Dear ELP alums –

It’s great that we are able to get out another Newsletter so quickly after the last one, and right before the beginning of the Beahrs ELP 2004 summer course. The 2004 participants (35, 18 men and 17 women) will have copies waiting for them in their binders in two weeks time! Thanks to Kyra for this beyond-the-call-of-duty effort, and for your contributions throughout the newsletter.

With this letter I would like to inform you about a new initiative that I think all alums can feel excited about. It is a collaborative project with the UC Berkeley Haas School of Business, with support from the Gordon and Betty Moore Foundation. We are calling it, Business Training for Environmental Professionals (BTEP). This initiative is largely in response to the often expressed interest of ELP participants for more training in basic project and organizational management skills. Whereas the ELP course in Sustainable Environmental Management includes training in leadership and conflict management, and the core curriculum offers a module on rural communities and ecosystem management, there is essentially no attention given to project management.

Increasingly, environmental professionals such as yourselves are having to take on management responsibilities to run complex organizations, projects, programs and eco-enterprises. Yet the majority of you have no formal training in business or project management. The Moore Foundation has identified a worldwide need for greater business, management and leadership training for professionals in conservation organizations. The hope is that investing in this type of training will lead to more effective management and enhanced outcomes. Training will also include monitoring and impact assessment skills to help environmental managers measure effectiveness.

The Beahrs ELP received a small grant in 2004 to plan a BTEP module that would be launched in summer 2005. The idea is to offer an intensive 6-day BTEP course just after the ELP for those ELP participants with these types of training needs. It will also be offered to environmental professionals from U.S.-based conservation and environmental organizations such as The Nature Conservancy and Conservation International. I’m particularly interested in creating an opportunity for peer sharing and networking among U.S. and non-U.S. environmental professionals. The world is in a state of terrible polarization and there is an urgent need to improve international understanding and appreciation.

The Planning for BTEP workshop will take place at the Haas School on June 24/25 and again on July 19, with a handful of ELP participants from 2004, faculty from CNR and Haas, and leaders of U.S.-based conservation organizations. We are hoping for a resounding success so that we may return to the Moore Foundation for more support to launch the BTEP in 2005. So, keep tuned for updates!

Meanwhile — warmest regards, happy summer (winter for S. Hemisphere alums).

Robin
In this issue, we hear from 7 fabulous alumni on aspects of their work related to Biodiversity, Sustainable Agriculture & Forestry.

Feature Article

The Key Role of Below Ground Biodiversity (BGBD) in the Sustainability of Agricultural Systems

Edmundo Barrios (ELP '03)

Soil organisms contribute a wide range of essential services to the sustainable function of all ecosystems through a variety of processes including; 1) by acting as the primary driving agents of nutrient cycling; 2) regulating the dynamics of soil organic matter, soil carbon sequestration and greenhouse gas emission; 3) modifying soil physical structure and water regimes; 4) enhancing the amount and efficiency of nutrient acquisition by the vegetation through mycorrhiza and nitrogen fixing bacteria; and 5) influencing plant health through the interaction of pathogens and pests with their natural predators and parasites. These services are not only essential to the functioning of natural ecosystems but constitute an important resource for the sustainable management of agricultural ecosystems.

The soil organism community, including bacteria, fungi, protozoa and invertebrate animals, is extremely diverse. Despite its importance to ecosystem function the soil community has been almost totally ignored in considerations of biodiversity conservation and management even at the inventory level. Few data are available from tropical regions where it is suspected that the highest levels of diversity may be found. Although the biological diversity of the community of organisms below-ground is probably higher in most cases than that above-ground, it has generally been ignored in surveys of ecosystem biodiversity. Documentation of BGBD, including the biological populations conserved and managed across the spectrum of agricultural intensification, is an essential component of the information required for assessment of environment-agriculture interactions, as is the evaluation of the impact of agricultural management on the resource base, particularly that of the soil.

Governments have typically encouraged land conversion and agricultural intensification in response to the demand for higher levels of food production under conditions of increasing population growth. The processes of land conversion and agricultural intensification are a significant cause of biodiversity loss, including that of BGBD, with consequent negative effects both on the environment and the sustainability of agricultural production. The lowering of the biological capacity of the ecosystem for self-regulation has led to further need for substitution of biological functions with agrochemical and energy inputs.

Sustainable and profitable management of agricultural biodiversity, including BGBD, is dependent on information about the current status, the value perceived by the various sectors of society, and the factors which drive change in one direction or other. Despite a policy and economic environment that does not acknowledge the importance of managing and conserving agrobiodiversity; farmers, rural communities, scientists, NGOs and the general public have become increasingly aware of the high environmental cost of many intensive high-input agricultural practices. Furthermore, it is now accepted that loss in biodiversity (including BGBD) is one of the major factors leading to degradation of ecosystem services and loss of ecosystem resilience. Development of appropriate policy requires, in particular, reconciling the needs for meeting food-sufficiency by high levels of agricultural productivity with those for conserving biodiversity and environmental protection.

