Students Taking Action: A Local Approach to Solving Global Problems in the Food Area: Development of the Moringa Tree in Togo by Sud Nutrition

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Abstract

Sud Nutrition is a student association within the Polytechnic Institute of LaSalle Beauvais. This humanitarian association works in cooperation with a local community—the rural training center of Tami—in Togo in the field of nutrition. Sud Nutrition has already conducted several awareness campaigns since its creation in 2009, and it has implemented projects that continue to grow year after year. All these projects are undertaken with respect for the culture and traditions of community inhabitants.

Since 2009, the goal of Sud Nutrition has been to highlight some plants already present in Togo, but which are little used by people because they do not know all of the potential benefits.

Sud Nutrition works particularly with the Moringa tree, which has been introduced via the Tami 2009 project. This tropical tree is drought-resistant and grows rapidly. There is international interest in this tree among NGOs, researchers and the private sector. It is nicknamed "the miracle tree" because of its many properties.

First of all, analyses have shown that Moringa leaves are very interesting in terms of nutrition because they are richer in vitamins, minerals and protein than most vegetables. They also contain more protein and calcium than yogurt or milk, much more vitamin C and A than oranges and carrots, and contain eight essential amino acids. The leaves can be eaten fresh in salads or cooked in stew, soup, sauces, etc. They can also be dried and ground. The Moringa fruit can also be consumed. In traditional medicine, the leaves are used as to treat diabetes, vermifuge, skin disorders, and as a strengthener of immune defenses. The roots also contain a powerful antiseptic. In agriculture, the leaves provide a slurry used as a fungicide and fertilizer. The powder resulting from the grinding of its seeds can be used in water treatment. The powder dissolves and clarifies water by agglomerating all the impurities, which then settle to the bottom. Moringa seeds are therefore an alternative to chemical flocculants. Finally, oil from the seeds is used in the manufacture of cosmetics.

The Moringa tree deserves its "magic tree" nickname. It is essential to promote the cultivation of this tree with local people so they can take advantage of its many properties. However, the Moringa is not the only interesting plant in that area of Togo. The association is currently working with Mucuna Pruriens, a plant with very promising nutritional, agronomic and medicinal properties.

All the projects of Sud Nutrition are conducted in order to develop resources that are already present in Togo. For the students, it is a way to apply and transfer their knowledge. Thereby, they contribute to reducing malnutrition in Togo; this is a local approach to solving global problems in the food area.

Food Borne Disease among School Age Children in Bogor: The Role of Students in Facilitating Food Vendors and Children to Create Better Understanding

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Abstract

One of the most severe problems faced by school-age children in Bogor is food-borne disease. Data from Ministry of Health in 2010 show that one out of five children in Bogor can be considered susceptible to diseases such as diarrhea, typhoid, and food poisoning. School time is a vital period for children, because they spend some seven to nine hours daily at school outside the control of their parents. The core problem lies in the safety of the food consumed by these children. Street food dominates the children's consumption. In Bogor, it has been found that 25-50% of beverages sold by street vendors are contaminated with Salmonella parathypii A and other dangerous compounds, such as textile colorant (rhodamine B), as well as prohibited substances like borax or formalin, which are added to food as preservatives. In this case, the role of education is paramount to giving more insight to children so that they will be able to differentiate which food is good and which is not. Students from the Food Science and Technology Department at Bogor Agricultural University have established a program called "Food Warrior." This program consists of students who are willing to take part in combating bad practices among food vendors and educating school-age children about healthy and safe food. This is done through continuous socialization, campaigns, and fun learning. This program can be seen as a prominent element in sharing information among university students, food vendors, and students. It results in mutual understanding, and benefits can be achieved especially in terms of improving the quality of food sold around children, and alleviating cases of food-borne illness.

Key words: food-borne disease, school-age children

Raising Food Safety Awareness: What's in Your Mouth?

