

2011 JDS International Seminar

***Environmental Policy: Land use, biodiversity
conservation, and traditional knowledge***

November 28, 29 & 30, 2011

in

Room A205, Laboratory of Advanced Research A Building,

University of Tsukuba

This seminar is held as part of the Japanese Grant Aid for Human Resource Development Scholarship (JDS) Program activities hosted by the Graduate School of Life and Environmental Sciences, University of Tsukuba.



生命環境科学研究科

Graduate School of Life and Environmental Sciences



筑波大学

University of Tsukuba



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JAPAN INTERNATIONAL COOPERATION CENTER

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PROGRAM

November 28 (Mon)

- 9:00-11:45 Special lecture I: *Land use planning and ecosystem services*
(Prof. Yu-Pin Lin, National Taiwan University)
- 13:00-14:00 Presentations by JDS Fellows (Organizer: Prof. Yoshino)
- 14:00-13:30 Coffee break
- 14:30-15:30 Presentations by JDS Fellows
- 17:00-18:30 Welcome party

November 29 (Tue)

- 9:00-11:45 Special lecture II: *Environmental policy formulation and analysis in Asia: Implications in biodiversity conservation*
(Prof. Le Van Khoa, Ho Chi Minh City University of Technology)
- 13:00-14:00 Presentations by JDS Fellows (Organizer: Prof. Yabar)
- 14:00-13:30 Coffee break
- 14:30-15:30 Presentations by JDS Fellows

November 30 (Wed)

- 9:00-11:45 Special lecture III: *Peasant ways of life at stake: Environmental policies and community-based forest management*
(Prof. Noemi Miyasaka Porro, Federal University of Pará)
- 13:00-14:00 Presentations by JDS Fellows (Organizer: Prof. Matsui)
- 14:00-13:30 Coffee break
- 14:30-15:30 Presentations by JDS Fellows

List of JDS Fellow Presenters

November 28

Pham Tien Dat
2010, Vietnam

Monitoring Mangrove Forest Using Multi-temporal Satellite Remote Sensing Data in the Northern Coast of Vietnam, A comparative case study: Hai Phong City, Vietnam

Natsagdorj Natsagsuren
2010, Mongolia

Evaluation of Factors Affecting on the Soil Moisture in the Semi Arid Regions in Mongolia

Ha Nam Thang
2011, Vietnam

Apply Loicz Biogeochemical Modeling for Estimating Environmental Capacity of Aquaculture Zone in Sam Chuon Lagoon, Thua Thien Hue Province, Vietnam

Munkhuu Undraa
2011, Mongolia

The Plant Community Succession and Regeneration of Pseudo-Taiga Larch Forests after Fire in Tarbagatai Mountain Range, Mongolia

November 29

Ngo Thi Lan Phuon
2010, Vietnam

A New Approach for Municipal Solid Waste Governance Aiming to Become Green City Bases on a Sound Material-cycle Society Initiative in Hanoi, Vietnam

Hoang Thanh Tung
2010, Vietnam

Policy for Risk Management in Rice Value Chain to Adapt with Climate Change in Vietnam

Abu Taher Md. Kamrul Kabir Bhuiyan
2010, Bangladesh

Introducing Socio-Environmental Management Policy Guidelines for the financing of Electric Power Projects in Bangladesh

Nguyen Thanh Nga
2010, Vietnam

Analyze Wetland Economic Value: Case Study in Xuan Thuy National Park, Viet Nam

Shahjahan Mohammad
2011, Bangladesh

Adopting Clean Development Mechanism for Sustainable Development and Economic Growth in Bangladesh

November 30

Gonchig Gantulga
2010, Mongolia

The Establishment of Sustainable Farming Extension in Mongolia: Challenges and Possibilities of Integrated Governance

Nguyen Thi Thuy Phuong
2010, Vietnam

The Effect of Community Forest Management on Forest Resource Dynamics in Nam Dong District, Thua Thien Hue Province, Viet Nam

Badamsed Delgermaa
2011, Mongolia

Wetland Management and Waterbird Conservation in "Mongol Daguur" Strictly Protected Area

Khanam Syeda Masuma
2011, Bangladesh

The Empowerment of Rural Women in Bangladesh for Environmental Conservation: Integrating Traditional Knowledge and Environmental Education

Dang Nguyet Anh
2011, Vietnam

Community-based Adaptation (CBA) to Climate Change for Coastal Fishing Community in Ha Tinh, Vietnam