Almost universally, attempts at integrated and sustainable agricultural development are frustrated by lack of an information base that rigorously demonstrates the environmental implications, whether beneficial or detrimental, of agricultural development, and the benefits or otherwise to be gained from conservation and management of agrobiodiversity, including BGBD. This requires investigations at both the farm and at the landscape scales. Policy formulation for BGBD conservation and management for local, national and global benefits is dependent on the availability of this information, which enables rigorous evaluation of the costs and benefits of different trajectories of development and the reconciliation between them.
Feature Article
Biodiversity and Indigenous Knowledge in Guizhou Province, China
Ren Xiaodong (ELP ’01) and Chris Aldridge

With Beahrs funding, CCDRC is facilitating a Biodiversity Group for Guizhou Province in southwest China. The authors have described previously how the province bears a significant proportion of the state-protected species of flora and fauna.

Much of Guizhou is also unique for its karst geology, which gave rise to many ranges of spectacular, conical hills. The associated biology is best viewed and studied in the pristine karst forest of Mao Lan National Nature Reserve (pictured below) – a Man & Biosphere site in southern Guizhou.

In many ways, biological, geological and geographical knowledge is well defined in Guizhou, which gives our centre many advantages in fronting community-based conservation. But it is the richness of culture and tradition that now challenges, in a novel manner, our mindset and participatory principles for the future. China terms its many traditional clans ‘minority groups’, as distinct from the dominating Han people. In Guizhou, there is the greatest representation of such ethnic groups in all of China - seventeen, including, in descending order of population, the Miao, Gejia, Buyi, Dong, Tujia, Yi, Shui, Hui and Bai. Thirty-five percent of the Guizhou population belongs to such groups. (Below – Miao elders lead a ceremony in Langde village, Guizhou).

The practical downside of the karst terrain is its resistance to optimal agriculture – through soil chemistry and water hydraulics. Trace elements are poorly balanced and most of the plains are honeycombed with subterranean caverns and streams, attracting rainfall to drain rapidly.

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In his contemporary study of social forestry in a Miao community of eastern Guizhou. In his study area of Tageba village in particular, he discovered that the Hmong clan elders of the Miao sustained a belief in spirits existing in every surrounding object. This status was particularly elevated for old or tall trees and forests on the mountain sides – “old trees protect the village; old men manage the village affairs”. However, since 1980, when farmland in China began to be allocated to households by contract, Tageba and neighboring villages have become entrepreneurial about fruit tree production and produce sale, and moved away from low-intensity management of fir. In a complexity of land allocation factors, this has led to disparity of income and many young people of the poorer families have turned their backs on their language, work on the land and filial tradition, particularly to hire out their labor in provincial cities.

Against this increasingly common backcloth, CCDRC has joined in the MMSEA* (Mainland Montane South-East Asia) initiative to protect Indigenous Knowledge in the region; particularly in relation to natural resources in Guizhou and as a core challenge in the emerging Guizhou Biodiversity Group.

*Website www.ikap-mmsea.com

All display a richness of costume, music and dance, and all hold to a sustainable relationship with natural resources. ELP alumnus Yang Congming has described minority relationships well, in his contemporary study of social forestry in a Miao community of eastern Guizhou.

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The practical downside of the karst terrain is its resistance to optimal agriculture – through soil chemistry and water hydraulics. Trace elements are poorly balanced and most of the plains are honeycombed with subterranean caverns and streams, attracting rainfall to drain rapidly.
Uganda is a landlocked country located in East Africa. Uganda is well endowed with natural resources that support both urban and rural livelihoods. The vast fresh water resources, the varying forest and natural resource types are unfortunately threatened with continuous destruction through pollution, agricultural and industrial expansion as well as deforestation.

Uganda has progressive laws that support the protection of the environment. For example, the Constitution provides for the right to a clean and healthy environment and various laws provide for the protection and sustainable utilisation of forests, wildlife and fragile ecosystems. Unfortunately, the institutions responsible for the sustainable natural resource utilization face challenges in enforcement and monitoring compliance. This in part arises from the limited human and financial resources to monitor these vast protected areas and the low levels of voluntary compliance by the private sector to curb environmental degradation.

In Uganda, a trend that is threatening the destruction of several protected areas arises from the failure to balance ecological and development needs. In the forestry sector, a number of forest reserves have been excised or degazetted for agricultural or industrial purposes. Private forests have been targeted with the recent example being the recently approved Palm Oil project on Bugala Islands located in Lake Victoria. The spill over effect arising from the destruction of the private forests will be felt on the forest reserves on this island.

Wetland encroachment for both small and large-scale agriculture is another common problem. The flower farm industry has contributed to wetland drainage and degradation (http://www.natureuganda.org/news3.htm). Private flower farms bordering the major fresh water resource, Lake Victoria are contributing to an increase in pollution and will gradually impact on the fishing industry.

Protected wildlife areas are facing similar threats and are major targets for degazettement to pave way for agricultural development. For example, the Pian Upe Game reserve has been earmarked for degazettement.

