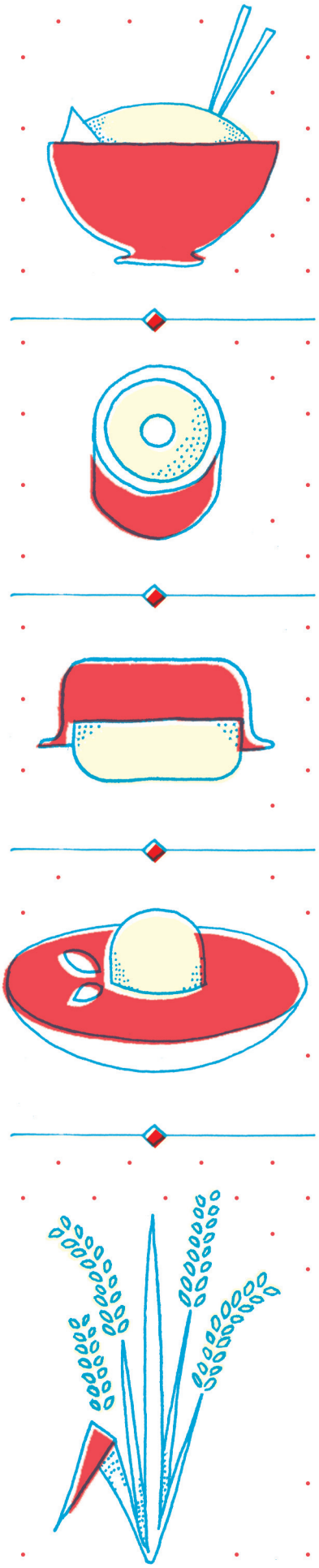

Fighting food risks

Dr Emako Miyoshi, Associate Professor at Osaka University, Japan, is conducting an interdisciplinary research project that aims to resolve food safety issues in China

Can you outline the key objectives of your research project?

Our research lab is conducting interdisciplinary research to tackle environmental problems. The aim of our current project is to contribute towards the elimination of food risks through international collaboration. We have been investigating how soil, air and water pollution relate to food risks in China, in order to resolve these problems and help China along the path to global food safety.

The issue of food risk between China and Japan is frequently aired and despite good economic relations between the countries, it is serious. We are currently examining how to further promote interaction between Chinese and Japanese researchers, including students. We hope our research will contribute to the establishment of a better future relationship between China and Japan.

China is fast becoming a major player in the world economy. What has been done to improve the security and reliability of its food market?

Globalisation has led China to become a world manufacturing centre. However, there is still a big gap between China and other manufacturing centres such as the UK, Germany, the US and Japan. These developed countries produce their exports with the aid of their own technology and capital whereas China is more of a manufacturing base rather than an assembly base of foreign articles. In addition, China lacks resources and has a high demand for foreign material supplies. China's development of manufacturing on a global scale thus seems dependent on the global supply chain.

Since China became a member of the World Trade Organization (WTO) in 2001, its processing industries have grown rapidly due to a combination of low costs, growing markets and government policies. The Chinese Government has improved its food safety supervision, established new laws and enforced inspections to ensure food safety, especially of exports.

What is the main method you use to develop young researchers and encourage university students to become involved? What impact will this strategy have in the future?

One of the key objectives of our research is to create unique and practical learning experiences for students. Our Contemporary China Studies framework is an interdisciplinary education programme that aims to help graduate students acquire a broad education and gain the ability to see issues from different viewpoints, while allowing them to build advanced specialist knowledge in a specific area. This means that students from different disciplines can come together to discuss and contribute to their respective academic fields from broad perspectives. We have promoted our related research activities to enhance interaction between Chinese and Japanese students in the hope that this will improve future relationships.

Who are your collaborators and why did you select them to contribute to your research?

Our key Chinese collaborators are Professor Pei Jiang of Nankai University in China and Professor Yuming Hsu of National Dong Hwa University in Taiwan. We have collaborated in order to hold international conferences on social change in contemporary China and to help young researchers to develop. We have also established collaborations with a number of other universities in China to study different types of pollution. We hope to expand our collaborative scope, further contributing to our global society.