MONITORING MANGROVE FOREST USING MULTI-TEMPORAL SATELLITE REMOTE SENSING DATA IN THE NORTHERN COAST OF VIETNAM

A comparative case study: Hai Phong city, Vietnam

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^a Graduate student, Graduate School of Life and Environmental Sciences, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki, 305-8577 Japan - dat6784@gmail.com

^b Professor, Graduate School of Systems and Information Engineering, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki, 305-8573 Japan - sky@sk.tsukuba.ac.jp

ABSTRACT:

Mangroves play an important role to protect dyke systems and defend against the impacts of big storms. However, these forests are under severe threat because of the rapid growth of population, migration onto the coasts, insufficient governance, poor planning, as well as uncoordinated economic development. Hai Phong city is located in the Northern coast of Vietnam where the mangrove are distributed between zone I and zone II among four mangrove zones in Vietnam. This city is vulnerable to rising sea levels associated with climate change and tropical cyclone, which are forecasted to become more prevalent and stronger as climate change intensifies. Mangrove forests in the city areas have decreased dramatically due to intensive and extensive shrimp aquaculture. The objectives of this research were to identify the locations of mangroves and to analyze mangrove changes using different sensors including optical sensors: LANDSAT, SPOT, and ALOS PALSAR in Hai Phong from 1990 to 2010. Image segmentation was used to improve the accuracy assessment of the post satellite image processing. Moreover, Geographic Information System (GIS) and Remote Sensing data were applied to analyze how the mangrove had changed across the different periods from 1990 – 2010. The findings of this research showed that mangroves loss was approximately 1067 hectares in Hai Phong. Nevertheless, mangroves have expanded in several districts thanks to good mangrove conservation and management. The overall accuracy of the satellite imagery processing was 89% and the Kappa index was 0.87. This research may provide the potential for a multi-temporal satellite remote sensing data together with image segmentation approach for mapping mangrove forest in the coastal zones.

KEYWORDS: Mangrove change, GIS, Satellite remote sensing, Image segmentation, Optical imagery, SAR.

Evaluation of factors affecting the soil moisture in the semi arid regions in Mongolia

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Land cover with insufficient and unstable soil moisture is predominant in north-eastern Eurasia. This is true especially in the arid and semi-arid region which covers Mongolia, where there is an annual precipitation ranging from a few mm/y to 300 mm/y. Therefore, the development of an integrated approach to evaluate the soil moisture is key for a better understanding of the natural potential during climate change. The observed data are quite useful when investigating the soil moisture change in both the spatial and the temporal distribution, and they should be analyzed with the observed soil moisture data.

The previous studies in hydrology and climatology suggest that the soil moisture might have an influence on the climatic conditions in Mongolia, however there were few papers to investigate the relationship between the soil moisture and climatic conditions, especially for the prediction of soil moisture. For this purpose, a step regression analysis of the soil moisture for over a long time period is necessary using the observed soil moisture and the meteorological data.

The objective of this master's thesis is to predict the temporal and spatial distribution of the soil moisture content through a correlation analysis using the observed data and to make clear the important factors affecting the future soil moisture conditions.

Firstly, a correlation analysis of the observed soil moisture data in the selected stations is performed to make clear the relationship between the soil moisture certain parameters such as: precipitation, temperature, humidity in the atmosphere, and then to predict the soil moisture in the future. A preliminary regression analyses for four different natural zone's stations were performed. For example: A forest steppe area (Bulgan, Tsetserleg) has more correlated forecasted atmospheric factors ,especially for precipitation. In Steppe regions, forecasted air and surface temperature with daily wind factors were correlated (Darkhan, Undurkhaan, Ugtaal, Baruun-Urt). In the Gobi Desert, can make forecasts from previous precipitation and it's evapotranspiration (Dalanzadgad, Saikhan).

After the correlation analyses, a spatial distribution map of the soil moisture will be produced for every variety of natural zone. The results of the present study would contribute much to the construction of a prediction system to improve the agriculture and nomadic activities in Mongolia.

