, bicycle, and pedestrian, and each vehicle cannot use other parts of the road. For both train and road vehicles users it would be helpful to share the information about traffic jams and accidents via media.

4. Conclusion

From this discussion, we concluded the solutions into two key points. The first one is to foster the collaboration among stakeholders. (government, society, company, engineer etc) The second one is to encourage people to use transportation wisely to establish sustainable process. Traffic jams aren't about problems, they're about the challenge we need to solve. Smile is what happens when there is no traffic jam. Let's accomplish this challenge and realize our dream for better world.



Group members

Edited by Yuka, Miya

Group 2: Economic development and the gap between the rich and the poor

Member: Akhsanto, Hani, Hiro, Ich, Kaori, Ryo

1. Introduction

Indonesia has the fourth largest population in the world. We witnessed a lot of people utilize their own motorbikes in the heavy traffic, sell merchandise on the side walk. The city was really vigorous. Indonesia is rapidly developing in terms of economy, industry, and living standard. GDP is

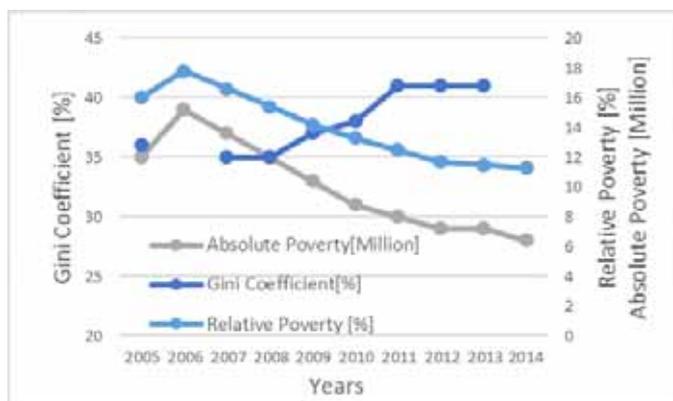


Fig.1 Poverty rate and Gini coefficient of Indonesia

increasing every year, the central government debt is relatively decreasing to GDP. However, there are several remaining problems in Indonesia. Fig.1 shows the poverty rate and Gini coefficient in Indonesia. Gini coefficient is the statistical indicator of the inequality, so it also means the gap between the rich and the poor. The graph clearly indicates that the gap is increasing though both absolute and relative poverty is steadily decreasing. If the gap becomes bigger, then some of problems are expected such as increasing crime, causing health problem, and the international competitiveness becoming weaker. So, a lot of problems will occur, which would be really serious.

2. Discussion

We took 5 steps in our group discussion.

Firstly, we talked about what the problem of gap is, how big is the gap in Indonesia, and so on. And we explained this in Introduction part at the final presentation.

Secondly, we discussed about the factors making the gap between rich and poor bigger and bigger. We thought there are 5 aspects: finance, environment, industry, awareness, and education. So, we decided to make each person be in charge of one aspect.

Thirdly, we talked about “which is the most crucial factor?” We thought “education” is the most crucial one because every factor always has educational part at its base.



Then, we searched and collected the data. In environmental part, we understand the

cycle from water pollution, our health, work productivity and daily income to make the gap bigger. In Industrial part, we thought about the difference of big industry (developed country) and small company (developing country). From the aspect of awareness, we thought “corruption rate is related to making the gap bigger”, so we collected the data of CPI (corruption perception index) and compared to other countries.

Lastly, we found the solutions from environmental, industrial, awareness, and educational aspects to solve this problem. Here are the solutions from 3 aspects.

Environmental aspect

- Increase people’s awareness about pollution.
- Assert the regulation especially related to pollution emission.
- Improve the water quality by applying technology for cleaner and safer environment.

Industrial aspect

- To train and educate the local labor.
- apply machines to the making process in small industry.

Awareness aspect (to reduce corruption)

- To work with other countries (e.g. JICA’s project JSPP21:
http://www.jica.go.jp/english/news/field/2014/140519_01.html)
- To hold workshops and lectures to students who will lead the country in the future.

All these solutions are related to education.

3. Our suggestion

To improve the current situation, we arrived at a conclusion that education is the most important topic and we should raise the quality of education. Then in order to accomplish this goal, we came up with two suggestions. First, the salary of teachers in Indonesia should be raised. Teacher’s salary in Indonesia is one of the cheapest in the world. Second, the educational systems, especially teacher’s training system should be changed. If the salary of teachers in Indonesia is raised and new educational system is adopted, the quality of education will be raised. After that, some problems connected with education will be solved, too.

4. Conclusion

Finally we found that each problem making the economical gap are connected with educational problems and educational problems are keys to solving the economical gap. In any case, we need to continue the discussion of these complexly connected problems.

Edited by Hiro, Kaori, Ryo

Group 3: Enlarge Overseas Market for Indonesian Companies

Member: Aulia, Cahyo, Denko, Hammad, Sota, Yasu

1. Introduction

By visiting factories, our group had great interests in innovation and regional/global competition. We found that Japanese companies designs for the global market, however Indonesian companies just cover the regional market (Fig1).

We think that Indonesia should develop its overseas market, because we can increase the GNP of Indonesia and create chance of working overseas for Indonesians. What's more we can help our partner countries to develop economics together at the same time, just like Japanese companies are improving Indonesian economics.

	Japan	Indonesia
Rate of top10 companies(go overseas)	10/10	3/10
GNP(\$)	4489,752	49.087
Unemployment(%)	3.3%	8.81%

Fig.1 Comparison of the economic condition between Japan and Indonesia

2. Discussion

We discussed the current situation of Indonesian companies.

In terms of natural rubber production, Indonesia is second position in the world (almost top). And, the percentage of export is stable, at least 80 percent. Like this, there is too much raw materials (rubber, cement, and so on) being exported directly.

