

usually planed the contents, and village headmen or religious leaders passed on “limited information” through “limited routes” to local residents. Based on reflection on this practice, this project, putting advertisements on bulletin boards and through other media, called on local residents to participate with the catch-phrase “anyone can join”.

Development officers of agricultural extension, forestry and social development stationed in various areas served as lecturers and instructors. People of all generations from children to adults – even a woman carrying a baby on her back – gathered and attended training courses on, for example, forestation, cultivation of fruits and vegetables, measures against soil erosion, and business management. In Malawi, a mere 30 percent of boys and girls could manage to graduate from elementary schools. In such educational situations, an opportunity to learn was, itself, very precious. Things necessary for training were all come by in the villages. This “handy” training program was a technique developed in an “Integrated Community Forest Development Project in Senegal (PRODEFI)”, where JICA sought for sustainable management and use of resources on the initiatives of local people.

Mr. Madalitso Lipenga, an agriculture extension development officer (AEDO) in charge of 17 villages, said, “So far, we had no transportation, and had difficulty in giving instructions, monitoring and conducting all kinds of activities. Thanks to the Project, we got motorbikes, and are now able to visit the villages at least once a week or every two weeks.” These AEDOs held meetings twice a month with JICA experts and local staff members of the Project to discuss the schedule, contents, achievements and various other things of the training program.



Mr. Peter Chabwera of Chiwalo village checks on a beehive. “We’d like to expand our activities so that everyone in the village can benefit”, he shows enthusiasm as a lead farmer (in charge of forestation).

### What Are the Real Needs? – Bold Revisions to the Plan

In early 2009, the Project reached a turning point. Mr. Sato said, “we initially focused our activities on the ‘regeneration of forests’. However, having conducted surveys on the status of land use and hearings to local residents, we learned that their urgent priority was to secure everyday foods, rather than the loss of trees”. Because of soil erosion in farmlands, they could not have sufficient harvests. And, they would be able to increase them with appropriate measures... “I have realized that, if they understand this fact and come to be able to secure

their living on their own efforts, measures against soil erosion will produce the effects much earlier than expected.” Accordingly, he decided to focus the objectives of the training on “prevention of soil erosion”, expanding the coverage from seven to 50 villages.

In addition, a system of “lead farmers” was newly adopted. Lead farmers were persons who were selected from persons in the villages to have responsibility for the training. They were given instructions by AEDOs, and then served as lecturers/instructors of training courses held in the villages where they lived. Mr. Enock Maloya, village headman of Mtema village, also gave the boost and said, “lead farmers are members of the



Mr. Peter Chabwera of Chiwalo village checks on a beehive. “We’d like to expand our activities so that everyone in the village can benefit”, he shows enthusiasm as a lead farmer (in charge of forestation).

village. They’re very reliable in that they come straight to us if there is something wrong, and can solve the problem”. The village, where some 200 households resided, suffered from a sharp decline in yields due to soil erosion. However, some farmers, having learned the method of contour cropping in the training program and putting it into practice, succeeded in increasing the yield of corns by five times. Mrs. Cecilia Alfazema, a lead farmer (in charge of measures against soil erosion) showed enthusiasm and said, “The houses become full of corns at harvesting time. I would like as many people as possible to join the training for the growth of our village”.

“How could we have them join us – that was the biggest challenge”, said Mr. Suwed Yamu, group village headman of Kumponda village, who had enthusiastically promoted the training with “full participation”. He organized briefings in collaboration with lead farmers and patiently persuaded the people to join, showing them successful cases in the past. “The obvious achievement that the yield increased so much is the motive for us to take action”. Hiroyuki Kanazawa, a JICA expert, noted his observation that “the key to success, among other things, is to build sound relationship of trust between lead farmers and AEDOs. They are creating a mechanism, whereby they themselves find and solve problems”.

### Never-Ending Challenges and the Role of “Outsiders”

Guided by Ms. Emily Sungeni, female village headman of Chiwalo village, I arrived at a place where a large beehive was hanging from a tree. The project also promoted beekeeping as a means to increase incomes. She happily said, “we learned everything from scratch. How to make beehives, how to collect honey, and how to process it...now, many people say that they want to buy our honey”. “Actually, I also buy honey in this village every year”, said Mr. Sato. He was attracted to the sweet and rich taste of the honey made in this village. “Beekeeping requires flowers as a source of honey and the shade of trees to hang beehives. People here now recognize the importance of trees and commit themselves eagerly to forestation activities”. Some villages were beginning to show interest in beekeeping after having learned about the reputation of this village.

