

Youth-Led, Cross-Border
Radiation Measurement Project
in East Asia

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East Asia School Network (EASN)
University of the Sacred Heart, Tokyo

Youth-Led, Cross-Border Collaborative Radiation Measurement Project: Results and Issues Foreword

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Since 2008, our academic study group has conducted research concerning the international network of schools formed in the East Asia region. The main goal of our activities has been to provide a research-based foundation for building a network of schools that will develop youth capable of building a sustainable future, thereby enabling East Asia to become a more peaceful region in the near future.

At the beginning, our academic study group proceeded according to plan and studied such excellent practices as the Baltic Sea Project in northern Europe, and considered how the knowledge could be applied to East Asia. Then, in March 2011, we experienced an unexpected situation – that of the Great East Japan Earthquake and the Fukushima Daiichi nuclear accident.

The influence of this great tragedy, which resulted in nearly 20,000 deaths and missing persons, was felt so strongly across many different spheres that it was as if all Japanese citizens had been victims. Our study group was no exception. Not only did we become more conscious of our group's mission, but we also came to rethink the direction of our research. The outcome was that we embarked on an experimental "School Network Project" involving the implementation of an international survey measuring nuclear radiation. Concretely, this consisted of having high school and other students and teachers from Mongolia, Russia, South Korea, Taiwan, and Japan use Geiger counters to measure nuclear radiation with a goal of comparing the recordings internationally. Not only would the results be shared; we aimed to make the act of the measurement an opportunity for dialogue among young people that would help develop their capacity to promote sustainable development in the future.

In order to bring this survey to the implementation point, various opinions

were exchanged within our study group. In particular, there was extensive discussion about what to do if the case arose of one of the participating schools unexpectedly obtaining a high reading. This kind of intense and complex discussion had never before occurred within the study group. The project unexpectedly became a lesson as each one of us was drawn into the confusion surrounding the Great East Japan Earthquake in terms of our views of civil society and our own ways of living as members of civil society.

Even if the meaning of conducting this project in the context of the Great East Japan Earthquake was clear, members of the study group shared the view that if they were from schools implementing the project, they would have to exercise due caution. Thus, we established that one of the conditions for a school's participation would be the agreement of the principal, and we set a limited monitoring period of four months. The schools in Japan and other countries were decided as a result of members making direct contact with teachers they had met through other collaborative international projects and by having schools introduced through the National Commission for UNESCO in the countries. (Refer to the following chapter for a listing of the specific schools.)

Needless to say, in a collaborative project like the measurement of nuclear radiation, an important learning from the project should be the attitude and skill of approaching numbers and data in a neutral way. It was essential to show students how to read numbers scientifically and to interpret the data using critical thinking and complex thinking skills, no matter what levels were observed. We cannot say that our study group dealt with this issue enough, and there also remain many issues related to building a future school network. Concerning these points, we would like you to read the project secretariat's report that follows.

This was an observation programme that raised a variety of issues as it progressed. But I think we can say that the project fulfilled a role as the "bud" of a flower, confirming the meaning of an international collaborative programme to develop youth capable of promoting a sustainable future. The participating young people exchanged their daily feelings, and formed connections with one another in a natural way. This is clearly different than the formation of inter-personal or social "bonds" (*kizuna* in Japanese) that the Japanese government and others advocate, but I think we can say that the exchange

involving Fukushima gave us hope. For the details of this, we have just an excerpt, which we invite you to read in the Appendix.

I am repeating myself, but even though this project was implemented in a very compressed timeframe, it left us with many issues and possibilities. Upon reflection, one can say that the project was implemented with highly compressed preparation and implementation periods. I would like to take this opportunity to thank each one of the students and teachers from the participating schools from my heart.

The research avenues going forward have not been exhausted, including a comparison with the Baltic Sea Project examined by our study group when it was initially formed. To make the programme a stepping stone to further research, we tried compiling as accurate a record as we could. I will be happy if this small experiment contributes to building a foundation for sustainability in East Asia.

East Asia School Network (EASN) Members (Representative teachers of participating countries and steering committee members)

CHINA

1) Beijing Huiwen Middle School
Yanjin Wang

JAPAN

2) Adachi High School
Toshiharu Tsushima

3) Horyuji Kokusai High School
Maki Matsumoto

4) Yanagawa Elementary School
Takeo Ouchi

5) University of the Sacred Heart
Yoshiyuki Nagata

6) Individual
Michiru Yamada

MONGLIA

7) Hobby School
Purev Ochir

RUSSIA

8) Physical-Technical Lyceum № 1
Regina Sosnovskaya

SOUTH KOREA

9) Pusan Foreign Language High School

Dong Wook Kang

TAIWAN

10) Ming-Dao High School

Ronnie Antony

◆ Steering Committee

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Teacher, Fujimi Junior High School, Koshigaya City

Hideki Maruyama (Research Member)

Principal researcher, National Institute of Educational Policy Research (NIER)

Kazuko Yokota (Research Member)

Teaching staff, Waseda University, Tokyo

* Needless to say, the EASN activities were conducted by many students of the above-mentioned participating schools. Because of the limited space of the report, it is impossible to mention all of their names. Special thanks, however, should go to all of the students as well as teachers who contributed to the development of the programme. (Y. Nagata, Representative of EASN)

Overview of East Asia School Network Project Led by High School Students: *Achievements and Issues from the Perspective of the Project Secretariat*

Naoko Yoshida
Secretariat, ROP/EASN

This section discusses the Radioactivity Observation Programme (ROP) implemented with the cooperation of schools participating in the East Asia School Network, which connects six countries and regions in Asia. It is presented from the perspective of the secretariat that managed the project and provides an overview, results and issues related to the Programme.

1. Overview

(1) Implementation Period

The Programme was implemented as an experimental project from the second week of September 2011 through the second week of December 2011, for a total of 14 weeks (approximately 4 months).

(2) Participating Schools

Nine schools from six countries and regions participated in this project (refer to Table 1). Schools participating in the East Asian School Network are mainly those involved with UNESCO activities, and the secretariat for the Network is at University of the Sacred Heart, Tokyo. The involvement of each school varied depending on each school's situation. For example, some schools had individual classes participate, while in others participation was a core activity of an afterschool club. The participating schools are indicated in the table below.

Table 1: List of EASN Participating Schools

Japan	Fukushima	Fukushima Prefectural Adachi High School
	Nara	Nara Prefectural Horyuji Kokusai Senior High School
	Tokyo	Koto Ward Yanagawa Elementary School
	Tokyo	University of the Sacred Heart, Tokyo
South Korea	Pusan	Pusan Foreign Language High School
Taiwan	Taichung	Ming-Dao High School
China	Beijing	Beijing Huiwen Middle School
Mongolia	Ulaanbaatar	Hobby School
Russia	Saratov	Physical-Technical Lyceum No. 1

*There was also one individual participant from Kyoto, Japan.

(3) Method of Measurement

Every Monday, each of the participating schools used the same model of Geiger counter provided by the secretariat to measure the volume of radiation in the school area (exceptions were the schools from Fukushima and Russia which used different types of Geiger counters). If a Monday fell on a holiday and the school could not take the measurement, the measurement day was designated as the day following the holiday. The total number of measurements during the project period was 14, and the measurement sites consisted of 5 in Japan and 5 in other countries, for a total of 10.

The project secretariat had each of the schools predetermine a well-ventilated location to take their measurements, such as the center of the schoolyard or other location where it would be difficult for radioactive materials to stagnate. We requested that they report the radiation measurement each time from that same location between 0 and 1

meter above the ground. The unit of measurement was the number of microsieverts per hour ($\mu\text{Sv/h}$), which measures the volume of radioactivity over the course of one hour.

Each school reported the measurements to the secretariat on the Internet using individual spreadsheets prepared for them (using Google Docs). The secretariat then compiled the measurements obtained in each location in a single table and uploaded it each week to the Internet. Thus, the participating schools could freely access the latest information.

(4) Management Method

For project management, the secretariat relied mainly on the Internet services provided by Google¹. With the primary goal of disseminating information from the secretariat, we first set up an exclusive Web site for the project (using Google Site). Through this, we made the school introduction articles and activity reports provided by each school available for viewing. In addition, by setting up a separate blog (using Blogger), we secured a place for communication where schools could exchange opinions freely. The blog differed from the open Web site, which large numbers of unspecified people could view. Blog access privileges enabled only those schools participating to view and post, and we took care concerning such issues as the protection of individual information. The blog included not only the information provided by each school, but also photos showing the students involved in the project as well as comments from teachers and the researchers. Thus, energetic, interactive communication was developed. Where articles posted to the blog posed no issues concerning protection of individual information, the secretariat would repost information to the main Web site so that that the general public could see the activities. For communication between the secretariat and individual partner teachers, we used email (Gmail) and a mailing list (Google Group).

¹ <https://sites.google.com/site/eastasiaschoolnet>

One initiative of the secretariat that was added to promote more active communication among the schools was the posting once a week during several weeks of the project of questions to the blog with a request for response from the participating schools². The secretariat also planned collaborative events for the participating schools in Japan such as a project in which the students from Horyuji Kokusai Senior High School in Nara Prefecture translated a research report³ written by students at Adachi High School in Fukushima Prefecture into English, as well as visits from students of the University of the Sacred Heart, Tokyo to both of these schools to interview students. The results of all of these activities were translated into English and made public on the Web site.

As another tool for reporting about Programme activities to the general public, a newsletter was published five times⁴.

(5) Preparation

Preparation for the Programme began in the middle of August. The main work was to establish the Internet environment for the project and gain knowledge of methods for measuring radiation. Concerning the former, we decided on the consistency of using services provided by Google. Thus, we secured Google accounts for each of the schools, communicated how to use each service, and conducted demonstrations, such as

² Five questions were posed to the participating schools over the course of the program. The questions were:

- (1) Self-introduction
- (2) The number of nuclear power plants in one's country
- (3) The form of energy most used in one's country or the form of natural energy
- (4) Questions for Japan and for the students from Fukushima
- (5) The form of one's hoped for future (hoped for school, community)

³ Fukushima Prefectural Adachi High School Natural Sciences Department (2011) *Hoshasenryo to Hoshasei Busshitsu – Utsukushima Fukushima Saisei e no Chosen*. [“Nuclear Radiation and Nuclear Materials – The Challenge of Bringing Back a Beautiful Fukushima”]

⁴ Refer to Appendix.

on how to input the radiation measurements. Concerning the latter, the secretariat prepared English and Japanese language versions of the project overview and method for operating the Geiger counter⁵. By uploading these as Google documents, the participating schools were able to confirm the information regularly. For the schools in Mongolia, South Korea and Taiwan, the researchers visited and directly explained the methods for using the Internet services and the Geiger counter to the partner teacher. For the other schools, we shipped the Geiger counter and had them confirm that they understood the use by viewing the explanatory file. At that time, we also followed up by phone with some of the schools.

