

# ILSI Japan CHP Newsletter

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## What's Project SWAN (Safe Water and Nutrition)?

WHO has reported that 780 million people do not have access to safe drinking water, and in many developing countries the intake of unsafe water and unhygienic environments cause diarrhea and infectious diseases among children. This interferes with the intake of necessary nutrients, resulting in malnutrition. Even if water treatment facilities exist, it is often found that these facilities are not properly designed and that proper treatment is not conducted, including the use of chemicals to remove contaminants, resulting in the failure to meet WHO microbiological and chemical standards.

Project SWAN aims to establish sustainable water supply and health management models in rural and suburban areas through a participatory approach with inhabitants by enhancing knowledge of drinking water, nutrition, food hygiene and sanitation at the household level, optimizing the operation of water treatment facilities to meet Vietnamese standards, establishing effective management systems to sustain safe water supplies and promoting health communication by community-based participatory approaches.

It is expected that these models will be applicable to and can be expanded to other rural and suburban areas in Vietnam.

Since 2013, ILSI Japan CHP has been conducting a feasibility study for the Project SWAN (Safe Water and Nutrition) in Indonesia in collaboration with ILSI SEAR (Southeast Asia Region) and Indonesian partners. The Indonesian partners include: DIM Consultants (an Indonesian consulting company specializing in water technology and the environment), SEAMEO RECFON (Southeast Asian Ministers of Education Organization Regional Centre for Food and Nutrition) an education and research institution under Indonesian Ministry of Education, YASMINA Foundation (an NGO registered to the Indonesian government). In February and May 2015, staff members of ILSI Japan CHP visited Wanasari Village, Karawang District and Gunung Sari Village, Bogor District in the West Java Region, and observed the situation of existing village (community) managed water treatment facilities and collected information about the health conditions of community members, then reviewed issues in the villages and possible solutions. Based on the visits above, we have determined that the community managed water treatment facilities face problems related to operations and maintenance, treated water quality control, and decreases among water users. Also, we have identified that water-borne diseases may be caused by drinking unhygienic water and ingesting foods cooked under unhygienic conditions.

We concluded that it is urgently necessary to improve both water quantity and quality, the performance of water management unions, and enhance information, education and communication (IEC) activities for water, food hygiene and nutrition, while targeting community members in these villages. We are developing a project that combines both water technological activities and IEC activities in accordance with the SWAN model.

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## Research results of SWAN2 in Vietnam Presented at the ACN 2015

We made a poster presentation at the occasion of the 12<sup>th</sup> Asian Congress of Nutrition held in Yokohama, 14-18 May 2015. The poster focused on the evaluation of community nutrition activities carried out in the



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second phase of Project SWAN. In Vietnam, low dietary diversity is considered to be one of the factors increasing the risk of inadequate nutrition intake in children under five and resulting in malnutrition. In this study, we have assessed the diversity of food prepared by Vietnamese mothers for children using intervention and no-intervention villages in both suburban (Hanoi) and rural areas (Nam Dinh Province) of Vietnam. Prior to the assessment, community nutrition activities lead by village health workers were conducted in 16 intervention villages in suburban and rural areas for 8 to 10 months. The activities included household visits using flip charts for education, cooking classes, and loudspeaker announcements, etc. At the assessment, we analyzed data from 2,108 mother-child pairs that included that from the 16 intervention villages and the 5 non-intervention villages (cross-sectional design with control group). We found that mothers at the intervention sites provided more food groups to their children compared to mothers at non-intervention suburban sites (Indicators for assessing infant and young child feeding practices, WHO). However, similar results were not observed in rural areas. We plan to share the results with province authorities and to develop a new strategy that will include the improvement of practical and sustainable activities (such as cooking classes) administered by village health workers.



