

ERECON ANNUAL REPORT



Non-Profit Organization <ERECON>

Institute of *Environment Rehabilitation and Conservation*

1. Aims and programs of ERECON

Institute of Environment Rehabilitation and Conservation, called ERECON, is a non-profit international organization established in April 2000. ERECON shall aim to contribute to sustainable use of natural resources in Asian countries. Therefore, the organization shall pursue the environmental rehabilitation and conservation as well as the environmental education for the harmony between the agricultural and urban development and the natural environment.

- ERECON shall conduct the following non-profit programs.
1. Programs on environmental rehabilitation and conservation in Asian countries
 2. Programs on sustainable use of natural resources in Asian countries
 3. Programs on environmental education in Asian countries

2. Report of ERECON programs in 2010

Following programs were implemented in the program year of 2010 from April 2010 to March 2011.

1. Programs on environmental rehabilitation and conservation in Asian countries

1-1 *Encouragement Program on Rehabilitation of Soil Environment in Salt Affected Area of Northeast Thailand*

This program aimed to rehabilitate soil environment in salt affected area in Phra Yun of Khon Kaen province, northeast Thailand through applying agro-forestry systems and managing organic model farms. In 2010, fruit trees such as mangoes and rose apples were distributed for applying agro-forestry systems in the model farms.

1-2 *Program on Promoting Sustainable Agriculture in Bohol of Philippines*

Corella and Tagbilaran in Bohol province are located in the remote mountain areas, where local farmers conduct slash and burn shifting cultivation on deforested slopes (20 to 40 degrees slope) depending on rainwater. On cultivated slope land, massive loss of surface soil that contains abundant nutrients and organic matters occurs with heavy rainfalls. It results in deterioration of farmland quality. Therefore, effective and urgent actions to conserve and improve soil conditions are strongly needed.

This program aimed to establish sustainable farming system for conserving soil and water environment with local farmers. In 2010, the workshops on sustainable agriculture were held and pamphlets and posters were distributed.



Photo. 1 Program (1-2) conducted in Bohol, Philippines

1-3 *Program on Environmental Rehabilitation and Conservation through Reforestation of Mangrove with Local Group in Tsunami Affected Area in Southern Thailand*

Thung Rak village in Pang Nga province of southern Thailand was affected by Tsunami in 2004. Not only humans but also natural environment were badly damaged by Tsunami. So, this program aimed to rehabilitate mangrove forest through reforestation with Thung Rak tree planting group.

In the year of 2010, the workshops on environment conservation with reforestation were held for deepening the perception of local people on the functions of mangrove forest to

prevent disasters and to conserve ecosystem.

1-4 Program on Reforestation and Bridge Renovation in Thung Nang Dam Island, Thailand

Tsunami occurred in 2004 also damaged the bridge of Thung Nang Dam Island, where 114 villagers are living. As the bridge to the dock was broken, not only daily goods but also reforestation materials were not transported effectively in Thung Nang Dam Island. So, this program dealt with the renovation of the bridge in Thung Nang Dam Island as well as reforestation.



Photo. 2 Bridge renovated in program (1-4) conducted in Thung Nang Dam, Thailand

2. Programs on sustainable use of natural resources in Asian countries

2-1 Guidance of Sustainable Organic Agriculture and Reforestation for Local Farmers (Phase 4)

The sloping area in Nan province has been damaged by heavy rainfalls. The damage tends to be accelerated by deforestation and burning practices. For improving the situation, this program dealt with the conservation of natural resources through reforestation and sustainable agriculture based on organic farming systems.

In 2010, following activities were implemented in Pua, Chiang Klang and Bo Kluea districts of Nan province; promoting organic agriculture through agro-forestry, setting up the pellet compost center and conducting the workshops for local people to improve understanding of the importance of sustainable agriculture and reforestation.



Photo. 3 Pellet compost center in program (2-1) conducted in Nan, Thailand

2-2 Program on Natural Resource Utilization and Management through SATOYAMA Restoration in Rural Areas of Cambodia

In Kampong Cham, Mondulkiri and Battambang provinces of Cambodia, natural resources were badly damaged by illegal deforestation and land conversion for agricultural purpose. So, this program aims to promote reforestation for conserving soil and water environment as well as the sustainable use of natural resources through SATOYAMA restoration. Institute of Environment Rehabilitation and Conservation (ERECON) has been implementing this program under the collaboration with organization members of International Partnership of SATOYAMA Initiative; United Nations University, Institute of Advanced Studies (UNU-IAS) and Ministry of Environment, Cambodia (MOE).