(6) Language Use

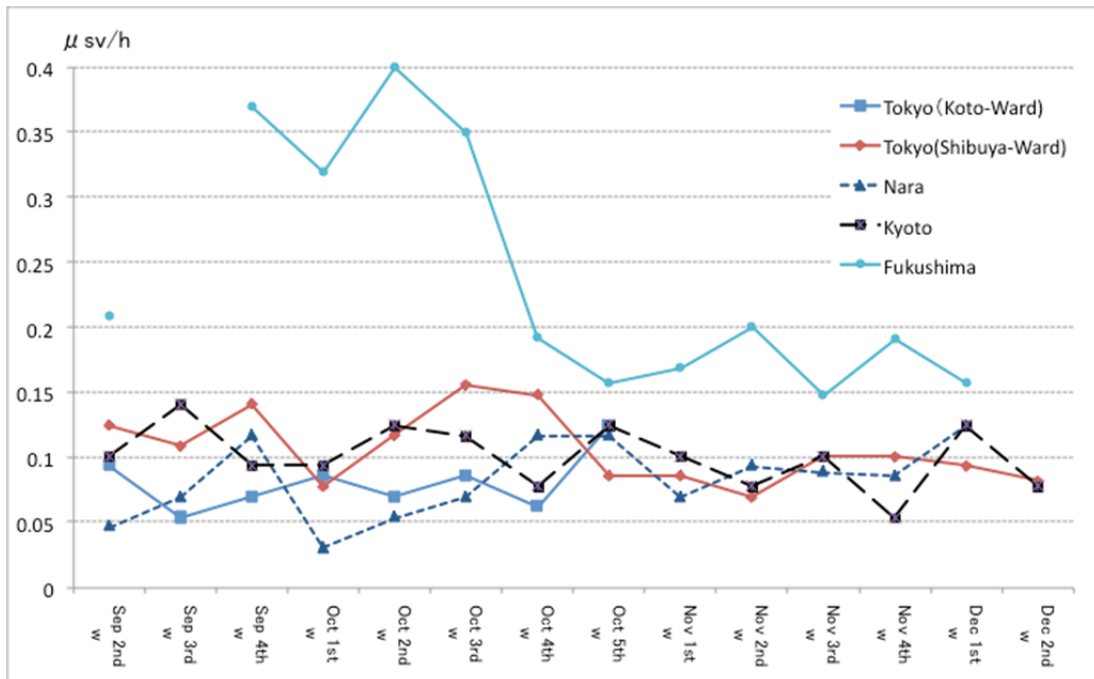
The participants used English for email, the Web sites, blogs, etc.

2. Measurement Results

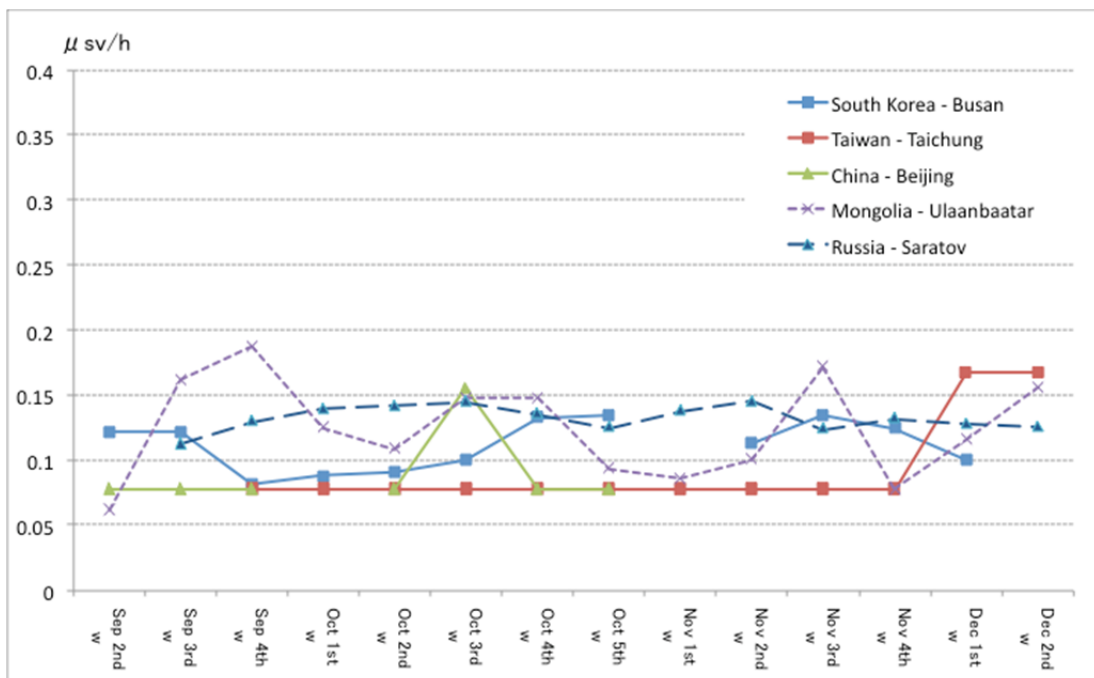
Concerning the measurement results during the implementation period, the change in radiation levels from a point 0 meters above the ground is reflected in the graph below. These measurements, as indicated earlier, were taken simultaneously in six countries. However, the results become extremely complicated when compiled in a single graph. Thus, we divided the results into Graph 1 with results from the participating schools within Japan and Graph 2 with the results from the participating schools outside Japan. Because the schools in Fukushima and Russia used Geiger counters that were different from the others, one cannot make a simple comparison with the results from the other eight schools. In addition, in the case of the participating school from China, there was an unexpected change in the situation within the school, and it became difficult for the teacher responsible for the project to continue. There was communication that the school would not

⁵ Refer to Appendix.

be able to participate from November on.



Graph 1: Change in Radiation Level at 0 meters above ground (5 Locations within Japan)



Graph 2 : Change in Radiation Level at 0 meters above ground (5 Locations outside Japan)

3. Results

(1) A Variety of Forms of Exchange among Schools

In this project, exchange was realized in a variety of forms internationally, as well as domestically within Japan.

As an overarching trend, the exchange among students began with surface-level interest in how students in other countries were implementing the radiation measurement that they were also implementing. However, gradually, it seemed that students began to show interest in sharing what they learned and discovered through the observation work.

From the schools in Japan and the other countries, we frequently heard that knowing about the situation in other countries led participants to reflect on the situations in their own countries. In other words, they came to think seriously about environmental issues and energy policies in their own countries. Further, as a result, they strengthened feelings about the importance of promoting sustainability in their own regions and globally. Especially at the point several weeks into the program when the secretariat began presenting questions on the blog and requesting responses, opportunities increased for seeing the differences in energy and radiation issues and the approaches taken by each country and region. This became an opportunity for all of the people involved with the Programme to learn a great deal. One can probably give the project a high evaluation in terms of the fact that many opinions favored continuing this kind of exchange even after the project had ended. The desire of the two participants from Fukushima to communicate the situation in Fukushima and their thoughts to a wide audience was heightened, and we should make special mention of the fact that the secretariat received a communication from their teacher that they applied to a program to study abroad.

On the other hand, what was distinctive about the voices from the participants from Japan was their surprise and gratefulness that people from other countries not directly affected by the earthquake were thinking and worrying this much

about Japan. Through blog posts, drawings, photos, and text messages, students and teachers from the Programme schools outside Japan again and again expressed the pain in their hearts. The teacher responsible for the Programme in Russia said that when she gathered questions for the participating school in Fukushima, she received nearly 200 questions. This kind of relationship of sharing and responding to feelings does not often seem to be prevalent in exchange programs that prioritize gaining intellectual understanding of other countries.

This project was originally started with the goal of promoting international exchange among schools. However, the development of exchange among schools within Japan was a great added benefit of this process. One can single out the fact that, as a result of the translation project between the high school in Fukushima and the high school in Nara, the high school students in Nara became touched by the earnestness of the students from Fukushima who had conducted research on effective methods of decontamination. In turn, knowing that the high school students from another prefecture had worked so hard to translate their research papers so that people in other countries could read them, the Fukushima students came to feel similarly deep emotions toward the Nara students.

Concerning this exchange activity within Japan, the initiative for the above effort came from the secretariat, which learned that the students from Adachi High School in Fukushima had written research papers concerning the decontamination problem at their school. The secretariat thought the papers would provide a good opportunity for participants from outside Japan to know the reality in Fukushima and asked Horyuji Kokusai Senior High School to translate the papers. The participants from Fukushima numbered only two and their teacher was in the natural sciences department. However, the participants from Nara had joined the project as classes; thus, there were a large number of students. Further, the teacher responsible for the project in Nara was in the English language department. Thus, the secretariat thought that the translation

could be accomplished by dividing up the work. Although the translation of these research papers was difficult owing to the large number of specialized vocabulary words, and we ended up placing a large burden on the teacher from Horyuji Kokusai Senior High School, acting on this kind of simple idea gave dynamism to the project, leading the project in an unexpected direction. For the students from Nara, the work seemed to be an opportunity to share the pain of Fukushima.

(2) Deepening Consciousness of Energy Issues

If we focus on energy issues from among the many communications among the participating schools, the reactions of the participants from Mongolia and Russia are interesting. A reason for this is that, other than Mongolia, all of the participating countries and regions already have nuclear power plants. Only Mongolia does not have a single operational plant, but plans for the construction of a first plant are moving ahead. In contrast, Saratov in Russia is in an area where there is memory of the Chernobyl nuclear accident. A variety of opinions from the 11- and 12-year-old Russian students were posted on the blog concerning the merits and demerits of nuclear power. Posts on the same theme came from the school in Taiwan, which is currently putting great effort into environmental issues. These exchanges seem to have held deep significance, especially for the participants from Mongolia. In fact, the students from Mongolia were able to approach issues like urbanization and pollution, the merits and demerits of nuclear power, and the possibilities of alternative energy from a more multifaceted point of view. In response to the secretariat's final blog request "Describe the future you hope for," the whole class from Mongolia wrote essays. They reported that they then voted anonymously on the best submissions to be posted on the blog. These essays advocated for correcting various problems faced in Mongolia as a result of its rapid growth, including not only effects on nature and the environment, but also on people's daily lives. In addition, concerning their home city of Ulaanbaatar, students mentioned

the importance of city planning that incorporates concern for the environment and safety. Not a small number of adults felt hope and promise from the forceful statement: “The development of Ulaanbaatar is not only controlled by city planners and the government. We can also become responsible.”

Concerning energy issues, one can give a high evaluation to the cool and comprehensive dialogue that incorporated consideration of related factors rather than strict adherence to one side such as “Oppose nuclear power!” These students will live in a society growing increasingly diverse and more complex, and their participation in this program seems to have given them the chance to analyze issues from a macro level by examining the ways various elements are intertwined rather than by simplifying a problem and grasping it only in terms of the juxtaposition of two choices. On the other hand, the students from Fukushima and the university students from Tokyo provided a variety of personal micro-level experiences concerning radiation pollution. As a result, participants were exposed both to the large and small story of nuclear power, and we think they were able to gain a consciousness of the importance of looking at issues in front of them on multiple levels and from multiple perspectives.

(3) The possibilities for communication using Internet tools

This international project took place almost entirely on the Internet, yet the meaningful exchanges described above were realized. Reflecting upon this, we felt that it was above all because we explored effective tools on the Internet to promote exchange that would not have been possible before in an international network where it is difficult for participants to be present and see one another’s faces.

It’s hardly necessary to mention that the Web site and blog were effective for supporting communication. From the perspective of the secretariat, use of the Google Document service contributed greatly to reducing the burden of dealing with project documents, while facilitating the management of observation data in one place. In addition, by using Google’s multilingual

Internet tools, the need for the secretariat to explain the process for using the tools in English disappeared. The fact that schools could confirm the process in each of the various languages also reduced the burden on the secretariat. There were many limitations to the Blogger service and participants needed individual support because they were not familiar with the SNS service. Thus, in using the Internet for this project, it's not as if there were no problems. However, we can evaluate the use of these tools positively. Further, such issues will naturally start to disappear with the increased spread of Internet use.