### Achievements of Project SWAN to Date

**Vietnam:** With an emphasis on rural areas in developing countries in Asia, where public water works are lacking, ILSI Japan CHP has been working on the Project SWAN in collaboration with the National Institute of Nutrition since 2001. Project SWAN features a unique concept, combining a water technological program and an IEC (Information, Education and Communication) program into one project, taking a cross-sector approach. Based on the preliminary investigations, a project “Participatory approach for improving safe water supply, nutrition and health environment: SWAN1 (2005-2008)” and the SWAN2 (2010-2013) in Hanoi and Nam Dinh Province were supported by JICA (Japanese International Cooperation Agency) as a grassroots technical assistance project. The SWAN1 was completed in 3 villages with great successes at the community level such as safe water supply by water management unions, and the improvements of nutrition and health conditions. The Phase 2 intended to enhance cross-sectional cooperation and to improve community-support by building up Working Team at national government level and Support Team at provincial/district level. Almost 120,000 people across 16 villages benefited by the SWAN2. Since 2013, the SWAN3 has been carried out in Hanoi and Nam Dinh Province, where we intend that Vietnamese provincial authorities adopt SWAN’s programs for their water and health related programs. Since 2014, with a focus on the nutritional aspects, we have been implementing a 3 years project “Project to support educational activities for mothers to improve the quality of complementary food in rural Vietnam” in Thai Nguyen and Bac Giang Provinces. The project has been supported by AIN (Ajinomoto International Cooperation Network for Nutrition and Health).

**Indonesia:** Since 2013, in collaboration with ILSI SEAR (Southeast Asia Region), we are developing project components in Indonesia.

## Project IDEA

### A Meeting on Rice Fortification Projects around the World at the PACIFICO Yokohama

During the 12<sup>th</sup> Asian Congress of Nutrition (14-18 May 2015, Yokohama), a meeting on rice fortification projects around the world was held on 16 May 2015 in Yokohama. The meeting aimed to share present information on rice fortification projects around the world and to discuss how to disseminate technology to reduce the population of the malnourished. More than 20 participants gathered and 6 topics were discussed: 1) Rice fortification and projects in the world (GAIN), 2) Strategy of WFP on rice fortification



(WFP), 3) Iron fortified rice projects in the Philippines (FNRI), 4) Iron and zinc fortification of rice in Vietnam (NIN), 5) Lysine fortification of rice in India (St. John's Research Institute, India), and 6) Multiple fortification of rice in the mid-day meal project in India (Life and Sight, DSM).

## Market Trial of Iron and Zinc Fortified Rice in Vietnam

Based on the agreement reached at the 1<sup>st</sup> consortium meeting last July, the market trial on iron and zinc fortified rice in Vietnam was started, supported by an international NGO (GAIN) and ILSI Japan CHP. Iron and zinc fortified Premix rice, 1,300 kg, was produced by the Food and Nutrition Research Institute of the Philippines (FNRI) and sent to the National Institute of Nutrition in Vietnam (NIN). The



Premix will be blended with regular rice to produce fortified rice at a rice miller. Introduction of the fortified rice will be conducted in Thai Binh Province near Hanoi in August 2015 and the program will continue for 12 months.

## What's Project IDEA (Iron Deficiency Elimination Action) ?

The difficulty in maintaining a variety of food sources results in malnutrition and micronutrient deficiencies in the developing countries. Iron deficiency anemia, one of the most prevalent threats to public health, impairs brain development, immune system functioning, and learning ability in infants and children. It can also be a major cause of death among pregnant women, and dramatically reduces productivity among working adults, which in turn hinders the struggle against poverty. The UN ACC/SCN (the United Nations Administrative Committee on Coordination/ Sub-Committee on Nutrition) reported that 1.6 billion people suffer from iron deficiency anemia, and that it has been more difficult to overcome this than other micronutrient deficiencies.

Project IDEA works to reduce iron deficiency anemia (IDA) in developing countries by adding iron to commonly-eaten and commercially-produced foods such as condiments and staples, based on the dietary patterns unique to each country.

## Food Intake Survey for Lysine Fortification in Vietnam

To estimate lysine intake in children aged 8-9 years, surveys of the 3-day dietary intake of children and parents will be performed by NIN staff members. More than 600 children in primary school will be interviewed and the 2007 Vietnamese food composition table will be used to calculate nutrient values for raw foods and cooked foods. The interviews start in the beginning of the school year (September 2015) and the results of the survey will be submitted by March 2016.

### Achievements of Project IDEA to Date

In the Philippines, ILSI Japan CHP has worked with FNRI on the stability and acceptability of several alternatives for the fortification of rice with iron. The overall evaluation indicated that extruded rice with ferrous sulfate and micronized ferric pyrophosphate are the most stable and have the most acceptable taste and color. An efficacy study was conducted for 6 months in 2004 by means of an intervention program using primary school pupils 6-8 years old in Metro Manila. The intervention program demonstrated that both of fortification alternatives significantly improved anemia prevalence. A market trial started in April 2008 and confirmed the effectiveness in Orion Municipality.