Following activities were implemented in 2010; holding workshops and seminars, investigating natural resources, setting up tree nurseries, managing trees in the nurseries, conducting reforestation for SATOYAMA restoration and leader training, and distributing pamphlets for restoration of SATOYAMA.

2-3 Program on Capacity Building for Agricultural and Rural Development for Increasing Productivity and Farmers' Income

This program was conducted at Rong Kor village, Kampong Cham province, Cambodia for supporting the Japan Association for International Collaboration of Agriculture and Forestry (JAICAF). The program aimed to increase agricultural productivity and farmers' income through promoting organic agriculture and improving farming systems.

Through the implementation done by the experts, it was concluded that the introduction of organic fertilizer, especially composting and bio-pesticide making, was significant, as local farmers could reduce expenditures for chemical fertilizer and chemical pesticide.



Photo. 4 Program (2-2) conducted in Kampong Cham, Mondulkiri and Battambang provinces, Cambodia

3. Programs on environmental education in Asian countries

3-1 International Training Course at Northeastern and Southern Thailand for International Green Volunteers

This training course was implemented in Khon Kaen province of northeastern Thailand, where salt accumulation is a serious problem, and in Pang Nga province of southern Thailand, where mangrove forest was damaged by Tsunami. The training period was 8 days from 29 December, 2010 to 5 January, 2011.



Photo. 5 Program (3-1) conducted in Pang Nga, Thailand

In this training course, following activities were implemented; observing reforested area by Green Volunteers of National Land Afforestation Promotion Organization (NALAPO), planting trees with local groups, observing daily lives of local farmers in the village through home stay and discussing importance of reforestation in Thailand.

(Machito MIHARA)



3. Forefront of technology in organic agriculture

E.coli efflux from the fields applied immature fermented manure

Proper treatment of cattle manure should be considered from a viewpoint of organic agriculture. However, pathogenic bacteria known as *E.coli* in immature fermented manure may spread from farmlands.



Photo. 6 Cow manure gathered

This study aimed to investigate the characteristics of *E.coli* efflux under different stages of fermentation. Slope modeling experiment was conducted using an artificial rainfall simulator. Slope plots were filled with soil, and then fresh cow dung, 2 weeks fermented manure and 12 weeks fermented manure were applied on it as shown in Fig. 1.

Colonies of *E.coli* were evaluated in the laboratory. The analysis was carried out with the bacteria culture medium XM-G (Photo. 7).

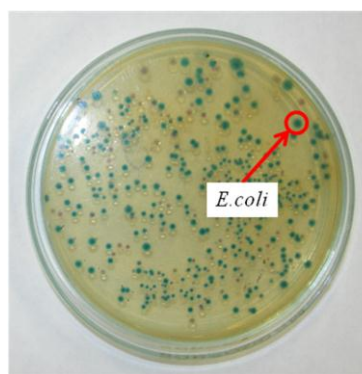


Photo. 7 Colonies of *E.coli*

On the basis of the results of slope model experiment, the amounts of *E.coli* efflux from cow dung was significantly higher than that from manure. However, there was no significant difference between the amounts of *E.coli* efflux from 2 weeks fermented manure and that from 12 weeks fermented manure as shown in Fig. 2.

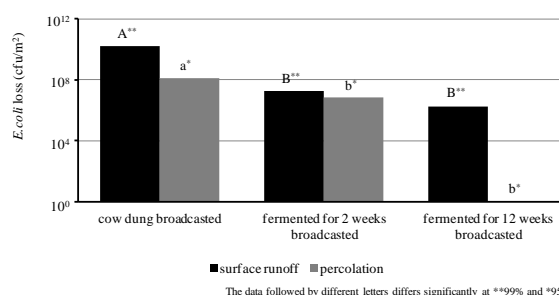


Fig. 2 Total discharge of *E.coli* from cow dung and manures

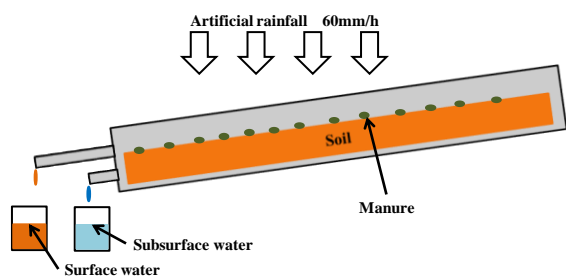


Fig. 1 Cross section view of slope model experiment

In addition, there was a tendency for the amounts of *E.coli* efflux by surface flow to be higher than that by percolation. It means that an attention should be paid to eliminate *E.coli* efflux by surface runoff especially in farmlands applying cow dung.