We also wanted to show an example of processed products in Indonesia. We searched the smartphone share in Indonesia. Smartfren and Evercoss (Indonesian company) is second and third position. The first position is Samsung, a Korean company. I guess almost Indonesian prefer to use Samsung because of price, quality of communication, comfortable of use and so on. Anyway, in the point of processed products, Indonesia is not as popular as developed countries.

Comparing the existing situation of Indonesian companies with Japanese companies we found that Japanese companies are very active in exploiting the overseas market and succeed in meeting global needs. For example, Toyota has many different models in different countries that can fit local needs very well. And, in order to reach localization of raw materials, Toyota has good cooperation with relational companies, such as Denso, a manufacturer of automatic components. So, Denso and Toyota have factories in the

same city.

Nippon Shokubai tried to establish factories in locations close to market, so they can reduce transportation costs and respond to local customers immediately. In general, we think that Japanese companies make efforts at exploiting the overseas market and can succeed in gaining maximum profit.

There are many excellent Indonesian companies, too. Quick, SGM, Center of Leather are representatives of Indonesian companies with technology. However, they only succeed in the domestic market.

- Quick only produce small tractors that can only fit domestic needs (terraces). Quick cannot solve transportation cost when overseas order is not large enough to reach high economic scale.
- The center for Leather has ability to access the rarest materials in the world and good process technology. But the style doesn't contain much fashioned elements which is very necessary in overseas market. Considering and understanding more about overseas need could create higher value with the same material.

3. Our suggestion

To improve the current situation, we suggested 3 solutions

- a) Governmental policies: stimulate companies to exploit overseas market.
- b) Strengthen diversified culture in enterprise: Diversity of culture can create more ideas and make employees to have understanding of foreign culture will help products to meet global need
- c) Logistic solutions
Domestic companies cooperate with each to reach economic scale

4. Conclusion

It is not because of lack of ability but lack of ambition and consideration that make Indonesian companies not have large overseas market until now.

We think that it is necessary for Indonesia to exploit overseas markets and there are a lot of solutions that can be used to solve obstacles.

Edited by Denko

Group 4: Education and industrial management

Member: Takumi, Izhar, Ifan, Ouran, Maryam, Yuko (From left side in the photo)

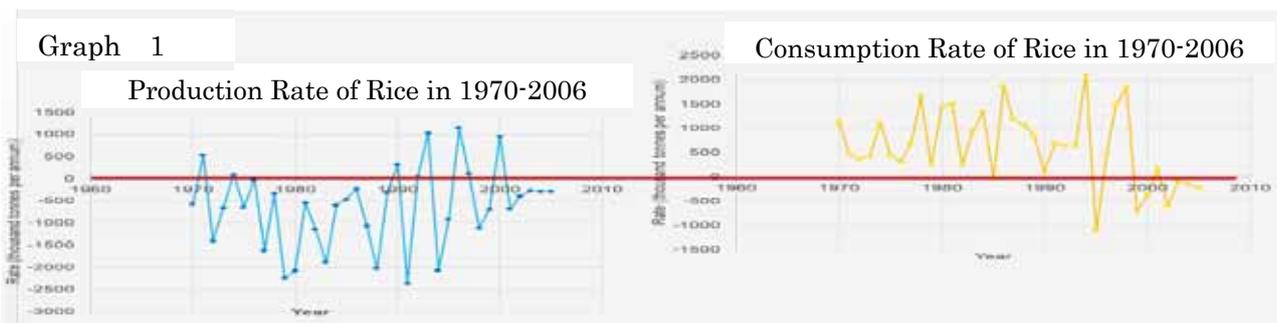
1. Background

To show the problem in agriculture, we collected a lot of data in 3 parts.

First is the total population and the number of farmers. Indonesia has the world's fourth largest population, and its population continues growing. Besides, agricultural population is unstable. It's easy to be influenced by the weather and disasters.



Group members



Secondly, we searched for the number of agricultural products. In graph 1, we can see that the consumption rate is over the 0 line but the production rate is under the 0 line. Which means people's need is greater than the food they can produce.

Finally, we investigated the education solution in Indonesia. Only 20% of students will go to university. And in this 20%, only 2% will become a farmer. So most of the farmers at least have high school graduation degree? Actually according to the data almost 3/4 of Indonesians with no schooling eventually become farmers. In summary, the number of educated farmers is still relatively low in Indonesia.

2. Problem

There are four problems in Indonesian agriculture. The first problem is "Industrial management". The cause of this problem is "sloppy management system". Products farmers made are bought by brokers at cheap prices. So farmers cannot earn a lot and remain poor. The second problem is "Low number of educated people." Up to now, there is a paradigm in Indonesia that farming is close to the poverty. So the number of

educated people in Indonesian agriculture is becoming lower and lower. And non-educated people only work at farms. The third problem is “Conventional farming”. Conventional farming, also known as industrial agriculture, refers to methods of farming in which include the use of synthetic chemical fertilizers, pesticides and herbicides and genetically modified organisms. Since the 1970s Indonesia had applied the conventional farming, but it still can't fulfill the demand, even until now. The fourth problem is “existing low efficiency”. The existing low efficiency of Indonesian farmers is caused by the lack of education of the farmers about what is the proper and sustainable technology and management to be applied for the farming activity. So, these are the reasons we try to achieve a sustainable agriculture industry through the improvement of the educational system.

3. Objective

The objective is “achieving a sustainable agricultural industry through the improvement of educational system”.

4. Problem analysis

We discussed our objective to be more specific. What does ‘sustainable’ mean? We agreed that it was a situation where domestic demand was fulfilled by domestic product. To achieve this, they must accelerate productivity. Then why is education needed? We suggested that tech-illiterate farmers who can only operate given technology but cannot create by own self may change into tech-savvy result of education. Tech-savvy farmers understand some way to improve their circumstances, for example breeding, fertilizer development, infrastructure improvement and organization. Their own knowledge and skill can encourage them to develop the farm business to be more productive. Finally, these individual changes provide rich supply for Indonesia.

5. Solution

We think the fundamental solution is to change the education system. Education should give children freedom to decide their own future and make them creative. This will help Indonesia to get the industrialized agriculture which is more productive.