4. Issues

(1) Problem of positioning of the project within pre-existing curricula

The preparation period for this project was extremely short at one month, and the project began mid-year. In part for these reasons, the schools in Japan and South Korea in particular exhibited confusion about how to position the ROP within the existing curriculum. At Horyuji Kokusai Senior High School, thanks to the cooperation of the school principal, the partner teacher made various efforts to develop curriculum and incorporate the ROP activities into official classroom time. However, the fact that the teacher was burdened with fitting the lesson into the curriculum did not change. For example, it seemed that the hurdle is still too high in the present school system to have the partner teacher involve other teachers or to develop the sort of interdisciplinary approach that is the aim of ESD. One possibility is to submit a project plan to the school in the prior year and go through the process of laying a foundation for the activities to be incorporated into the school curriculum. Nonetheless, it becomes difficult to have the school deal with subject that requires a high level of adaptation. Is it better to frame the effort as a “project” under the flag of a standard subject area, prioritizing harmonization with the partnership structure at the school and existing curriculum? Or is it better to

establish the flexibility of the school system and curriculum as a premise and consider the project one that responds to a changing society by incorporating relevant subjects? The approach one decides to take depends on one's goals for the exchange among schools.

If we change our way of looking at this, however, these issues reflect a problem of sticking to a rigid framework for the project and having people adapt their curriculum to the project. Thus, we might be able to change our way of thinking and overcome the problem by exploring ways that participants in the projects can exercise autonomy and adjust the project to their needs, making it applicable to what they are learning. Through this kind of process, participants can each accept the project, and we can anticipate unexpected results being achieved through this dynamism.

(2) Teachers' Lack of Time

For smooth execution of an inter-school exchange project, the support of the teachers whose students are the main focus is extremely important. However, teachers are buried in their daily work, and the reality of their situations is that they do not have any personal leeway to become actively involved in an added project. Even when the secretariat gave instructions and plans to the partner teachers, there were many instances where it took a long time for these to be delivered to the students in question because the teachers were too busy. Also, even if the partner teachers planned to cooperate with other teachers in the school, the partner teachers ended up taking on the burden of the work because the others were so busy with their regular work. Thus, in order to implement the form of activities proposed in the preceding paragraph in which the participating schools manage the project autonomously, there are many issues to overcome. Because this project was initiated as the result of the plans of some researchers, the secretariat started out taking care of the detailed work of the management of the homepage and blog, determined the direction of the activities as the project was being

implemented, and did the work facilitating the connection with each school. The participating schools took direction for their activities by following the requests of the secretariat. Nonetheless, after the project was completed, the majority of the partner teachers expressed the opinion that the project would have been difficult to implement without this support in all project phases from the secretariat. Some said that if they had to go so far as to have to manage the project, they would have declined to participate.

However, for this very reason, isn't the importance of autonomous participation even greater? This would enable participating schools to propose to one another what the possibilities are within their limited situation and to adjust the project, rather than merely participating passively in the project prepared by the secretariat. In order to make this possible, one needs to create a network among the teachers before the exchange among students begins, or at least to create a space for exchange among and with the teachers. Concerning this point, we had had a plan to engage all the partner teachers at the same time using the video chat function on the Internet, and even now we feel it is unfortunate that this completely fell through.

If one looks at the case of the ASP Network in Osaka⁶, Japan, a regular conference of the program coordinators is held in Osaka and intimate communication among the teachers takes place. The communication concerns not only the collaborative projects of ASP Net, but day-to-day instruction and work in schools, and even events that occur in schools. The teachers do not exhaust the possible topics and always seem to participate in an atmosphere of excitement – even as if they are enjoying the exchange. Also, if one looks at the approach of BSP(Baltic Sea Project)⁷, it is the teachers rather than the students who meet in person a minimum of once a year. In this case as well,

⁶ A local network with an emphasis on mutual learning among schools in Osaka. Many of the member schools implement ESD actively.

⁷ For details of BSP, see the following URL:
<http://www.b-s-p.org/about/>

teachers are enjoying the exchange, and one feels the similarity with the case of Osaka's ASP Net.

When thinking of "exchange among schools," there is sometimes a tendency to put effort towards "How can we get the students to have exchange with one another?" However, in order to be successful in achieving "exchange between students," one needs to place greater priority on securing a relaxed space for ongoing exchange among the teachers.

(3) Language

In international projects that bring together participants who use different languages, one ends up having to depend on English as an intermediary language of communication. Thus, for those participants who are not used to communication in English – in other words, including teachers, students and the secretariat in Japan – the limitations resulting from the use of English erect a large barrier to moving the exchange forward smoothly.

When considering participation in an international project, using English for exchange is probably one of the merits of participating in a majority of cases. One should not use the fact that one is not skilled in English as an excuse, but take advantage of the opportunity to understand the content communicated by others and to brush up on English to be able to communicate one's opinions. It also seems that more attention should be given to the motivation this kind of project provides to study English.

On the other hand, this way of thinking is based on the idea that one cannot participate in exchange if one doesn't know English. However, it is not the case that one cannot communicate with someone else if one's English is not perfect grammatically. Even if there are some deficiencies, it is possible to have exchange using the vocabulary words one knows and by using one's knowledge of grammar creatively to communicate one's thoughts in some way. Further, by going through that challenge, one gains practice in listening to "world Englishes"

spoken by people from other countries where English is also not a mother tongue. Moreover, exchange does not only occur through words, but through drawings and photos, music, and other artistic means. We saw this kind of activity among a portion of the participants and felt that it would have been good for there to have been just a little more of a sense that communication itself needs to be a creative activity in order to achieve the original goal of exchange.

(4) Limitations of the Internet

As mentioned in the previous point (3), the management of this project benefited in a significant amount from the Internet. However, on the other hand, we confirmed that there were several limitations.

First, depending on a school's level of Internet security, there were cases here and there where services like those provided by Google could not be used on computers within the school. This trend was more pronounced for computers used by students. Further, the exchanges among students took place mainly on the blog, and open access to computers within schools was not ordinarily provided. There was no structure in which everyone was given computer access rights and students were able to freely use the computers. This tendency was particularly strong in Japan. As a result, in some of the participating schools, students had to borrow their teacher's computers and use them in the afterschool hours or use a computer after returning home in order to update the blog. The outcome was that a situation arose in which only a portion of the students could communicate on the Internet.

In addition, there was a tendency for blog communication to become unidirectional. Thus, we considered using SNS in order to secure a space for bidirectional communication. However, there were many cases in which use of SNS within schools was more strictly limited for security reasons. Further, when there was a pre-existing SNS, often there was an age limit for obtaining an account. For example, in the case of Google+

provided by Google, if you are not above the age of 18, you are not able to obtain an account. Thus, we had had to abandon the idea of using it among the students. We felt the gap between the pace of the continually evolving innovations of Internet technology and the approach to using the Internet within schools, including for literacy education.

One can cite China as a specific case of the limitations of the Internet for this kind of exchange. In China, the Google services outside of Gmail cannot be used. As a result, we had to have the school in China submit their measurements and blog posts by email, and the secretariat then needed to do the work of posting these on the Internet as well as making screen grabs of the Web site and blog once a week and sending them to the partner teacher in China as email attachments. We also thought of using one of the Internet services in China, but because these are managed in Chinese, we could not use them in the future. These kinds of regulations in individual countries are obstacles for Internet-based international exchange.

This was an experimental, short-term project aimed at exploring the possibilities for building a new school network in East Asia. On the one hand, issues arose that were particular to the East Asia situation. However, we can positively evaluate the fact that participants turned their eyes towards what was going on around the world and reconsidered their own environments. The highlight above all was that participants shared feelings concerning the pain of Fukushima, and this empowered the participants from Fukushima. That we would also receive power from these voices from Fukushima was more than we had hoped. I would like to thank the unsparing cooperation of the participating schools for supporting this incredible opportunity for learning.

APPENDIX

East Asia School Network Radioactivity Observation Programme (ROP)

1. Objectives of this project

The conception of this project was triggered by crisis at the Fukushima nuclear power plant caused by the Great East Japan Earthquake. However, this is not intended to measure the radiation damage limiting to those caused by a specific country.

This project calls for the students to observe nuclear contamination from frequent nuclear testing and from nuclear power plants by themselves within their living areas. Sharing these observations will provide an opportunity for the students to attempt cross-border cooperation and exchange of views for “realization of a sustainable Asia”.

The ultimate goal for this is to offer insight which shall be informative in forming a joint cross-border project in the future in Eastern Asia and for the students to realize that they shall be the ones who will form the sustainable region in the near future. Therefore the positioning of the program is a trial in building a program utilizing the full-scale school network.

2. Participating countries

Schools that take part in ASPnet (UNESCO Associated Schools Programme Network) in Korea, Taiwan, Japan, Russia and Mongolia, whose school principals agree with the significance mentioned above. Non-ASPnet schools are also entitled to join the network if the principals understand the significance and have teachers and students who can communicate by e-mail in English.

3. Participation

- (1) Measurement of radiation density in the air using radiation measuring instruments by designating one location as an average location for activity in school life.
- (2) Participating schools will make observations at the 0 meter and 1 meter points above ground on specified dates (every Mondays) during the months of September to December 2011, and the results be provided to the program organizer (in Japan).
- (3) Participating schools shall save their observations made on observation dates in Excel files and record the changes over time and each school will prepare graphs to analyze trends and examine the outcome.
- (4) Participating schools shall register the following with the organizer:

- Names of country and community
- School name and photograph of the school building/ground
- School's address and its digital location
- Brief overview of the environment surrounding the school (Such as urban area or suburban area)
- Name of the person in charge and face photo
- Information on participating students (grade, number of students, sex, group photo)

4. Rights of participating schools

- (1) Participating schools will have the right to view maps which represent data from each of the participating schools
- (2) Participating schools will have the right to exchange opinions with other participating schools through the website operated by the organizer
- (3) Participating schools will have the right to take part in events hosted by the organizer

5. Observation

(1) Measuring Tool

In order for the participating countries to measure as accurately as possible, the same measuring machine called 'Geiger counter' will be sent to the school as soon as the programme organizer acknowledges the participation of a school.

(2) Measuring method

Staff of the programme organizer will visit a participating school before mid-September 2011 and explain how to use the machine and how to measure for a teacher and students in charge.

(3) Observations points

Designate locations such as the center of the schoolyards where air flows in easily and it would be unlikely for radioactive pollutants to accumulate.

(4) Specifying observation locations

Location of global observation points shall be based on accurate measurement of longitude and latitude using GPS. However, the approximate location should be obtained using Googlemap or the like when GPS is not available.