(Yuta ISHIKAWA and Machito MIHARA)

4. Report of the 2nd ICERD held in Phnom Penh

The 2nd International Conference of Environmental and Rural Development, ICERD, was held at Royal University of Agriculture, Phnom Penh, Cambodia, from 8 to 9 January, 2011. There were 67 presentations (21 for oral and 46 for poster) and 210 participants gathered for this conference.

This conference was organized by the International Society of Environmental and Rural Development (ISERD) and co-organized by the United Nations University, Institute of Advanced Studies (UNU-IAS), under the collaboration with Tokyo University of Agriculture (TUA), Royal University of Agriculture (RUA), Institute of Environment Rehabilitation and Conservation (ERECON) and Association of Environmental and Rural Development (AERD).

Institute of Environment Rehabilitation and Conservation (ERECON) has been taking a role of a secretariat of the International Society of Environmental and Rural Development (ISERD).



Photo. 8 The 2nd ICERD held at Royal University of Agriculture, Phnom Penh, Cambodia
(Sophea TIM)

5. Direction of ERECON programs in 2011

Since the establishment of Institute of Environment Rehabilitation and Conservation (ERECON) in 2000, ERECON has been conducting various programs for contributing to sustainable development in Asian countries, especially in Thailand and Cambodia for 10 years.

For celebrating the 10th anniversary of ERECON, the seminar was held at the memorial hall of the Parthenon TAMA, Tokyo on 13 November, 2010.



Photo. 9 Seminar for celebrating the 10th anniversary of ERECON at Parthenon TAMA, Tokyo, Japan

Under the chairman-ship of Prof. Dr. Machito MIHARA (Tokyo University of Agriculture / Director-General at ERECON), there were 3 presentations at the seminar. ‘Restoring SATOYAMA and Bio-diversity’ was presented by Mr. Yoshihiro NATORI (Nagao Natural Environment Foundation), ‘Role of NGO for Sustainable Social Development’ by Prof. Dr. Toichi MAKITA (Obirin University) and ‘Collaborating with Ancestors for Environmental Conservation in Rural Areas in Thailand’ by Dr. Takashi UENO (Secretariat-General at ERECON). It was a meaningful opportunity to feedback the last 10 years as well as to consider the next 10 years for ERECON.

Through ERECON activities for 10 years, we recognize that research activity is important and should be conducted before moving to the extension activity, as the technologies applying in extension activity should be suitable and adaptable for locals. Although ERECON has been collaborating with several universities and research institutes in Asian countries, these organizations cannot respond to the urgent request from ERECON. So, the Research Center is established in the Headquarters of ERECON.

In 2011, ERECON Headquarters comprises following 3 centers: Extension Center, Research Center and Administrative Center. ERECON Southeast Asia Office and Cambodia Branch keep the same functions as last year. (Machito MIHARA)

6. President, directors, advisors and officers in 2011

ERECON president, directors, advisors and officers in 2011 are as follows.

1. President

MIHARA Machito, Dr. PD.

Professor at Tokyo University of Agriculture, Japan.

2. Directors

YASUTOMI Rokuro, Dr.

Professor Emeritus at Tokyo Univ. of Agri. and Tech., Japan.

YAMAJI Eiji, Dr.

Professor at The University of Tokyo, Japan.

MAKITA Toichi, Dr.

Professor at Obirin University, Japan.

TAKEUCHI Yasushi, Dr.

Professor at Tokyo University of Agriculture, Japan.

UENO Takashi, Dr.

Secretariat-General at Asian Network for Sustainable

Development

3. Advisors

NGO Bunthan, Dr.

Rector at Royal University of Agriculture, Cambodia.

SOMBATPANIT Samran, Dr.

Past President at World Association of Soil and Water

Conservation.

4. Officers

In 2011, there are 12 officers of full-time or part-time implementing the various ERECON programs under the collaboration with 15 registered Experts of International Environment Cooperation.

