

NipCA Project Public Lecture Series: The Future of Central Eurasia and Japan

Vol. 11 “Protecting Mongolian Children from Accidental Burn Injuries: A Project to Improve Children's Living Environment”

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Supported by  日本財団 THE NIPPON
FOUNDATION

September 2020

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Lecture Series “The Future of Central Eurasia and Japan” On the Occasion of the Publication of the Record of the Lecture

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In January 2019, the University of Tsukuba’s “Nippon Foundation Central Asia-Japan Human Resource Development Project (NipCA)” started with a new mission, taking over the achievements and know-how of the “Multilingual Human Resource Development Program for Russian-Speaking Countries to be Active in Industry” (2014-2019), a project selected by the University of Tsukuba as part of the Ministry of Education, Culture, Sports, Science and Technology (MEXT)’s “Re-Inventing Japan Project: Russia”. The NipCA project is committed to the development of human resources that can play an active role in the development of the society and hosts a variety of events, including dispatch and acceptance projects. One of these events is the public lecture series “The Future of Central Eurasia and Japan”, which aims to promote a deeper understanding of the SDGs (Sustainable Development Goals) and other initiatives that contribute to achieving the SDGs. In the first year of the series, 10 lectures were held and then the sudden pandemic of the new coronavirus struck in the spring of 2020. Each lecture was attended by 60 to 80 people. We received many comments from the audience that the lectures were excellent and that they wanted to read them in a booklet, so we decided to publish the booklet as a record of the lectures as part of our social contribution.

This booklet contains the 11th “The Future of Central Eurasia and Japan” public lecture, “The Project for Protecting Mongolian Children from Burn Accidents by Improving Their Living Conditions,” in its entirety, the first of this year’s public lecture series, and is an English translation of the Japanese version of the booklet. We would like to express our deepest gratitude to Dr. Masao Ichikawa, Professor of Faculty of Medicine at University of Tsukuba, a project collaborating faculty member in this project, for serving as lecturer. In his lecture, Dr. Ichikawa mentions that 29 years ago in April 1991, when he was a 19-year-old student, he participated in a work camp organized by the Japan Shipbuilding Industry Foundation, the predecessor of the Nippon Foundation, and visited a farming village called Wiang Pa Pao, located between Chiang Mai and Chiang Rai in northern Thailand. Coincidentally, at the time, Mr. Yuji Mori, the current Executive Director of the Nippon Foundation, was involved in the planning and management of this work camp as a program officer of the Sasakawa Peace Foundation, and took 25 Japanese youths, including young Mr. Ichikawa, to Wiang Pa Pao village. This experience sparked Dr. Ichikawa’s interest in international cooperation and led to the realization of Dr. Ichikawa’s project to save children in Mongolia. I think this is a wonderful episode that makes us realize that the future is shaped by the connection between people. Coincidentally, Executive Director Mr. Mori lived in Mongolia for eight years from 2004 as a representative of a local NGO, and had the experience of implementing a project to spread traditional Mongolian medicine with a grant from the Nippon Foundation, which reminds us of the mystery of human connections and the depth of human resource development. As the person in charge of the project, I would be more than happy if this booklet eventually leads to another international cooperation relationship and helps to save the children of Mongolia.

Last but not least, I would like to express my heartfelt gratitude to Mr. Yuji Mori, Executive Director, Mr. Takashi Arikawa, Senior Program Director of International Projects Division, Mr. James Huffman, Manager of International Projects Division, and Ms. Kyoko Vrboski, President of the Japan Central Asia Friendship Association (JACAFA), for their continuous and warm support of the NipCA project at the University of Tsukuba.

Yamamoto Thank you for joining us today for the University of Tsukuba’s 11th Public Lecture Series on “Central Eurasia and Japan’s Future”. We are pleased to announce that the University of Tsukuba’s 11th Public Lecture Series on “Central Eurasia and Japan’s Future” will be held now. Thank you very much for taking time out of your busy schedule to participate in this lecture today.

My name is Yukiko Yamamoto, and I am a faculty member of the Faculty of Humanities and Social Sciences and the “Nippon Foundation Central Asia-Japan Human Resource Development Project” at the University of Tsukuba, and I serve as the moderator today. Thank you for your cooperation.

We would like to ask all participants to please turn off their microphones and cameras while listening to the lecture. After the lecture, there will be a question-and-answer session, so please wait until the end of the lecture if you have any questions or comments. Please note that this lecture will be recorded and distributed on demand at a later date.

