Report of ERECON Extension Programs in 2021

Following extension programs were implemented in the program year of 2021 from 1st April 2021 to the end of March 2022.

1. Program on Environmental Rehabilitation and Conservation in Asian Countries

1-1 Project of Reforestation for Sustainable Forest Management in Kampong Cham Province, Cambodia (Phases 2 and 3)

The local residents in Kampong Cham Province have faced hardships with climate change impacts such as droughts and flooding because of low-density forests. This project aims to promote reforestation activities in pagodas and elementary schools with local residents. It is expected to contribute to the conservation and management of the forest for promoting an objective of "Sustainable Forest Management" in SDGs No.15. The reforestation activities were conducted at two elementary schools in Stung Trung District in Phase 2, and at public lands around the lake in Prey Chhor District in Phase 3. Also, the workshops on "Importance of forest" were held for the local residents, who formed a forest management group for managing and monitoring the planted trees in the area.



Photo. 1 Reforestation activity in Kampong Cham Province, Cambodia (Project 1-1)



Photo. 2 Group activity in Mondulkiri Province, Cambodia (Project 1-2)

1-2 Project on Greening for Satoyama Regeneration in Eastern Cambodia (Phase 1)

In Mondulkiri and Kratie Provinces, biodiversity has been severely damaged due to deforestation and forest degradation caused by land conversion and illegal deforestation. Local residents have interests in sustainably managing the forest; however, the knowledge and techniques are minimal. This project provides the local residents the opportunities for reforestation activities to recover biodiversity and workshops for deepening knowledge and technique on sustainable forest management and environmental conservation. The reforestation activities were conducted at Doh Kromom Village in Mondulkiri Province and Snoul Ker Pagoda in Kratie Province. As local forest management groups were formed in each area, the groups have been managing the planted trees.



Photo. 3 Workshop on plant propagation in Ratanakiri Province, Cambodia (Project 1-3)

1-3 Strengthening National Biodiversity and Forest Carbon Stock Conservation through Landscape-based Collaborative Management of Cambodia's Protected Area System as Demonstrated in the Eastern Plains Landscape, CAMPAS (Phases 5, 6)

In Mondulkiri and Ratanakiri Provinces of Cambodia, this project has been implemented to establish the system of community-based forest management and rehabilitation in community protected areas (CPA). In 2021, a series of workshops such as "seed storage", "seedling management", "seedlings' pest and disease management" and "plant propagation for commercial products" were conducted in the project areas of CPAs to enhance community awareness and understanding of reforestation and habitat restoration. Native tree seedlings produced by local communities were planted for rehabilitating the degraded areas and creating the agro-forestry farms. After reforestation, CPAs members have been maintaining and monitoring the planted areas, especially in the dry season.

1-4 Project on Promoting Reforestation for Rehabilitating Rural Environment in Kampong Cham Province, Cambodia (Phases 1 and 2)

In Kampong Cham Province, Cambodia, 10,000 native tree seedlings were planted in 10 districts in collaboration with 513 local residents aiming to restore the environment of rural areas for future generations. In addition, workshop on "Importance of Forest and Biodiversity Conservation" was conducted for local residents. The planted sites are being managed by Forest Management Group formed by local residents, who plays a central role in forest management. Based on the questionnaire survey conducted to local residents, around 65% of local residents understood what they learnt in the workshop and more than 90% were aware of how significant for themselves to be involved deeply in forest management in their community. The results testified the importance of continuing the environmental education through tree planting activity at the grassroots level. In February 2022, university students from Japan and Cambodian students participated in volunteer activities to support reforestation, too. In Phase 2, reforestation activity is continued and expanded in collaboration with local residents in 10 districts in Kampong Cham Province.