Your project committee has held five international conferences and symposiums since 2011. What were the major outcomes and how did they benefit your research?

As core members of the Osaka University Forum on China (OUFC), we have held international conferences where the official language is Chinese. These have attracted many different participants from across East Asia. Our project committee has also hosted two international conferences focusing on the safety, security and reliability of food, as part of the OUFC movement. We have emphasised the necessity of open systems through learning or through academic interchange between China and Japan. Young researchers have a key role to play in improving future relationships between these countries. At the same time, we hold public lectures on food risks, because trust and credibility cannot be manufactured – they can only be earned through good performance and effective communication.

Advancing international relations

With existing concerns regarding Chinese food exports, a multidisciplinary team of researchers from China, Japan and Taiwan is collaborating to achieve improved food safety and risk communication

As China becomes an increasingly prominent player in today's global food market, unease has been growing over the safety of the country's produce. Triggered by a number of high profile food manufacturing accidents and claims that vegetables are often contaminated with high levels of pesticides and heavy metals, these concerns are being voiced at both a domestic and international level.

In response, the Chinese Government passed a new food safety law in 2009 and formed a politically driven Food Safety Commission in 2010. They have also imposed stricter controls on the traceability of vegetable exports and announced their commitment to tackling perpetrators involved in food safety scandals. However, some critics suggest there are still gaps between these policies and their implementation.

Concerns about Chinese food safety are particularly prevalent among Japanese consumers, with Japan being the leading market for Chinese vegetable exports. In view of this, researchers based in China, Japan and Taiwan are collaborating to enhance risk communication on the safety, security and reliability of Chinese food produce. The group is also aiming to improve Chinese-Japanese relations and facilitate the development of students and young investigators.

AN INTEGRATED APPROACH

Dr Emako Miyoshi, Associate Professor at the Graduate School of Human Sciences in Osaka University, Japan, is a core member of the collaborative project. With a research background in human environmental science based on physical chemistry, Miyoshi is passionate about using sustainability science as a means to examine the issues surrounding Chinese food safety risks. As a transdisciplinary approach, sustainability science forges links between environmental, economic, social and political spheres, developing integrated tools to investigate these systems and the ways in which they connect. Miyoshi and her colleagues are focusing their efforts predominantly on sustainability issues surrounding human and food security.

> The research project has important real-life implications as both China and Japan stand to gain from the continuance of strong trading ties

The Contemporary China Studies programme at Osaka University, formed in 2010, has successfully brought together Japanese and Chinese students from a range of disciplines. A wide range of projects have been run, particularly on the topics of food and agriculture as well as their impact on human life and culture.

TRADE TIES

Three factors in particular have furthered China's competitive advantages in the global food market. Firstly, following more than two decades of reforms aimed at shifting the country towards a free market economy, China became a member of the World Trade Organization (WTO) in December 2001. Secondly, Chinese food-processing industries have burgeoned due to a combination of low costs, growing markets and favourable government policies. Finally, there has been a sizeable expansion of strategic alliances between Japan and China regarding the import of Chinese vegetables.

The robust economic relationship between the two nations is mutually beneficial. From the Japanese point of view, consumers have access to a range of fresh, low-cost agricultural imports from China. From the Chinese perspective, Japanese industries have created many employment opportunities, as well as providing the Chinese food industry with technological assistance and developments. Miyoshi's research project therefore has important real-life implications as both China and Japan stand to gain from the continuance of strong trading ties.

BUILDING TRUST

Miyoshi aims to create a conceptual risk framework based on the theory of cognitive psychology. Although the terms 'safety' and 'risk perception' are often used interchangeably, they have different meanings. 'Safety' is a scientific discipline that can be enhanced by technologies while 'risk perception' is a subjective, emotion-led judgement that people make about certain factors. In view of these differences, the overarching concept in Miyoshi's research is that of social trust in the safety of China's global food exports, which she hopes her collaborative project will promote.