Keywords: soil moisture, prediction, air temperature, precipitation, step by regression

**APPLY LOICZ BIOGEOCHEMICAL MODELING FOR ESTIMATING
ENVIRONMENTAL CAPACITY OF AQUACULTURE ZONE IN SAM CHUON LAGOON,
THUA THIEN HUE PROVINCE, VIETNAM**

HA Nam Thang

First year student of Master program of Environmental and Life Science

Abstract

The Tam Giang – Cau Hai lagoon is located in Thua Thien Hue province. It is one of the largest lagoon in South East Asia with an area of 22,000 ha. For their livelihoods, aquaculture plays an important role for the farmers who live alongside the lagoon. Aquaculture has expanded greatly and has caused aquatic environmental pollution, biodiversity degradation as well as aquatic diseases. This thesis focuses on estimating the environmental capacity of the aquaculture zone based on LOICZ biogeochemical modeling. It also conducts a multi-variable analysis for establishing a regression model of water quality parameters (pH, DO) which is based on input factors such as feed and fertilizer as well as the density of shrimp.

Keywords

LOICZ modeling, aquaculture, environmental capacity, Sam Chuon lagoon

THE PLANT COMMUNITY SUCCESSION AND REGENERATION OF PSEUDO-TAIGA LARCH FORESTS AFTER FIRE IN TARBAGATAI MOUNTAIN RANGE, MONGOLIA

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Student ID: 201125029 (e-mail: zuunnast_2004@yahoo.com)

Tentative supervisor Prof. M.Masuda

Mongolia is a country with small forest resources. By 2010, Mongolia's total forest land is 18.6 million ha, of which 12,9 million ha or 8.26% of the total territory is covered in a closed forest area (MNET Forest agency, 2010).

Between 1999 and 2010, on average, 240,000 ha of forest area per year (a total of 2.9 million ha) was affected by fire due to climate change, aridity, human negligence and lightning.

Due to fires in 1996, 2002, 2003, 65,751 hectares of larch forest was destroyed by fire in the Tarbagatai mountain range (Environmental information center, 2010).

A characteristic of plant community change and forest regeneration after a fire depends on the intensity of those fires and the occurrence. Surface fire is predominant in larch forest of Mongolia. But crown fires are rare. Surface fires of a high intensity usually cause destruction of almost whole stand.

The study area is located in Tosontsengel soum, Zavkhan province, in the Tarvagatai Mountain Range, in the western part of Mongolia. One of the features of a pseudo-taiga larch forest is to regenerate only larch trees after a fire.

The objective of the study is to identify the tendency of the plant community change and regeneration and to work out a scientific rationale of rehabilitation after fires.

The forest monitoring survey will help to prevent degradation and deforestation and to determine the tendency of forest regeneration in different types of forest.

Key words: plant community succession, regeneration, pseudo-taiga

A new approach for municipal solid waste governance aiming to become green city bases on a sound material – cycle society initiative in Hanoi, Vietnam

Student: NGO Thi Lan Phuong (ID: 201025041)

Supervisors: Helmut YABAR, Yoshiro HIGANO

ABSTRACT

To establish a low carbon, sustainable and natural symbiosis society, municipal solid waste (MSW) is one of the important parts in an integrated environmental management system. An initiative from Japan named “a sound material-cycle society” toward MSW management is a very successful model and it now has been introduced and implemented in many countries and regions including Hanoi, Vietnam.

MSW in Hanoi, at present, causes many serious impacts on the environment and becomes a burden for the local government to deal with. Hanoi is regarded as one of the biggest waste generators in Vietnam. The current MSW generation in Hanoi averages of 3,200 tons/day (Hanoi Urban Environment Company, URENCO 2009) and it is estimated that the MSW amount will increase threefold in the coming years. MSW composition has been changing significantly because of living standard and habit changes. Beside organic waste from households, there is also a large proportion of hazardous waste and non-degradable waste such as plastics, metal, cans and glass (WB, 2004). However waste collection and waste treatment systems in Hanoi have not changed nor adapted with these increasing trends. The key reasons for this are a poor management system, a lack of the local people awareness, and a lack of funding and technologies, etc. The first and biggest challenge in this weak system is landfill capacity. The majority of waste in urban area of Hanoi now is mainly buried, treated and then disposed in the Nam Son waste treatment complex (90%). The average amount disposed of is 2,100 tons/day. In comparison with its designed capacity, it is estimated that it will be full and overloaded by 2015. Additionally, there is no future plan to build a new landfill area. Around the city, there are many illegal open dumping sites where many kinds of waste are directly discharged without any treatment. Secondly, recycling activities from MSW in Hanoi have not been concentrated sufficiently. Less than 5% of the organic waste is recycled into compost to produce fertilizers at the Cau Dien composting plant. Other materials could possibly be recycled, especially business and commercial waste but at present, they are collected and transferred in a bulky mixed waste with low value. Thirdly, the awareness of the local people regarding MSW management is still low and alarming. Local people throw away waste unmethodically and the illegal waste discharging in open dumping sites often happens at night causing many negative impacts on the city’s beauty. Thus, this study proposes some solutions to help Hanoi deal with current MSW difficulties by introducing an integrated MSW management system combining sorted collection, new technologies and sanitary landfill.