It can thus be observed that even with our good natural resource laws, protected areas are susceptible to degradation and encroachment. There is a need to create mechanisms that will support the laws in the protection of the natural resources. A concerted effort is required to ensure the sustainable utilization of the resources for future generations, lest our Pearl of Africa may soon be no more.

**Feature Article**

**Destruction of Natural resources under the Guise of "Development"**

Irene Makumbi (ELP ‘03)

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**Bwindi Impenetrable Forest & Rural Livelihoods**

**Aventino Kasangaki, Uganda**

Before Bwindi Impenetrable Forest was gazetted a national park it was being managed as a forest reserve. In a forest reserve people were allowed to harvest resources such as firewood, medicinal plants, materials for handicraft, bush meat and fishing, and timber with license. After it was gazetted a national park, all forms of extractive use were stopped. This alienated the local people from a resource that they had known to be theirs. In order to diffuse this problem, the managers introduced limited access to some forest resources in MUZs. They also introduced a revenue sharing scheme whereby communities are given 20% of the income from tourism to use in their development projects.

Local communities need to access resources from protected areas and yet these resources cannot serve the high human population surrounding the protected areas. There is thus a need for working out sustainable ways of resource harvest in consultation with all stakeholders in protected area management. The resources people need include those of medicinal value, handicraft and for food. For some plant resources, people have been allowed to harvest in areas designated as Multiple Use Zones (MUZs). However, sustainable use is often hampered by lack of information on availability of the resources and violation of harvest quotas by the local communities.

This is just one of the case studies ELP participants will be working on during the summer course.
Move towards Access and Benefit Sharing (ABS) mechanisms are as a result of international developments, notably the Convention on Biological Diversity (CBD) of 1993. This was a response to the stark reality that the future of the world’s biodiversity was at risk unless those who are in the forefront of biodiversity conservation participate and derive meaningful and substantial benefits.

Without a shadow of a doubt, developing nations have the biggest reservoirs of biodiversity. For a very long time, these developing nations have been losing out on benefit sharing to developed nations through bio-piracy. The CBD is an attempt to strike a balance so that developing countries can also benefit financially from the exploitation and commercialisation of genetic resources.

The Challenge for Zimbabwe

The challenge for Zimbabwe, like many other developing countries, is that the CBD places a responsibility on nation states to come up with laws, policies and institutions to determine access and benefit sharing mechanisms. African governments realize this need explaining why the African Union adopted Model Law in 1999 to help member states develop legislation to protect their biodiversity and ensure equity in benefit sharing. If sovereign nations do not develop these benefit sharing mechanisms they lose out. It is now eleven years since CBD came into effect, and Zimbabwe still has not been able to come up with legislation defining access and benefit sharing to its genetic resources and is losing out big time. Once the unprotected and unregulated genetic resource is patented, it no longer belongs to the host country or community.

There is a well-known case in Zimbabwe involving a breed of cattle that was developed by the government of Zimbabwe using 20 cows and a bull bought from local community in Southern Zimbabwe in 1945. Through a joint venture between Commonwealth Scientific and Industrial Research Organisation (CSIRO) an Australian Government Agency and a group of Australian cattle producers, Tuli embryos were collected and implanted into surrogate dams. This resulted in live cattle that have a significant comparative advantage over the other cattle in the Australian beef industry. Reliable information shows that the Australian consortium is now making hefty profits out of selling these embryos with no benefit accruing to Zimbabwe where the cross breed was developed.

However, CBD recognizes and reinforces the sovereign rights of nation states over their natural resources. The authority to determine access and benefit sharing is vested in the national government. This is likely to lead to power struggles between national governments who see this as a vital source of revenue and local communities who have the indigenous knowledge. The CBD provisions may therefore be more beneficial to national governments and not communities. There is therefore need for non-governmental organisations to work closely with communities on ways to help communities obtain more equitable benefit-sharing mechanisms from national governments. Concepts such as prior informed consent need to be strengthened so that communities do not lose out to the state and pharmaceutical companies.

Sources

Convention on Biological Diversity, 1993

The search to safeguard Zimbabwe’s genetic heritage: Community Technology Development Trust, Harare, Zimbabwe.
Feature Article

War against Species of Mass Invasion

Philips Kisoyan (ELP '02)

Looking outside your window, chances are that much of the pretty vegetation you see originated in another continent. Beneath the beautiful flowers are hidden ‘biological weapons’ of mass invasion. Many species used in agriculture and forestry have been introduced either intentionally or unintentionally from one part of the world to another. However, while most of these alien species have behaved relatively well, others have become monsters and uncontrollable in their new homes.

The United Nations Convention on Biological Diversity (CBD) Article (8h) identifies invasive alien species as a major threat to ecosystems, habitats and biodiversity. Damage and control measures run into millions of dollars annually.

In Kenya, one of the worst invasive alien species in the arid lands is the Prosopis juliflora (Honey Mesquite). The species was introduced in the country in the 1970’s to combat desertification through dryland afforestation. While the species proved very effective in greening the brown due to its prolific characteristics, it has also presented negative impacts on the ecosystem and on socio-economic activities. In Baringo district, the weed has choked up the wetlands around Lake Baringo, invading irrigation schemes and blocking passages thus threatening the livelihoods of the local community.