First of all, Professor Toshinobu Usuyama, who is in charge of this project, would like to make a speech and briefly explain the purpose of this lecture. Now, please, Dr. Usuyama.

Usuyama Hello, everyone. Thank you very much for taking time out of your busy schedule to participate in this lecture today. Now, let me briefly explain the purpose of this lecture.

The University of Tsukuba has received a grant from the Nippon Foundation to develop a large-scale global human resources project called the “Nippon Foundation Central Asia-Japan Human Resource Development Project (NipCA)”. Our objective is to nurture human resources that can move freely between Central Asia and Japan and play an active role in the development of Japan, Central Asia, and the world.

As for the lectures, we have selected mainly practical themes that will be useful for future career paths. We hold a series of public lectures called “Central Eurasia and Japan’s Future” as an opportunity for international students, especially from Central Asia, and Japanese students at the University of Tsukuba to gain a deeper understanding of the situation in Japan, the various issues facing Central Eurasian society, and the efforts to contribute to the achievement of the Sustainable Development Goals (SDGs) proposed by the United Nations. Thus, we hold a series of public lectures titled “Central Eurasia and Japan’s Future”. Today, we are pleased to have Dr. Masao Ichikawa, who is active in the field of public health, as our guest speaker.

I would now like to turn it back to the moderator again. Thank you for your cooperation.

Yamamoto Thank you very much. I would like to introduce Dr. Ichikawa, who will be giving the 11th Public Lecture today, entitled “Central Eurasia and Japan’s Future”. After graduating from university, Dr. Ichikawa completed his degree at the Graduate School of Mahidol University in Thailand and the Graduate School of the University of Wales in the UK, and then had experience at the National Center for Global Health and Medicine and the Graduate School of the University of Tokyo. He is currently a professor in the Faculty of Medicine at the University of Tsukuba. He specializes in epidemiology, preventive medicine, public health, children’s studies, and medical sociology, and is engaged in research activities to address various social issues from these perspectives both domestically and globally.

Today, Dr. Ichikawa will introduce the case of Mongolia, one of the largest countries in Central Asia, through the activities of the Living Environment Improvement Project to protect Mongolian children from burn injuries, which he is currently working on with the cooperation of a British university and an NGO. Now, Dr. Ichikawa, please.

Ichikawa Thank you very much for your introduction.

My name is Ichikawa and I work at the Faculty of Medical Sciences, University of Tsukuba. I am affiliated with the Faculty of Medical Sciences, but I am not a physician and not a medical professional either. If we divide academics into humanities and sciences, I originally came from a humanities background and was interested in international cooperation and development issues in developing countries.

Thirty years ago, when I entered university, what I did was to study a bit. I was interested in international cooperation, so from the beginning of my studies, I participated in NGO activities as a volunteer. I became deeply involved with an NGO that was working in the Philippines to introduce a deep-well drilling technique called “Kazusa-digging” to farming villages and fishing villages in the Philippines. In the Philippine countryside, they use unsanitary shallow wells dug about two to three meters deep, and the water dries up during the dry season. My job was to provide safe water supplies in these areas where water supplies were inadequate.

Fortunately, I was able to get involved in such activities right after I entered university. However, I couldn’t get involved seriously if I had to do it on a one-handed basis. So I took a

one-year leave of absence after my second year of university ended, when I was just 20 years old, to live and work in rural villages and fishing villages in the Philippines as a full-time volunteer. Rather than doing international cooperation, I feel that I cooperated with and was nurtured by international cooperation.

If you dig a deep well, you will find that some of the wells spout their own water, and the water overflows, and people come there to wash their clothes, to drink water, and to take a shower. It seems to be helpful at first sight. However, it is not clear whether this is really improving health problems or quality of life. Thus, I became interested in evaluating such projects. So I started to study public health. Currently, I research how different policies affect health.

Today, I would like to talk about our efforts in Mongolia. When I say that, I get the question, “Why Mongolia?” It was because a Mongolian student happened to come to my laboratory. In addition to Mongolia, I have targeted Thailand, Laos, Sri Lanka, Nepal, Vietnam, and other countries, usually because of my connection with foreign students. The same is true for our project in Mongolia.

I’ve always been interested in accident prevention and thus I continued my research. A Mongolian student came to my laboratory, and since I was mainly researching accident prevention, we decided to conduct research on accidents in Mongolia. In the course of the discussion, we learned that burns among children are common in Mongolia, and we decided to conduct research on how to prevent burns.