Second-hand information – such as that provided by the media – gives rise to predictors that largely determine social behaviour. In a previous research project, Miyoshi explored how the media contributed to the erosion of consumer security and social trust in the wake of the accidental export of poisoned dumplings from China to Japan in 2008, and the negative perception this gave of Chinese food. Rather than focusing on the incident itself, the Japanese media blew the scandal out of proportion, implying there were serious safety problems in the Chinese food production system: "The media misled Japanese customers, severely damaging the image not only of Chinese products, but China," Miyoshi explains. "It incited a high social mobilisation that led major food markets in Japan to recall the dumplings, as well as other Chinese-produced food."

PRACTICAL RESEARCH AIMED AT BUILDING RISK COMMUNICATION OVER THE SAFETY, SECURITY AND RELIABILITY OF FOOD IN CHINA

OBJECTIVES

- To contribute to the establishment of better future relationships among East Asian countries, including China and Japan, through the systematic investigation of food safety focusing on Chinese food safety, the perception of risk and social trust
- To contribute to the development of young researchers in China and Japan

KEY COLLABORATORS

Professor Hitoshi Tanaka, Graduate School of Law and Politics; **Associate Professor Weidong Xu**, Graduate School of Economics; **Assistant Professor Mizuka Kimura**, Graduate School of Human Sciences, Osaka University, Japan

PARTNERS

Nankai University, China • National Dong Hwa University, Taiwan • Zhejiang University, China • Lanzhou University, China • Nanjing University of Information Science & Technology, China • China Agricultural University, China

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EMAKO MIYOSHI was Assistant Professor at Tokyo University of Agriculture until 1993 when she began her three-year PhD at the Graduate School of Human Life Science, Osaka City University, Japan. She then worked as a lecturer and Associate Professor at the Osaka University of Foreign Studies until 2007. She is now Associate Professor at the Graduate School of Human Sciences, Osaka University, and has led four major research projects.

OSAKA UNIVERSITY

In view of this, Miyoshi is currently investigating how to build an effective means of risk communication that conveys accurate and reliable information about food safety risks. The hope is that risk-management agencies such as the government will learn to communicate risks in a way that garners widespread trust and contributes to conflict resolution. Miyoshi's research aims to promote a mutual understanding between risk evaluators and managers through enhanced collaboration.

A KEY INFLUENCE

To conduct her research, Miyoshi has drawn heavily on the systems theory of Niklas Luhmann, one of the most important social thinkers of the 20th Century. Luhmann identified that the relationship between social systems and communication (the most prominent structure for a working society) is fundamental to reducing such social complexities as global food safety and security. His theory considers three key concepts: trust, observation and the distinction between risk and danger – the former two being of particular interest to Miyoshi. Luhmann argued that trust plays a central role in mitigating social risks, using previous experience to inform better future decisions. However, trust does not necessarily take into account the quantity or quality of existing information, meaning that it can sometimes be portrayed as hyperbolic or false.

When it comes to building trust, Luhmann theorised that familiarity is one of the major factors. However, the Japanese Government's Cabinet Office reported a yearly decline in the familiarity between Japanese and Chinese populations. Based on Luhmann's theory, not only has the poisoned dumplings scare in 2008 eroded Japanese trust in Chinese food, but also fed into existing tensions and mistrust between the two countries.

FUTURE DEVELOPMENTS

The research conducted by Miyoshi and her colleagues is leading to a greater understanding of the global challenges faced by China. Importantly, the various collaborative studies undertaken as part of the Contemporary China Studies programme illustrate the necessity of open communication systems between China and Japan, which can be significantly enhanced through academic interchange.

Looking to the future, the researchers are keen to continue their collaborative efforts, pooling their resources and backgrounds to further investigate these important issues and promote the concept of sustainability science. They are also keen to oversee the transformation of their theoretical research into practical learning experiences for students and young researchers.

Past events

The project has held a number of international conferences and symposiums:

- **The International Conference on Environment and Food Safety**, Beijing, China, 2011
- The Student Forum: **Environmental Health and Food Safety in Our Daily Life**, Beijing, China, 2011
- **The Symposium on Food Safety, Security and Reliability**, Osaka, Japan, 2012
- **'Thinking of Learning at the Same University'**, a forum planned by Chinese and Japanese Students, Osaka, Japan, 2012
- The International Symposium: **The Consensus and Development between China and Japan in a Risk Society**, Osaka, Japan, 2013