In recognition of the growing threat, Lake Baringo GEF Project in collaboration with Kenya Forestry Research Institute (KEFRI) organised a national workshop on Prosopis management in Lake Baringo from 1st – 2nd October, 2003. The workshop was attended by a variety of stakeholders including community representatives; government officials; scientists from research institutions and universities; and international organizations including UNEP, FAO, ICRAF and CABI-Africa. CABI-Africa presented an overview of invasive alien species in Africa and the Global Invasive Species Programme (GISP) initiative; KEFRI presented the status of Prosopis in Kenya and the potential uses including fuelwood, furniture, building material and fodder. Lake Baringo GEF project displayed some of the products from Prosopis.

The main output of the workshop was the adoption of an integrated management strategy, which include policy reforms, land adjudication, utilisation intensification, certification of Prosopis products and more research work on utility and management aspects.

FAO has expressed interest in funding a two-year pilot project in Baringo for the integrated management of Prosopis species in collaboration with KEFRI and Lake Baringo GEF Project. The lessons learned from this project will be replicated in other affected regions.
A new geyser has erupted near Lake Baringo in Kenya. The geyser was accidentally discovered when a team that was drilling a borehole encountered a hot spring at about 250 feet below the surface. Two technicians were seriously injured by the hot water. Geysers are produced when boiling water enters fractured rock at shallow depths and flashes to steam producing the characteristic jet of hot water. The Baringo geyser produces a continuous fountain of boiling water at about 90°C. The geyser, reaching a maximum height of 80 meters, has overtaken Yellowstone in the USA as the world’s highest and can be seen from 20km away.

The geyser is a reminder of the volcanic nature of the Great Rift Valley that stretches from Israel to Mozambique. Kenya is the only country in Africa that has exploited geothermal power and currently produces about 60 megawatts of electricity. There is a need to set up a seismographic station in rift valley to map the volcanic activities in the region to avert future disasters.

Initial assessment of the geyser indicates some economic opportunities including geothermal power generation, tourism activities and irrigation. However, environmentalists are advocating for caution on exploitation citing the potential hazard especially on Lake Baringo which is a fresh water lake supporting a rich avifauna and aquatic biodiversity. As in the case with any “goldmine”, conflicts have already started between the local communities and the local authorities on the issue of ownership of the new found resource.

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Many thanks for offering me this wonderful opportunity to learn and share ideas, information and experience on a practical basis with implementers of field projects that combine theory and practice. The participants were wonderful, knowledgeable, active, interactive and very much informed on leadership issues and farming practices at community levels. James did a great job in organizing and coordinating all the training and related activities that in addition eased communication barriers and enhanced learning opportunities and application of leadership skills. This made my role more of an observer and a student. Very much looking forward to follow-up activities to this collaboration. Best wishes and kind regards…Patrick Karani
Our research objectives were threefold: 1) to determine the status of mammalian populations in southern Kyrgyzstan under the conditions of increasing anthropogenic pressure; 2) to develop a strategy to preserve mammalian species; and 3) to promote their rational use.

Based on research conducted from 1988-2000, we identified 66 mammalian species in southern Kyrgyzstan that belong to 6 classes - Lagomorpha, Rodentia, Artiodactyla, Insectivora, Chiroptera and Carnivora. According to species diversity, the rodent class is the most diverse (28%), followed by carnivores (29%) and chiropterans (20%). Hence, rather diverse groups represent the mammalian fauna of southwestern Tian-Shan and Pamir-Alay; their habitat boundaries are well-defined by the different high-altitude zones in the mountain landscape. This partitioning of the environment by different species reflects the historical confinement of various species to particular landscapes; the confinement results from the complex history of various mountain systems (Chatkal, Ferghana, Alay and Turkestan ranges), the ecological characteristics of each species, and the different physical and geographic conditions.

Of all mammals found in the southern Kyrgyzstan, 57 species are aboriginal; four of these species are endemic (Marmota menzbieri, Spermophilus relictus, Sorex asper, Crocidura pergrisea). The aboriginal species of Cuon alpinus, Lutra lutra, Felis manul and, perhaps, Vormela peregusna, Felis libyca, Mustela altaica are considered today extinct populations of mammal species from the territory of the southern Kyrgyzstan. At the same instant Sorex asper and Rattus norvegicus are the newly emerged species of the southern region fauna.

Given the purpose of increasing the species diversity and improving the productivity of hunting grounds in southern Kyrgyzstan, seven mammalian species were acclimatized (Procyon lotor, Nyctereutes procyonoides, Mustela vison, Ondatra zibethicus, Cervus dama, Cervus elaphus and Bison bonasus). For the past 60-70 years, only three of these species remained (Mustela vison, Ondatra zibethicus, and Cervus elaphus). The rest of the species did not get acclimatized.

