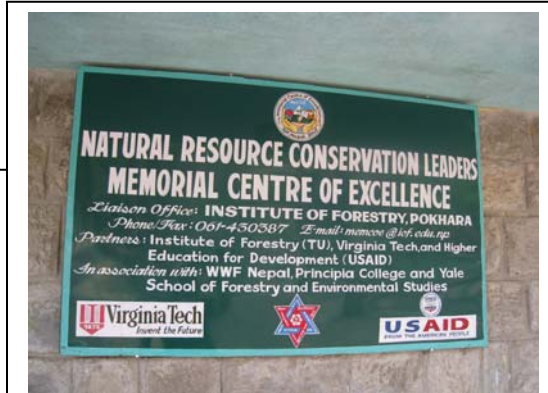


# LESSONS LEARNED FROM REVIEWS OF HIGHER EDUCATION PARTNERSHIPS IN SOUTH ASIA

## An Impact Assessment of 15 Higher Education Partnerships



### Higher Education for Development (HED)

Jane S. Gore, PhD,  
Senior Evaluation Specialist  
Malcolm J. Odell, Jr., PhD,  
Senior Research Associate

with

Marilyn Crane, Senior Program Associate  
Charlie Koo, Senior Program Associate  
Marisa Rivero, Program Associate  
Manny Sanchez, Program Associate  
Lynn Simmonds, Communications Associate  
Meena Nabavi, Program Coordinator  
Stephanie Morris, Strategic Communications Manager  
Jarred Butto, Program Associate, CII  
Kim Koch, Program Associate, CII  
Jill Wisniewski, Program, Associate, CII  
James Simpson, Intern, Monitoring and Evaluation  
Tura Woods, Intern, Communications

**For the United States Agency for International Development's (USAID)  
Bureau for Economic Growth, Agriculture and Trade (EGAT)  
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Higher Education for Development was founded in 1992 by the six major U.S. presidential higher education associations to support the involvement of the higher education community in global development.

American Council on Education (ACE) | American Association of Community Colleges (AACC) | American Association of State Colleges and Universities (AASCU) |  
Association of American Universities (AAU) | National Association of Independent Colleges and Universities (NAICU) |  
Association of Public and Land-grant Universities (APLU)

## STAFF RESPONSIBLE FOR THIS STUDY

**Marilyn Crane** – Senior Program Associate, HED, manages the Technical and Advisory Services Program, and partnerships in North Africa, the Middle East, Sub-Saharan and East Africa, and Haiti. Crane worked at the International Women’s Forum and Aspen Institute’s International Peace, Security, & Prosperity Program. She has a bachelor’s degree from Vassar College, studied at L’Institut d’Etudes Politiques de Paris, is fluent in French and speaks basic Spanish and Arabic.

**Jane Gore** – Director of Assessment and Reporting, HED, with 20 years of academic experience at Cornell University and the State University of New York. She has worked with USAID in El Salvador, for the U.S. State Dept./ Embassy in Botswana, as Senior Evaluation Specialist at Peace Corps/Washington, and as a Peace Corps Volunteer in Nepal. Gore holds a doctorate from Cornell University in Evaluation, and a bachelor’s degree from the University of Illinois-Urbana.

**Charlie Koo** – Senior Program Associate, HED, responsible for administrative oversight for more than 20 higher education partnerships throughout the world. Koo has a B.A. in Biology and M.S. in Nutritional Sciences from Cornell University, and an M.S. in Foreign Service from Georgetown University. He speaks French, German, Italian, Korean, and Spanish, and is learning Croatian and Japanese.

**Stephanie Morris** – Strategic Communications Manager, HED, responsible for overseeing all communications activities. She was previously an assistant vice president at Widmeyer Communications and director of communications for the National Women’s Business Council and Center for Women’s Business Research. Morris holds an MBA from the Robert H. Smith School of Business, University of Maryland, and a B.A. in Russian and Eurasian Studies from Mount Holyoke College.

**Meena Nabavi** – Program Coordinator, HED, responsible for providing technical and logistical support for peer reviews and HED partnership programs. Nabavi earned her B.A. in International Affairs and Economics from the Georgia Institute of Technology, and is currently enrolled in graduate courses in International Development at the George Washington University. Nabavi speaks intermediate Farsi.

**Malcolm Odell Jr.** – Senior Research Associate, HED, with 25 years of experience in international education, and rural development worldwide with a focus on project evaluation, assessment, and program design for USAID, Winrock, Africare, Habitat for Humanity and other international organizations. He has a bachelor’s degree from Princeton and Ph.D. from Cornell. Odell is fluent in Nepali and Danish, and speaks varying levels of Setswana, Hindi, Urdu, and French.

**Marisa Rivero** – Program Associate, HED, (temporary) was responsible for providing program and financial management expertise for the Mexico TIES initiative and assisting the assessment and reporting team. Rivero holds a M.A. degree in international communication from American University and B.A. in Politics and Spanish from Occidental College. Rivero has also worked for World Learning and Chemonics International on USAID, U.S. Department of State, and World Bank projects. She speaks Spanish.