This study aims to analyze the Japanese SMCS model in compatible conditions with the current waste in Hanoi at the first step: waste classification. The author will conduct an area study in some main wards of Hanoi with the participation of households and super markets about waste classification at source based on the SMCS initiative and the Japanese waste classification standards. The output of this study is to identify the MSW composition and the material cycle and then aim to increase the amount of composted and recyclable material, quantify the reduction in the landfill load and propose some policies to improve the local people awareness for better MSW governance.

Keywords: A Sound Material-Cycle Society, Municipal Solid Waste (MSW), Waste classification, landfill, recycling, Hanoi, Vietnam.

Policy for Risk Management in Rice Value Chain to Adapt with Climate Change in Vietnam

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Abstract

Rice is the most important crop in Vietnam; it is also the livelihood of over 50% of the population. Rice has an enormous role in national food security and partly contributes to world trade thanks to its exportation. Rice export volume had increased from 3.48 million tons to 6.05 million tons between 2000 and 2009. Thus the role of rice production in food security has grown internationally, rather than just nationally over the past decade that makes Vietnam become the world's second largest exporter just behind Thailand. However, the rice production, recently, has to face increasingly difficulties due to climate change, especially in the Mekong River delta and the Red River delta, which dominate more than 70% of the total rice production area. Although the rice yield gradually increased in all regions, it has significantly fluctuated from 2000 due to extreme weather events such as unusual flood flows, heavily precipitation, and typhoons. More seriously, farmers seem to not have benefited much from the remarkable achievement in rice production and exportation. The problem is that the more rice farmers have produced, the less profits they have received compared to other stakeholders in value chain, while they are the most vulnerable and disadvantaged people due to climate change.

The government has clearly recognized that climate change adversely affects rice production, yet it does not have any specific policies for risk management. This research aims to promote risk management focusing on risk identification, risk assessment, risk analysis and the adaptation of measures and policies. To achieve this objective, a literature review, a key stakeholder interview, meeting with experts and focus group discussion are deliberately conducted to collect information about what is considered as risk in the rice value chain, how present farmers, stakeholders and government respond to risk and what kind of policy measures should be implemented. The problems in rice production and market require reforming current policies and proposing new risk management mechanisms and institutions to ensure and equally allocate a shared risk and value among all participants in the value chain. Besides, the government policies should promote the positive cooperation of community, both private and public sectors to confront the increasingly negative impact of climate change on rice production.

Keywords: Risk management, Value chain, Climate change, Institutions

Introducing Socio-Environmental Management Policy Guidelines for the financing of Electric Power Projects in Bangladesh

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ABSTRACT

Energy, and especially electricity, has become the key component for the economic development of nations worldwide. Bangladesh has been struggling for a long time with her energy sources especially electric power. The gap between the demand and supply of electricity has never been met, and in 2007 alone, the demand was 30% higher than the supply. By 2013, the government plans to increase power generation to about 7000 MW which might somehow relieve this gap.

In order to meet this increasing energy demand, and since the amount of investment involved is huge, the Bangladesh government is encouraging the private sector to participate in this challenge. Thanks to this initiative, many small and medium scale electric power generation companies, mostly natural gas-based, have been established in the last couple of years. Many of these companies are running under a Public Private Partnership (PPP) basis. While these power projects are important for the economy, they have significant social and environmental impacts which are not seriously addressed. In this sense, it is imperative to establish a mechanism to determine and assess the future potential environmental and social impacts of electric power projects. Because of effective policies and guidelines, efficient and competent manpower, corruption, and overall unawareness, it is difficult for the government's environmental agency to monitor and evaluate these projects, as well, since most of these projects are financed by financial institutions (FIs), we propose that these FIs also conduct the impact assessment and monitoring under the guidance and regulation of the Central Bank, which are the regulator of the FIs.