The most common principles of protection and rational use of mammals in Kyrgyzstan include 1) ecological optimization of all economic activities; 2) expansion of the network of specially protected natural territories; 3) increasing the management effectiveness of selected protected territories; 4) updating the Red Book (the list of mammals that became rare and are under the threat of disappearance); 5) protection of “hot spots” of biodiversity; 6) establishing a network of specialized nurseries on the territories of natural and artificial ecosystems (littoral ecotones, diversion channels and water reserves that are not used in agriculture) for selected commercial mammal species; 7) introducing legal reforms for registration and control of rare and disappearing species; and 8) supporting biological research. In addition, it is also necessary to introduce economic levers for using wild natural resources (e.g. raising license taxes for commercial mammals), and to involve communities in environmental protection activities. Both processes should lead to the preservation of existing mammal populations (or all of the animal life) under the modern conditions of increasing anthropogenic influences. In designing new management strategies, we must take into consideration the significant of a functioning biosphere as the most valuable and vital resource for humans.
Mammals of Southern Kyrgyzstan

Uncia uncia  Vormela peregusna

Bolot Kulnazarov, standing  Bolot Kulnazarov
Malagasy President Marc Ravalomanana announced at the World Parks Congress in September 2003 his commitment to increase Madagascar’s protected area network to 6 million hectares, tripling the protected area network in Madagascar over the next five years. In an effort to publicize this commitment, Madagascar’s Minister of Environment and Water and Forests, the Director-General of the Madagascar National Parks Service, Director General of the Malagasy Forest Service, and USAID/Madagascar’s Lisa Gaylord visited Washington DC. The delegation participated in a series of meetings and events that included a dinner hosted by the International Conservation Caucus on April 27th, and a panel discussion hosted by the Woodrow Wilson International Center on April 29th.

On the evening of April 27, the newly created International Conservation Caucus of the House of Representatives, boasting membership of close to 40 members, honored the Malagasy Minister of the Environment, Water, and Forests from Madagascar. Speakers from USAID/W and a number of international conservation NGOs recognized the tremendous commitment and considerable accomplishments of the Malagasy government and people to aggressively pursue conservation within a context of linkage with development and poverty reduction. USAID/Madagascar funded a film, “Madagascar: A New Vision,” that debuted at the dinner.

The film presented the Madagascar President’s vision for increased investment and attention to greatly expanding conservation linked to development in his country, and highlighted the close partnership of his country with the USG to achieve that vision. Over twenty of the caucus members from both parties were present during the reception and dinner.

The panel discussion at the Woodrow Wilson on April 29th opened with brief remarks by the Minister of Environment highlighting Madagascar’s vision for conservation of the nation’s highly biodiverse ecosystems. The speech was followed by a second screening of the film. The film highlighted the unique nature of Madagascar’s biodiversity and successful efforts to conserve biodiversity and improve the livelihoods of the Malagasy people. The film featured Madagascar’s approach to biodiversity conservation linking conservation and human development by promoting programs in buffer zones of protected areas that address sustainable livelihood alternatives; poverty reduction through income generation opportunities; provision of health services along with safe drinking water and better sanitation; and the promotion of sustainable management of environmental services provided by forests and wetlands.

USAID/Madagascar has been a leading supporter of Madagascar’s national park system since 1992 with over $120 million invested in conservation in that period. The mission has contributed to increasing the national park system from 1.1 million hectares in 1996 to almost 1.8 million hectares in 2003, and has supported numerous innovative programs linking conservation with development for pursuing sustainable livelihoods and resource management simultaneously.
Traditional approaches for formalizing recognition of environmental services tend to focus singly on environmental objectives and the use of economic instruments seeking efficiency and cost-effectiveness in reaching those objectives. Poverty alleviation objectives are simply absent or are an add-on. As a result, in some cases, payment for environmental services can exclude or even be detrimental to rural communities stewardship and payment for environmental services to meet the twofold objective of environmental restoration and poverty alleviation. With this objective in mind, PRISMA lead a research process in the Americas to examine Payment for Environmental Services-related experiences and initiatives in order to draw lessons that illustrate opportunities and risks for indigenous and peasant communities. Based on this work, PRISMA have been working on the construction of an alternative approach towards payment for environmental services that has as its core the dual goals of rural poverty alleviation and improved stewardship of the environment. In order to refine and enrich this work, it is vital to engage academics in a process of review of the theoretical and analytical underpinnings of this alternative framework, as well as a critical review of its practical application. The objectives of this project geared to 1) enrich, deepen and strengthen the alternative framework for payment for environmental services; 2) initiate discussions and strategies for disseminating this alternative framework in academic and policy circles; and 3) increase the Center for Sustainable Resource Development’s exposure in the region, for further collaborations that support more efficient and equitable natural resource management.

To meet our objectives, we organized a 2-day workshop on an alternative framework for payment for environmental services that has the potential of achieving the dual objectives of environmental restoration and poverty alleviation. The workshop was held at the Hotel Pacific Paradise, Costa del Sol, El Salvador, during October 9th and 10th, 2003. Most of the key issues that arose during workshop enriched, deepened and strengthened the alternative framework on environmental services and its compensation; PRISMA has incorporated these comments into the final document presenting the framework. Finally, the materials (such as the video of the event, presentations, etc.) provided invaluable input for internal discussions and feedback processes at PRISMA.