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Abstract

Due to the numbers of food-borne disease and food-related issues reported worldwide, consumer's attitude and confidence have begun to waver. Governments all over the world are intensifying their efforts to improve food safety. These efforts are in response to an increasing number of food safety problems and rising consumer concerns. In Malaysia, evidence of food poisoning cases can be seen in the incidence rate of 62.47 cases per 100,000 population in 2008 and 36.17 in 2009 (MOH, 2009, 2010). University Putra Malaysia (UPM) offers a wide array of opportunities for students to be actively involved in efforts to raise community awareness of food safety for better living. Actions taken focused on specific target audiences (kindergarten children, primary school students, vendors, and institutional students themselves), and provided specific steps and effective knowledge. A quantitative survey (n = 989) was conducted to determine the effect of those programs and consumer awareness during the time from purchase until the point they consume the food. Seventy five percent (75%) of respondents became more aware of food expiry dates, hand hygiene, the restaurants at which they eat, and food hygiene. Consumer education is a crucial element to decreasing food-borne disease and food poisoning. UPM students are well prepared to assist the public with educational materials and programs to promote food safety and hygiene related to the consumption of agricultural products. Surely, safety-savvy consumers can become combat-ready within the food safety circle.

Key words: food safety, awareness, community, poisoning, survey, student

Agriculture Student Participation Program: Extension for Food Security in Rural Communities of Mexico

Aldo Fabián GONZÁLEZ-CAMACHO

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Abstract

The concept of food security is defined as including both physical and economic access to food that meets people's dietary needs, as well as their food preferences. Food security is built on three pillars: food availability, food access and food use. Food security is a complex sustainable development issue, linked to health through malnutrition, but also involving sustainable economic development, the environment and trade (WHO, 2011).

Even though food production has greatly increased, many people around the world still suffer from hunger. In Mexico, 21.1% of the population did not have appropriate access to food in 2008. Rural households presented greater levels of infant malnutrition than urban households. Poor people in rural areas often depend on agriculture to survive, and self-sufficiency in food is a viable option for food security if some capabilities are developed.

The Agriculture Student Participation Program is an organization that combats hunger and malnutrition through local approaches. It consists of a group of Chapingo Autonomous University students that cooperate with low-income Mexican farmers and social organizations to improve food security via enhancements in agriculture, forestry, and livestock. The Student Involvement Program of the Chapingo Autonomous University is analyzed as a way of achieving food security through the development of capabilities in deprived rural Mexican communities. It was found that the program has a positive impact on food security.

Reducing and Recycling Campus Waste for Sustainability: A Case from Michigan State University

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Abstract

Founded in 1855, Michigan State University (MSU) has always prided itself on its "Go Green" attitude. Students and faculty are encouraged to "Be Spartan Green" through active participation in the sustainable initiatives that have been implemented since the new millennium. Of these initiatives, several have been student-driven. Two student initiatives in recent years have been the Student Organic Farm and improvements to the MSU Recycling Center, both of which have benefited not only the MSU community but also the surrounding area. Through partnerships with campus dining and residence halls, the Student Organic Farm and MSU Recycling Center have aided in reducing MSU's overall carbon footprint, and have led to increased awareness of the importance of reducing and reusing campus waste.

The Student Organic Farm, founded in 2001, stemmed from the ideas of several dedicated students and is entirely student-run. In the decade since, the farm has grown much larger and now supplies select vegetables to two dining halls on campus. In addition, this partnership fosters cooperation between students and staff, and benefits the Student Organic Farm as well, as it obtains compost generated from the food waste of students on campus. The MSU Recycling Center, which once only recycled white paper, cardboard and some types of plastic, has now transformed into a LEED-certified Materials Recovery Facility through the work of many loyal, hard-working students. These students wanted a better facility that could benefit students as well as the surrounding area. With the variety of items that are now accepted, recyclables from dining and residence halls are transported to the Recycling Center where the raw materials are compacted into bales. These bales are then sold for reuse in the production of new materials.