In fact, burns are a major health problem worldwide. Such accidents are not often recognized as a health problem in Japan, but since people die and are disabled in such accidents, it is indeed a health problem. And burns are a major health problem worldwide. Tuberculosis, HIV and malaria are known as the world’s three major infectious diseases, but more people are actually affected by burns than the number of people infected with tuberculosis and HIV combined. Eleven million people suffer serious burns each year, most of them occur in developing countries.

Globally, the mortality rate of burns among Mongolian children is outstanding. For children under the age of five, eight people per 100,000 die from burns. In developed countries, there is no more than one per 100,000 people; it’s about 0.3. The world average is about two people, so you can see how big a problem burns are in Mongolia.

What can we do about this problem? The first thing to do is to find out what you already know, because there should be something you already know. Unfortunately, not much research has been done on burns in Mongolia, but we did get some data.

First, data on children under the age of five admitted to trauma centers, which are hospitals that specialize in the treatment of trauma, showed that 40% were hospitalized with burns. It was also found that about 30% of the children who visited the outpatient clinic were diagnosed with burns due to contact with heat and hot substances.

There was also a household survey on children’s burns. This was a survey conducted in Ulaanbaatar, the capital of Mongolia, involving 900 children under the age of five. It was reported that about 30% of the subjects had been burned, 19% more than once, 84% at home, 40% with hot drinks or food, 30% with a stove, and the majority had been burned in the presence of an adult.

It also reported on the transition of the burn mortality rate per 100,000 children under the age of five in Ulaanbaatar, which was very interesting. Burn deaths are classified as being caused by exposure to smoke, fire or flame, and contact with heat and hot substances, which are hot drinks, food or hot substances such as stoves. Since 2008, there had been a sudden increase in deaths from these causes. In other words, we can read from this graph that something happened in 2007-2008.

After reviewing previous statistical data and surveys, we ended up with little information to provide clues for prevention, and it was not clear under what circumstances burn injuries were occurring. Therefore, we decided to conduct a survey at the National Trauma Center in order to clarify the actual situation.

The National Trauma Center is located in Ulaanbaatar, the capital of Mongolia, and critically ill patients are transported from all parts of Mongolia. We decided to survey children under the age of 15 who were admitted to this hospital for burns for one year from August 2015. Interviews were conducted with guardians of hospitalized children using structured interviews and questionnaires to systematically collect data, and the necessary data were collected from medical records.

In the interview survey, we obtained information on the occurrence of burn accidents, what the heat source was, how they came into contact with the heat source, and which heat source was most likely to cause severe burns. By describing this information, we found a way to prevent severe burns.

Please see the research paper for more details.

Now, there were 906 children who were hospitalized during the past year. The majority are children under the age of three, with a particularly large number of one-year-olds. Almost half of the children were at the age of crawling. The heat source of the burn, what caused the burn, is often a boiling liquid. For example, boiling water or soup. In Mongolia, they make a lot of milk tea with salt in it, put it in a pot, and drink it all the time, and more than 90% of the children were burned by contact with such liquid.

In Mongolia, many people still live in *gers*, traditional dwellings that are almost circular in shape, five to six meters in diameter and resemble tents. More than half of the burn accidents occurred in *gers*. In the *ger*, people also cook, sleep, watch TV, and relax in one space, and that's where the burn accidents were happening.

Looking at the months and times of the burn incidents, one might think that burns would occur in winter, but no such seasonality was observed. As for the time of day, we found that it was most common in the morning, in the afternoon, and at dinnertime.

In terms of the incidents involving burns, more than 90% of the incidents involved burns caused by the release or spillage of boiling liquid. Forty percent of the boiling liquids came from large electric pots, and 14% from electric kettles. Of the products involved in the burn incidents, 601 of the 906 hospitalized patients had serious burns, and 310 of them, or 52%, were seriously burned by electric pots. What this means is that if electric pots were not in Mongolia, 52% of serious burns could have been prevented. There were also 373 burn incidents with electric pots, 310 of which resulted in serious injury. This indicates that most burns caused by electric pots will result in serious injury.

The children crashed into the electric pot, and the boiling liquid was released from the electric pot. The children came into contact with the boiling liquid in the electric pot, the children crashed into the electric pot, and the boiling liquid was released from the electric pot, and they were burned by it. In the case of an electric kettle or thermos, the children would pull on it, and the boiling water and so on would get on their bodies, causing burns.

What this research has shown is that the first step is to take measures against electric pots. Since there is no kitchen in a *ger*, there is no place to put electric pots and pans, so they are

often used on the floor or used on a low table or stool.