In this study, a social and environmental management policy guidelines for FIs will be developed to finance electric power projects consistent with Bangladesh Environmental and Social Assessment laws. Apart from any possible environmental impacts, the social impacts, including land acquisition and involuntary resettlement issues are also considered. This descriptive study would be carried out by reviewing related literature, consultation with stakeholders and a compilation and analysis of information.

We believe this study will help address the adverse social and environmental impacts during the whole life cycle of a project. The mitigation, monitoring and institutional measures will also be a part of the policies. From the view point of the Central Bank, these guidelines might increase the potentiality of the FIs to finance this type of projects.

Keywords: Electric Power, Environmental Safeguard, Social Impact, Financial Institutions, Environmental Laws.

Analyze Wetland Economic Value: Case Study in Xuan Thuy National Park, Viet Nam

NGUYEN Thanh Nga, Yoshiro HIGANO, Helmut YABAR
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Abstract

Wetlands, as defined by the Ramsar Convention, cover a wide range of habitat types such as rivers, lakes, coastal lagoons, mangroves, peatlands and coral reefs and are considered a homeland for a variety of flora and fauna and provide tremendous economic benefits. Located in Nam Dinh Province, Xuan Thuy National Park is the first Ramsar site in Viet Nam with more than 15,000 hectares in total area. It is viewed as a typical wetland ecosystem of national and international importance and the basis of livelihood for more than 48,000 local people. However, Xuan Thuy National Park is now under a number of threats and problems including resource overuse and mismanagement. Large areas of the wetland have been reclaimed for the aquaculture and agriculture activities, fishery resources have decreased due to over-exploitation and a large number of mangrove areas have been destroyed because of aquaculture, especially intensive shrimp farming. Moreover, the ecosystem is being polluted due to chemical waste from agriculture cultivation and the increasing population in the buffer zone, of which 50 percent relies on the wetland resources, exerts additional pressure on the wetland conservation and management in the region.

This study is aimed at partially filling an information gap relating to the economic values of the wetlands in Xuan Thuy National Park. The direct uses of aquaculture, agriculture and eco-tourism of the wetlands in Xuan Thuy are estimated by using Market Price Approach and Travel Cost Method. This information regarding the direct economic value will provide evidence of the monetary benefits of wetlands to community and the wetland managers and gain their support for wise use and management of the wetlands. The results of this study are a proposed recommendation for making trade-offs among the management options for the wetlands in this area.

Keywords: Xuan Thuy National Park, wetland, economic value, market price, travel cost method

“Adopting Clean Development Mechanism for Sustainable Development and Economic Growth in Bangladesh”

SHAHJAHAN Mohammad, Student ID No: 201125023,

Abstract:

Bangladesh is likely one of the worst sufferers from global warming. The IPCC determined that a 1.5 meter rise in sea level would inundate an area of 22,000 sq. km of Bangladesh and affect 17 million people (IPCC Report, 2007). The UNFCCC adopted an international framework to address global climate change. CDM is one of the tools to combat the climate change. The Clean Development Mechanism (CDM), under the Kyoto protocol to the UNFCCC, has the potential to be an effective tool in international law to encourage investment in waste and renewable energy projects in developing countries. CDM is intended to be, *inter alia*, a vehicle for investment and technology transfers into developing countries to achieve sustainable development by enabling necessary economic growth whilst also reducing GHG emissions on a global level. This mechanism has been designed to monetize environmental values using the market mechanism to contribute to the sustainable development of the host country and to encourage cleaner technology transfers from developed countries. This research makes an attempt to understand the CDM and is especially focused on waste and energy projects to find out its potentiality in Bangladesh.

In the capital city, Dhaka, the waste composition mainly is organic waste at 84.37%. (Source, Waste concern 2005). So there is potentiality to adopt a CDM project by composting the municipal organic waste. The waste sector options will mainly prevent the release of methane through bio-methanation processes. The methane collected can be flared or used to generate electricity. When electricity is generated, a GHG reduction due to fossil fuel replacement can be claimed. Also, when waste is converted to replace chemical fertilizers, GHG reduction can be claimed. The waste sector options for Bangladesh therefore can be realized in the landfill. Currently in Bangladesh there are only two registered CDM projects.

In order to attract more CDM projects to Bangladesh my objective in this study is to enhance the awareness of stakeholders regarding CDM potentials and identify economic opportunities in sectors that will be beneficial to the country for CDM projects from the view point of policy makers.