But before the effect of the education system innovation appear, how can we raise the output? We think the short-term solution for helping the present farmers present get more skill must be done. For example, government can build some Technical schools or import some machines that are higher quality but easier to handle.

Edited by Ouran, Takumi, Yuko

Group 5: Technology Transfer between Countries and the Effect on Economic Growth

Member: Ayako, Han, Jamie, Kaho, Nasir, Nobu, Tia

1. Introduction

A higher quality of life can be achieved by economic growth of a country. There are some essential factors to have economic growth; human resources, capital goods, or entrepreneurship. Technology transfer (TT) is one of the most effective ways to satisfy these factors. Through the discussion and series of company visits, we aimed to have a better understanding of TT and its importance, and to think about its impact on economic growth in terms of the factors mentioned above.

2. Discussion

With Internet research and information sharing, we first discussed the following two points in order to have a common understanding of TT: (1) background: what TT is, what are transferred in TT, why it happens, and (2) process: how technologies are transferred.

2.1 Background

We reached the common understanding that TT is the process of transferring both tangible and intangible technologies. Tangible ones are commodities, machinery or samples of facilities while intangible ones are skills, knowledge or method of manufacturing. The reason why TT happens is that sender and receiver satisfy each other's demands. Market, labor, land, natural resource, or low capitals should be sender's needs and wants in TT. On the other hand, the receiver would expect investments, employment, knowledge, technology or products themselves.

2.2 Process

Next we considered how TT takes place and thought that technologies can be transferred through the following: market transaction between companies, business affiliation, and information tools such as internet or television.

3. Case Study

Having grasped the big picture of TT, we discussed what impacts TT has on a society and how it relates to economic growth. We took Sarihusada and Danone, Karya Hidup Sentosa (KHS) and Kubota, and the JICA project for examples as we visited them.

(1) Danone affiliates Sarihusada and has improved Sarihusada's productivity or product quality by R&D, but the product price could remain affordable for middle- to lower-income consumers in Indonesia. We thought this is because it's not import/export but affiliation, one way of TT. Also, on our visit to Sarihusada, we witnessed many machines labeled a European machinery brand, which can be counted as one of the factors, capital goods.

(2) KHS and Kubota have made a joint venture, PT. Kubota Indonesia, and it now helps meet the demand of automation in Indonesian agriculture, which we thought to be a kind of entrepreneurship, one of the factors of economic growth.

(3) JICA has brought sabo dam to Indonesia. After many years of R&D, a sabo dam now does not only protect citizens or fortune from natural disasters but also provides better infrastructure as a bridge, or functions for local farmers as an irrigation channel. This means the technology itself has improved the quality of life of people there. Moreover, the need for sustainability of dams made JICA start up some educational and R&D institutions and a master's program for disaster management. It has resulted in growing more skilled and knowledgeable human resource.

We've thought about the positive outcomes so far, but there are of course challenges in TT. First, it is a very time-consuming process as there're some barriers: communication difficulty due to peoples' values gap or cultural difference, adaptation and adjustment of transferred technology to a new environment. Next, it can cause undesired troubles such as intellectual property issues, because there is a gap in laws and regulations between countries. It is also a problem that currently there's little research and development in receiving country. Evidentially, none of the foreign investment companies we visited had a domestic R&D department. This might be preventing potential innovations from occurring. Overcoming these challenges will maximize the positive effects of TT and lead to more efficient economic growth.

4. Conclusion

Through our discussion and case study, we could deepen our understanding of economic growth and technology transfer first, and then could know how TT concretely influences the factors of economic growth or citizens' standards of living.



Group members

Edited by Ayako Nobu Kaho

Evaluation of Tokyo Tech-AYSEAS 2015

All 32 students who participated in Tokyo Tech-AYSEAS 2015 were given a questionnaire about the program on September 15. The following evaluation was based on the answers to the questionnaire. The first half of Q1 in Section B only by Tokyo Tech students, Section E was answered only by non-Tokyo Tech students, and the rest of the questions were answered by all students.

[Section A] Evaluation for overall Tokyo Tech-AYSEAS 2015

A-1. What was FIRST MOTIVATION to participate in this program?

Answers

- *To visit companies(Local, Japanese) and learn the current condition in Asia*
- *To interact or have a discussion with students from different background*
- *To make International networking (make friends)*
- *To enhance their own English skill*
- *To learn more about Tokyo Tech from Tokyo Tech students*
- *Friends' recommendation*

Comment

Overseas students hoped they could learn Japanese ways of thinking through discussion and communicating in cultural exchange. On the other hand, Tokyo Tech students wanted to not only make International networking but also learn about Japanese companies in ASEAN countries. Most of the participants are able to use their own English in daily life so I think we focused on those purposes above in this program.

A-2. Were you satisfied with Tokyo Tech-AYSEAS2015? (Rate 1(Not satisfied at all) to 5(satisfied very much))

Rate	5	4	3	2	1	Average
Number	22	10	0	0	0	4.69

	All members(32)	Tokyo Tech students(15)	Overseas(17)
Average	4.69	4.8	4.59

Comment

Almost all students were satisfied with this program. Some participants left comments, such like, "I really loved to participate in this program." So please have a short look to A-4. There are some very positive comments from both Tokyo Tech students and overseas students.

A-3. What did you think of schedule arrangement? (1(very hard) to 5(not hard at all))

Rate	5	4	3	2	1	Average
Number	7	11	3	10	1	3.41

	All members(32)	Tokyo Tech students(15)	Overseas(17)
Average	3.41	2.6	3.65

Comment

There are some comments from students, such like, “Sometimes I got too tired in the morning and in the night. (for discussion)” That’s because almost every day in the latter half of this program we spontaneously had meetings to prepare for the final presentation. So for those who don’t have experiences to use English in discussion, especially Tokyo Tech students, the time schedule was not enough to understand and join the discussion. However, most of the overseas students evaluated 4 or 5 so they were satisfied with the schedule arrangement.