This paper and presentation will explore how these programs were initiated, how they have progressed, and what still needs to be done in order to successfully achieve a more sustainable campus, as well as how each program has benefited the surrounding community. This will be accomplished by analyzing the strengths and weaknesses of each program in order to show areas for improvement, as well as highlight the hard work and dedication of the many students who have participated in initiating change. As the world's population grows, a more sustainable global view on waste becomes more and more important, as this would lead to a decrease in the use of resources such as land, water, and fuel. Similarly, recycling of waste used in educational settings, such as paper, plastic, metal and even food products, would contribute to keeping our environment clean. We hope to share our lessons with other students, who then could take action and participate in reducing waste on a global level.

The Role of University Students in Promoting Wildlife-Based Tourism: A Case of Sokoine University of Agriculture, Tanzania

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Sokoine University of Agriculture

Abstract

Over 80% of tourism in Tanzania is wildlife-based, and is focused in national parks, game reserves, and the Ngorongoro Conservation Area. However, the performance of the industry has remained unimpressive compared to neighboring countries like Kenya. Despite its poor performance, the National Strategy for Growth and Poverty Reduction (NSGRP) recognizes wildlife-based tourism as a significant industry for environmental protection, poverty reduction and food security. The NSGRP is a medium-term mechanism to achieve the aspirations of Tanzania's Development Vision 2025 (TDV 2025) and the Millennium Development Goals (MDGs) of transforming Tanzania into a middle-income country. By recognizing the economic potential of wildlife-based tourism, the Government of the United Republic of Tanzania, in collaboration with development partners (DPs), has started initiatives to promote wildlife-based tourism and effectively manage the industry for sustainable development.

In this regard SUA students, as part of the larger community of public higher learning institutions in Tanzania through the association known as the Wildlife Student Association of Sokoine University of Agriculture (WISA-SUA), has been motivated to join government efforts to promote wildlife-based tourism. Overall, this paper describes student actions to promote wildlife-based tourism, processes, and approaches used by students, such as community awareness-raising related to wildlife-based tourism, and exhibitions. Other approaches include primary and secondary school student participation in tourism activities, and demonstrations related to the importance and management of wildlife-based tourism. This paper further illustrates the impact of students' actions in promoting wildlife-based tourism in the context of enhancing environmental management, poverty eradication, and household food security. In addition, the paper highlights the challenges faced by students in the process of accomplishing their actions. Last but not the least, the paper offers suggestions on how to improve students' actions to promote the wildlife-based tourism industry in Tanzania.

Key words: Role of university students, wildlife, wildlife-based tourism, Tanzania.

Student Activity on the Environment: Research Work on Bioremediation for Soil in the Uhaa Hudag Region, South Gobi Province

BATJARGAL Nomin Mongolian State University of Agriculture

Abstract

Mongolia is severely affected by global warming and the intense increase in mineral production. The combination of the vast mineral deposits in Mongolia, along with the process of intensive desert formation caused by global warming, creates a pressing environmental problem, especially in desert zone. In addition, mining operations have caused enormous damage to the environment via changes in the water regime and water contamination, which have incurred huge losses of pasture and meadow areas, destroyed many species of plants, made the soil unfit for use, and changed the landscape and the depths of the earth in a negative direction. All these show the urgent need for increasing biological remediation.

Preliminary research in the test area on soil structure, composition and fertility is needed to carry out the necessary biological remediation. A team of students together with professors from the chemistry and biology departments of the Mongolian State University of Agriculture is working to develop best practice restoration of soil and plants. We cooperate with "Energy Resource" LLC and conduct research at its test site.

The goal of our research work is, under natural and laboratory conditions, to determine the chemical composition of soil damaged by mining production, and choose the right vegetation seeds in order to promote biological remediation.

We collected soil samples at the test site and performed chemical tests on the spot and at our university laboratory. On the basis of our research we determined the properties of soil and other conditions of the surrounding terrain, and based on these results, selected appropriate plants for cultivation. For restoration, we chose suitable perennial plants, like *Stipa sibirica*, *Elytrigia repens*, *Psathyrostachys juncea*, and *Agropyron cristatum*.