Keywords: Clean Development Mechanism (CDM), GHG emission, Municipal Solid Waste (MSW), Landfill, Emission trading, Sustainable Development, Organic gas recovery.

Title: The Establishment of Sustainable Farming Extension in Mongolia: Challenges and Possibilities of Integrated Governance

Gonchig Gantulga
201025042

Abstract

Mongolian traditional livestock farming has sustained the populace for a long time. However, today, livestock farmers suffer from disintegrating traditional knowledge, increasingly overgrazed areas and decreasing self-governing power. This presentation aims to discuss a potential form of integrated governance for sustainable livestock farming in Mongolia by developing good local governance and empowering the herders. I believe that this form of governance would lead to good environmental conservation and healthy food production. Historically, Mongolian pastoralists developed their own ecological knowledge with traditional worldviews. For instance, seasonal grazing was determined by landscape, weather, water, available plant species, wild animal habitats, and the types of livestock. Also herders migrated to avoid natural disasters such as zhud, drought and strong storms. During the socialist period, a “collective herding” policy was established. Under this policy, the state owned the livestock, and livestock farmers received regular salaries as well as services such as education, health care, specialists’ advice, assistance and veterinary care. After the democratic revolution, all services were abolished, and livestock farming was privatized. This change has reduced self-regulatory pasture use and other collective resource uses by livestock farmers. Privatization has also induced more intensive farming investments from other countries. The current “top-down” system of agricultural extension services in Mongolia does not allow farmers to participate in relevant decision making processes and generally limits interactions, linkages, and effective communication among researchers, extension managers, and farmers. In this presentation, I suggest that Mongolian agriculture needs to establish a sustainable livestock farming extension by incorporating traditional practices. This policy can be implemented under good governance mechanisms along educated farmers.

Keywords: sustainable agriculture, traditional knowledge, livestock, herder, governance

THE EFFECT OF COMMUNITY FOREST MANAGEMENT ON FOREST RESOURCE DYNAMICS IN NAM DONG DISTRICT, THUA THIEN HUE PROVINCE, VIET NAM

NGUYEN Thi Thuy Phuong
Student ID: 201025040
Supervisor: Prof. Misa MASUDA

Community Forest Management (CFM) generally refers to community-based activities which are geared towards the sustainable use of forests. However, the concept of CFM has evolved over decades into various forms and contexts. CFM practitioners in Viet Nam call it "spontaneous" management. The concept of Community Forest Management (CFM) was officially recognized in Viet Nam with the implementation of the Land Law (2003) and the Law on Forest Protection and Development (2004). Prior to this, however, the government of Viet Nam had long promoted CFM, specifically on issues related to (1) the process of allocating forest land to households/household groups (particularly to poor, ethnic minorities whose livelihoods are closely linked to traditional forest management); (2) the decentralization of forest management; and (3) the development of "pro-poor" mechanisms that target those groups that are involved in implementing innovative forest management solutions. The CFM process has been piloted in many provinces in Viet Nam, such as Son La, Hoa Binh, Thua Thien Hue, Quang Nam, Binh Dinh, Quang Ngai, Dak Lak, Dak Nong, and Gia Lai. However, its effectiveness in achieving its goals is still debated. Some people regard local people as a threat to forest resource conservation. Others believe that, in many cases, local people play important roles in forest resource management. Both arguments are soundly argued, but which is correct? My study will answer this question by focusing on the effect of community-based forest management in Viet Nam. For this task, I selected one of two mountainous districts in Thua Thien Hue Province, Nam Dong, where 75% of the total area is forest, some of which the local people had received government allocation since 1995. To investigate the question above, I have three specific tasks to clarify: (1) How was CFM implemented in the district of my study area? (2) How does CFM affect the forest resource? And (3) How does CFM affect local livelihoods? My presentation reports on my findings regarding to these points so far.

Wetland management and waterbird conservation in “Mongol Daguur” Strictly Protected Area

Student: Badamsed Delgermaa
(201125028)
Supervisor: Prof. Misa MASUDA

Introduction

Wetlands are one of the most important resources and habitats for flora and fauna diversity. My presentation focused on the Mongol Daguur Strictly Protected Area (SPA) which is located in Northeastern Mongolia. This area is a generally flat plain with rolling hills holding swampy wetland areas. This unique ecosystem supports diverse fauna and flora species. It provides important stopover points for water and shore birds and important breeding grounds for rare and endangered species.