These local people would never stop challenging. They started direct seeding, a cropping system to sow seeds directly in forested sites, without growing seedlings in advance. The purpose was to save time and effort to grow seedlings, but it was fairly difficult to keep seedling survive in the first dry season in a region with little rain. However, in the forestation site of Kantumbiza village, the seeds planted four months ago grew to young trees of 20 cm high. “I’m concerned about water

shortage since the dry season will soon come”, said Mr. Kananji Matiasi, a lead farmer (in charge of forestation). He held in his hands a shabby notebook. “I take notes of things I’ve learned in the training program and keep a record of the survival rates and the growth of trees we have planted”, he added. People here took full advantage of things they learned and were determined to continue the activities even after the Project ended. He looked so dependable.

This year, the training programs were scheduled to be put into practice in 243 villages. “What we can do is to teach people in villages different and easier methods and present them options. I believe that that is our role, ‘outsiders’ role””, said Mika Kawamoto, a JICA expert. JICA were there to make arrangements to motivate local residents of as many as 25,000 households, support them from behind the scene, and warmly watch them.

Walking around villages in Malawi, I realized that there was nothing artificially manufactured. It was a realm where one could feel that human beings were kept alive by the nature. It might not be surprising for them who were born and bred in such environments to strive for harmonious coexistence with the nature. In a country in Africa far away from home, I felt that I saw the origin of community forestry.



The notebook of a lead farmer full of memos is dirt with soil and sweat.



JICA experts Kanazawa (right) and Kawamoto participate in a regular meeting with AEDOs. They advise the AEDOs to promote their activities.



The partnership of group village headman Yamu of Kumponda village (left) and the two lead farmers in charge of measures against soil erosion (right) are particularly solid. “I hope that many more people will follow these two farmers to enrich the activities”, says the headman.



### Forests, a Means of Living, under Threat

Nepal – a country commanding the Himalayas and its most famous mountain peak, Mount Everest, attracting tourists from all over the world with its notable trekking courses. In this country, some 70 percent of the total population resided in mountainous areas, and forests serves as indispensable resources for their life as wood fuel, timber and livestock food. Thus, in this country, a system to make use of forests while conserving them at the same time exists since the 1980s. Under the system, people made it a rule to cut trees for wood fuel only once a month, and never use timber for commercial purposes. It was not too much to say that they had been committed to community forestry more actively than any part of the world.

However, because of the prolonged conflict, it is becoming difficult to protect forests with the system only. There are an increasing number of forests of “telephone poles” – that is, trees whose branches were all cut off, since it was not banned to do so – and whose trunks alone remained standing. When it rains, falling drops hit the surface directly, washing away nourished soil. In many villages, it was difficult from the beginning to maintain and manage stepped rice paddies and other farmlands due to the depopulation caused by the emigration of workers and the internal conflict. Deforestation, a drop in the productivity of farmlands, and soil erosion deprived local people of income resources and forced them to give up their homeland, which again made it more difficult to manage forests. It was a vicious circle.

For thorough forest conservation in such mountainous areas, it was essential for local residents to break out of poverty, that is, to find ways for a better life. In 1994 – 2005, JICA implemented a “Community Development and Forest / Watershed Conservation Project” in hilly terrain areas of the western and central part

of Nepal. As a result, a “SABIHAA model”\* was established, which sought for conservation of forest resources and at the same time the development of villages in a resident-preparatory approach. Moreover, in order to make the model popular in wider areas, it was found necessary to cooperate with community organizations, the Ministry of Local Development which supervises the development committees of districts and villages, and the Ministry of Forests and Soil Conservation in charge of managing forests across the country so as to strengthen both the system to disseminate the model and the capacity of the staff members concerned. In line with this, in 2009, JICA commenced a “Participatory Watershed Management and Local Governance Project”.

### Support to Local Residents’ “Power to “Act on Their Own Accord”

“In the SABIHAA model, with support from the development committees of districts and villages, residents’ groups called ‘WCCs, or Ward Coordination Committees’, will be organized by dividing one village into nine wards. It is important for local people themselves to find their own needs voluntarily”, said Koji Terakawa, a JICA expert (from Sanyu Consultants Inc.) serving as a chief advisor. Local residents in each WCC plotted various resources on the map, drew up a resource management plan, and proposed activities to perform. Then, the Project offered funds and technical instructions. “Although there are a variety of needs of local residents, the Project focuses on activities such as slope protection, prevention of mudslides and land restoration”.