Different Local Approaches to Solve One Global Problem: Chinese Students' Actions on Vegetation Protection

XU Xiangyu China Agricultural University

Abstract

Faced with today's serious environmental problems, people spontaneously form coalitions or associations to dedicate themselves to this issue. Besides those successful official and private organizations and associations operated mainly by elder adults, there are a great number of student environmental protection associations actively working in this realm as well. Although environmental problems are global in nature, they have regional characteristics because different areas differ in the climate, natural environment, level of urban development, composition of industry and agriculture, and so on, which leads to variations in local approaches in different regions to solve the same environmental problem.

As a typical example, China comprises a vast territory, whose different regions vary enormously from west to east, and north to south. Even though a decline in vegetation coverage is a national phenomenon, the reasons behind it are not the same in each province; methods of vegetation conservation carried out by student associations from different universities vary, as well.

This article will introduce some representative approaches and efforts carried out by student environmental protection associations of China Agricultural University in Beijing and some universities in different provinces, to show how they differ in methods of protecting vegetation but still achieve the same goal. The focus will be on ISF China and Green Vain of CAU, the student environmental protection associations of Xiamen University, Northeast Forestry University, and Inner Mongolia Agricultural University, and their respective local approaches to vegetation protection. The author will then analyze the merits, limitations, and significance of actions taken by students to solve environmental problems.

Key words:

Student association, local approaches, global problems, vegetation, region, environment conservation

Promoting Agriculture in Brazil by Its Reflection to the Whole Society

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Abstract

In 2011, ISF-Brazil analyzed Brazilian agricultural conditions on a local and national scale, and took actions in order to promote the importance of agriculture to different people. The main goal was to present how agriculture is expressed in our daily lives, and try to reduce the gap between producers and consumers using creativity and reflection. The ISF-Brazil group is engaged in exploring questions about food, energy, the environment, the connection between urban and farm areas, and sustainability. The first point was gathering the students from our own university together in order to raise those questions and hear different opinions. This would allow ISF-Brazil to achieve a richer and more pluralistic environment, learning from the differences and understanding the importance of agricultural diversity.

Considering the proposal of achieving ISF-Brazil's goals, the forum has been organized in weekly meetings with two different missions. The first one was devoted to exploring not only Brazilian and world agricultural issues, but also political and social questions. The second one was focused on realizing the importance of the first meeting's discussions, and to elaborate tools that will enable students to take action. The ISF-Brazil plan of action set out four main projects: (i) to promote lectures for land science students at the University of São Paulo, presented by professors and politicians who will talk about Brazilian governmental actions; (ii) to establish a project involving the city community to illustrate how agriculture is connected to our daily lives; (iii) to promote debates and lectures at a university in São Paulo city which is not directly related to land sciences majors; and (iv) to organize a challenging day by demonstrating a crop chain to teenagers, an interactive activity where they have to link industrialized products with the crops from which they come. Finally, ISF-Brazil desires to spread ideas and promote the importance of agriculture. We expect our local approaches to improve people's behavior in terms of agriculture, and to reduce the gap between producers and consumers. Therefore, people will be more concerned about the value of agriculture, and local approaches will be able to solve global problems.

Iskolars ng Bayan Taking Action: Empowered Youth as the Key in Combating Issues Encompassing Philippine and Global Agriculture

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Abstract

Agriculture has always been an important factor in the social and economic development of any country. However, there are various issues that are plaguing the global agricultural sector today. In this context, developing nations are the most affected because of their dependence on agriculture to meet their basic needs and provide livelihoods. Global organizations and institutions have already started implementing projects that can address these problems. The United Nations Food and Agriculture Organization and the World Bank are

The United Nations Food and Agriculture Organization and the World Bank are only some of the institutions that have teamed up to provide the necessary resources and methods to combat these problems. These organizations aim to heighten the global community's awareness and response to these agricultural issues, and they have taken a particular interest in doing so in the student youth population. They have also started various programs, such as the celebration of the International Year of the Youth, to emphasize the importance and advantages in collaborating with students to address social problems, most specifically in the field of agriculture. The International Fund for Agricultural Development, for instance, has teamed up with several agricultural youth organizations across the globe to raise the status of agriculture, and in the process to help solve other global problems, such as food security.