**Lynn Simmonds** – Communications Associate, HED, responsible for supporting outreach efforts, web site management, content development, marketing and public affairs. Simmonds holds an M.A. degree in Public Administration from American University and B.A. in journalism. She was a Peace Corps volunteer in Togo.

**Manny Sanchez** – Program Associate, HED, responsible for managing higher education partnerships under the Mexico TIES initiative and supporting evaluation and assessments. Sanchez earned his B.A. in international affairs from George Washington University. He served as a Peace Corps volunteer in Honduras, is fluent in Spanish and speaks basic Japanese.

**Jarred A. Butto** – Program Associate, Center for International Initiatives (CII) at the American Council on Education (ACE), responsible for the design of professional development programming and resources on internationalization strategies for U.S. higher education. He holds a M.A. from the University of Chicago’s School of Social Service Administration and a B.A. in East Asian Studies and Anthropology from Bucknell University. Butto spent several years studying and working in Japan.

**Kim Koch** – Program Associate, CII, ACE, where she conducts research on international partnerships, branch campuses abroad, and campus internationalization. She holds an M.A. in international affairs from George Washington University, and a B.A. in anthropology from the College of William and Mary. Koch was a community development Peace Corps volunteer in Namibia.

**Jill Wisniewski** – Program Associate, CII, ACE, Jill manages the Internationalization Collaborative, Leadership Network on International Education, and the ACE/FIPSE project on Assessing International Learning. She received her M.A. degree in Education Policy at the George Washington University.

**James Simpson** – Intern, Monitoring and Evaluation recently joined the HED team. He is currently enrolled in undergraduate courses in International Affairs and Music at the George Washington University. Graduating in December, he hopes to travel and work in the development field. He plans to attend graduate school for International Development.

**Tura Woods** – Intern, Communications, HED, currently enrolled at the George Washington University, majoring in International Affairs with a functional concentration in International Development Studies. Woods speaks intermediate Arabic.

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## ACRONYMS

ACE	American Council on Education
AGRAU	Acharya N.G. Ranga Agricultural University, Hyderabad, India
AKI	Agriculture Knowledge Initiative, jointly sponsored by 16 US and 16 Indian universities
BUET	Bangladesh University of Engineering and Technology
CII	Center for International Initiatives, American Council on Education
CUREE	Consortium of Universities for Research in Earthquake Engineering
CU	Cornell University
D&G	Democracy and Governance
DANIDA	Danish International Development Assistance
EERI	Earthquake Engineering Research Institute
EGAT	Bureau for Economic Growth, Agriculture and Trade
ENRECA	Enhancing Research in Developing Countries, DANIDA program
EureGAP	Global partnership for certification of safe and sustainable agriculture
FIC	Food Industry Center, Punjab Agricultural University
HCC(S)	Houston Community College-Southeast
HCN	Host Country National
HED	Higher Education for Development, American Council on Education
HI	Heifer International
IAAS	Institute of Agriculture and Animal Science, Veterinary School, Tribhuvan University
IAEE	International Association for Energy Economics
IARD	International Agriculture and Rural Development course (below) Cornell catalog listing
ICAR	Indian Council of Agricultural Research
INTAG	International Agriculture and Rural Development course, Cornell/Tamil Nadu Ag. Univ.
IOF	Institute of Forestry, Tribhuvan University, Pokhara, Nepal
ISU	Iowa State University
IUB	Independent University of Bangladesh
KVK	Krishi Vignanda Kendre, Bangalore, India
MCC	Millennium Challenge Corporation
MCEER	Multidisciplinary Center for Earthquake Engineering Research
MSU	Michigan State University
NASA	National Aeronautics and Space Administration
NGO	Non-Government Organization
NICEE	National Information Centre of Earthquake Engineering
NRM	Natural Resource Management
NSF	National Science Foundation
NZFHRC	National Zoonoses & Food Hygiene Research Center, Nepal
O-AT-KA	O-AT-KA Milk Products Co., Batavia, NY
OSU	Ohio State University
PAU	Punjab Agricultural University
PU	Purdue University
RFA	Request for Application
SAFAL	Indian online e-trading exchange network
SHG	Self-help Group
SIU	Southern Illinois University/Carbondale
TCSVM	Tufts University, Cummings School of Veterinary Medicine
TNAU	Tamil Nadu Agricultural University
TU	Tribhuvan University, Kathmandu, Nepal
TU	Tufts University
UAS	University of Agricultural Sciences, Bangalore, Dharward
UCD	University of California-Davis
UD	University of Dhaka, Bangladesh
UH	University of Houston
UNDP	United Nations Development Program
USAID	United States Agency for International Development
Virginia Tech	Virginia Polytechnic Institute & State University
WID	Women in Development
WSSI	World Seismic Safety Initiative
WU	Washington University in Saint Louis

## EXECUTIVE SUMMARY

During spring 2009, the United States Agency for International Development (USAID)/Washington and Higher Education for Development (HED) initiated an impact assessment of selected higher education partnerships in South Asia that have occurred since 1999. The assessment focused on:

- Impact of partnerships to strengthen the capacity of host country faculty and institutions to deliver quality higher education;
- Impact of increased capacity of host country higher education faculty and institutions to support national development goals;
- Impact of partnership activity on U.S. faculty, students, and institutions; and
- Suggestions for improving the HED/USAID higher education partnership program.