[Reference]



(5) Data collection

International standards calls for measurement of the amount of radiation from radioactive pollutants flowing in the air, but considering those open areas where there may be a high likelihood for students to be affected, data should be collected at the following two points:

- On the ground surface at 0 meters
- 1.0 meter point from the ground surface
 - Recording should be made by waiting until the values on the measuring instruments stabilizes before taking any readings

(6) Recording data

	A	B	C	D	E	F	G	H	I
1	Country:	Japan							
2	Schol name:	University of the Sacred Heart							
3	Latitude:	35.65139							
4	Longitude:	139.71998							
5									
6	(μSv/h: micro sievert per hour)								
7	No	Day	Month	Year	0m	1m	2m(optional)	Mean*	Icon level
8	1	12	9	2011				0.054	7
9	2	19	9	2011				0.054	7
10	3	26	9	2011				0.054	7
11	4	3	10	2011				0.054	7
12	5	10	10	2011				0.054	7
13	6	17	10	2011				0.054	7
14	7	24	10	2011				0.054	7
15	8	31	10	2011				0.054	7
16	9	7	11	2011				0.054	7
17	10	14	11	2011				0.054	7
18	11	21	11	2011				0.054	7
19	12	28	11	2011				0.054	7
20	13	5	12	2011				0.054	7
21	14	12	12	2011				0.054	7
22	average				#DIV/0!	#DIV/0!	#DIV/0!		
23									
24	* Tokyo's natural radiation: http://www.geosociety.jp/hazard/content0058.html								

Each school shall identify the line of the recording date in the Excel sheet in GoogleDocs and input the values you copied from the counter in the field. When you updated the Excel file after each observation, make sure to save the file.









[The following are to be done by the organizer (for your reference)]

(7) Disclosure of data

Googlemap will be set on the organizer's homepage and be embedded with data collected from the participating schools for disclosure.

Method

Using the API-key in Googlemap, embed the data display program into the source of the html file for the organizer's homepage and upon fixing the position on the map with longitude and latitude, display by specifying the icons on the Excel file according to the data values.

Level	<0.03	0.03<	0.06<	0.114<	2.28<	5.700<	11.40<	<11.40
Icon								

*The specific classification of levels shall be determined together with representatives from the participating countries and scientists.

6. Observation and organizer's responsibilities

The organizer should set opportunities for schools who have participated in the observation to have discussions based on observation results. However, this should take place as web-conferences or direct exchanges among representatives, with consideration to the political and economic conditions in each country.

7. Others

(1) Language

English should be used for all exchanges and data communication.

(2) Preparation of data

Microsoft Office version of 2007 or older should be used in preparing data in order to eliminate any impediments arising from different levels of information technology in each country.

Contact Address:

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The Secretariat

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1 EASN/ROP: Excerpts from Students' Blog

Dialogue 1: Cross-border questions and answers concerning the accident at Fukushima-Daiichi Nuclear Power Plant

MONDAY, DECEMBER 19, 2011

Reply to Mongolian students from Fukushima

Answers from the members of Adachi HS to Mongolian members

1. How has your view of nuclear energy changed since the incident?

I think NPP has many benefits; it will be one of the ways to get electric power. However, we need to prepare the solution when an accident happens like 3.11.

核エネルギーは利点も多く、発電方法にはあっても良いと思います。ですが、もしも今回のような事故や、何らかのアクシデントが起こった場合にどうするべきなのかを明確にしておかなければならないと思います。

2. What would you advise Mongolia to do about nuclear energy?

NPP is risky but if we can control them safely and effectively, NPP is so useful. Therefore, in case an accident happens, we should prepare solution.

原子力発電はリスクは高いですが、安全かつ有効に活用することができたらとても便利だと思います。ただし、今回のような事故に遭わないように建物の強度や、事故が起こった際の対処を明確にしておくべきだと思います。

3. Have there been any substantial changes in your daily routines because of the incident?

Comparing to before 3.11 earthquake accident happened, I became very careful when I go outside as possible as I can. Also, I became careful to the vegetables where they come from.

今までどこにも気にしないで外出できていたのが、なるべく外に出る時間を少なくしたりするようになりました。あと、食べ物を買うときに産地を気にするようになり、被曝に関してとても敏感になりました。

(Translated by EIM)

MONDAY, DECEMBER 19, 2011

Reply to the Russian students from Fukushima

Answers from the members of Adachi HS to Russian members

1. Does anything change in your school system or in your everyday life after the tragedy?

In my school, the building which has high radiation rate were shot down. In addition, teachers cut P.E. class and ground land were taken away. In our daily life, we care our food where they come from. We avoid going outside when we do not have a purpose.

学校では、放射能数値の高い中庭や廊下が封鎖されました。他には、グラウンドの土壌除去が行われ、それまで外での体育の授業は行われませんでした。日常生活では、食べ物の産地に気を遣うようになり、なるべく無意味な外出は避けました。洗濯物を外に干さなくなりました。

2. Did the tragedy cause any environmental changes near Fukushima?

In our daily life, we try to stay inside our house, and children always wear masks on their way to school or home. Also, now, we are very careful of selecting food produced in Fukushima due to the danger of cesium in products. In terms of natural environment, a radioactive substance forbade us producing crops any longer and we replaced some soil of playground in elementary school.

生活環境では、外出を控えるようになり、小学生などの小さい子供はマスクをつけての登下校をしている様子が見られました。そして、福島県で作られている農作物などからセシウムが検出され、食べ物にも気をつけるようになりました。自然環境の点では、生活面と重複しますが農作物が思うように作れなくなりました。グラウンドなどの土壌の入れ替えを行いました。

3. Do you think it possible to use alternative energy source and abandon NPP? Had your attitude to NPP changed after the accident?

I think it will be hard for alternative energy to sustain our life which replaces the energy produced by nuclear power; however, Japanese are the one who should think how to establish our living without depending on nuclear power. After the explosion of nuclear power plant, we knew how dependent we were on nuclear power, feeling fear at the same time.

I think it is okay to have nuclear power plant, but we should not depend on it as possible as we can.

脱原発は可能だと思います。今まで原発に頼っていた分を他の電力でまかなうのは大変だと思いますが、このような事故を経験した日本人が先陣に立ち、いかに原発に頼らず十分な電力を供給出来るのかを考えるべきです。事故の後は、原発の恐怖を知るとともに、原発がなくなったら電力不足に陥ったため、今までどれだけ原発に依存していたのかを学びました。原発はあっていいと思いますが、できるだけ原発には頼りたくないと思いました。

4. How did you spend your summer holidays?

I try not to go outside and I really worry about shower which contains radioactivity substance. I felt sorry for children when I know them not being able to get into the pool.

なるべく外出を控えました。夕立などの突然の雨にも警戒して過ごしました。他には、特に警戒することはありませんでしたが、外のプールに入らなかった小学生などを見るとかわいそうでした。

(Translated by EIM)

Dialogue 2: Desirable Future or School/Community to be hoped

SATURDAY, DECEMBER 17, 2011

Here are the two best essays about the future we imagine for Mongolia and Ulaanbaatar, our capital city. These essays were written by our 10th graders! They cover a range of topics and address hotly debated issues in Mongolia, like the protection of the environment or migration from the countryside. Hope you enjoy them!

The Future of Mongolia- Its Role in Asia and in the World

Hello. My name is Uranbileg and I study at Hobby school. I'll be talking about the future of Mongolia and its role in Asia and in the world.... When you first hear Mongolia what's the first thing that would come into your mind....? Probably mountain ranges, deep blue sky, and maybe its nomadic life. But there's also one thing that Mongolia can be defined as. It's a country rich in natural resources and minerals. For example: gold, copper, as well as coal, fluorite, iron ore, tin, uranium, oil, lead and so on. The 2 main mines that we have are Tavan tolgoi and Oyu tolgoi. If we calculate the total amount of resources only in Oyu tolgoi by money it would be enough to provide food for the world's total population for a whole month.

Our country's economy is greatly dependent on mining. It supplies raw materials that are needed to build and maintain modern industry and economy. In Mongolia, due to the recent development of mining industries nearly 50,000 people now have a work. While there are advantages there are also disadvantages. Natural resources, since it is called natural, it cannot be made again, they're non-renewable resources. Also the workers working in mines aren't secure. They face lots of danger and risk. For example: explosions, cave-ins and lung disease. And most of all, it causes great damage to our environment. Almost 60 rivers in our country is polluted and nearly becoming extinct, only due to mining. If we don't have clean water resource what will we have left? Because of the lack of water, Mongolia's 80 percent of the land area is becoming deserted. These are some of the main problems that our country is facing.

However I don't see my country going down the drain. If we can find the solution and make it happen then our country can make a major development. Mongolia gives 21 thousand tugrugs to every citizen each month. Just the 21 thousand itself isn't enough to make one's life improve. So, if we stopped giving that amount of money and spent it altogether to improve our environment and buy techniques that would help our situation, not only will it improve our nature and environment but also the people themselves. If the surrounding is flourishing, the people living there would also improve. Mining and natural resources involves not only the country itself but also it shares its benefits with many other countries.

"Always remember that the future comes one day at a time" so said by Dean Acheson. If we can work together step by step we can accomplish our goal to improve our country MONGOLIA.

Ulaanbaatar: A city of the future

I imagine a future Ulaanbaatar as a place where people live in a healthy, safe, and pleasing environment.

In order to stop the current dissatisfaction with Ulaanbaatar, and prevent future problems, we need to focus on urban planning. The more we delay solving problems like traffic, lack of recreational sites, and inefficient pedestrian laws, the bigger and harder to solve they will be in the future.

First of all, traffic. Everyone in Ulaanbaatar feels the stress of traffic. (Yet, more and more people are buying cars every day, adding to the major burden.) The construction and quality of roads and the lack of traffic lights are an annoyance to car owners and dangerous to pedestrians. They don't have safe walkways, and are often victims to fatal car crashes because of the problems mentioned before such as few traffic lights and unsafe crossroads.

But this isn't the only problem with UB.

The situation surrounding ger districts needs to be solved. These districts are the cause of major environmental problems, like air pollution and unsanitary water. But, these gers are the property of people who usually have nowhere else to go. We can improve the planning of the city, like provide adequate plumbing throughout ger districts. Also, in order to organize the messy expansion of ger districts, we have to improve land ownership and organization.

The other 40% of UB that live in apartments have their fair share of woes as well. Many buildings are built with bad quality, and often times, don't get inspected well before and after occupation.

To solve all these problems we need to improve urban planning. We could provide new bus systems or build a subway to reduce traffic and build skyscrapers or build walkways high above the ground between buildings. There needs to be fresh and safe water resources for the ger districts to maintain their water needs as well as more attention on the legal aspects of land ownership. Eventually, ger districts need to be replaced with apartments, or better, environment-friendly heating.

The problems I have spoken about are very real, and the solutions that I have suggested are very feasible. The future Ulaanbaatar that I imagine can and hopefully will become true if we pay our attention to safe urban development in order to improve our city and make it an attractive site that provides a safe and healthy environment. Maybe in the future, tourists will come to Mongolia excited to see Ulaanbaatar, as well as the countryside. The development of Ulaanbaatar doesn't have to be in the hands of urban planners and the government; we also can make a change. Change starts with the smallest action of throwing away gum into the bin, not the street or under the desk. It starts with me, it starts with you, it starts with us.

THURSDAY, DECEMBER 15, 2011

My desired School. Gi Seung Oh.

Desired school

I wish the school changes the educational policy. I think that current Korea's high schools only teach students to send to the famous university. So most subjects in week are Math, English. But nonmajor subject such as PE(physical education) is only one in a week. In news, it is said that many Korean high school students are much lacking in the amount of physical activities than that of other countries. I really think it can be large problem for our health in future. So I want PE class time in a week increased.