7. Information

1. ERECON membership

The organization shall comprise following members; regular, international regular, associate and organization members. Regular members shall receive 2 ERECON Newsletters written in Japanese by mail and more than 50 of ERECON News by e-mail. Also, international regular members shall receive an ERECON Annual Report written in English and decades of ERECON News by e-mail. All members can join ERECON programs.

1-1 Regular members

Persons and organizations that agree with the aims of ERECON and promote international environment cooperative activities in Asian countries including Japan.

1-2 International regular members

Persons and organizations that agree with the aims of ERECON and promote international environment cooperative activities in specific country of Asia. The persons and organizations staying in Japan cannot be an international regular member.

1-3 Associate members

Students who agree with the aims of ERECON and promote international environment cooperative activities only in Japan.

1-4 Organization members

Organizations that agree with the aims of ERECON and support ERECON international environment cooperative activities in Asian countries including Japan.

At present, there are 113 regular members, 22 international regular members and 14 associate members in ERECON.

2. ERECON scholarship

2-1 Objectives

The ERECON scholarship aims to support financially the young people, who has a strong will to promote environmental rehabilitation and conservation in Asian countries through ERECON activities. The objective and planning of the research traveling or the studying abroad should be in the field of environmental rehabilitation and conservation.

2-2 Application

To apply for the ERECON scholarship, please submit an application form, C.V., a graduation certificate and a transcript of GPA.

2-3 Selection

The committee in ERECON selects a few fellows being eligible for scholarship based on the following.

- 1) Ability and potential to promote environmental rehabilitation and conservation in Asian countries
- 2) Major and grade obtained. Basically GPA should be higher than 3.00
- 3) Past work performance in ERECON at least for a year

3. ERECON awards

Two kinds of awards are granted by ERECON. Member can be award candidate by submitting the reports of one's activities. Please don't hesitate to contact us.

3-1 Scientific Award of Environmental Agriculture

This award is given to scientists, who are conducting researches for environmental agriculture.

3-2 Technical Award of Environmental Agriculture

This award is given to farmers, engineers and technicians, who are conducting activities for environmental agriculture.

In 2010, ERECON granted the Scientific Award of Environmental Agriculture to Prof. Dr. Akimi FUJIMOTO of Tokyo University of Agriculture and the Technical Award of Environmental Agriculture to Mr. Chea HEM of Wat Chas village, Kampong Cham province, Cambodia.

4. ERECON books

The book titled 'Environmental Science of Water' was published in April 2004. This book written in Japanese is the 1st book published by ERECON. The price is 1,500 yen including tax.



Photo. 10 ERECON book titled 'Environmental Science of Water'

In November 2004, the book titled 'Participatory Strategy for Soil and Water Conservation' was published as a result of the international symposium organized by ERECON and co-organized by UNU, JICA et al. The book is written in English and its price is 3,000 yen including tax.

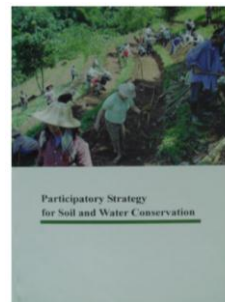


Photo. 11 ERECON book titled 'Participatory Strategy for Soil and Water Conservation'

Also, the book titled ‘Sustainable Agriculture with Organic Fertilizer’ was published in December 2007. This book was written in 4 languages, English, Thai, Khmer and Japanese.

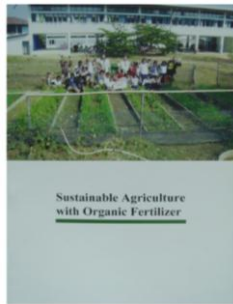


Photo. 12 ERECON book titled ‘Sustainable Agriculture with Organic Fertilizer’

In November 2010, the book titled ‘Guidebook of International Environment Cooperation’ was published for celebrating the 10th anniversary of ERECON. The price of the book written in Japanese is 1,500 yen including tax.



Photo. 14 ERECON book titled ‘Guidebook of International Environment Cooperation’

In April 2009, the book titled ‘Sustainable Farming Practices for Environmental Conservation’ was published. The price of the book written in English is 1,000 yen including tax.

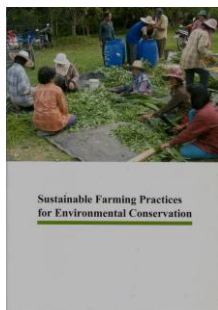


Photo. 13 ERECON book titled ‘Sustainable Farming Practices for Environmental Conservation’



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