I had assumed that the children would be burned by the stove in the center of the *ger*, which was bare and unenclosed. Of course, many children get burned by the stove, but the stove is big enough to be seen. On the other hand, electric pots are small and placed on the floor, so they do not come into the children's field of vision. That makes it easy for burn incidents. This is what we found in this survey.

One of the things that Mongolian students have found through various researches on social networking sites is a blueprint of furniture for safe use of electric pots. This seems to be a blueprint drawn by a parent who lost his child in a burn accident and thought it would be nice to have this kind of furniture. This is a sign that we need measures to ensure the safe use of electric pots.

Also, a Mongolian student found handmade furniture, with fittings for electric pots in an article on the Internet. This furniture is not sold on the market, but is available only to those who can make it. The fact that there are people who make this kind of furniture means that there is a need for it.

In addition to this, there was another unique initiative. It was an initiative to try to popularize the use of two pillars in the center of the *ger*, and put a pot stand there on which an electric pot can be placed. This was a project started by doctors at the National Trauma Center who wanted to somehow reduce the number of burn accidents. However, it is said that this unfortunately did not work out. The reason it didn't work was, as you may have guessed, that the height of the pot stand was about the height of an adult's waist, just high enough for the child's head to hit it. This project was cancelled because it was too dangerous for children to hit their heads.

I can dig a well, but I can't make furniture. So we decided to ask the furniture maker Nitori for help. I wrote a letter to the president of Nitori in March 2017. I sent this letter, and a while later I received a reply from an employee. They said that they want to hear more from me, so at the end of March, I went to Nitori's Tokyo headquarters for a meeting. At the meeting, I brought a caricature that proclaimed "A kitchen revolution to protect children from burn accidents!" and explained the concept of the project. They immediately agreed to help us and create a prototype.

Later, I heard that a prototype had been made, so I went to Nitori's Tokyo headquarters with a Mongolian student to see it. When I saw the prototype, I have to admit I was astonished,

because it was completely different from what I imagined. This misunderstanding was unavoidable. I showed them the handmade furniture's picture and asked them to make it for just \$30. I couldn't ask more than that, though this may be a Japanese feeling. The only thing I asked was that the furniture had to be cheap, to eventually become popular locally, so I asked them to make it for just \$30. As a result, the price went over \$40.

I thought, "This is a problem. Can't we improve the design somehow and make it cheaper?" So I hung around the Nitori store next to the Nitori Tokyo headquarters. Then I thought, "Well, if we can use existing furniture, we can do it cheaply and we don't have to go to the trouble of making new furniture".

Furniture has to be mass produced to be cheap. In order to do this, they need to make a mold, and it costs a lot of money to make that mold. The prototype was made in a way that did not require a mold, and had many limitations.

One thing that caught my eye at the Nitori store was the steel rack. Steel racks are relatively inexpensive, so we figured out we could do this cheaply.

This time, I thought it would be better to ask for a specific design, so I made some changes to the diagram of the steel rack

and made some specific suggestions, such as putting electric pots and kettles here, and organizing other things there.

As a result, the prototype was completed just as we had imagined. We refer to it as a "kitchen rack" for convenience. In fact, Nitori didn't have a steel rack in the size we requested, so they took the trouble to order a steel rack from another company and made a prototype for us. To prevent children from getting burns, their hands must not be able to reach the electric pots, so the kitchen racks are designed to be high and deep enough to prevent children's hands from reaching them.

I went out to Mongolia in November 2018 with my prototype kitchen rack. Photo 1 shows the inside of a *ger*. In this house, electric pots and kettles were used on a low table. When I asked this mother how many near-misses she had with her electric pot, she said every day. There are three girls in this house, and the parents are often very worried about them.

We asked them to use the prototype kitchen rack in their house. As for the location of the kitchen rack, there are two *ger* pillars, and there is a superstition in Mongolia that if you pass between the pillars, your family ties will be torn. So we heard that the space between the pillars is a dead space, so as shown in Photo 2, we placed the kitchen rack there.

The first thing we found out after having the kitchen racks in



photo1 The inside of a *ger*



photo2 The new kitchen rack

use for a month is that since the lower section of the kitchen racks does not have a door and there is a space that the children can enter and play. We were advised that the bottom section should be closed to prevent children from getting into the bottom section of the kitchen rack to play. Also, the height of the kitchen rack was 90 cm, which is a bit oppressive, and we received feedback that the overall size of the rack should be shorter. Despite these improvements, the mother said that using the kitchen rack has made her less worried.