Recently, the effects of global warming, fire, mining, pollution and overgrazing by domestic animals have been negatively impacting the region, especially for rare and endangered species of birds. However, the main problems are the lack of finances and properly trained human resources which prevent the proper protection of the wetland ecosystem in Eastern Mongolia.

These environmental problems have affected wetland habitat and distribution, population sizes, breeding activities and the migratory success of waterbirds.

Objectives

I will examine the challenges of wetland management which Northeastern Mongolia faces in conserving waterbird habitats. By identifying these problems I will seek some solution, especially how local people and their knowledge can help to conserve the wetlands in the Strictly Protected Area.

Key words: wetland management, waterbird conservation, strictly protected area, local people

Title: “The Empowerment of Rural Women in Bangladesh for Environmental Conservation: Integrating Traditional Knowledge and Environmental Education”.

Abstract: In Bangladesh, rural women have intimate relationships with the environment. They use, manage and protect natural resources for food, fuel, fodder, water, medicine and other income generating activities. They are fully aware that their livelihood and family welfare depend on sustainable resource use; and therefore, the environment is to be conserved for their long-term needs.¹ In Bangladesh, environmental degradation is a hot issue now. More than men, rural women have to bear the adverse consequences of environmental degradation especially the ones caused by climate change. However, rural women do not need to be the powerless victims if they are sufficiently empowered to conserve the environment. In the past, the rural women of Bangladesh proved their capacity to manage household food security while coping with natural disasters. Their participation in Grameen Bank (2006 Nobel Prize laureate) has successfully improved their financial conditions since the 1980s. Based on this understanding, my hypothesis is that the marriage of rural women’s traditional knowledge with contemporary environmental education will empower them to cope with environmental degradation and environmental conservation management. For a long time, male-centered social, cultural, political and religious norms have marginalized rural women’s knowledge regarding environmental conservation-related tasks such as kitchen gardening, agriculture and animal husbandry. Though rural women have conserved natural resources, some new causes of environmental degradation such as synthetic chemical contaminations by agribusiness, over-population, increased and mismanaged wastes, and climate change cannot always be dealt with through their traditional conservation methods. To cope with these new challenges, rural women need to also be adequately informed through their participation in environmental education projects.

Key Words: *Empowerment, rural women, environmental degradation, traditional knowledge, environmental education, environmental conservation, Bangladesh.*

¹ Khan,Salma (1995). “The Impact of Environment on Women’s health Status” in Jahan.et.al.,(eds.), (1995), ***Environment and Development: Gender Perspectives***, Dhaka : Women for Women.

Community-based adaptation (CBA) to climate change for coastal fishing community in Ha Tinh, Vietnam

Dang Nguyet Anh

Abstract

With its 3,260 km of coastline, Vietnam is among countries greatly affected by climate change impacts particularly in coastal areas with a very high density of population. Therefore, urgent adaptive strategies are badly needed to reduce vulnerability and secure livelihoods for local people in these areas. However, adapting to climate change is still among the challenging problems in developing countries which require various approaches to solve. Community based adaptation (CBA), as a bottom-up approach, is one innovative measure to help local communities to improve their adaptive capacity to climate change. In Vietnam, the National Target Program for Climate Change Adaptation has implemented many adaptive policies. However, many of them are focusing on “hard” measures which are sometimes risky and costly whereas, “soft” measures like CBA, according to some NGOs, seems to be less costly and easier to implement in rural areas. However, there has not been any concrete research on the effectiveness of CBA toward climate change for fishing communities so far. Choosing Ha Tinh, Vietnam, as a case study and by developing a CBA model from a climate change adaptation model proposed by Shaw (2006) as well as applying conjoint analysis from a questionnaire survey, my study aims at exploring the hazards, vulnerability, and adaptive capacity of the fisheries-related population to climate change in their community as well as identifying the role played by CBA in building the resilience of the coastal fishing community against climate change. The research will focus on the involvement of the fishing community in coastal areas adapting these strategies toward climate change in Ha Tinh. CBA is expected to be efficiently applied for fishing communities as a ‘soft’ solution to climate change problems. The outputs are intended to assist policy makers to integrate community-based adaptation into adaptive strategies at local and national levels in the future.

Keywords: *community-based adaptation, fishing community, vulnerability, adaptive capacity*