A problem of water contamination in the water-supply system was raised in a village. A survey found that turbidity was attributable to a mudslide which occurred near the water source.

“Then, how about arranging stones to prevent earth and sand from pouring in?”

Following this suggestion from local residents, the Project provided the fund of 640,000Rp (approx. 80,000 yen) for the procurement of cement and other materials. In addition, when necessary, development officers in charge of soil conservation assigned to each district gave technical advice.

As in this case, the Project made it a rule that local residents themselves would identify problems and take the initiative in solving them. In Nepal, where the caste system still remains deeply rooted in society, it was vital to incorporate in the Project females whose social status was particularly low, as well as people of the low social status in the caste system. In this



The POWER activity aims to provide females with beekeeping skills as a means of earning cash.

regard, the Project launched an activity called “POWER” addressed to female groups, whereby financial supports of 16,000Rp (approx. 20,000 yen) each were provided to those groups who proposed voluntary activities for the purpose of improving their incomes. The POWER offered the opportunities to earn cash through giving females instructions on the methods of cultivation of vegetables and fruits such as ginger which can grow in mountainous areas, beekeeping, and breeding of goats. Only with these efforts, full participation of local residents including those of the low social status could be realized.

Mr. Terakawa himself was committed to the coordination among the parties concerned, so as to establish a “system” whereby this model would be settled in Nepal and made use of in many mountainous areas. “There are so many government ministries, agencies and outpost agencies involved in the projects, and so many villages to be covered, that is, 34 villages and 306 wards, that it is quite difficult to coordinate and share information among the parties concerned. Still, once the SABIHAA model is adopted and the assistance continues in accordance with the real needs of local residents, they will certainly gain confidence and believe that they can manage so long as they take actions”, he said.

Not just waiting for assistance, but “taking actions themselves” to improve incomes will serve as the first step to break out the vicious circle. This will undoubtedly lead to harmonious coexistence with forests without damaging their “lifeline” forests any longer.



A WCC, once organized, plots natural resources available in the community on the map to understand the current state. People in the WCC discuss and decide problems of the village and the specific solutions.



In a training session addressed to officers of the relevant governmental agencies, Mr. Terakawa (right) gives account of the methods of WCC management and facilitation.

from **NEPAL**

## Energy of Local Residents Saves Forests

In mountain villages in Nepal, which command the Himalayas, quite a few people still live in poverty. The disputes and depopulation lowered the “quality” of forests; people left behind were unable to take advantage of benefits from forests, and trapped in a vicious circle of poverty. In order for local residents to protect forests voluntarily and seek for a better life... JICA strives to create and promote a new mechanism to manage natural resources.



Since many people are involved in the project, operation manuals for “SABIHAA model”\* in Nepalese are prepared to clarify the procedures.

\*Abbreviation of “community vitalization / forest conservation” in Nepalese





Cargo vessels pass through the openable lockage one after another in the Panama Canal.

### Extensive Slash-and-Burn Farming Spreads Concerns over Water Supply to the Canal

The Panama Canal serves as a key maritime trade route connecting the east coast of America and countries in Asia. The 80-kilometer ship canal is a key junction, where some 140,000 vessels travel each year. As the number of vessels passing through the canal increases, an extension work is planned to complete in 2014.

In recent years, however, there have been increasing concerns over the canal: the population in the watershed area has increased, and deforestation due to land cultivation and the fall in the ability of forests to nurture water resources have emerged as serious problems. The mountains near the watershed are water resources of the canal, and thus, a drop in the water-retaining capacity of the forests and a reduction in water supply to the canal would interfere with travels of cargo vessels of many countries. Such problems might eventually have negative impacts on the world's trading and economic activities.

As part of efforts to conserve the natural environment, Government of Panama designated in 1984 most part of the watershed of the Chagres River, including Alhajuela Lake, as national parks. However, local people had lived in the area before it was put under control of the government, and used the land in an "unsustainable" manner, such as extensive slash-and-burn farming, so as to secure farmlands in the situation with limited plain land areas. Under such circumstances, JICA conducted in 2000-05 a "Panama Canal Watershed Conservation Project in the Republic of Panama", and also launched in 2006 a "Project for Participatory Community Development and Integrated Management of the Alhajuela Lake Subwatershed". The Projects are aimed at securing stable water resources both in the Panama Canal and for the daily use and industrial activities by over 1.5 million residents in the outskirts of the capital, by promoting the forest management and "sustainable" use of land use by local communities in the watershed area.,

### Sustainable Use of Farmlands for A Bright Future for the Canal

Together with the provision of these practical agricultural techniques, the Project sought to promote environmental education and organization reinforcement.