In Cambodia, fish sauce fortified with NaFeEDTA was introduced in Kampot in March 2007 and Siem Reap in August. ILSI Japan CHP is working with RACHA to promote social marketing programs, to establish quality monitoring of the market and to establish a surveillance system for monitoring IDA. The effectiveness of the fortification was confirmed. Akzo Nobel is supporting the project by donating NaFeEDTA.

A literature search on complementary feeding resulted in the report "Towards improved infant and young child nutrition in Asia through appropriate complementary feeding" which can be used as a basis for the research and development of complementary feeding.

In Vietnam, in collaboration with National Institute of Nutrition (NIN), ILSI Japan CHP has pursued iron fortification (NaFeEDTA) of fish sauce. A series of studies verified that regular consumption of iron-fortified fish sauce significantly reduced the prevalence of anemia. Iron-fortified fish sauce was launched in 2006 based on the scientific outcomes of the research and development. The plan calls for 10 large production plants to produce fortified fish sauce by 2009. With financial support from GAIN, the national launch is scheduled in 5 years, which will include programs for production/distribution, quality assurance, communication of nutrition and health and monitoring/surveillance. ILSI Japan CHP will continue to provide professional support to ensure a successful national launch.

In China, the Iron Fortified Soy Sauce Program has been launched since 2004 as the national policy to prevent anemia by ILSI Focal Point in China and CDC China.

# Project PAN



## TAKE10!® Training Course in Iwakuni

### What's Project PAN (Physical Activity and Nutrition)?

To promote healthier aging, Project PAN seeks to prevent **lifestyle-related diseases** including **obesity** among middle-aged people and **keep the elderly out of being bedridden**. Project PAN develops science-evidenced programs to promote physical exercise and to improve nutritional status of people through changing their lifestyles.

ILSI Japan CHP is pursuing two programs named "TAKE10!®" and "LiSM10!®".

#### LiSM10!®

ILSI Japan CHP developed "LiSM10!®" (Lifestyle Modification) that supports improvements of risk factors of lifestyle-related diseases of employees in **worksites**. This program focuses on health promotion for physical activity and dieting after medical check-ups in worksites.

"LiSM10!®" consists of 1) Individual objective setting and recording implementation. 2) Individual and periodical counseling by professionals to support individual program for 6 months, and 3) Support programs from worksites and families of individuals.

#### TAKE10!® for the elderly

Aiming to support "Healthier longevity" among the elderly and to reduce costs of the national health care program, ILSI Japan CHP developed TAKE10!® for the elderly. The program is featured by effective and unique combination of **appropriate physical activity** and **proper dieting habits**, which is different from conventional programs for preventing lifestyle-related diseases of adults.

Since 2014, Iwakuni City Council of Social Welfare started offering the Elderly Assistant Training Course for citizen volunteers, as "Academy of Iwakuni Mutual Assistance Network", authorized by the Iwakuni City government. We held the "TAKE10!® Leader Training Course" for those who wanted to take the step-up training class after finishing the basic classes.

We have conducted training for TAKE10!® leaders in Nishiki-cho, Iwakuni City since 2010 under the auspices of Iwakuni City Council of Social Welfare. Since that received a favorable reception, they wanted to expand the scope to the whole city starting from this year. In December 2014, 31 students eagerly participated in the 6-day training course with the goal of starting care prevention classes for their own local communities. Course evaluations showed that the students were very satisfied with the content of the lectures in terms of ease of understanding. Also they had confidence in passing along the content to others, especially in terms of eating habits, where 82% of them were confident. Following the training course, participants have been working on holding regular study sessions locally and are expected to play further active roles in their communities. We plan to conduct the second TAKE10!® Leader Training Course in August 2015.



### TAKE10!® Up To Now

An intervention study was conducted for 1400 elderly population in Nangai village, Akita Prefecture from July 2002 for one year. The study proved that TAKE10!® for the elderly can effectively be introduced to local communities and can improve regular physical exercise practices and dieting habits, maintain muscle strength and improve physiological functions.

The result of the study was reported at the Annual meeting of Japanese Society of Public Health in November 2004. Three national newspapers and eight local newspapers covered the study. More than 8,000 inquiries have been received, including inquiries from local government offices and organizations, and more than 20,000 copies of the booklets have been sold. Many lecture sessions by ILSI Japan CHP have been conducted.

The "Sumida TAKE10!®" program was started by Sumida Ward Government of Tokyo in October 2005. The program was conducted at six sites and included lecture sessions on the program and physical exercise practices.