In addition to, it will be nice to make music practice time. Many students like to play the instruments or sing a song. But their musical interest are restricted by the harsh school schedule. If there are music practice time, we will study enjoyfully. It's my thought ^^ For my classmates and I don't have time to sing, we song in corner of the aisle in every recess time.haha

* * * * *

WEDNESDAY, DECEMBER 14, 2011

Weekly Task from Russia

We would like to share with you students thoughts of future. Here are messages from our youngest students (11-13 year old).

School of the Future

- All students will study at homes. *Kalmykov*
- Students in future will study 3 days per week and have no homeworks. *Parfenova J.*
- The school of the future must be interesting. *Chemetsov A.*
- School of future must be beautiful, big and clean, in school international students will study. *Hurchakov.*

What will it be, the school of the future?

I think that it will be good to add a few lessons into the time-table: Drama lesson. At this lesson we will not only get a lot of information about the world famous movies and plays, but also to try acting ourselves. Acting trains memory and gives people positive emotions. So, in our world of stress, such a lesson can really help students to relax, or even find themselves.

Lesson of traditions and etiquette. Nowadays our country is rather well-known and respected by the others. so, we really need to know all of our traditions to spread the fame and might of our Motherland. It is very important to be polite and well-mannered these days. Only then you get your place in life.

Discussion lessons. At this lesson students can be taught to speak well and also different topics can be taken.

And I want to tell you about one more idea. I think it's easy to build a small greenhouse on the territory of the school, why not? Working there will make children more experienced and may be one day it will help them to survive!

So, these are my ideas. I hope, that one day they will really be useful and such a school will be built.

Nikulina Nastya, 10 form (Teacher of English: Chelobanova Larisa)

City of the Future

- Cars will move with bio-fuel. *Kalmykov*
- The city of future will be clean and beautiful. People will be polite and honest and don't rob. Buildings will not polluted environment. *Guslyakova*
- I imagine city of future with good ecology. In the city will be beautiful parks and gardens. People will relax in it. *Irgiskina*
- In the city of future a lot of plants will be planted. One language will be for all nations and everything will be fine! *Parfenove J.*
- The city of future must have been a clean and full of trees and flowers. There will be no cars and air will be clean. Instead of cars people will drive a bicycles. *Kovylin*

- I think the city in the future will be look like a forest. Every where will be trees, grass, bushes. Cars will fly. New technological ships will swim on the rivers. They shall clean water. They should use fruit juice instead of fuel. *Eremin N.*
- In the city of future must be good ecology, good people and good education. All people must be friendly. *Chemetsov A.*
- Future cities will have a good ecology because in there will using ecology products. People should love each other and nature. Earth will blossom. Nature will be friend with people and electronics. *Kruchkova E.*
- The city of future will be safe absolutely for people. There will not be any factories and plants. Everything that we need will produce on Moon using ecological factories. Transport will use only solar and wind energy. In the cities will be lots of parks and flowers. *Litvinov N.*



Questionnaire for Teachers

The Radioactivity Observation Programme (ROP) was finally completed without any difficulties, thanks to your active participation & cooperation. Now we would like to have your feedback of ROP to make use of our experiences in the near future. Please kindly take a few minutes and fill in the questionnaires below.

Any comments are welcome!

(1) How many students participated in this project? And what grades were they?

(2) When did you conduct ROP? Please choose appropriate numbers from the following options;

1. Within traditional lessons (e.g. Social Study)
2. Integrated Study (e.g. Project-based Lesson)
3. Lunch Time
4. Pre-school hours or After-school hours
5. Others (Please specify: _____)

(3) On the content of ROP, please give us weaknesses / strengths, or a challenge.

(4) On the method of ROP, please give us weaknesses / strengths, or a challenge.

(5) Have you noticed any changes on your students' values, behavior or lifestyles and so on through the participation of this project? In case of YES, please explain what kind of changes are they?

YES / NO

yes -->

[]
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(6) Have you noticed any changes on yourself through the participation of this project? In case of YES, please explain what kind of changes are they?

YES / NO

yes --> []

(7) Would you like to join a programme for international exchange based on international school network such as EASN in the future?

And if yes, do you think it is possible to run and manage it without any supports of a secretariat? Or do you have any ideas on quality control of the network or how to run the project better?

(8) Others (free description)

Deadline: January 20th, 2012

If you have any further questions, please contact the secretariat (eastasiasnet@gmail.com).
Thank you for your cooperation.

The Secretariat of East Asia School Network

Answers (Excerpt) of the Questionnaire by Teachers

(1) How many students participated in this project? And what grades were they?

- 116 high-schoolers at the 3rd grade
- 2 high school students at the 2nd grade (Member of Science Club)
- Around 75 students Participated (Grades 7 -11)
- 27 students participated. They were all 11th graders.
- 2 students are actively involved in this project. They are first graders in high school. But many UNESCO club students know this project and they try to help those two students.
- Nearly 400 students of our school took part in this project (we have 730 students at school). I would like to add students from 2 other school from Balakovo city (near NPP). Students from 6-11 grades (11-17 age; we have no grades 1-6 in our school).

(2) When did you conduct ROP? Please choose appropriate numbers from the following options;

1. Within traditional lessons (e.g. Social Study)
2. Integrated Study (e.g. Project-based Lesson)
3. Lunch Time
4. Pre-school hours or After-school hours
5. Others (Please specify: _____)

- 1&3
- 1&3&4
- 2&3
- 4 only
- 3&4
- 1&4&5 (we organized a special group of students who explored radiation background not only in the school yard but also in the school, in the streets of the city, in the park and in the suburbs of the city. This research will result in the report for the city scientific conference for students and for the meeting of the teachers of our school. Information about our participation in ROP is placed on the site of our school and on the site of the national coordinator of ASP UNESCO. A contest of drawings, posters and compositions has been announced in our school.)

(3) On the content of ROP, please give us weaknesses / strengths, or a challenge.

- I could include what we have experienced in my daily lessons.
- Students had opportunities to use Gaiger-counter.
- It was a good chance because the topic was an internationally recognized timely one.
- Measurement has become a routine work and we did not know how we should make the most of the

results.

- The theme of the project is of current importance for the steady development in the whole world. It is necessary to attract people's attention to the problems of nuclear-power stations and the use of nuclear energy for peaceful purposes. It is extremely important to discuss this issue with children who will have to solve the problems of nuclear stations in the future
- I do believe that ROP gave good content.
- This is a good start and we need to do more projects for nature and educate the young generation the need for sustainable development. We need to make our weakness as our strength and challenge as our goal.
- The idea that several designated schools from East Asia countries conduct the radiation around their area was very meaningful for accomplishing sustainable development within these countries. But, there were some differences between the levels of participation because students or teachers didn't have a chance to share their plans before starting this project. If so, we can get some good ideas from other teachers or students which could facilitate the project.

(4) On the method of ROP, please give us weaknesses / strengths, or a challenge.

- It was an active system where we could exchange comments and photos.
- As to Newsletters, I could print them out and put them on the walls of classes and teachers' room. That was effective to get an overall picture of the project and good as an advertisement.
- It was difficult for whole class to create direct communication with students in other countries; small number of students wrote messages to the Blog.
- I have a slight doubt on how many students have a feeling in which they belong to EASN because of the limited rights to access with password for school computers.
- Because of the routine works at school I found it difficult to get on the network system. It would be different if we could hold an opportunity to have a lecture on how to use the system with face-to-face communication.
- It was very interesting that student can have a chance to check the radiation with a radiation check-up device for themselves. What I was worried about is that there is any possible variables to affect the radiation result.
- We didn't find any drawbacks in the work of the site. It worked perfectly. We could place information, photos and comments ourselves, the tasks were announced gradually. We liked that there was a variety of tasks for junior and senior students of the lyceum. It's a pity that the project is over. But we hope that we will be able to continue our communication via E-mail.
- I didn't see any weaknesses.
- So far none to mention.

(5) Have you noticed any changes on your students' values, behavior or lifestyles and so on through the participation of this project? In case of YES, please explain what kind of changes are they?

- I have given homework concerning this project, and there seems to be increasing number of

students who got used to read newspaper, TV news on related topics, and discuss the issues with family members and friends. The project (...) has become an opportunity for students to what their country should do, what to do with their future, etc.

- Through the programme I did see changes of students' views on things and ways of thinking, and their growth in various points. Two of rather moderate type of students has become active in learning and got higher aims. (...)
- Of course we noticed changes that took place in thoughts and feelings of our students during the project. Many of them had never thought about these problems before. They seriously discussed the questions if we needed NPS and what could replace them. They sympathized with the Japanese students who found themselves in the center of those horrible events. Senior students compared Chernobyl, Fukushima and Balakovskaya nuclear-power stations. Many of them began to treat every day peaceful life more seriously after taking part in the project.
- The students seem more aware of the world around them. Thanks to this project, they feel more responsible to things in Mongolia, and most importantly, the whole world.
- Yes, they value nature and use energy wisely, started to plant more trees and participation in nature clubs.
- Both of two students who participated in the ROP feel very proud that they attend in PFLHS because PFLHS is the only school which took part in the ROP in Korea.

(6) Have you noticed any changes on yourself through the participation of this project? In case of YES, please explain what kind of changes are they?

- I would like to convey my gratitude to people who hold interest not only in their own country but also disasters and accidents overseas, from a standpoint as a teacher in Fukushima. I have got a feeling in which our communication barrier can become smaller through this kind of exchange, though there are diversified views and perceptions among us. Of course, Fukushima is now in difficult situation, we have become aware of each region/country has its own issues and problems. Therefore my feeling is now that it is not only Fukushima which goes through difficulties, and the situation we face at this moment is one of the things that we should get over.
- (...) Daily life at school is very busy and I found it difficult to exchange with people in other countries myself, partly because I wanted most of my students to participate in the network, and therefore devoted myself in making handout and others. It was good that teachers of my school who show interest in this kind of activities gave us their own voices, as a result of our efforts in making whole school community to know of this event by putting name tag on students with Gaiger-counter, and letting them walk around the school and measure at four points on campus, and also posting a notice through newsletters in teachers' room. This kind of efforts ended up with the dissemination of the information, telling teachers that our school is an active UNESCO's ASPnet school.
- Yes, I found there is a huge responsibility in me as a educator to guide my students about the value of nature more than exam grades and money
- Deadline tasks made me and my students more disciplined and organized. Before participating in this project I thought that my pupils were rather small and were not able to discuss such serious topics. But I was mistaken. It was a pleasure to read the messages of my colleagues and their students. I got much new information.

- After this project, I knew that there are many volunteers and activists who want to make the society better and share their idea together
- I noticed that I discuss more about world affairs that usual with students in class.

(7) Would you like to join a programme for international exchange based on international school network such as EASN in the future? And if yes, do you think it is possible to run and manage it without any supports of a secretariat? Or do you have any ideas on quality control of the network or how to run the project better?