"Basically, since people here are engaged in agricultural work with their families, they are not used to group activities. It was really tough to have them understand about sharing farmlands and farm supplies with neighbors, and engage in agricultural work jointly while learning necessary techniques", said Mr. Sakai. Because of this, he was delighted when they understood the benefits of cooperation with neighboring people and the sustainable use of farmlands.

"In some villages, local residents planned a model tour to promote eco-tourism activities as a new income resource. In the other, local residents tried to sell jams made from pineapples they grew. People were trying to unite with each other, suggest all kinds of ideas and motivate themselves for group activities", said Kotaro Mizoguchi, a JICA expert (NTC International Co., Ltd.). They succeeded because they had made steady efforts.

The Project would end in July. Mr. Sakai and other experts, with officers of the National Environmental Authority, drew up guidelines for the development officers in the hopes that people in Panama would continue the commitments, and that their case would be able to serve as a good reference for other parts of the country and other countries.

It might be a small step. But these continuous efforts would open the way for a bright future for the canal, the mainstay of Panama's economy.

## from PANAMA Protect Forests as Water Resources of The Canal

Located 14,000 kilometers away from Japan, Panama in Central America appears to many people a country far away.

However, for Japan, a big trading country, the Panama Canal sailed by many cargo vessels is indispensable. Water pouring into the canal is a blessing from the forests in the watershed area.

JICA has been long committed to conservation of these forests.



Mr. Sakai, JICA expert, (left) measures contours of the slope as part of advice on fruit tree plantations which can prevent soil flowage and produce the opportunity for cash earning.



### Transfer of Agricultural Technologies with No burden on the Environment

What does the "sustainable use of land" mean?

In the area where there were few plain lands, people traditionally adopted the traditional agricultural method of slash-and-burn farming, where they converted the slopes of mountains to farmlands and grew corns and rice. However, quite a few lands were poor from the beginning, so that they were obliged to give up their farmlands when their productivity fell, and burnt and created new farmlands. Since the lands were inclined, deforestation was likely to cause soil flowage. Thus, as a measure to prevent soil flowage, the project aimed to create terraced farmlands on the slopes and plant corns, rice and other crops, as well as trees which could be grown on slopes. If the trees bore fruits, they would become a new source of income.

JICA experts (NTC International Co., Ltd.) headed by chief advisor Isao Sakai visited villages around the watershed with officers of the National Environmental Authority, and held meetings to call on local residents to organize groups of 10 people or so. The purpose was to ask them to cultivate "group farmlands" and draw up plans themselves concerning how to use the lands.

The planning was assisted by development officers from the Authority who were in charge of giving villagers instructions concerning agricultural, forestry and various other techniques. They advised, for example, on measuring of landforms, and where to plan what kind of crops in accordance with the needs of local residents. After local residents decided on the kinds of crops and plantation sites, the development officers gave the local persons various "tips" concerning conservation of the environment: how to prepare ridges on the contour lines for planting; how to grow crops on terraced farmlands; and why they should plant orchard, coffee and other trees on inclined lands – that is because soil was easily drained on slope lands.



Corn planted on a burnt mountainside. When nutrients are depleted and lands become no longer usable as farmlands, they are converted to pasturelands. However, they are vulnerable to soil flowage and will never be made forests again.

The slope is cultivated to create a plain land like terraced paddy field, and plant leeks. The idea is to grow plants having effects to curb soil flowage on inclined lands.



Local residents prepare a map to draw up a plan of use of group farmlands, and discuss where to plant what.



# Sensitive to Changes in the Nature World!?

## What's this "green frog"?

Things we can do to protect vast forests... why don't we begin with changing our own lifestyle? In fact, there are quite a few goods around us which are manufactured in consideration of the natural environment. Among these are Rainforest Alliance Certified™ Products.

Haven't you ever come across a little green frog printed on the package of a product you pick up in a shop? This is the Rainforest Alliance Certified™ seal, an international NGO for forest conservation. The mark is granted exclusively to farms which have satisfied the Sustainable Agriculture Standards of Rainforest Alliance Certified™ concerning, for example, conservation of the natural environment, work environment with due considerations to human rights, and contributions to local communities.

The Rainforest Alliance Certified™ has been granted to coffee beans produced in the "Participatory Forest Management Project in Belete-Gera Regional Forest Priority Area" which JICA supports since 2003 in Ethiopia for the sakes of forest conservation and improvement in people's income. Certified products are imported to Japan and sold in the names of "UCC" (for business use) and "Seikatsu-no-ki (Tree of Life)" (for consumer use).