Filipino youth are no exception to this current global trend. With the country's current status of faltering agricultural production due to an increasing population, industrial conversion of agricultural lands, and environmental degradation, students are becoming more involved in finding solutions to remedy the situation in the local agriculture sector. This initiative was established by various activities and programs conducted by students from different colleges and universities across the country, particularly in the premier academic institution of the country: the University of the Philippines (UP). UP students are known for their intellect and compassion in helping communities, and they focus on these when they organize activities/programs that promote sustainable agriculture in the country.

One of the main UP campuses, Los Baños (UPLB), was actually founded as an agriculture-based college. Despite its expansion into a full-fledged university, it still conducts research and promotes innovation in agriculture, and is home to the world's leading agricultural research laboratory. Consequently, UPLB students are active participants in spearheading activities in agricultural development. They volunteer in community-based programs; conduct interactive agriculture competitions and quiz contests; offer symposiums, trainings and workshops for adults and students; perform small-scale community outreach drives; and participate in paper and/or project presentation summits about agriculture.

Filipino youth serve as a good example, for they exhibit perseverance in spite of being slightly disadvantaged. Although these student activities do indeed offer much promise for promoting change in the agriculture sector, youth on its own cannot fully make it a success. Youths need help from the older population and, most importantly, the government, to provide them with the necessary moral and financial support, as well as access to resources. Moreover, youths will also need the help of youth and elderly populations from other parts of the globe, and will need to help each other to achieve the goal of solving issues in global agriculture. If youths, and also those around them, sufficiently recognize their importance in the improvement agendas, then they will surely play a major role in the advancement of agriculture, not just in their local communities but also at the global level.

Directions in Sustainable Agriculture Development: Focus on Cooperatives

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Abstract

Recently, sustainable agriculture has become a topic of conversation around the world. Sustainable agriculture has influenced Korean agriculture, which has become a social issue via the FTA and WTO. Producing crops in Korea is less price-competitive than in other countries that feature mass production of crops. The idea that we should improve the quality of crops to achieve price competitiveness has led to eco-friendly agriculture, and this is consistent with the global trend toward sustainable agriculture.

Originally cooperatives were composed of the poor, like workers, small traders and peasants, but recently there are cooperatives which consist of various social and economic levels, such as consumer cooperatives composed of consumers. There are consumer cooperatives which have been established by Korean universities. "I-coop," one such consumer cooperative, is operated by KNU (Kyungpook National University).

School cafeterias run by i-coop serve foods at reasonable prices compared to other restaurants in the school area. I-coop directly purchases eco-friendly products in bulk from producers. With direct dealing, farmers' co-producing systems allow school cafeterias to provide food at a reasonable price. Farmers who run small-scale agriculture achieve price competitiveness through co-producing organic farming and technical improvement, as well as by cutting production costs, and installing and managing facilities together.

This paper attempts to identify the direction of development in sustainable agriculture, focusing on i-coop and agricultural cooperatives. First, by promoting awareness of the role of cooperatives to students and local residents, such as the consumer cooperative in the university, we should arouse interest in various cooperatives, and promote ethical consumption by local residents. Second, farmers should compete through cooperatives comprising farm-scale improvements in eco-friendly agriculture. Ultimately, the community has to create a win-win situation, through active connections between farmers and consumers.