A-4. Describe your suggestions, ideas and comments for all of Tokyo Tech-AYSEAS.

Answers

- *It would be better if we have more time for discussion or other things.*
- *AYSEAS has to make any effort to advertise itself more.*
- *It would be better to change sightseeing date into the last date.*
- *Non student leader members have to cooperate with student leaders.*
- *Everyone has to be more punctual and bring his PC.*
- *There should be information of average price of meal.*
- *Allow students (participants) to decide parts of schedule and where they want to go.*
- *For the next program there will be a T-shirt of Tokyo-Tech AYSEAS as a memorable thing.*
- *It’s very good program not only for Tokyo Tech members but also for the other participants.*
- *Please try to involve participants from more countries.*
- *We should arrange activities more useful. Some of the factory seem unprepared.*
- *If possible, after the Final Presentation, I hope all students can have comments from professors.*
- *I really loved to participate in this program.*
- *All is good. Please create more like this program.*
- *It’s really good opportunity to know each other’s culture and having discussion in*

a topic. It's also challenging to discuss in English. My idea is to visit the companies that are related to various background study.

- It would be more fruitful if we have some workshops, and longer duration of program (maybe we can have some programs at night).
- The program is so well-arranged. Maybe we can implement the buddy system so every participant can be in charge of another participants to make.
- Expand the collaboration to outside ASEAN, more games to strengthen the friendship, and adjust the schedule of the other university in order to decrease the number of absence in the classroom.
- Before joining, I couldn't imagine AYSEAS such a great one. Of course I'll cooperate to keep and improve AYSEAS.

[Section B] Evaluation for overall Tokyo Tech-AYSEAS 2015

B-1. Please grade each part of the program (Rate 1(Not satisfied at all) to 5(satisfied very much)).

Table. Program in Japan (only for Tokyo Tech students)

Program	Rate
Energy issues for sustainable community	4.59
Learning to See Other Cultures	4.68
Biological assessment of your developing technologies	3.71
Introduction to nanoscience and nanotechnology	3.75
Toyo Glass Factory tour	4.44
Indonesian language and culture class	4.81
Presentation	4.71
Total	4.39

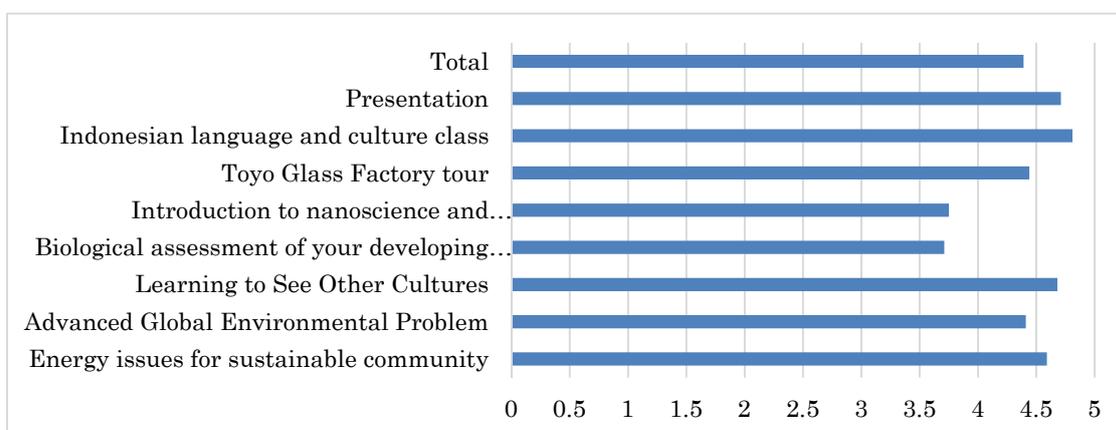


Fig. Evaluation of the preparatory studies in Japan

Table. Program in Indonesia (for all participants)

Program	Average
Universitas Gadjah Mada (UGM)	4.66
NIPPON SHOKUBAI	4.59
TOYOTA	4.63
DENSO	4.52
CV. Karya Hidup Sentosa	3.88
PT. Sarihusada Generasi Mahardhika (SGM)	4.56
Balai Besar Kulit, Karet dan Plastik	3.93
JICA Project (“Urgent Disaster Reduction Project: Mt. Merapi”)	4.13
Total	4.36

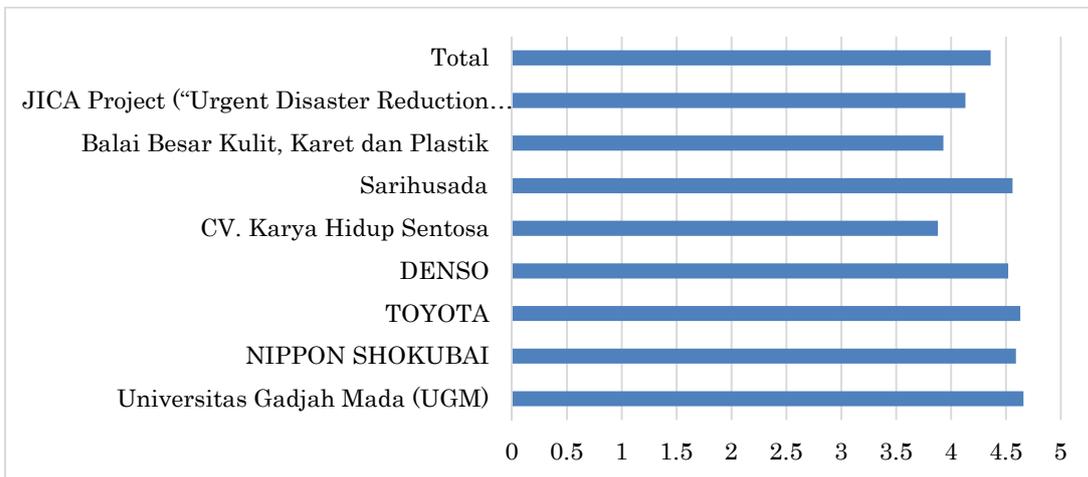


Fig. Evaluation of Program in Indonesia

B-2. Please choose the best 3 programs from your viewpoint within technical visits. Then, describe the reason of your choice.