- If we can get another opportunity like this, it would be a wonderful chance for my students, we are eager to participate. However, networking by teachers would be too much for me, thinking of my own situation at this moment.
- I appreciate the values of international exchange programme. Therefore, if possible, I would like to participate on my own initiative.
- In the learning environment of my school, it is extremely difficult for students to be involved actively through home page and blog, and to include the activity into lessons.
- It could be possible to run this kind of programme by teachers only as far as they share the contents and significance of the programme. But if there are no teachers who can take initiatives, it would be difficult, I guess.
- If we can implement a programme with academic advice as well as implications, it would be fine.
- My students and I look forward to taking part in the future projects. I think it will be great if we know the scheme of our work beforehand.
- We learned the new methods of measuring. The description of them was clear and accurate. We had to do many interesting but difficult tasks during a short period of time. Thanks to the secretariat for prolonging the deadline.
- Probably, if stage-by-stage plan of work is published on the site, the leadership of the secretariat will be necessary only at the first stage of work and then the participants will place their materials themselves in due time. But I think such project will be hardly successful without the secretariat.
- Sure I would like to participate in more EASN activities and will give my suggestion in future.
- Yes, I would like to join. I think a secretariat is necessary and this year's secretariat was extremely responsible and well-organized.
- I hope EASN cooperation system can last in the future. And I will actively take part in that cooperation. I am sure that there are many common issues EASN members should work together.
- I think the ROP can flow smoothly thanks to a secretariat. Without any control system, it should be very difficult for students and teachers all around East Asia to work together. If we have a chance to conduct some other projects together later, it can possibly work well.

(8) Others (free description)

- I myself have learnt well, and the programme gave me a crucial insight on teaching materials. I may have caused trouble for the secretariat of the programme. But I should like to express my gratitude. Participation of this kind of programme and consideration of the same problem with high

school students in other countries gave the students confidence and helped them feel that they have to do their best.

- Thanks!

- Keep up the good work. It's a good start, we will face hurdles but stay on.

- I feel very sorry that I didn't post many messages and my students didn't so because of some language problem. If I have a chance to have this kind of project I will choose some students who can speak and write English very well. And I really appreciate for your heartfelt cooperation.

Manual for Recording

EAST ASIA SCHOOL NETWORK STEPS TO RECORD (OVERVIEW):

1. - Put the counter on the ground (**0 m**).
- Power on the counter.
2. Record the first value shown in the monitor.
3. Input the three values into the Excel file in the date of record.
4. Repeat 1-3 for the values at **1 m** records.
5. Send the Excel file each day you record to eastasiasnet@gmail.com

How to record & report (details)

Step 1.

- Put the counter on the ground carefully.
- Power it on and wait for the first value is shown in the middle of display. (Fig.1)

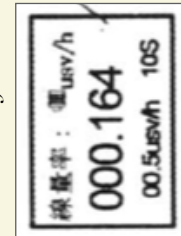
Step 2. Record the **first** value in the display.

Step 3. Input the values into the Excel file in the record date. (Fig.3)

Step 4. Repeat steps 1 to 3 to record the values of 1.0m. See the pose of recording (Fig.4).

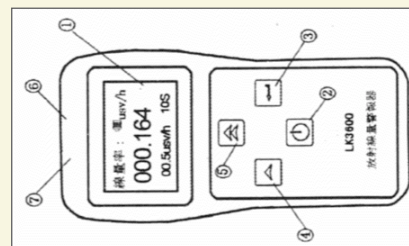
Step 5. When you complete, send the updated Excel file to the Japanese secretariat (eastasiasnet@gmail.com)

Fig. 1: Monitor of the Counter



Read the number shown largest in the middle.
The first value is most important.

Fig. 2: Handy Geiger-Muller Counter



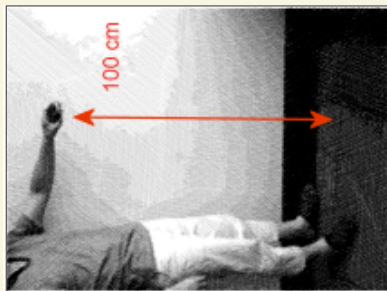
- (1) Display
- (2) Power
- (3) Mode shift
- (4) Release the lock, Clear memory, Set "Date"
- (5) Set "Month"
- (6) Indicator lamp
- (7) Alarm

Fig. 3: Excel Sheet

No	Day	Month	Year	0m	1m	2m(optional)
1	12	9	2011			
2	19	9	2011			
3	26	9	2011			
4	3	10	2011			
5	10	10	2011			
6	17	10	2011			
7	24	10	2011			

- Find the record date.
- Input each value in the same line of the date.
- The most important first value should be input at left cell.
- Average values are automatically calculated.

Fig. 4: Pose of Record (1 m: 100 cm)



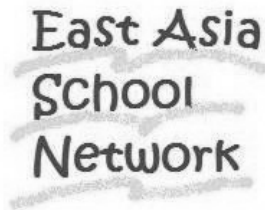
- Keep the counter away from your body.
- Keep it at 1.0 m level.

THANK YOU!

Thank you for your recording and sharing.

We are looking forward to communicating with you!





East Asia School Network News Letter

East Asia School Network Study Group
<https://sites.google.com/site/eastasiaschoolnet/home>

No. 1

Members:

Adachi High School
Beijing Huiwen Middle School
Hobby School
Horyuji Kokusai High School
Ming-Dao High School
Physical-Technical Lyceum №1,
Pusan Foreign Language High School
University of the Sacred Heart
Yanagawa Elementary School

Table of Contents:

- 1 From Director of EASN
- 2 Members
- 3 Observation Result
- 4 Voice of Schools

Contact to:

The Secretariat of EASN in
Univ. of the Sacred Heart
E-mail :
Eastasiasnet@gmail.com

1 . FROM DIRECTOR OF EASN

Dear all,

First of all, let me convey my feelings of big 'thank you' to all of our friends who have given moral and financial support to the Japanese people, sufferers from the Great Earthquake Disaster.

Based on the hardships caused by the disaster, we have launched an experimental project: East Asia School Network, Radioactivity Observation Programme (ROP).

It is my pleasure to tell you that the students and educators from six countries are interested in the project and taking action for our sustainable future. I believe that they are all 'change agents' to transform our society towards sustainability.

My hope is that this project will be a platform for all of us to learn each other and share ideas and spirit beyond borders. Our future is in our own hands!

Yoshiyuki Nagata
Univ. of the Sacred Heart, Tokyo

2. MEMBERS

- ◆ 6 Countries: China, Japan, Mongolia, Russia, South Korea, Taiwan
- ◆ 7 high schools, 1 university, 1 elementary school, 1 individual
- ◆ Program Coordinator : University of the Sacred Heart, Japan

<China>

Beijing Huiwen Middle school, Beijing

<Japan>

Adachi High School, Fukushima
Horyuji Kokusai High School, Nara
University of the Sacred Heart, Tokyo
Yanagawa Elementary School, Tokyo
Individual, Kyoto

<Mongolia>

Hobby School, Ulaanbaatar

<South Korea>

Pusan Foreign Language High School, Busan

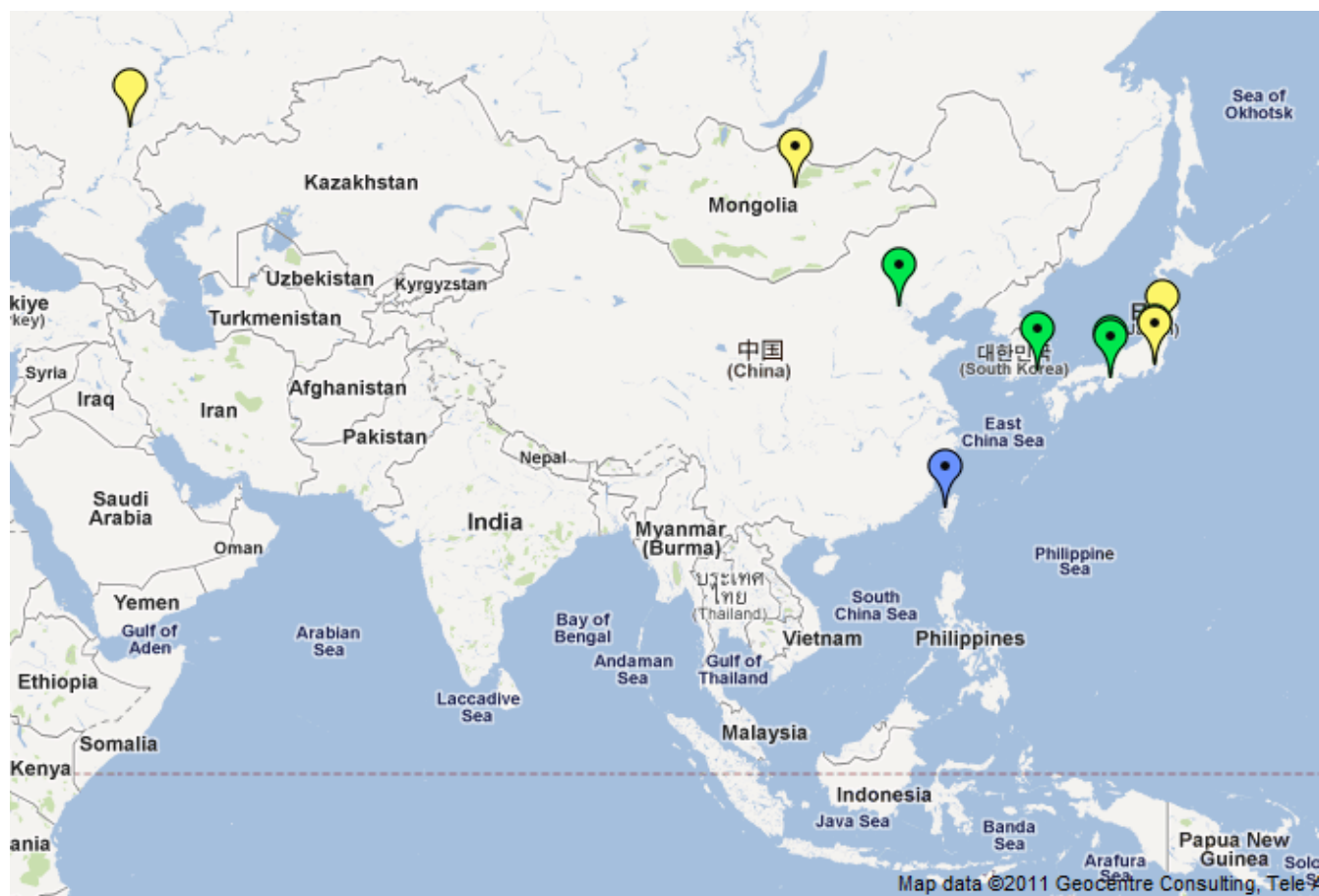
<Russia>

Physical-Technical Lyceum №1, Saratov

<Taiwan>

Ming-Dao High School, Taichung

3. OBSERVATION RESULT (FROM 9/12 TO 9/26)

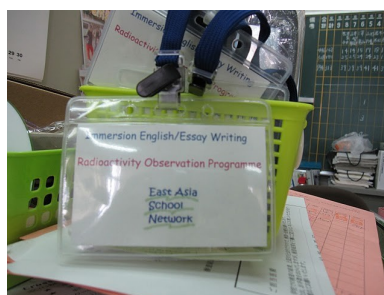


Level	n.a.	0.03<	0.06<	0.114<	2.28<	5.700<	11.40<	<11.40
Icon								

4. VOICE OF SCHOOLS

**** Comments & Pictures from Horyuji Kokusai High School on Sep 10th ****

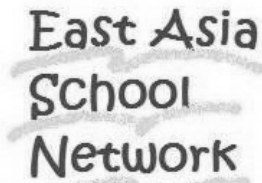
We have been measuring radiation density every day! Students who are on duty do it each day. We have made name tags so that everybody can recognize who is on duty and what we are doing!