They say that frogs are very sensitive to changes in the natural world and disappear more quickly than any other animals if the environment has deteriorated. Allegedly, this is why a frog is chosen as a motive of the Rainforest Alliance Certified™.



The Rainforest Alliance Certified™ is popular in many countries in the world. Recently, an increasing number of businesses are dealing with certified products in Japan, too.



Unifruitti Japan Corporation, which has a license for trading "Chiquita" which is the world's leading brand of bananas and pineapples in Japan, deals with fresh fruits harvested in Rainforest Alliance Certified™ farmlands of its own in Mindanao, the Philippines. "Chiquita Bananas" (regular, medio, precious) and "Chiquita Precious Gold Pineapples" grown with natural fertilizer and pure spring in careful consideration of the natural environment are popular products throughout the world.



Over 100 years, the DAABON Group has been growing bananas in the Santa Marta region, Colombia. In 1990, the group turned to certified organic agriculture, and all its banana farms have been Rainforest Alliance Certified™ since 2008. The Daabon Group strives for the sustainable agriculture in consideration of conservation of biodiversity by, for example, maintaining buffer zones and creating wildlife corridors in the farmlands, which allow animals to roam through its plantations undisturbed. DAABON's bananas are loved globally for their refreshing taste with a good balance of sweetness and acidity.



Mos Burger is a hamburger restaurant chain popular among the people of all age groups. Although it is well known as "restaurants to eat in", in order to attract many more consumers to use their outlets as "café", the company started to offer coffee (premium blend coffee and premium iced coffee) with Japan's Organic JAS Certified and the Rainforest Alliance Certified™. The blend coffee made from beans from Columbia, El Salvador and Indonesia is popular also among genuine coffee lovers.



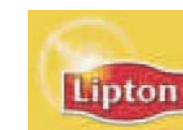
### UCC Ueshima Coffee Co., Ltd.

UCC is the leading company with the largest share of the coffee market in Japan. The company started the sales of organic coffee products in 1996, and the sales of Rainforest Alliance Certified™ coffee products in 2004. It offers a great line-up of products, including "regular coffee" (Mocha, original blend and Kilimanjaro) for general consumers available at local shops, and coffee and orange juice for business use.



### MORINAGA MILK INDUSTRY CO., LTD.

Morinaga, known for its milk products, is also enthusiastic to acquire the Rainforest Alliance Certified™. The "Mt. Rainier Double Espresso" series, Morinaga's standard line-up of chilled coffee products, are 100% made from coffee beans harvested in Rainforest Alliance Certified™ farmlands in Brazil. Coffee beans twice as many as ordinary coffee is extravagantly used, to present a rich, aromatic taste. "Lipton Extra Shot", available from April first in the metropolitan area, is another Rainforest Alliance Certified™ product.



Lipton is one of the oldest, most famous tea brands in the world. 50 percent or more tea leaves manufactured in the Rainforest Alliance Certified™ farmlands are used for the products called "YELLOW LABEL TEA" of standard flavor and "Flavored Tea" (apple, lemon, strawberry, peach, caramel and maple). The manufacturer plans to acquire the Rainforest Alliance Certified™ for all tea-bag products by 2015.



### Forest-Friendly Chocolates

There are some products manufactured in consideration of the natural environments other than Rainforest Alliance Certified™ products, one of which is Meiji "Agroforestry Chocolate" on sale from this spring. The nicely designed package is impressive, but the product itself receives attention as a "forest-friendly" chocolate bar. It is made from cacao grown, as the name suggests, with the "agroforestry" method – the method of using lands as farmlands while growing forests. JICA, committed to support for Japanese communities in Tome-Acu, a Japanese transmigration area in Amazon for over 50 years, has recently provided technical cooperation in the field of agroforestry. The cacao for this chocolate products is grown chiefly by Japanese Brazilian residing in the area. The products come in two flavors – milk and bitter. Available at convenience stores and other retail shops.



The little green frog can be also seen on the packages of Family Mart house brand products, "Ajiwai Famima Café" and "QUALITY" series. In order to deliver its motto "Touching People's hearts" to consumers, a Japan's leading operator of convenience stores has been committed to development of Rainforest Alliance Certified™ products since 2003. It seeks for "Satisfaction of the Heart" so that consumers can feel relaxed when they drink coffee which is natural and good for the body.