The systematization and elaboration of the document related to the workshop is still in the phase of transcription. The document containing the major insights, issues, conclusions, as well as the future lines of work is scheduled for completion shortly. This document will also include contributions of workshop participants and specifically, contribution from the Center for Sustainable Resource Development. Upon completion of the document, PRISMA will distribute a Spanish version. PRISMA has already established an agreement for the publication of the alternative framework with two Mexican publishing firms: Editorial Juan Pablos and the National Institute of Ecology (INE).
The Southeast Asian countries like the Philippines and Vietnam have been undergoing rapid transition in their respective economies. This change is characterized by rapid economic growth and "globalization" or increasing integration with the world economy. This kind of growth has various consequences both in the quality of the environmental resources and livelihoods of the population. The dynamics of resource use systems in the Philippines and Vietnam as they respond to global economic integration is a growing concern both to the academic and the policy making communities.

The uplands of the Philippines and Vietnam have not been spared from the influences of "globalization". In Vietnam, the uplands cover three-quarters of the country's land surface and provide a home to one-third of its population including fifty-one of Vietnam's ethnic minorities. In the Philippines' uplands consists of over half of the country's total land area and is considered home to about 15 million people. Under this international market regime, the Philippines has adopted a policy to focus on commercial crops with competitive advantage. This market integration triggers the expansion of plantation crops like banana and pineapple in the Philippines uplands.

The uplands are considered a fragile ecosystem, providing shelter and livelihood to a significant proportion of both Vietnamese and Filipinos. To sustain their livelihoods, the governments are promoting community based resource management strategies designed to formulate and implement sustainable livelihood activities that are complementary with the nature of the uplands ecosystem. Various programs, coupled with both internal and international efforts, were implemented to ensure that communities would have the capacities to carry out a resource use system that is more conserving of the biophysical resources and at the same time provide their basic needs.

It is within this context that this research is being proposed. While community based resource management strategies are being promoted in the uplands of Vietnam and the Philippines, another trajectory of events are in the offing. This is coming from the integration of local production and markets to the global economy. Many questions are now being asked: How do communities respond to the changes in the market economy? How does this new economic trend influence environmental quality? What are the incentives for greater agricultural intensification and does this present an opportunity to “save land for nature”? What is the social cost? How do local institutions and social networks that govern public resources and support social cohesion respond to the changes?

The study proposes to examine the impacts of rapid economic changes and globalization pressures and opportunities on: 1) livelihood strategies; and 2) local institutions/groups/arrangements and social capital. Using examples from Vietnam and the Philippines, the study will highlight how these impacts are influenced by different stages of the globalization process.

The Latest Update...

To provide you with the current status, the survey was completed last March, cleaned up last April. We have to go back again to complete and do some replacement once more.

We are now in the process of processing the completed survey questionnaire. The streamflow analysis done. The maps are now cleaned up and nicely drawn. We have made good progress, including some funny pictures in the field. It is quite exciting really... and tedious, I should say.
Regional Page Oceania

Reactions to the Movie "The Day After Tomorrow"
Asenaca Ravuvu (ELP '03)

After an advance screening of the climate change-related movie "The Day After Tomorrow", the Mission of Tuvalu to the United Nations issued the following press release which emphasizes the severe damage that sea level rise already has taken on this atoll.

Climate change is one of the issues to be addressed by the International Meeting on Small Island Developing States (Mauritius, 10 to 14 January 2005, dates to be confirmed): http://www.un.org/smallislands2004/

Reactions to the Movie "The Day After Tomorrow"

The movie "The Day After Tomorrow" provides a dramatic picture of climate change and sea level rise. Whilst the reality may not be as dramatic, climate change is nevertheless devastating for small island developing states like Tuvalu.

The adverse effects of climate change and sea level rise can be slow and insidious. For instance, seawater intrusion into our islands is causing our crops to die and our freshwater to be contaminated. Slowly and surely we are losing our food and our freshwater. Inch by inch, centimeter by centimeter our islands are being washed away by the rising tide. It is for the urgent addressing of these serious threats that the upcoming Mauritius International Meeting on the BPOA for SIDS is extremely important.

In the Pacific we are witnessing the slow but steady die-off of our coral due to increasing sea temperature. Coral reefs are vitally important to our survival. They protect us from the ravages of the sea and provide fish for us to eat. Similar effects are also happening in other regions; the Caribbean, the Indian Ocean, the Atlantic and the Mediterranean Sea.

But even today the effects of climate change can be dramatic as well. We are witnessing more severe and more frequent cyclones, which we believe are the direct result of climate change. Earlier this year, Cyclone Heta devastated the small island nation of Niue. Most of the buildings including the hospital on the island were severely damaged or destroyed. The same cyclone also caused severe damages in Tonga and Samoa.