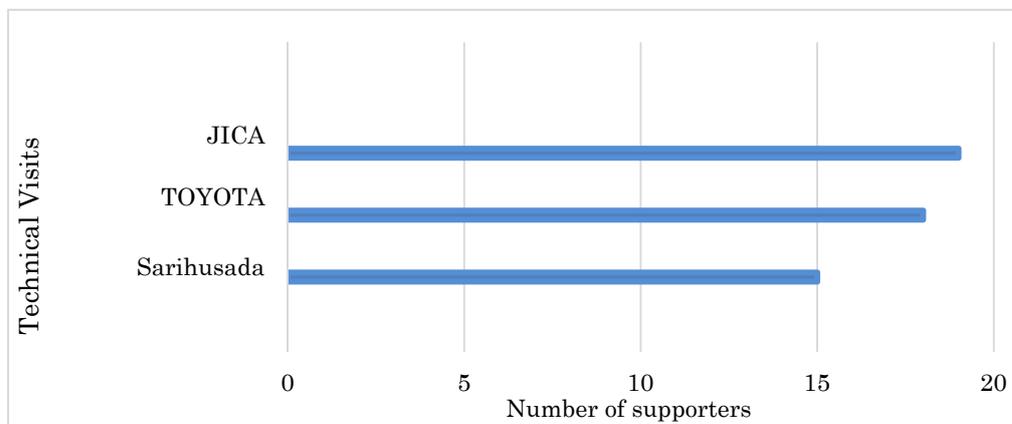


Fig. Evaluation of Technical Visits in AYSEAS 2015

Positive opinions

JICA:

- *There are many improvements that we can see in reducing Disaster Destruction.*
- *The sabo dam project suits my interests in civil engineering.*
- *Because I'm familiar with disaster risk management-related topic. At JICA project, I can see with my own eyes how to manage volcano eruption and why it's so important.*
- *It was interesting the technology adopted to Mt. Merapi is also used in Japan.*

TOYOTA:

- *We could see the process of making engine and the factory was well-organized.*
- *Because we can really come to the factory and have a look at the machinery.*

Sarihusada:

- *This is an unusual experience to visit non-engineering factory.*
- *Because it is very full of knowledge*
- *This is a new experience for me to see a milk factory. I used to drink SGM milk since childhood so it's very interesting to see how the product I drink every being made.*

NIPPON SHOKUBAI:

- *The management of NIPPON SHOKUBAI is very impressive. They manage every process in the factory with high safety.*

Balai Besar Kulit, Karet dan Plastik:

- *I saw a lot of leather goods and the process to make those goods.*

DENSO:

- *As we visited TOYOTA and DENSO on the same day, it was easier to understand the relationship of the automobile industry. The staff answered our questions very well.*
- *I came to know about Japanese spirit "Kaizen" on the DENSO Indonesia.*

Others:

- *Because the facilities are really good, they also welcome us really nice, good presentation and good opportunity to ask many things. I could learn so much from those 3 programs.*
- *These factories have a great management systems and great technology. A great example of how science and technology being implemented in a real world.*
- *I'm really amazed with comfortable and green environment, clean process and impressive factories. Furthermore, the quality of the presentation is excellent.*
- *(UGM) really nice to see all the talent and funny guys.*

Comment

They were satisfied with where they could gain new knowledge from presentation and real process in their factories.

[Section C] Evaluation for “Discussion and Presentation”

C-1. What did you think about discussion and presentation (discussion topic, group discussion and final presentation)?

Please grade the method (Rate 1 (Not satisfied at all) to 5 (satisfied very much)), then describe your opinion.

Rate	5	4	3	2	1	Average
Number	9	14	7	1	0	3.88

	All members(32)	Tokyo Tech students(15)	Overseas(17)
Average	3.88	4.29	3.76

Opinions

- *Good opportunity to discuss in English and improve skill of sharing ideas*
- *We could make time management because it is too short to have enough discussion*
- *I think group discussion is a very efficient way to get deeper understanding and review what we saw and learned.*
- *It was difficult to share the common goal, attitude, and time. Difficult to make progress because only three out of six members brought their own PC. Make it sure to bring PC.*
- *It was easy to understand the goal and purpose of discussion. Time schedule was hard but it made our bonds strong.*
- *I was satisfied, but it's better to choose topics which is related to technical visits.*
- *Actually, I think we should discuss more about conclusion by everyone. It was difficult for me to have every members to engage in the work, even if the role is determined. Time management was also difficult for our group.*
- *I couldn't participate in the discussion enough and I had little time to practice my part. I enjoyed preparation with talking with my group members.*
- *It was too hard and more impressed than I imagined. I had difficulty in the discussion but I tried to study and understand what others members said. It was the most precious experience, I thought.*
- *Tokyo Tech provided many interesting topics. However, I think it's better to use*

some venue to discuss the case study and involving suggestions from professors or lecturer before doing presentation would be essential and beneficial.

- *In general, the discussion and presentation sessions have been enjoyable and worth doing. It was only regarding the relatively short and limited time that we had which caused us to be a little bit in a hurry. It made us become quite hectic and dynamic within this session and performance lower than what we could possibly achieve.*

Comment

As is mentioned above, discussion and presentation were precious for all participants. Some of them thought discussion and preparation time were short for fruitful results. However, they also thought time limit let us communicate positively with others from different background.

C-2. Please grade following items (Rate 1(Not satisfied at all) to 5 (satisfied very much)), then describe your opinion.

Table. Evaluation about Discussion

	Average
Time for discussion	3.53
Number of members in each group	4.47
Time for preparation	3.47

Comment

Some participants said that it was often inconvenient to move back and forth to UGM and our hotel. Also others said 7 members were too many to have equal opportunities to remark. Number of members is really important to share ideas in the discussion.