Incidentally, we thought it would be better to use local furniture rather than bring it in from overseas, so we went to the local market to see if there was any furniture we could use. However, we could not find any furniture as sturdy as the prototype.

I had been looking into the possibility of utilizing existing kitchen furniture, thinking about the kitchen all the time, since such furniture is used in the kitchen. But after returning from Mongolia and looking at mail-order sites, I finally realized that I could utilize furniture other than kitchen furniture. Among other things, we thought we could use closet storage furniture, so we ordered the storage furniture shown in Photo 3. This one cost about 6,000 yen. It was not high enough and had casters, so it would be dangerous if you didn't anchor it. However, I



photo3 Closet storage furniture



photo4 Reconfigured closet storage furniture

thought it would be a good image of the furniture.

But it was too simple, so I bought some things at a 100-yen shop and added them. What I added was the top of the storage furniture. I showed this to the Nitori representative and requested that they make something like this for me.

The result is Photo 4. I wanted to put a door on the bottom of the kitchen rack, but it exceeded the budget, so I left it as is. We also heard from people who tried out the kitchen racks that they felt oppressive, so we shortened the height and length of the kitchen racks a little.

The sides of the kitchen rack are deliberately netted. The reason for this is that we thought that if the children couldn't see inside the kitchen racks, they might get interested in them and try to climb on them. This also saved money. Children might put their fingers through the mesh of the net, but they can't reach the electric pots and kettles in the kitchen rack.

I personally think it's acceptable if your fingers reach the surface and you get a little burn on your fingertips. It is important for children to learn through some pain in order to grow up. The one thing that absolutely must be prevented is severe burns.

This kitchen rack weighs 20 kilos, so it won't tip over if a child gets their hands on it. Even if an adult tries to knock it over, the kitchen rack is almost square and quite stable, so it can't be easily knocked over.

I was unsure if making this kind of furniture will really reduce the number of burns. There is no point in promoting kitchen racks if you don't know if they'll reduce burns, so we're trying to measure their effectiveness. This has already been planned,

has been reviewed by the research ethics committee, and is registered on the clinical trial registration site.

Then we need to promote this furniture at a price that the locals can afford, because if this furniture is expensive, it will not become popular. So what is the right price? We are also preparing a survey to learn more about this.

Kitchen racks may look like very simple pieces of furniture, but they are actually made through a fairly rigorous quality assurance process. According to Nitori's development staff, when they make a prototype, they review the product at a technical evaluation meeting. For example, we considered designing the sides of the kitchen racks not in the form of a net, but as a steel plate with holes punched in it. In this case, the part punched by the punch is sharp, put your finger in the hole, and there is a possibility of injury. I also thought about cutting off some of the corners of the net to widen it a bit, because the plugs for electric pots are bigger than those in Japan. In this case, there is a possibility of injuring your fingers on the cutting surface of the net. That's how the possibilities were properly evaluated. There is also a test to see if the furniture will fall over. There is also a third-party review. These processes lead to product registration.

Now that the kitchen racks have been developed, what is needed is funding to measure their effectiveness to see how much they can reduce burns. In fact, we are having a very hard time raising the funds for it. This is an ongoing process and we are still working to raise funds.

At first, I wanted to do this project on a research basis, so I applied for a Grant-in-Aid for Scientific Research. That was in October 2016. I was convinced that I would definitely obtain the Grant-in-Aid for Scientific Research, but I received the result in April 2017 and to my surprise it was not accepted. Rejections are ranked, with A in the top 25%, B in the next 25%, and C in the bottom 50%. My result was a C. I realized that this kind of project is not evaluated by the Grant-in-Aid for Scientific Research, and I gave up trying to obtain funding as a Grant-in-Aid for Scientific Research.

After that, I did some research and found that I could apply for JICA's Grassroots Technical Cooperation Project from my university, so I applied in June 2017. When I applied for the project, I consulted with JICA's staff and asked for their advice in making a project proposal, and I thought this would definitely work. However, this was also rejected.

This project is open to the public twice a year, so I applied

again. This time I was selected as a finalist. However, the result was rejected. The reason for this was that the sustainability of the project was not guaranteed. In fact, a study was needed to provide the evidence for this, and that study was incorporated into the project, but it was not approved. We can't lie about our sustainability, so we gave up on the Grassroots Technical Cooperation Project.

We also thought about raising money through crowdfunding. The University of Tsukuba has a partnership with a crowdfunding company called READYFOR, so I consulted READYFOR. But I soon gave up. The reason I gave up is that crowdfunding requires that the results of the project be reported to the investors within six months, or at the latest within a year. My project could have taken two to three years if you include the preparation, and it would have been impossible to complete it in six months or a year. I've also given up on relying on crowdfunding.