Each year on the island of Funafuti in Tuvalu, we witness very high spring tides around February and March. When these tides arrive seawater comes bubbling up from the ground, and floods large areas of land. People have to wade though water to get to their houses. These high tides are getting worse and – for a country whose highest point is only 12 feet above sea level – this is a worrying trend.

So while the movie may give the impression that climate change and sea level rise is part of science fiction, for us in Tuvalu and other small island States it is a reality.

We must all work together to address climate change. No nation, no matter how big or small, can ignore the fact that climate change is here. It is happening. We must seriously question our reliance on fossil fuels, which is the cause of global warming and climate change, and move quickly to develop viable, environmentally friendly renewable energy sources. We must also be more efficient with our energy use.

As stated by Ronald Emmerich, Direct/Producer of the movie, "At the core of any ‘disaster movie’ there always has to be something factual, something real for the audience to grab on." And that something is that small island States like Tuvalu are at the frontline of impacts of climate change. Let us hope that we are not the first to disappear because of the effects of climate change and sea level rise.

28th May 2004
Permanent Mission of Tuvalu to the United Nations

Mark Smith, ELP ’03

I hosted a project workshop last month on analysis of landscape change which I asked Adina Merenlender (who is on sabbatical at U Queensland) to come along to. She made a great contribution, reviewing the Californian experience, and this is a nice Beahrs link that wouldn’t have happened without the ELP.
The Centre for Natural Resources and Environmental Studies, Vietnam National University is supporting a project to establish a conservation centre at Buon Don (Don village), in the buffer zone of National Park Yok Don, Central Highlands. Buon Don is a well-known location because of its dense tropical forest and clean fresh air from the virgin forests where one can enjoy a sense of being close to nature. A boat ride (one piece canoe excavated from log of one tree) alongside the imposing Srepok river, listening to the ethnic minority elders telling tales inside the traditional long house are not the only recreational events; one could also learn from the ethnic peoples in the South of the Truong Son range or the Central Highlands. The following tribes live in this area: Ede, Gia Lai, Mnong, Laotian, etc. These places still keep their local traditional trades such as handicrafts. Popular ceremonial festivals, celebrating the spiritual culture of the tribal peoples of Ede, Mnong, Gia Lai, etc., still take place.

The Project objectives are to: provide capacity building for the community to continue to preserve their traditional cultural features; improve the environment; protect the biological system (which is endangered); raise the living standard of the local people via the sustainable management of the natural resources as well as the production and trading of products made of wood and non-wood; and reducing forest destruction.

Sustainable development is defined as follows: “Development activities that could satisfy the needs of the present-day generation and would not hinder the possibility of satisfying the needs of the future generations”. Poverty and hunger are the causes leading to destruction of the environment. To survive human beings have to use – to exploit even – the natural resources. When the environment is improperly handled and natural resources exploited, the local people and their economy incur risks because eventually their basic needs are not met due to the extinction of the resource life, the natural environment. As nature has sent us the expensive bill of unplanned sustainable development, there are numerous feasible solutions to sustainable environmental development that should be expanded.

The Project will assist the communities in Dak Lak province to establish a centre for the preservation of local traditional knowledge and to improve the living conditions of one of the poorest regions of the country. Once the centre is established the older people of the villages would train and disseminate their knowledge to the younger generations, not only to construct, carve, and weave but also to understand the interpretation of their culture in their daily activities. The community will identify particular areas to exploit products other than logs; they will restore and develop laws, customs and management rules for sustainable production of forest and secondary forest products.
...News from ELP Alums...

Suzanty Sitorus, ELP ’02  
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After five and half years working in biodiversity NGO, I got the opportunity to have a break. Not a silent break, however, as since September last year I have used my sabbatical leave to pursue M.Phil/Ph.D degree in the School of Development Studies of University of East Anglia, Norwich, UK.

It has been a transforming moment, especially for my professional development. I have tuned to the academic environment and water issues. My research is looking at the integrated water resources management, the dominant concept in today’s water resources management, and its linkage with local dynamics. So far, it has been a smooth journey. I am looking forward to presenting my research proposal to my colleagues and faculty staff before the end of June this year. After that, I will embark on my fieldwork in Indonesia for more or less one year.

Although I have been quiet, but I appreciate continuous communication among Beahrs ELP alums, especially through this newsletter. It allows me to keep abreast with ELP alums around the world who are doing fantastic works for the environment. I would welcome discussion or exchange of ideas with alums whose works are relevant to my current research.

Aminul Islam, ELP ’01  
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I’m working as Sustainable Development Adviser with UNDP Bangladesh. Some of the interesting projects I work on are 1) the joint India-Bangladesh Tiger Census in world’s largest mangrove and World Heritage the Sundarbans; 2) the GEF funded Coastal & Wetland Biodiversity Management; 3) projects related to climate change and adaptation; 4) application of ICT in education, telemedicine, disaster warning, MDG monitoring and networking with public-private institutions involved in sustainable development. My latest interesting trip to Bangkok was to participate in an Asia-Pacific workshop of UNDP on Energy and Environment.