C-3. What did you learn throughout discussing with members?

Answers

- *The importance of clarifying all members' definitions and combine different ideas*
- *How to discuss in English and communicate more actively*
- *How to improve teamwork efficiency*
- *Diversity of ways of talking and thinking from different cultural background*

Comment

We could learn each other's ways of thinking but we had to manage this disparity within the some limited time. We not only improved the skill of communicating but also understood what the teamwork and how to manage this efficiently.

[Section D] Your opinion for future Tokyo Tech-AYSEAS

D-1. What kind of program do you want to join?

Answers

- *To stay in local participants' home*
- *Educational programs (more workshops, university's laboratory tour etc.)*
- *Culture exchange program from overseas and Entertainment*
- *Visiting governmental office*

Comment

This question confused us as most of the answers had nothing to do with the true meaning for this question, perhaps due to the phrasing of the question.

D-2. Which country should we visit in the next time?

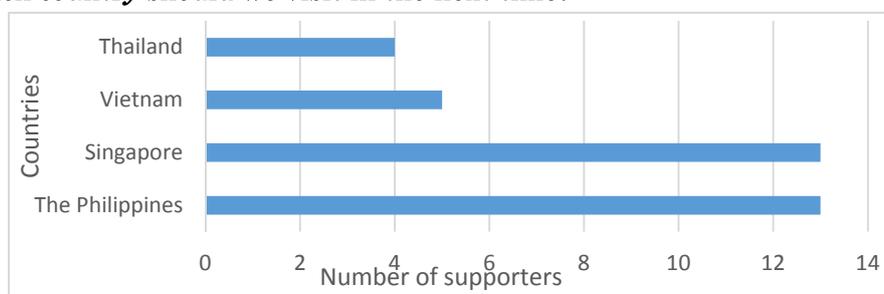


Fig. Which country should you visit in the next time?

Comment

This time, we had to choose among those four countries in this question. Some students are afraid that Singapore is too small to go sightseeing. However, many students chose Singapore so we have to think Singapore is attractive to them in spite of the scale.

D-3. What did you think the number of days (length) for Tokyo Tech-AYSEAS2015?

Comment

Most of the participants think 10 days is proper but some students need more time or think it was too long.

D-4. What kind of discussion topic do you want to suggest for the future Tokyo Tech-AYSEAS?

Answers

- *Renewable Energy*
- *Corruption*
- *Regional Cooperation*

- *English as mother language*
- *Fuel efficiency and environmentally-friendly in car technology*
- *Environmental Awareness*
- *Disaster management*
- *Gender equality in engineering area of ASEAN countries*
- *The air pollution in urban area*

Comment

We think most of the topics which were distributed by professors but we think topics related to technical visits would be better for the final presentation. Topics mentioned above are almost all already included in distributed topics.

D-5. Your suggestions, ideas, and comments for future programs.

Answers

- *More diversity (country, university)*
- *Some sports activity for fun*
- *Scholarships for non-Tokyo Tech students or free of fee (Fully funded)*

[Section E] Present state in your university (For non-Tokyo Tech students)

E-1. When and how did you know about Tokyo Tech-AYSEAS first? (from your friend? past AYSEAS participants? Ad?)

Answers

- *Past AYSEAS participants*
- *Study abroad fair*
- *Ad in international office*
- *Web (twitter, Facebook)*
- *Friend*

E-2. What kind of Tokyo Tech-AYSEAS advertisement was displayed in your university?

Answers

- *Web (faculty website, international announcement or Twitter, Facebook)*
- *E-mail*
- *Paper*

E-3. Was there any interview test in your university?

Yes (0)

No (13)

E-4. What was the first time to meet with your university members?

Comment

It depends on their situations. Students met a week before the program or on the first day of the program.

E-5. Were there any preparatory study sessions in your university?

Yes (2)

No (11)

Comment

Few students from ASEAN countries had study session but they prepared by themselves.

E-6. Any suggestions, ideas, and comments to improve future application process?

Answers

- *It would be better to have an interview session.*
- *Please attach the schedules and activities.*

[SUMMARY]

I hope this evaluation will have a good influence on the future AYSEAS program. What you understand through reading this evaluation report is that AYSEAS 2015 program did influence so many participants in an irreplaceable way and changed their ideas of the importance and difficulty of intercultural communication, the rising Asian industry that has many strengths as well as weaknesses, Asian problems, and lot more elements that are going to get more and more crucial in the near future when many more Asian people come to cross national borders and have to live side by side without conflicts. In that kind of world, there must be people who can lead the people around to avoid meaningless fights and to achieve a better place to be. All the AYSEAS participants have advanced one step closer to become such future global leaders, and we must keep moving forward. It must improve itself year by year and show its presence to the world in order not to clog the current of interaction among brilliant Asian students and their cultures. For that reason, this evaluation report should exist. All the participants politely gave us their feedback for the future this year, which is not so ordinary, and we, especially who will be involved in running this program, shall make use of this to the best. If you want to join AYSEAS program through reading this, it couldn't be better for me. We're really glad to have you read our evaluation report.

Edited by Sota

ASEAN

Outline [1]

ASEAN (Association of South-East Asian Nations) is a political and economic organization of Southeast Asian countries. It was formed on August 8, 1967 by Indonesia, Malaysia, The Philippines, Singapore, and Thailand, and expanded to include Brunei, Cambodia, Laos, Myanmar and Vietnam. Now, ASEAN is composed by 10 nations.