At the same time, we were wondering if we could get financial cooperation from companies that have relations with Mongolia, so in parallel with applying for JICA's Grassroots Technical Cooperation Project, we have been negotiating with companies in Mongolia. Despite the continued rejection of the project, we are beginning to see prospects for obtaining financial support from a company, and we even obtained an informal agreement when we visited Mongolia in January 2019. However, just as we were about to start, we were unable to obtain financial support due to circumstances at the company. I found this out in April 2019 and was very depressed at the time.

Still, we can't give up on this. The rest of the time, I went around asking for help as much as I could. For example, speaking of Mongolia, there are Mongolian wrestlers. So I consulted with *yokozuna*, and asked for financial support from a major cosmetic surgeon. This was in July 2019, and even though they were sympathetic, it was not funded.

I thought that if I couldn't get funding domestically, I might be able to get it from overseas, so I did some research and found out that Swansea University in Wales, England, has a center called the Global Burns Policy Research Center, which is involved in the prevention and treatment of burns in developing countries. So we contacted the center, explained the purpose of the project, and asked for financial support. I don't know anyone at that center, but if you explain with all your heart, your feelings will be understood. After two Skype meetings, we agreed that we should definitely do it. And we're going



photo5 Inside a ger



photo6 A burn accident

to do a pilot study in March or April. Just then, however, the pilot study had to be postponed due to the spread of the new corona infection.

So, what do we do now? I've had a lot of trouble so far, so I can't just stop here. In June 2017, with the help of the local community, we began a pilot study.

For the pilot study, 50 households residing

in *gers* were visited door to door, interviewed, and allowed to install the kitchen racks. I'll show you a picture of that time.

Photo 5 shows the inside of the *ger*, where they cooked with an electric pot on a low table like this. This is a common cooking style and is often done on the floor.

What happens when you cook on the floor like this? This is what happens. Photo 6 shows a burn accident that happened to a child in the family we were investigating, and this girl sat on an electric pot that was on the floor. That's how she ended up with severe burns on her lower body. This tragic accident would never have happened if they had used a kitchen rack.

Photo 7 shows another family. You can see two sticks on the kitchen rack. This is because the size of electric pots varies from household to household, so these sticks are installed to keep the electric pots from moving in the kitchen rack.

Photo 8 shows children gathering and playing. The children are frozen in front of the camera, but it would be dangerous if they started playing. However, if you keep the electric pot in the kitchen rack like this, the children may bump into the

kitchen rack, but I don't think it will cause serious burns.

The height of the kitchen racks has been lowered a little from the original height because it was requested earlier. It can be seen from Photo 9 that regardless if the kitchen rack is high or low, if the child is interested, he will bring a chair like this and stand on it to look inside. This is dangerous to say the least, but the mothers agreed that if children touch an electric pot and gets a slight burn, it is fine as long as it does not lead to serious burns.

We are currently conducting focus group discussions in a follow-up survey to gather feedback on the usability of the kitchen racks and how they can be improved. We also use data



photo7 A kitchen rack



photo8 Children in a ger



photo9 The height of the kitchen rack

from the baseline survey to estimate the amount of willingness to pay for kitchen racks and how much money people would be willing to pay for kitchen racks. Incidentally, if we set the price of the kitchen rack at about 4,000 yen, half of the target customers would buy it, or so we found. How to lower this price may be a challenge in the future.

As for future plans, we would like to compile the results of the pilot study and use these results to verify the effectiveness of the kitchen racks. In order to do this, we need funds, so we would like to continue fundraising. And we believe that the future challenge is to lower the price of kitchen racks and encourage their sustainable production, distribution, and popularization.

That's all I have to say. Thank you very much for your attention.

Yamamoto Dr. Ichikawa, thank you very much for your talk on the "Kitchen Revolution" in Mongolia. It was a story that conveyed your passion.

How was it, everyone? We could see that the convenient cooking utensils that we use without thinking every day can be very dangerous for people living in *gers* in Mongolia if they are not adjusted to fit their lifestyle. It was a very interesting and thought-provoking case.

Now, we have about 10 minutes left, so we would like to take questions and comments from everyone. If you have any questions about today's talk, please speak up.

Kuanysh Tastanbekova (Assistant Professor, Faculty of Human Sciences, University of Tsukuba) Excuse me. May I?

Yamamoto Yes. Please.