Olga Ramaromanana, ELP ’01  
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Hello everybody! This is a personal news from Madagascar. I will move to a regional position within the Indian Ocean Commission (COI) - a regional development entity in agriculture, trade, environment, diplomatique and socio-cultural area. I will be based in Mauritius and will work within the 5 isles (La Réunion, Mauritius, Comores, Seychelles and obviously Madagascar) as a Regional Technical Assistant in Monitoring & Evaluation for an agricultural related program. My major responsibilities are to harmonize legislation in the region, create a regional website of the protected vegetation areas, and improve the technique, control and quality of pesticides used in integrated pest management. Most of the programs implemented by COI are funded by the Union European but there are other donors such as WB, UNDP, etc. for specific areas. My family will join me after the end of the school year. Please feel free to contact me if any of you plan to go around Indian Ocean. Bonne continuation à tous !

Mireille Linares, ELP ’03  
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Recently I received notification that I’ve been admitted to a Master of Arts in International Development program at UNBC in Canada. An academic program in International Development is the first step and my best choice to continue my efforts to contribute in the matters I’m not only concerned but also I would like to deal with for longer.

Vo Thanh Son, ELP ’03  
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I am sorry for keeping silent for quite long time. In fact I was very busy after completing the course at UCB. I have worked as manager for UNDP project “Vietnam Agenda 21” (Formulation and implementation of Vietnam National Agenda 21 for sustainable development) till March 2004 and at the same time work in CRES. In fact it was very hard to do 2 jobs and that why I have to stop the works for project Vietnam Agenda 21.

I have good news for you. Our CRES will open the Master course from this year and Ph.D. course from next year, on Environment and Sustainable Development. This is really new Master course on sustainable development in Vietnam and we hope that we can promote further the works on environment and sustainable development in Vietnam.

Zac Tchoundjeu, ELP ’03  
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I have been silent for years. Now I feel really guilty for this. The good
news from this end of the world is the arrival of four students from the Business Haas School Berkeley in our project. For three weeks, the students will understand the strategy we are developing for the marketing of indigenous fruit trees and medicinal plants of the Congo Basin (the second important biodiversity reserve in the world after the Amazonia). During the three weeks in Cameroon, the four students will visit farmers, interact with scientists and all partners involved in tree domestication program. I would like to take this opportunity to sincerely thank Robin and Sebastian who supported this project.

Samina Khalil, ELP ’02
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Here is an update from my side. My research proposal titled “Selection and Design of Policy Instruments: Application to Environment Protection and Natural Resource Management in Developing Countries including Pakistan” has been selected by Higher Education Commission, Islamabad (Government of Pakistan) and Government of France for the subject program under Pak-French Research Collaboration in Social Sciences and Humanities.

I will be visiting UNEP and International Institute of Development and Environment in Paris in September 2004, for a month to work on my research titled as above and anticipate a fruitful and good learning experience. For me this is an opportunity to develop an insight into the subject while working with experts of this area and learn from their experience too.

Mari Linnapuomi, ELP ’02
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I am still posted in Brussels, working on EU Civilian Crisis Management. The highlight of the spring was a visit by our working group to the Balkans, more precisely to the EU police missions in Bosnia-Herzegovina and Macedonia. Having seen the work of those policemen in the field, I am much more motivated to work on the conceptual and management issues of these operations, and possible future EU efforts in other conflict areas of the world. In my freetime I have spent visiting smaller - and more beautiful - Belgian cities surrounding Brussels as well as the "mountains" of Ardennes and those, more worthy of that name, of Vosges.

Archana Patkar, ELP ’03
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I am actually in NY and ready to leave tonight for home - finally after 3 back to back missions; one week in Bangladesh - on a review of the Water Aid Hygiene & Sanitation Project; one week in London on WHO measurement of adolescent health and development outcomes work; and one week here to present the conclusions and recommendations of a tripartite (UNFPA, UNICEF & WHO) imitative at HQ on adolescent girls in 16 countries. The best part is that before these excursions I had a wonderful vacation with husband and kids in Geneva, Chamonix, Zermatt & London over the summer!

Keti Chachibaia, ELP ’02
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I am still working in Bratislava as a member of UNDP/GEF team that covers Eastern Europe and CIS. I specifically manage the capacity building and the adaptation & land degradation portfolio for this region. If there are other alumni members working on any of these issues I would appreciate you putting me in touch.
...Memories...
The Beahrs Environmental Leadership Program (ELP) links state-of-the-art environmental and natural resource science and policy at the University of California, Berkeley, with environmental professionals around the world. It is the leading international program within the Center for Sustainable Resource Development of the College of Natural Resources.

The core component of the Beahrs ELP is an interdisciplinary summer certificate course in Sustainable Environmental Management. Participants in the summer course:

- Develop an interdisciplinary understanding of key environmental topics;
- Explore alternative policies, technologies and institutions that promote sustainable environmental management;
- Strengthen conflict management and leadership skills; and
- Experience cross-cultural and cross-sectoral learning from peers around the world.

Course participants continue their learning and peer relations through the Beahrs ELP Berkeley Alumni Network, with an active website, newsletter, and various exchange opportunities.