Student Action to Promote Sustainable Agriculture at Royal University of Agriculture, Cambodia

Thira PINN Royal University of Agriculture

Abstract

The Royal University of Agriculture (RUA) is an agricultural university in Cambodia that offers undergraduate and graduate study in various fields, such as agronomy, animal science and veterinary medicine, forestry, fisheries, agricultural technology and management, agricultural economics and rural development, agroindustry, and land administration and land management. RUA also has a graduate school which offers agricultural study in the field of integrated management of agriculture for rural development, as well as natural resource management. Many courses in the curriculum focus on sustainable agriculture and rural development. Before graduation, each student is required to conduct a research thesis that can be either basic or applied research. Applied research explores current problems related to sustainable agriculture and rural development. Field studies on sustainable agriculture in rural areas are also conducted by students with particular focuses and areas of specialization in each faculty at the end of the second semester in the third year. In addition to writing theses, RUA students participate in groups-namely, the RUA National Scouts of Cambodia, and the RUA Red Cross and Volunteer Youth Network of ATM-that work in to promote sustainable agriculture and rural development. The groups have conducted various activities, such as composting, waste collection around the campus, rubbish bin installation, and vegetable gardening. The composting effort showed that this activity was a profitable way for students to support their groups; students themselves also better understand the process of composting. Awareness of sustainable agriculture development was obtained by students through actual practice in the field, particularly the vegetable garden. Based on these experiences, they are able to contribute to agricultural development and promoting sustainable agriculture, which are needed around the country in order to alleviate poverty and foster economic development.

Integrated Water Management as a Collaborative Approach to Improve Urban Water Systems: Challenges in the Case of Cusco, Peru

Jennifer van DIJK

Wageningen University

Abstract

As urban areas in developing countries are growing rapidly and becoming increasingly dynamic, continuous pressure is exerted on the distribution and quality of water resources. Rural-urban migration often leads to an uncontrolled development of squatter settlements in peri-urban areas without basic sanitary services. Also, due to deficient operation and maintenance of existing infrastructure, people are frequently faced with irregular water supplies and poor water quality for human consumption. The aim to expand the urban water supply and guarantee constant water distribution requires additional investment; however, financial resources and technical capacity are not always available. In addition, the fragmentation of current water management is caused by the existence of a patchwork of organisations where political dimensions also play a crucial role. The problem domain is defined by the urban water supply and distribution to different sectors in urban areas (e.g., water use for domestic/human consumption, recreation, industry and tourism).

This paper focuses on collaborative approaches in which all relevant actors of society are represented in the sound management of multi-purpose water use in an urban context. It highlights the importance of integrated water management as a strategy to fully comprehend the urban water system and view it as a complex process involving human intervention. Research was undertaken as a case study in Peru, in the urban areas of Cusco, a city of approximately 300,000 inhabitants, located in the Andean mountains. Quantitative and qualitative data were obtained from academic literature, official NGO documents, government institutions, and public and private companies. Field visits to (peri) urban communities and water collection sites (lakes and rivers), water treatment plants and other installations serve as complementary, empirical sources of information. Stakeholder frameworks are then built according to their necessities and characteristics, with a perspective of the urban water system as a causal chain influenced by these stakeholders. The paper successively identifies the main issues arising from the present state of water management and its possible causes. Finally, the author reflects on how a collaborative approach can generate opportunities for improving the urban water system. Key words: IWM, stakeholder frameworks, urban water systems, multi-purpose water use

Seaweed in Peru: Students Being Part of the Design and Implementation of Solutions in the Community

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Abstract

Peru has a complex system of ocean currents flowing far offshore along the coastline. The influences of these currents and the tropical water masses from the western Pacific region are responsible for several marine regions along the Peruvian coast, which leads to great diversity in fauna and flora. For instance, Peru has approximately 280 species of seaweed that have been recorded. Amongst these, *Macrocystis* and *Lessonia* are the most common in cold waters.

We focused our study on the community of San Juan de Marcona, in the region of Ica, Southern Peru. Their marine wealth makes them a big natural refuge for marine life, especially seaweed, all of which grows naturally. That is, they only use seaweed brought naturally to the shore by the sea. However, some marine areas have been damaged by waste dumped in the sea by a mining company. As a consequence, the community of fishermen has developed ecological awareness of their resources.

Creating business with this resource has become a problem because tons of seaweed are being sold like raw material, without added value. Fishermen with poor working conditions do not have enough knowledge of its importance as an economic resource. Fishery engineering students have the capacity to create and implement solutions for the community, sharing knowledge and experience. Furthermore, these studies could be useful in the students' careers. Therefore, they could bring mutual benefits.