Photo. 4 Reforestation activity in Kampong Cham Province, Cambodia (Project 1-4)

1-5 Project on Promoting School Environment Greening aiming for Forest Environmental Education in Thong Khmum Province, Cambodia (Phase 1)

In Tbong Khmum Province, mixed deciduous forest being the treasure trove of biodiversity has lost significantly due to huge land conversion mainly to rubber plantation. Also, there are few educational opportunities provided to local students and residents for improving their knowledge and deepening their awareness on necessary for conserving the local forest. Environmental education is needed for children in order to strengthen the foundation for continuous forest conservation in the region. Therefore, the project promotes greening primary school environmental education to local students and residents. Additionally, the workshops on "importance of forest and biodiversity conservation", the competition on "forest management" are held at each school.



Photo. 5 Land survey before reforestation in Tbong Khmum Province, Cambodia (Project 1-5)

2. Program on Sustainable Use of Natural Resources in Asian Countries

2-1 Project on Capacity Building and Women's Empowerment of Agricultural Cooperative through Production and Sales of Safety Agricultural Products by Promoting Sustainable Agriculture in Sre Santhor District, Kampong Cham Province, Cambodia (Phase 1)

Local farmers in Srei Santhor District have been struggling to find markets to sell their crops due to agrochemicals contamination, and their livelihood is at risk in terms of the environment. For those reasons, this project aims to promote sustainable agriculture to local farmers, particularly the Agricultural Cooperative (AC) members in Srei Santhor District, and build women's capacity to sell their safe agricultural products at better prices through their AC. During the program year of 2021, a series of workshops on sustainable agricultural practices were delivered to the local farmers, and the number of participants increased to 199 in total. In addition, the Srei Santhor Agricultural Cooperative has been officially acknowledged by the Ministry of Agriculture, Forestry and Fisheries (MAFF), and the collecting and shipping center has been established.



Photo. 6 Workshop on sustainable agricultural practices in Sre Santhor District, Cambodia (Project 2-1)

3. Program on Environmental Education in Asian Countries 3-1 Internships and Trainings for Environmental Education

ERECON has been accepting some volunteers and interns every program year, and offering internships or trainings using various facilities such as training farms or seminar rooms in ERECON Headquarters. In the program year of 2021, one Cambodian trainee and 11 Japanese students were accepted and taking internships and trainings on the environmental rehabilitation and conservation as well as the natural resources utilization for raising their awareness on importance of natural environment and international cooperation.



Photo. 7 Internship on managing the training farms in ERECON Headquarters (Project 3-1)



Photo. 8 ESD training in Kampong Cham Province, Cambodia (Project 3-2)

3-2 ESD Training through Reforestation in Cambodia

As a part of "Project on Promoting Reforestation for Rehabilitating Rural Environment in Kampong Cham Province, Cambodia (1-4)", two ESD trainings were conducted; one was online in August and the other was face-to-face on site for 8 days from 14 to 21 February 2022. Totally 14 students from Japanese university and 19 Cambodian students from the Royal University of Agriculture participated in both trainings as volunteers to support reforestation activity in Kampong Cham Province, Cambodia. Especially in the face-to-face training on site, every trainee could cumulate meaningful experiences through conducting reforestation activity, visiting rubber and cashew farms and bamboo bridge, etc. with deep perception of the importance of conserving forests as well as natural environments. **3-3 Seminar on Effects on Climate Change on Agriculture and**

Local Adaption

As a part of "JICA Training on Agricultural Policy" held from 13 to 23 December 2021 for the governmental officers of Bangladesh, Indonesia and Nepal, ERECON provided the seminar titled "Effects on Climate Change on Agriculture and Local Adaption". Although agriculture is strongly affected by climate change, it is also a major source of greenhouse gas (GHG) emissions, and estimated around 20% of global greenhouse gases (GHGs) are from agriculture. Accordingly in this seminar, "negative effects of climate change on agriculture" as well as "greenhouse gas emissions through agriculture" have been focused. In addition, it was described local farmers adaption of sustainable farming practices, such as no-till, cultivating nitrogen-efficient crop varieties, integrated soil fertility management, natural control of pests, and water harvesting including effective irrigation are vital.

(Kumiko KAWABE and Keiko AOKI, Extension Center)