Further information of EASN → <https://sites.google.com/site/eastasiaschoolnet/home>

***** Please send us any information on sustainability at/around your school or community! *****

October, 24, 2011



East Asia School Network News Letter

East Asia School Network Study Group
<https://sites.google.com/site/eastasiaschoolnet/home>

No. 2

Members:

Adachi High School
Beijing Huiwen Middle School
Hobby School
Horyuji Kokusai High School
Ming-Dao High School
Physical-Technical Lyceum №1,
Pusan Foreign Language High School
University of the Sacred Heart
Yanagawa Elementary School

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- 1 From Fukushima
- 2 Voice of Schools
- 3 Observation Result
- 4 Editor's Note

Contact to:

The Secretariat of EASN in Univ. of the Sacred Heart
E-mail :
Eastasiasnet@gmail.com

1 . FROM FUKUSHIMA

First of all let me introduce myself. My name is Toshiharu Tsushima (Mr), science teacher of Adachi High School, a prefectural high school in Fukushima.

As you know, Fukushima has been in such a sad situation; people there are physically and mentally damaged. Now more than half a year has passed since the nuclear accident. We have been making little by little progress all over the place. Especially one of the most noticeable things here is our students who are trying to grasp the situation by themselves and making change for the better. I feel a ray of hope in the positive attitude of the students.

Just as Hiroshima and Nagasaki have become a symbol of the world peace, we, in Fukushima, will go forth with a reconstructed future after the disaster in our minds.

Best wishes,

Toshiharu Tsushima

福島県立安達高等学校の對馬と申します。福島県は物理的にも精神的にも悲しい状況が続いていますが、半年が過ぎ、あちこちで少しずつ前に歩き始めています。特に生徒たちは自分たちでこの状況を把握し、改善していこうと努力しています。生徒の前向きな姿勢に希望の光を感じます。

広島・長崎が世界に対する平和への願いのシンボルになっているように、復興後の未来を見据えながら歩こうとしています。どうぞよろしくお願いいたします。

對馬俊晴

2. VOICE OF SCHOOLS

** From Beijing Huiwen Middle School on Oct 10th **

Each of the 6 students sent us a wonderful self-introduction...



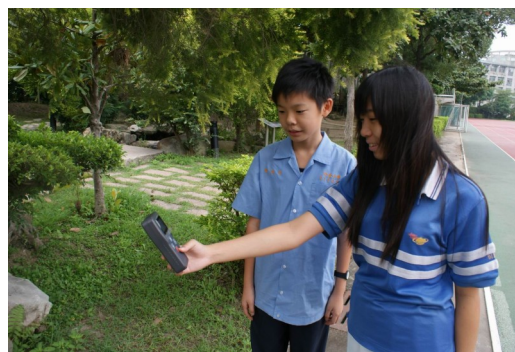
**** From Ming-Dao High School on Oct 19th ****

Hello,

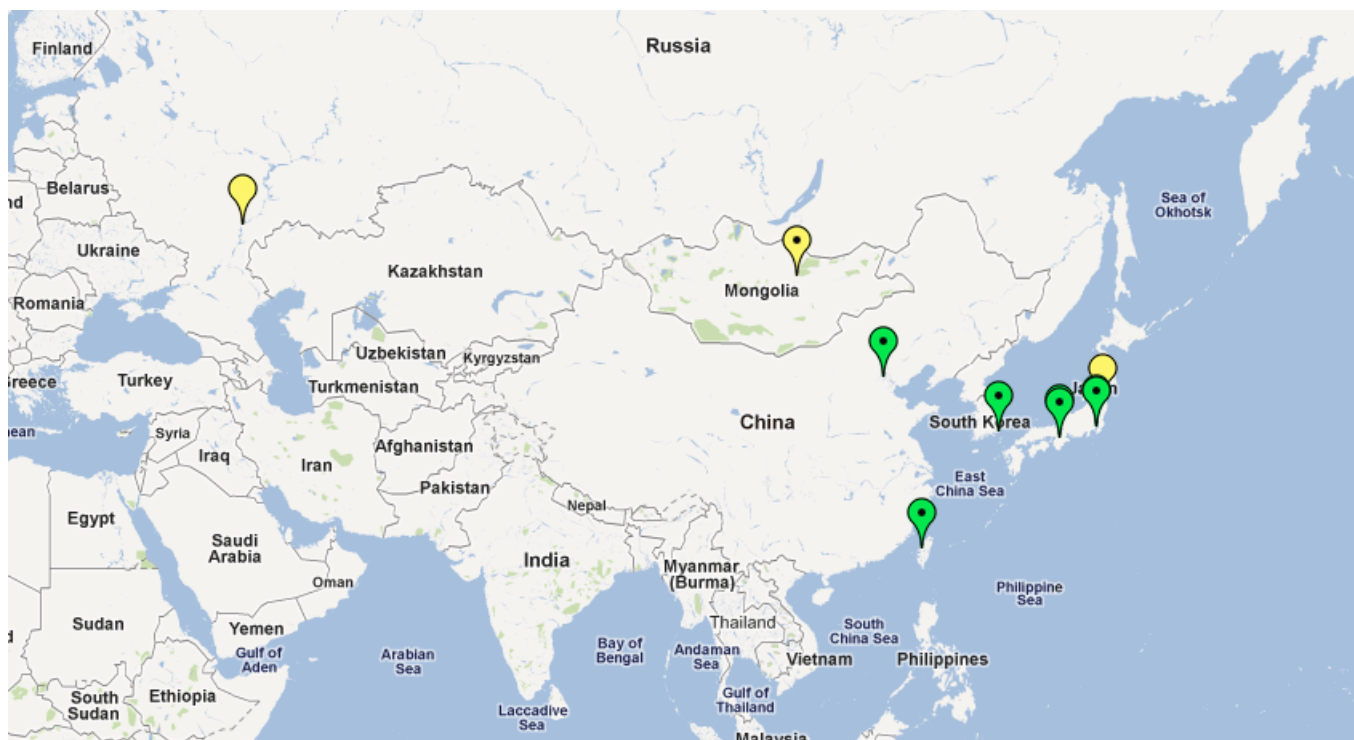
I'm Anne, currently in 11th grade, and he is Ian from 7th grade. We started this project of collecting data from many places in Taiwan because we think that radioactive particles hasn't only pollute Japan ,it also spreads to other regions in the world, causing environmental damage. By doing this project ,we hope that we, students can better understand the level of radioactivity and its pros and cons. Lets build a world for tomorrow, a greener world.

Anne and Ian

Mingdao High School, Taiwan



3. OBSERVATION RESULT (AVERAGE FROM 9/12 TO 10/ 17)



Level	n.a.	0.03<	0.06<	0.114<	2.28<	5.700<	11.40<	<11.40
Icon								

4. EDITOR'S NOTE

The secretariat of EASN is now working on the joint project between Adachi High School in Fukushima and Horyuji Kokusai High School in Nara, to inform practices and voices in Fukushima to other EASN members. It will be shared with you by the end of November.

Further information of EASN → <https://sites.google.com/site/eastasiaschoolnet/home>

**** Please send us any information on sustainability at/around your school or community! ****



East Asia School Network News Letter

East Asia School Network Study Group
<https://sites.google.com/site/eastasiaschoolnet/home>

No. 3

Members:

Adachi High School
Beijing Huiwen Middle School
Hobby School
Horyuji Kokusai High School
Ming-Dao High School
Physical-Technical Lyceum №1,
Pusan Foreign Language High School
University of the Sacred Heart
Yanagawa Elementary School

1 . COMMENTS FOR A WEEKLY TASK

The secretariat of EASN provides members with a small assignment every two weeks. Members send great answers back to us! Let me introduce some of them:

Q. What is the most popular energy in your country?

The most popular energy resource in Mongolia is coal. Mongolia currently has over 12.2 billions of proven coal reserves, and is currently estimated to have over 150 billions of coal. Coal-burning causes many problems here, such as air pollution. Although every Mongolia agrees with the danger of coal, many people still use it as coal is the cheapest option. There are many active campaigns against the usage of coal or the promotion of cleaner coal-burning.[...]

Miga (Hobby school , Mongolia)

The most popular energy resource of Korea is oil. Korea is the world's 5th largest oil importer and 10th oil consumer of nation. Since our country doesn't produce a drop of oil, we import oil from other countries (import 592 million barrel=about \$ 40 billion). If we consume amount of current energy use, Korea will run out of oil in 2050. So Korea absolutely need developing alternative energy.[...]

Gi Seung (PFLHS, Korea)

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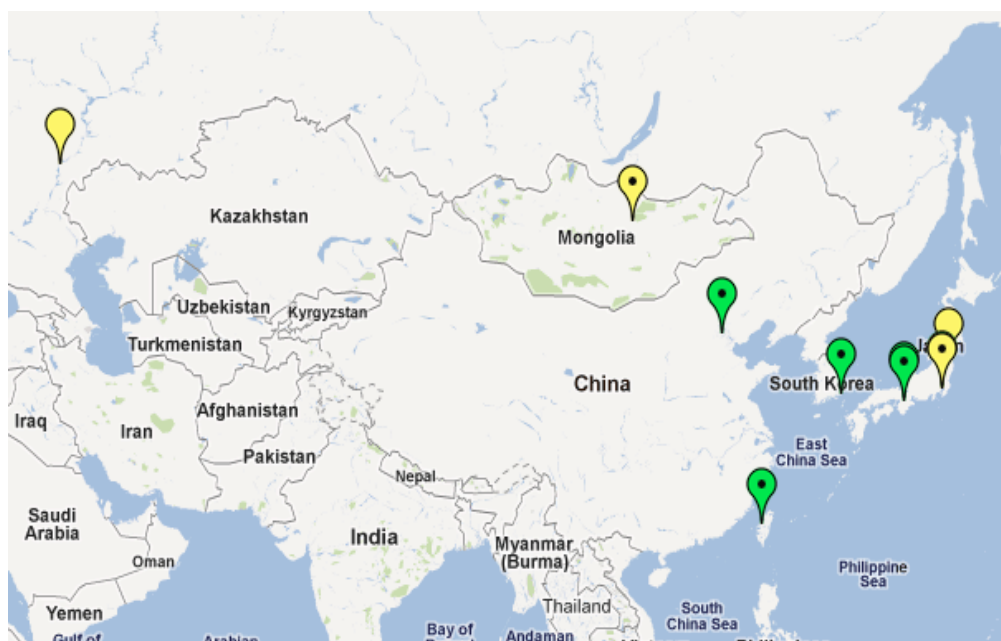
- 1 Comments for a weekly task
- 2 Observation Result
- 3 Voice of Schools
- 4 Editor's Note

Contact to:

The Secretariat of EASN in Univ. of the Sacred Heart

E-mail :
Eastasiasnet@gmail.com

2. OBSERVATION RESULT (AVERAGE FROM 9/12 TO 11/7)



Level	n.a.	0.03<	0.06<	0.114<	2.28<	5.700<	11.40<	<11.40
Icon								

3. VOICE OF SCHOOLS

** From Hobby School on Oct 22nd **



Hobby is the first bilingual school, and was founded 17 years ago, in 1994. Beginning with 20 students and 2 teachers, we have grown into a community of over 600 students and 50 teachers. Our students are bright and motivated youth and potential future leaders of Mongolia. [...] Every day, a different student or different groups of students take measurements with our physics teacher, Munkhzul, and then discusses the possibilities of why the measurements vary.