Our main goal is to be the first step for development, stimulating seaweed research by students and professionals who want to be involved; this kind of information will be fundamental to a good resource management strategy. Our group expects to develop a new perspective on seaweed issues, increasing the commercial importance of seaweed not only as a raw material, but for the production of polysaccharides like alginates, carrageenans, mannitol, and human consumption. We want to be an example for other communities and other groups of students. We want to show them what young people can do for their communities.

Students' Awareness of the Sustainability of the Ecosystem

NGUYEN Thi Xuan Huong

Hanoi University of Agriculture

Abstract

Climate change, which is the product of unsustainable development, has been impacting the whole world with its compound effects. Youth, the most vulnerable victims of climate change, therefore demonstrate intensive engagement and concern about it (World Youth Report 2010) via specific activities. Among youths, students' responsibility for the environment is expressed in scientific research and voluntary work. Along with that, the community is involved as a crucial component in realizing ideas and projects. At Hanoi University of Agriculture (HUA), student involvement in sustainable development is quite extensive, emphasizing improved crop performance, IPM, environmental conservation, and food safety, as well as voluntary work.

There are two projects that the author is part of that are related to implementing natural conservation: (1) application of sorghum (*Sorghum bicolor* L. Moench) for bioethanol production, and zinc and iron nutrients in the human diet, and (2) a community house for the Red Dao people (Ta Phin – Sapa – Lao Cai – Vietnam), which aims to conserve the local climax of herbal baths, as well as exerting a pull on ethnic minorities to stop stalking tourists to sell handicrafts. All in all, each project will solve different problems related to climate change but collectively they support sustainability.

In order to achieve these goals, intensive work on sorghum breeding and surveying has been conducted under Project 1, which is expected to lessen nutrient shortages and gradually reduce the use of fossil fuels.

The second project features cooperative collaboration between local people, architects, agronomists, ethno-botanists and artists for fundraising and designing the house and surrounding landscape. If the project is successful, the ethnic minorities in Ta Phin will experience a more stable life, thus becoming a good example of organized production, trading, and conservation of local customs for other places.

However, a large number of Vietnamese students are shy and not very active, as a consequence of lacking chances to work in international environments. Therefore, cooperation at both institutional and national levels is necessary for better results. Any activities, such as student exchanges, technology transfer, joint projects and seminars will offer students chances to learn from each other and provide a multiple perspective for participants in similar situations in other countries. Should it be possible, the author would love to see future CIEPs with more participating universities, to be held in different sister institutions every year, all for the above purpose.

Student Engagement to Improve the Situation in Local Communities – An Example of Students of Agriculture/ Germany

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Abstract

Food, environment and energy are the most urgent topics in today's society. Students of agricultural universities will have to deal with these questions when they start their professional lives. As members of society, however, these questions are already of importance in students' lives. Solving global problems is only possible by starting interaction in the smallest units. This paper demonstrates ways that students are engaging in order to contribute to improvement in these areas.

How can students improve and influence the food supply, environment and energy supply? The following shows three different approaches taken by students. First, they take action in the framework of their studies. Second, they are engaged in student associations. Third, they get involved with non-university organizations.

- 1. In the framework of their studies, agriculture students have the opportunity to work with projects on farms. University projects deal with on-farm problems for which students are asked to find solutions. These problems can touch different topics, such as the minimization of environmental impacts, health conditions, income, and many more. From their first year on, students are in contact with local farmers. They have the opportunity to visit different kinds of farms, divided into groups, and analyze the circumstances and identify individual problems in the farmer's environment. After getting the necessary data, students define different questions and point out solutions to the appropriate manager. For example, one topic could be the profitable production of biogas against the background of sustainability and responsibility for the environment. For both parties, these projects are an extremely effective way to help with solving local problems that in the end concern the whole world.
- 2. Students are engaged in working groups to sharpen social awareness of both local and global problems. In these working groups, they organize opinion formation, and invite specialists and persons concerned with specific problems to the university to discuss solution pathways. They also become involved in political interactions with decision-makers to support political change.
- 3. Students are also engaged outside their universities. They act in civil movements, environmental organizations, professional representations, and so on. These organizations can have a high social impact on political decisions. In this way, students can involve themselves in the political decision process.