Fig. 1 The Nations joining ASEAN



Fig.2 The flag of ASEAN

Table 1: The basic data of ASEAN [2]

Population	630 million	9% in the world
GDP	2.4 trillion dollars	3% in the world
The amount of trade	2.5 trillion dollars	7% in the world
Directly investment balance of Japan	14.4 trillion dollars	12% of all

Purpose [1]

In the ASEAN Declaration, the aims and purposes of ASEAN are:

- To accelerate economic growth, social progress, and cultural development in the region
- To promote regional peace and stability
- To promote collaboration and mutual assistance on matters of common interest
- To provide assistance to each other in the form of training and research facilities
- To collaborate for the better utilization of agriculture and industry to raise the living standards of the people
- To promote Southeast Asian studies
- To maintain close, beneficial co-operation with existing international organizations with similar aims and purposes

Relationship between ASEAN and Japan[3]

- ASEAN is familiar with Japanese life

For life of Japanese people, ASEAN is familiar existence. Almost all fruits and seafood processed goods sold in Japan are imported from ASEAN. And, many commodities, electric appliances, automobile components are manufactured in ASEAN countries.



Fig. 1: The ratio of ASEAN occupied among the products imported to Japan

- Cooperative relationship

After WWII, Japan have supported to build ASEAN Nations through ODA. In 1997, Takeo Fukuda, Prime Minister at the time showed “ASEAN Diplomatic Principle”. Next year, Japan-ASEAN ministers’ meeting was held and Japan and ASEAN started cooperative relationship as “Dialogue partner” for the first time for ASEAN.

ASEAN Integration 2015[3]

ASEAN is aiming to realize ASEAN Integration consisted of Political and security community, Economic community, Society and cultural community by 2015. Originally it had decided the goal in 2020, but ASEAN accelerated to integrate ASEAN considering global competition with India and China. At Vientiane Action Program in 2003, concrete actions to realize ASEAN Integration were decided. And at the ASEAN charter in 2008, it had released to reinforce ASEAN mechanism and to define decision making process.

References

[1]Wikipedia, “Association of South east Asian Nations”

[2]”ASEAN の現状と日・ASEAN 関係”, Japanese Government Representative of ASEAN, October 2014, <http://www.asean.emb-japan.go.jp/documents/20141010.pdf>

[3]”ASEAN と日本~アジアの平和と繁栄のために”, Ministry of Foreign Affairs of Japan homepage, <http://www.mofa.go.jp/mofaj/press/pr/wakaru/topics/vol64/index.html>

Edited by Yasu

Indonesia

1. Outline

Indonesia, officially the Republic of Indonesia, is a sovereign state in Southeast Asia. Indonesia has an estimated population of over 255 million people and it is the world's 4th most-populous and the most-populous Muslim-majority country.



Fig1. Flag and national emblem

Indonesia's republican form of government includes an elected legislature and president. Indonesia has 34 provinces, of which five have Special Administrative status. The nation's capital city is Jakarta.

The country shares land borders with Papua New Guinea, East Timor and Malaysia. Other neighbouring countries include Singapore, the Philippines, Australia, Palau, and the Indian territory of the Andaman and Nicobar Islands. Indonesia is a founding member of ASEAN and a member of the G-20 major economies. The Indonesian economy is the world's 16th largest by nominal GDP and the 8th largest by GDP at PPP.



Fig2. Location of Indonesia (green)
in ASEAN (dark grey)

2. History

- World War II and post-independence

Japanese occupation during the Second World War ended Dutch rule and encouraged the previously suppressed Indonesian independence movement. A later UN report stated that four million people died in Indonesia as a result of the Japanese occupation. Two days after the surrender of Japan in August 1945, Sukarno, an influential nationalist leader, declared independence and was appointed President. The Netherlands tried to reestablish their rule, and the resulting conflict ended in December 1949, when in the face of international pressure, the Dutch formally recognized Indonesian independence with the exception of the Dutch territory of West New Guinea, which was incorporated into Indonesia following the 1962 New York Agreement, and the UN-mandated Act of Free Choice of 1969 which was questionable and has resulted in a longtime independence movement.

- New Order and Reformation era

At first independent Indonesia was a parliamentary democracy. However in February 1957 President Sukarno introduced a new political system, which he called 'Guided Democracy'. The power of parliament was reduced and his own power was greatly increased. Meanwhile in October 1957 the army took over the remaining Dutch companies in Indonesia. As a result the army grew wealthy. Then in the early 1960s the economy faltered. There was very rapid inflation. In September 1965 the Communists attempted a coup in Indonesia. They murdered a number of generals. They also seized strategic points in Jakarta. However General Suharto quickly took action. The coup was crushed. Suharto was granted powers by President Sukarno to restore order. After the coup Suharto arrested and executed a large number of communists.

However Sukarno lost support and on March 11, 1966 he signed over his presidential powers to Suharto. From 1966 Suharto ruled as a dictator (although there were elections held every five years democracy was a facade). However Suharto brought stability and under him the economy of Indonesia recovered.

From the 1960s reserves of oil in Indonesia were exploited. After 1973 Indonesians benefited from the high price of oil. Agriculture also became far more productive.

However most Indonesians remained poor and in 1997 Indonesia was hit by a financial crisis. As a result of the economy contracted, Indonesia was hit by riots and Suharto resigned in May 1998. Democracy returned to Indonesia with elections, which were held in 1999.

At the beginning of the 21st century, the Indonesian economy began to recover and by 2007 it was growing by as much as 6% a year. Even in 2009 when most of the world was mired in recession the Indonesian economy still grew. Today the population of Indonesia is 248 million.

3. Economy

The country is the largest economy in Southeast Asia and a member of the G-20 major economies. According to World Bank affiliated report based on 2011 data, the Indonesian economy was the world's 10th largest by nominal GDP (PPP based). The industry sector is the economy's largest and accounts for 46.4% of GDP (2012), this is followed by services (38.6%) and agriculture (14.4%). However, since 2012, the service sector has employed more people than other sectors, accounting for 48.9% of the total labour force, this has been followed by agriculture (38.6%) and industry (22.2%). Agriculture, however, had been the country's largest employer for centuries.

This graph shows GDP, GDP/capita, and the relative government Debt to GDP. By this graph, we can see GDP and GDP per capita are both increasing.

Furthermore, the government debt is relatively decreasing compared to GDP.