** From Physical-Technical Lyceum №1 on Nov 7th **

Hi everybody! We had Fall holidays at school for one week. Look how happy we are :) Did any of you had Fall holidays? We are curious about school holidays in different countries. For instance, we have 4 holidays during school year: Fall (1 week, at the end of October), Winter (2 weeks, 30 December – 12 January), Spring (1 week, at the end of March) and Summer (June, July, August!!!). We also have 4 free days according to National holiday.



** From Mindao High School on Nov 8th **



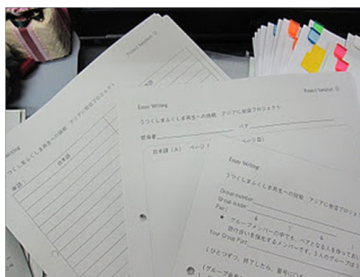
All of them are really concerned about Fukushima and hope world can learn a lesson from it.

*Rebecca & Kelly
9th grade students*



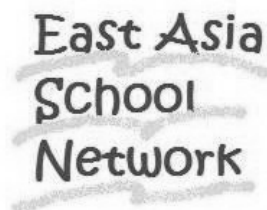
4. EDITOR'S NOTE

The joint project between Adachi HS (Fukushima) & Horyuji Kokusai HS (Nara) is in progress. Students in Nara are translating the report written by students in Fukushima into English. In addition to this, students in USH visited Adachi HS on Nov 7. Their visit report will be released soon.



Further information of EASN → <https://sites.google.com/site/eastasiaschoolnet/home>

**** Please send us any information on sustainability at/around your school or community! ****



East Asia School Network

News Letter

East Asia School Network Study Group
<https://sites.google.com/site/eastasiaschoolnet/home>

No. 4

Members:

Adachi High School
Beijing Huiwen Middle School
Hobby School
Horyuji Kokusai High School
Ming-Dao High School
Physical-Technical Lyceum №1,
Pusan Foreign Language High School
University of the Sacred Heart
Yanagawa Elementary School

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- 1 From Russia**
- 2 Voice of Schools**
- 3 Recent Activities by Members**
- 4 Editor's Note**

Contact to:

The Secretariat of EASN in Univ. of the Sacred Heart
E-mail :
Eastasiasnet@gmail.com

1 . FROM RUSSIA

The benefits of international communication

When we had got the invitation to this project from Makoto Iijima we decided immediately to join the project. At first we thought that our task would be to measure radioactivity once a week. My students and I found it very interesting. But then we began to receive the weekly tasks and my students liked them a lot.

Different themes of tasks allowed attracting many students to work in the project (from 11 to 17 years). The web site became bigger and more interesting day by day. My students and I read the information which was on the Agora blog* with great pleasure and interest. (*note : "Agora blog" is the name of our blog site for students' communication.)

This project helped my students to think about different serious topic, such as safety of nuclear power plants, switching to other energy sources, the effects of the Chernobyl accident, and Fukushima I, the security environment, etc. All of this was unexpected and very important for children. All teachers in our lyceum believe that our students will become patriots and will do everything for sustainable development in Russia and all over the world. Words of the Japanese student, "Now we love Fukushima even more" evoke tears.

There were near 200 questions from my students. They are curious about Japanese students lifestyle (and other ROP members too), interests, relationship to nature, feelings, thoughts about the future.

I hope that we will continue our correspondence after ROP-project finish via email. It's great that every teacher shared his/her email. So it may be possible. A pleasant surprise was the invitation to the environmental conference in Taiwan. Thank you Ronnie Antony! We may be able to come and attend it.

I would like to say many thanks to all organizers of the ROP project. You did your work wonderful. Thanks to you we could share the information with each other easily and learnt lots interesting things.

Our lyceum is looking forward to take part in other international projects. We are open to dialogue on any subject in the sustainable development of our country and around the world!

P.S. I'm sorry for such a long message but emotions overflow me.

Regina Sosnovskaya,
Biology teacher from Physico-Technical lyceum №1
(Russia, Saratov)

2. VOICE OF SCHOOLS

**** From the interview in Adachi High School on Nov 7th ****

EIM: Has your way of thinking changed since 3.11?



***Student 1:** I came to talk with my family more, and I am proud that I was born in Fukushima.*

***Student 2:** My dream has changed since 3.11. My grandmother always worries about dose of radiation on her rice field. So, I want to research on biotechnology and produce safer and more reliable food.*

***Student 3:** I want to be a designer and promote Fukushima, since I believe that our talent would not be damaged by harmful rumors or misinformation.*

***Student 4:** After 3.11, We love furthermore Fukushima!!*

**** From Q & A between the students Hobby school and members in Japan ****

***Miga** (in Hobby School) : Have there been any substantial changes in your daily routines because of the incident?*

***Risa** (in USH) : After 3.11, we lack the gasoline. To save them, my mother uses her bike. Now, we have enough the gasoline, but she continues to use her bike. She says "Using bike is nice for my health, we can save money and I feel I held the Earth." She enjoys her sustainable life!!*

3. RECENT ACTIVITIES BY MEMBERS

- ▶ The members of "Earth In Mind" in USH visited Fukushima on Nov. 7, and conducted an interview with the students in Adachi HS. The visit report is on our website. EIM members also visited Nara on Nov.28 and joined the class and did an interview with the students in Horyuji Kokusai HS. The report will be released by the end of this week.
- ▶ Students both in PTF & Ming-Dao HS presented their great reports on nuclear power in each country. See our website (by PTF) and blog site (by Ming-Dao).
- ▶ The joint project between Adachi HS & Horyuji Kokusai HS is nearly in the final stage. According the teacher of Adachi HS, the original research paper written by students in Adachi, which is been translating into English by members in Horyuji, won No. 1 prize in the prefecture, and got one of the best awards at national level. The translated version will be released through our website soon.

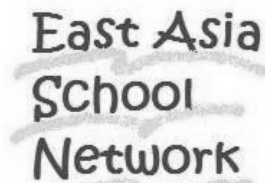
4. EDITOR'S NOTE

Our "Radioactivity Observation Programme" started on September 12th. With mainly utilizing the internet, we have exchanged a lot of pictures, voices, and information on each country up to the present date.

ROP will finally end on December 12th. I would like to say thank you to all of the EASN members for their wonderful efforts for this programme. What have you experienced through joining ROP? Hope to be sent your opinions!

Further information of EASN —> <https://sites.google.com/site/eastasiaschoolnet/home>

**** Please send us any information on sustainability at/around your school or community! ****



East Asia School Network News Letter

East Asia School Network Study Group
<https://sites.google.com/site/eastasiaschoolnet/home>

No. 5 (Final)

Members:

Adachi High School
Beijing Huiwen Middle School
Hobby School
Horyuji Kokusai High School
Ming-Dao High School
Physical-Technical Lyceum №1,
Pusan Foreign Language High School
University of the Sacred Heart
Yanagawa Elementary School

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- 1 From Director of EASN
- 2 Voice of Schools

Contact to:

The Secretariat of EASN in
Univ. of the Sacred Heart
E-mail :
Eastasiasnet@gmail.com

1 . FROM DIRECTOR OF EASN

Dear friends,

On 12 December, thanks to all of you, we have ended an official observation across countries. I would like to extend my sincere gratitude to all of your students and teachers.

Although this experimental project comes to an end, it is up to us whether we make the most of what we have experienced and learnt as well as the collected data. All the communications with photos, and newsletters and scientific data are still available. Please try to think what you/we can do with these for a sustainable Asia.

On the last paragraph, written by the students of Adachi High School in Fukushima, which was translated by wonderful students of Horyuji International School, actually struck my mind. They said:

"The worries and anxiety will never end. Still we will never forget beautiful Fukushima filled with people's warmth. (...) I am convinced that our generation will play a key role in the revival."

Yes, I totally agree to what they stressed there, believing that our future is in the hands of young people.

What we have challenged for four months is something like planting seeds for our future. Please keep on watering so that it will grow to be a big sustainable tree!

Wishing all of you Merry Christmas and a Happy New Year!

Yoshiyuki Nagata,
Univ. of the Sacred Heart, Tokyo
Director of the EASN Project

2. VOICE OF SCHOOLS

**** From the interview in Horyuji Kokusai High School on Nov 28th ****

EIM: What did you learn from this EASN project?

Student: (...) I wanted to ask people all over the world for their own opinions using Facebook, and many people gave me replies. One German gave me an e-mail message with his research about radiation containing his opinions. I was really surprised at his thought on nuclear power plant even his country has not had any nuclear power plant incidents. On the other hand, English gave me a message saying "I do not understand why nuclear power plant is bad." The reason of his opinion, the UK has few nuclear power plants. The gap between these opinions made me surprised. I realized that I do not know much about Japan including such issues as energy, politics and history. Looking at and thinking about issues abroad are important but knowing of Japan, my own country is important, too.



2. VOICE OF SCHOOLS

**** From Q & A between the students of PTF in Russia and of Adachi HS in Fukushima****

PTF : Do you think it possible to use alternative energy source and abandon NPP? Had your attitude to NPP changed after the accident?

Adachi HS : I think it will be hard for alternative energy to sustain our life which replaces the energy produced by nuclear power; however, Japanese are the one who should think how to establish our living without depending on nuclear power. After the explosion of nuclear power plant, we knew how dependent we were on nuclear power, feeling fear at the same time.

I think it is okay to have nuclear power plant, but we should not depend on it as possible as we can.

**** The Responses to our final task, "Describe your preferable future".****

From PFLHS in Korea: Desired School



I wish the school changes the educational policy. I think that current Korea's high schools only teach students to send to the famous university. So most subjects in week are Math, English. But nonmajor subject such as PE(physical education) is only one in a week. In news, it is said that many Korean high school students are much lacking in the amount of physical activities than that of other countries. I really think it can be large problem for our health in future. So I want PE class time in a week increased.

In addition to, it will be nice to make music practice time. Many students like to play the instruments or sing a song. But their musical interest are restricted by the harsh school schedule. If there are music practice time, we will study enjoyfully.

From Hobby School in Mongolia : Ulaanbaatar: A city of the future

(...). To solve all these problems we need to improve urban planning. (...) The future Ulaanbaatar that I imagine can and hopefully will become true if we pay our attention to safe urban development in order to improve our city and make it an attractive site that provides a safe and healthy environment. Maybe in the future, tourists will come to Mongolia excited to see Ulaanbaatar, as well as the countryside. The development of Ulaanbaatar doesn't have to be in the hands of urban planners and the government; we also can make a change. Change starts with the smallest action of throwing away gum into the bin, not the street or under the desk. It starts with me, it starts with you, it starts with us.

From PTF in Russia: City of the Future

- I think the city in the future will be look like a forest. Every where will be trees, grass, bushes. Cars will fly. New technological ships will swim on the rivers. They shall clean water. They should use fruit juice instead of fuel.
- The city of future will be clean and beautiful. People will be polite and honest and don't robe. Buildings will not polluted environment.



☆☆☆ THANK YOU VERY MUCH FOR YOUR ASSISTANCE & COOPERATION !! ☆☆☆

Further information of EASN —> <https://sites.google.com/site/eastasiaschoolnet/home>

**** Please send us any information on sustainability at/around your school or community! ****