In summary, students do have various opportunities to engage themselves in finding local solutions, and even improving global conditions. The task of students and universities is to enhance facilities for students acting in a reasonable and effective way to improve conditions in society and the global community.

Revitalization of Rural Areas through Student Activities in Ikumi

Yuri HASHIGUCHI and Rui KINJYO

Tokyo University of Agriculture

Abstract

Agriculture in Japan is mainly sustained by villages in rural areas. However, today many of these villages are facing severe problems. In the agricultural sector, the proportion of the population aged 65 and over is increasing every year, and the problem of an aging population in rural areas is becoming more severe. At the same time, other problems, such as abandoned farmland and a lack of successors, also exist. These problems are the main reasons for the deterioration of marginal villages in Japan. The Ikumi district, which is located in Shizuoka City, Shizuoka Prefecture, is an example of a marginal village. In order to solve problems that occur in marginal villages, a "working holiday" system was implemented in Ikumi. The working holiday system was introduced after the establishment of a local agricultural processing and experience facility called Yamayuri. During the busy tea harvesting period, the local community wished to continue management of Yamayuri, and through Shizuoka Prefecture, the working holiday system was introduced; the system consists of inviting NPOs and universities to help with tea harvesting and management of Yamayuri. Members of ISF Japan initially participated in this effort, and have continued to participate since 2006; this is known as Ikumi Field Practice.

Through this field practice, we are able to directly interact with farmers and experience real agricultural activities. For example, in Ikumi, where tea is the main agricultural product, we helped during tea harvesting, or spread fertilizer in the summer. We also participated in local traditional festivals, and by working together with the local community, we gain experience with, and understanding of, the problems which many rural areas in Japan are facing. Furthermore, we are better able to understand the importance of bonds between rural areas and students. Both students and the local community believe that having students help out during the harvest period and participate in local festivals, etc., has led to better connections between rural areas and youth, and therefore built a new community.

In the future, we hope that these activities will serve as an example of an activity which could lead to solving problems of rural areas in Japan. In that context, we would like to think of what students should do, put these ideas into action, and contribute to the revitalization of rural areas.

Community Forest: An Approach to Sustainable Forest Conservation

Nitat CHAISONGKRAM

Kasetsart University

Abstract

Deforestation is an alarming problem that impacts the environment, agriculture and quality of life in Thailand. Collaboration is essential to protect and restore remaining natural forest areas and to increase reforestation. 'Community Forest' is an approach toward ensuring that forest and natural resources are managed and conserved by the local community for the sustainable benefit of that community. Each community has its own way of community forest management. Proper rules and regulations have been established based on traditional ways of life and local ecology. Success stories of forest communities in Thailand, as well as important factors for success and constraints are discussed in this presentation. Realization of the importance of community forests and continuous cooperation of people in the community are the key factors of success. On the other hand, attempts by capitalists to change natural forests into large plantations, industrial areas or tourist attractions still exist. Inefficient bureaucracy also limits the progress of community forests. Students can support the progress of community forests through activities on campus such as bird watching, conservation of bird habitats, and building bird houses; these are led by the Bird Conservation Club, and increase students' awareness of natural forest conservation and its impact on the campus environment. Visits to community forests and learning from local people how they manage and conserve their forests will enhance students' understanding of the whole process and provide an opportunity for them to participate in real action. "Volunteer Camp 2011" provides such an opportunity for more than 60 Kasetsart University students to work with a local community on reforestation activities and building a mushroom house. Finally, community forest success stories in certain areas can be applied to other areas of the country. With more people involved, more ideas and more systematic research, a small local example can be expanded into practice for other regions of the world facing similar situations of rapid deforestation and declines in natural resources and biodiversity.