My name is Kuanysh Tastanbekova, Faculty of Human Sciences. I am from Kazakhstan. Thank you, Dr. Ichikawa, for a very, very inspiring talk.

In your first slide, you showed us a map of Mongolia showing the burn figures, and I noticed that Kazakhstan, my home country, was also red in color. Although not as high as in Mongolia, we found out that Kazakhstan also has a higher rate of burns among such children than other places.

So, in the slide you showed us, I thought it was very easy to understand how to make a rack. In Kazakhstan, there is a lot of handmade furniture for sale in the market, but the people who make the furniture are mainly returnee Kazakhs who lived in Bayan-Ölgii in Mongolia, which is close to Kazakhstan, and came back to Kazakhstan. So I have an image that Mongolians are very good at making furniture.

So, my question is, I'm under the impression that the last thing that was mentioned, such as welding the steel rod thing that was used for the rack, is very easy and can be done locally. So I thought it might be possible for local furniture makers to do that as a business. Rather than going to the trouble of raising funds in Japan, making it, and then procuring it at a price that Mongolians can afford, I thought that if it was simple to make, it could be done locally. Thank you for your consideration.

Ichikawa Thank you very much. First of all, the main reason why we asked a Japanese furniture maker is to guarantee the safety. If you make furniture like that and have people use it and they get severe burns, that will be a big problem for us to resolve. So, in order to make furniture that will never cause accidents, we asked a Japanese furniture manufacturer with whom we can directly consult.

If possible, we would like to produce locally, but we do not have such a partner locally at the moment. Also, most of the furniture sold in Mongolia is imported from China, and I think the reason for this is because it is cheap. We believe that it will be cheaper to import kitchen racks made in China than to make them in Mongolia.

However, in terms of revitalizing local industry and the economy, I think we should produce locally, so my hope is to investigate whether it is possible to produce locally in the future, and to produce locally as much as possible.

Tastanbekova As I was listening to what you just said, one thought occurred to me, and that is that a local company, with the cooperation of the professor, might be able to raise funds like an interest-free loan from the World Bank or the Asian Development Bank, for example. I thought it would be very appealing to have local people be responsible for making the products, but with Japanese know-how and technology. That's all.

Ichikawa Thank you very much. In fact, we are planning to conduct a study to see how many accidents can be reduced using this kitchen rack, as well as how much medical costs can be reduced. The treatment of patients with severe burns is very costly, and although there is a significant co-payment in Mongolia, medical care is essentially free, and the government pays for it. If kitchen racks can significantly lower the medical costs of treating burns, I hope that the extra money can be used to subsidize and promote kitchen racks.

Whether it is a country, the World Bank, or the Asian Development Bank, first of all, we need materials and data to negotiate. To do that, we need to prepare the data, and we are at that stage now.

Tastanbekova Thank you very much.

Yamamoto Now, do we have any other questions from the audience?

James Huffman (Manager, International Projects Division, The Nippon Foundation) I'm James Huffman from the Nippon Foundation. May I?

Yamamoto Yes, please.

Huffman Thank you, Dr. Ichikawa. I was very impressed not only by your dreams and hopes, but also by how you connect them to the real world and create things. Thank you very much.

My question relates to the public-relations challenges, and I'd like to ask you how you are working to communicate and spread these very good ideas to many people as much as possible.

Ichikawa Thank you for your comment. As far as Mongolia is concerned, one of the companies that we are asking for financial support for this project is MobiCom, which is a major telecommunications operator. MobiCom will be assisting us with publicity and burn prevention activities.

Huffman Thank you. This is a challenge we face all the time. I asked this question because even if I have a good idea, how to get the word out is something with which I always struggle with. Thank you very much.

Yamamoto Thank you for your comment. Does anyone else have any comments or questions now? There's one more person here. You must be Bayarbaatar. Please go ahead.

Margad Bayarbaatar (School of Humanities and Culture, University of Tsukuba) Thank you very much. I'm Margad Bayarbaatar from Mongolia. It was a great experience for me to listen to these stories.

Probably the biggest cause of this burn problem is that there are still a lot of *ger* areas in Ulaanbaatar, Mongolia. About half of the citizens live in the *ger* areas, so I thought that if the *ger* areas were eliminated, the problem of these burns would be improved a little.

One more suggestion: The former principal of my alma mater, the Shin Mongol Integrated School, is now politically active, and I thought it would be easier to raise funds if we could get the cooperation of politicians and make a presentation saying, "If we can promote this project, it will appeal to the people." I thought it would be easier to get funding. That's all.