In developed country, government's debts are over 200% to GDP, so this value is quite low.

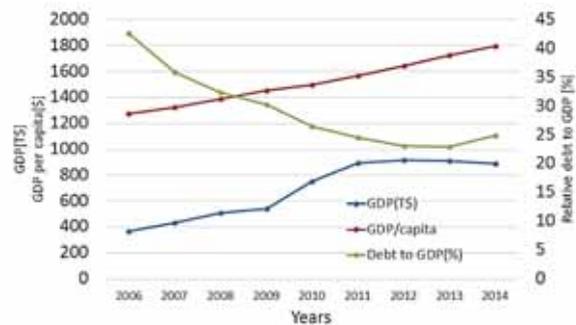


Fig3. Developing economy & decreasing debt (data from World Bank)

4. Culture

- Religion: While religious freedom is stipulated in the Indonesian constitution, the government officially recognises only six religions: Islam, Protestantism, Roman Catholicism, Hinduism, Buddhism, and Confucianism. Indonesia is the world's most populous Muslim-majority nation, at 87.2% in 2010, with the majority being Sunni (99%). The Shias and Ahmadis respectively constitute 0.5% and 0.2% of the Muslim population. In 2010, Christians made up almost 10% of the population (among them 7% were Protestant, 2.9% Roman Catholic), 1.7% were Hindu, and 0.9% were Buddhist or other. Most Indonesian Hindus are Balinese, and most Buddhists in modern-day Indonesia are ethnic Chinese. Though now minority religions, Hinduism and Buddhism remain defining influences in Indonesian culture.

- Cuisine: Indonesian cuisine is one of the most vibrant and colorful cuisines in the world, full of intense flavour. Rice is the main staple food and is served with side dishes of meat and vegetables. Some popular Indonesian dishes such as nasi goreng, gado-gado, sate, soto and bakso are ubiquitous in the country and considered as national dishes.



The picture above is an example of Indonesian Sundanese meal: ikan bakar, nasi timbel, ayam goreng, sambal, fried tempeh and tofu, and sayur asem; the bowl of water with lime is kobokan.

References

- [1] Wikipedia, "Indonesia", <https://en.wikipedia.org/wiki/Indonesia>
- [2] The World Bank, <http://data.worldbank.org/country/indonesia>

Edited by Kaori

List of Participants

University	Name	Nickname	Sex	Department
Tokyo Tech	Sota Kato	Sota	M	Polymer Chemistry
Tokyo Tech	Yinglan Qin	Ouran	F	International Development Engineering
Tokyo Tech	Yuka Murofushi	Yuka	F	Biotechnology
Tokyo Tech	Ayako Yamagishi	Ayako	F	Social Engineering
Tokyo Tech	Kou Lee	Kou	M	Electrical and Electronic Engineering
Tokyo Tech	Hironobu Kiuchi	Nobu	M	Mechanical Engineering and Science
Tokyo Tech	Ryosuke Kobayashi	Ryo	M	Inorganic Materials
Tokyo Tech	Hiroyuki Fuse	Hiro	M	Electrical and Electronic Engineering
Tokyo Tech	Takumi Koga	Takumi	M	Biotechnology
Tokyo Tech	Yuko Hayakawa	Yuko	F	Inorganic Materials
Tokyo Tech	Hironao Miyamoto	Miya	M	Inorganic Materials
Tokyo Tech	Kaho Yamano	Kaho	F	Metallurgical Engineering
Tokyo Tech	Tianzi Lu	Denko	F	International Development Engineering
Tokyo Tech	Kaori Mikuni	Kaori	F	Biological Sciences
Tokyo Tech	Yasuhiro Tada	Yasu	M	Electrical and Electronic Engineering
UGM	Agustia Arum Larasari	Tia	F	Faculty of Engineering/ Civil and Environmental Department
UGM	Akhsanto Anandito	Akhsanto	M	Department of Mechanical and Industrial Engineering
UGM	Aulia Fadhillah Zahro	Aulia	F	Faculty of Engineering/Geodesy and Geomathics Department
UGM	Muhamad Izhar Azharudin	Izhar	M	Civil and Environmental Engineering
UGM	Muhammad Nasir	Nasir	M	Engineering/Engineering Physics
UGM	Oka Damar Pamungkas	Oka	M	Department of Civil and Environmental Engineering
UGM	Vidya Nahdhiyatul Fikriyah	Vidya	F	Faculty of Geography/Cartography and Remote Sensing
ITB	Adi Theodosius S	Adi	M	Chemical Engineering

ITB	Cahyo Subroto	Cahyo	M	School of Electrical Engineering and Informatics (SEEI)
ITB	Handayani Nabilah	Hani	F	Environmental Engineering
ITB	Ifan Murdiyadi	Ifan	M	Faculty of Industrial Technology / Chemical Engineering
ITB	Jeremiah Bintang Santoso	Jamie	M	Faculty of Industrial Engineering/ Department of Engineering Physics
ITB	Maryam Zakiyyah	Maryam	F	School of Architecture, Planning and policy Development
CU	Nuntuchaporn Trongsirawat	Plan	F	Engineering
KU	Ratcharnon Apinyayanyong	Ich	M	Faculty of Engineering
KMITL	Hamad Sultan Ashraf	Hamad	M	TAIST/Automobile Engineering
HUST	Nguyen Thai Ha	Han	M	Materials Science and Engineering

Faculty members

University	Name	Department
Tokyo Tech	Prof. Katsunori Hanamura	Department of Mechanical and Control Engineering
Tokyo Tech	Prof. Toshimasa Fujisawa	Department of Physics (Condensed Matter Physics)
Tokyo Tech	Prof. Hirofumi Hinode	Department of International Development Engineering
Tokyo Tech	Eriko Tone	International Affairs Division, International Affairs Department
UGM	Prof. Harwin Saptoadi	Department of Mechanical and Industrial Engineering
UGM	Aci Prima Sari	International Affairs - Faculty of Engineering (UPHI)



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