Food Safety Program in Asian Countries

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Summary By using the ILSI network in Asia, we are holding a session focused on food safety programs in several Asian areas. In view of the external environment, it is expected to impact the global food system in the near future, including the rapid increase in food demand and in public health services due to population growth, as well as the threats to biosecurity and food safety due to the rapid globalization of the food trade. Facilitating effective information sharing holds promise for the activation of the food industry. At this session, Prof. Hwang shares the current situation of Food Safety and Sanitation Regulations in Taiwan. Dr. Liu provides a talk on the role of risk assessment in food regulatory control focused on aluminum-containing food additives in China. After the JECFA evaluation of aluminum-containing food additives in 2011, each country has carried out risk assessment based on dietary intake surveys. Ms. Chan reports on the activities of a working group on Food Standards Harmonization in ASEAN. She also explains that the ILSI Southeast Asia Region has actively supported the various ASEAN Working Groups in utilizing science to harmonize food standards. Prof. Park provides current research activities in Korea focused on the effect of climate change on food safety. Climate change is generally seen as having a negative impact on food security, particularly in developing countries. We use these four presentations as a springboard to vigorous discussion on issues related to Food Safety in Asia.

Key Words food safety regulation, risk assessment, food standard harmonization, ASEAN, climate change

Founded in 1978, the International Life Sciences Institute (ILSI) is a nonprofit, worldwide foundation that seeks to improve the well-being of the general public through the advancement of science. Its goal is to further the understanding of scientific issues relating to nutrition, food safety, toxicology, risk assessment, and the environment by bringing together scientists from academia, government, and industry. ILSI consists of a total of 15 branches, of which six are in the Asian area. By taking advantage of this network, we plan this “Food Safety Program Session” to invite speakers from Asian regions.

It is estimated that there are almost four billion people, more than 60% of the current world population in the Asian area. The Asia Pacific Ocean region is one of the areas where the food industry has the fastest sustained economic growth rates in the world and it was forecast to win 33% of the market share in the global beverage and food market in 2014. In the Asian Pacific Ocean, countries such as India and China are developing agricultural industry on a large scale, and they have established themselves as big agricultural exporters to the world.

On the other hand, there still remain problems linked to an insufficient availability of food, especially in developing countries. It seems that a billion people, more than one-eighth of the world, goes to bed hungry every night. The FAO has estimated that in 2012 there were 870 million malnourished people in the world, the equivalent of 12.5% of the global population (FAO 2012). There is enough food now in the world to feed everyone adequately, but the problem is the structure of food distribution, the effective access to food resources and the lack of confidence about food safety. In the end it has to be recognised that an approach focused only on production is not enough to shape an effective response to the problem.

The world’s population is projected to increase to more than 9 billion by 2050, requiring up to a 60% increase in agricultural production. It is important to achieve sustained and inclusive agricultural growth and raise 50 million people out of poverty over the next 10 y. Agriculture remains the largest employment sector in most developing countries and international agriculture agreements are crucial to a country’s food security. Due to rapid globalization of the food trade, it is one of major challenges to understand food standards and methods of analysis in East Asian regions where an attractive market is forming.

We have invited four speakers from 4 regions to this session and asked them to provide information on food safety programs from each region. They are expected to touch on how science and technology can contribute to meeting some of these challenges that will be faced in the future.

Prof. Lucy Sun Hwang, Emeritus Professor of Taiwan
University and co-chair of this session shares the current situation of Food Safety and Sanitation Regulations in Taiwan. In recent years, Taiwan has strengthened legal regulations to ensure food safety. There is no end to the number of incidents that threaten food safety, such as recycled cooking oil, in Taiwan and these incidents have seriously threatened the basis of Taiwan society. In response to this situation, the revision of the Act Governing Food Safety and Sanitation, which mandates stricter management and regulation of food processing from ingredients and production to distribution and sale is laid out on the table.

Dr. Zhaoping Liu, China National Center for Food Safety Risk Assessment, provides a talk on the role of risk assessment in food regulatory control, focused on aluminum-containing food additives as an example. In 2011, the Joint FAO/WHO Expert Committee on Food Additives carried out an assessment related to aluminum-containing food additives and established a Provisional Tolerable Weekly Intake of 2 mg/kg bw. At the 45th Codex Committee on Food Additives held in Beijing in 2013, dietary exposure assessment for aluminum-containing food additives was discussed. The major route of exposure to aluminum for the general population is through food. Therefore, due to the design of dietary surveys, it is not so easy to reach a conclusion on the specific sources contributing to the total dietary intake of aluminum.

Ms. Pauline Chan, Director of Scientific Programs, ILSI South East Asia Region, reports on the activities of a working group on Food Standards Harmonization in ASEAN. The ASEAN Economic Community (AEC), a single regional common market and production base, shall be the goal of regional economic integration by 2015 for the 600 million women and men of the 10 ASEAN Member States. This will lead to the freer flow of goods, services, investment and skilled labour in the region. Therefore it is expected to achieve significant economic development. In order to facilitate the harmonization within ASEAN, ILSI SEAR supports the work of the various ASEAN working groups.

Prof. Ki Hwan Park, Chung-Ang University, lays out current research activities in Korea focused on the effect of climate change on food safety. The possible implications of climate change on availability and access to food has widely researched. Climate change is generally seen as having a negative impact on food security, particularly in developing countries. As a microbiological issue including foodborne pathogens, climate change may alter the incidence of foodborne illness and/or the ability of pathogens to cause illness. New microbial hazards and anti-resistant pathogens are also considered as other potential impacts of climate change. As a chemical issue, chemical contaminants and toxins such as mycotoxins may affect the safety of our foods. Climate change may affect agricultural practices. The type and abundance of pests and weeds will change. Considering future population growth, we must increase the amount of available food by more than 50% while dealing with major environmental challenges, such as climate change, greenhouse gas emission and pressure on biodiversity, ecosystems, soil and water.

The four presentations in four areas are designed to lead to vigorous discussion on issues related to food safety in Asia.

**[Program]**

13:50–13:55 Opening remarks
13:55–14:20 “Food Safety and Sanitation Regulations in Taiwan”/Lucy Sun Hwang
14:20–14:45 “The Role of Risk Assessment in the Regulatory Control of Aluminum-containing Food Additives in China”/Zhaoping Liu
14:55–15:20 “Facilitating Food Standards Harmonization in ASEAN”/Pauline Chan
15:20–15:45 “Climate change and Food Safety in the Korean Peninsula”/Ki Hwan Park
15:45–15:50 Closing