Ichikawa Thank you for your comment. In fact, that was the reason I went to see the Minister of Health. But there was an election the other day, wasn't there?

Bayarbaatar Yes.

Ichikawa So the minister was replaced. But in fact, the director of the National Trauma Center became the new minister. He and I have already met, and he is very passionate about burn prevention, so I hope to have the opportunity to visit Mongolia soon.

I have also made an effort to meet Mongolian politicians who have visited Japan so far. I ask for their cooperation, but politicians have to consider their own interests as well, so it is difficult to put it into words, but I feel it is not easy.

However, I also believe that it is important to have the help of politicians, so I would definitely like to go and meet the new minister next time.

Bayarbaatar Thank you very much. One thing that I thought might be helpful is about the coal problem in Mongolia. Ulaanbaatar burns coal in the winter and uses stoves, so there is an air pollution problem because of that. To solve this problem, there was an activity that distributed more eco-friendly stoves to people in the *ger* area. I thought that you might be able to find some clues by tracing the history of these activities.

Ichikawa Thank you for your comment. I've heard about that.

Bayarbaatar Oh, I see.

Ichikawa I heard that a politician provided it. However, I also

heard that it didn't work very well.

Bayarbaatar No, it didn't.

Ichikawa Actually, when I visited Mongolia in January last year, I was surprised to see a bright blue sky. It seems that thanks to a strong government crackdown on the use of poor quality coal, good quality coal is now being used and air pollution has improved considerably.

Bayarbaatar Thank you very much.

Yamamoto Thank you very much. It's time to go. Is Ms. Fujii, who just turned on her microphone, here?

Mayumi Fujii (International Projects Division, The Nippon Foundation) Yes.

Yamamoto Please go ahead.

Fujii Excuse me. Thank you, Doctor, for your precious time today. My name is Mayumi Fujii from the Nippon Foundation. Thank you for your consideration.

I heard that you had a very difficult time raising funds, but you never gave up, and I felt that you did a lot of research and made a lot of presentations and approaches.

It doesn't have to be just about this project, but I was wondering if you could tell us about the source of your own motivation.

Ichikawa Thank you for your comment. Simply put, I have a genuine desire to help others. I became interested in social issues through my classes in junior high and high school, and that led me to want to help others, and although wanting to help others is ultimately for myself, I continue to have that feeling.

In fact, I feel very grateful to the Nippon Foundation. During my spring break in my third year of high school, before I entered university, I participated in a study tour organized by

the Japan Shipbuilding Industry Foundation, the predecessor of the Nippon Foundation. I had never been abroad before, but this study tour gave me the opportunity to visit a farming village called Wiang Pa Pao, which is located between Chiang Mai and Chiang Rai in northern Thailand, and to come into contact with the real development issues there. I think it was the opportunity to visit the area that made me have a strong desire for international cooperation and to help the world.

Fujii Thank you. I also have a project at the moment and will keep it in mind for future reference. Thank you very much.

Yamamoto Thank you very much. I know that some of you still have questions, but we are running out of time, so I regret to say that we will have to end our questions at this point. If you have any individual questions, please contact the project and we will forward them to Dr. Ichikawa.

Dr. Ichikawa, thank you very much for taking the time out of your busy schedule to speak to us today. It is difficult to convey the enthusiasm of the audience in a Zoom lecture, but on behalf of the audience, I would like to express my gratitude with a big round of applause. Thank you so much for your time.

The lecture will be available as a free video on Manaba, in-campus only. If you would like to listen to the lecture again, or if you know someone who was not able to attend the live lecture this time, please use this service. Details of the on-demand distribution will be announced on the website of the "Nippon-Foundation Central Asia-Japan Human Resource Development Project (NipCA)".

This concludes today's lecture by Dr. Ichikawa. Thank you all for joining us today.

**NipCA Project Public Lecture Series:
The Future of Central Eurasia and Japan
Vol. 11 “Protecting Mongolian Children from Accidental Burn Injuries:
A Project to Improve Children’s Living Environment”
Dr. Masao Ichikawa, Ph.D., Professor, Faculty of Medicine, University of Tsukuba, Japan**

September 1, 2020

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Hiroshi Sasayama
Translated by Noriko Shimada, Leslie Tkach-Kawasaki
Published by University of Tsukuba “The Nippon-Foundation Central Asia-Japan
Human Resource Development Project (NipCA Project)” 1-1-1 Tennodai,
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Phone: +81-29-853-4251
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URL: <https://centralasia.jinsha.tsukuba.ac.jp/>
Printed by INEXT Inc.



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