This assessment effort produced quantitative and qualitative evidence of impact on host country and U.S. partners — faculty, students, and institutions — and impact on local and national development needs. These findings and results are drawn from a comprehensive review of information from three independent sources:

- Survey of partnership semi-annual and close-out written reports;
- Telephone interviews with partnership directors from U.S. institutions; and
- Observations/site visits and interviews with host country partners in South Asia.

In February and March 2009, teams of three HED researchers each visited 15 of the 19 higher education partnerships that had been awarded in three countries in South Asia. One team visited higher education partnerships in Bangladesh; a second team traveled to India; and the third team to Nepal. In preparation for the visits, partnership progress reports were reviewed and summarized for evidence of outcomes. All 15 U.S. higher education partnership directors were interviewed by telephone regarding their knowledge and perceptions of lessons learned and overall impact. See Table 1 for a list of partnerships in this assessment and Figure 1 for geographic locations.

### **Overall Lessons Learned to Promote Effectiveness and Sustainability of Higher Education Partnerships**

The following seven ‘lessons’ emerged from this impact study as ways to strengthen education capacity and enhance the value of higher education on national development, ensure sustainability of results, and augment overall cost effectiveness for the host country and U.S. partners.

1. Involve the host country partner institution from the start in the critical process of determining performance objectives—activities and expected outcomes for the partnership
2. Involve the host country partner actively in the selection of the U.S. partner institution
3. Emphasize ways to attract host country academics studying abroad for advance degrees back to their home institutions through specific institutional capacity building

4. Ensure that the partnership objectives clearly focus on providing results that strengthen human and institutional capacity with a focus on technical projects as secondary outcomes
5. Determine that the U.S. and host country partners have genuine collegial support from a legitimate academic unit involving more than one motivated principal investigator
6. Demonstrate evidence that partnership applications include sincere “cultural sensitivity”
7. Include a clearly stated six-month reporting format for the HED internal reporting process that requests both quantitative and qualitative information; and conduct regular HED portfolio reviews for active partnership activities.

### **Overall Impacts of Higher Education Partnerships**

The assessment review and site visits revealed an impressive array of examples of how these modest (\$100,000 to \$400,000) university partnerships are working toward local and national development goals while striving to address critical components of higher education quality. Of the 15 institutions in the sample, seven focused on agriculture, four on the environment, two on democracy and governance/public policy, and one each on health and education.\* Of these partnerships, two had a secondary focus on women in development and two others a secondary goal to work in journalism—all essential program areas for national development in South Asia.

### **EMERGING TRENDS**

**This study reveals trends to be noted by donors and the higher education community. Here are some examples.**

- Higher Education for Development partnerships are contributing to national development goals through policy dialogue and action on critical issues including food security and safety, energy, workforce development, earthquake preparedness, constitution development, and critical social issues such as domestic violence and women’s rights
- HED partnerships create lasting relationships that generate substantial cost share and leverage significant on-going funding, becoming hallmarks of foreign assistance cost effectiveness
- HED partnerships are tapping considerable local financial resources and re-engaging host country nationals at home and abroad and helping to reverse the ‘brain-drain’ phenomenon
- The legacy of the land-grant university engagement in Asia’s ‘Green Revolution’ is re-appearing for a new generation, demonstrating sustainable impact over decades and paving the way for similar partnership activities in Africa and elsewhere
- The HED capacity building partnership model brings immediate results through increased knowledge and skills for faculty and students; and institutional changes to update management, curricula, courses, teaching methods, research, publications and public policy/extension work ‘beyond the walls’ of the partner institutions
- U.S. institutions also benefit through expanded knowledge for faculty and students, internationalization of curricula, cutting edge research and publication opportunities, and long-term collegial relationships with host country colleagues
- HED partnerships are becoming more effective as host country partners play greater roles in determining program objectives and selecting the U.S. partners

\* One partnership combined Democracy and Governance (D&G) and Environment; another combined D&G and Women in Development

(See Table 1.)

The surprisingly **high value of cost-share financial contributions and additional leveraged funds** listed by this sample of partnerships quickly reveals that higher education partnerships are ‘value for money.’ The \$3.2 million total HED awards were matched by \$2.3 million in ‘cost-share’ funds contributed by the partners who then leveraged almost \$17 million in indirect funding from other sources during or after the partnerships began. Rarely in the world of international foreign assistance are cost share figures recorded, which exceed 70 percent of the original grant amount. Even more unusual are reports documenting indirectly leveraged funds exceeding five times the initial grant award.

**Human capacity building and institutional capacity strengthening**, primary goals of these partnership efforts, clearly happened as part of all 15 partnerships. Numerous examples were provided of how the skills and knowledge of faculty, staff, and students have been enhanced either at the host country campuses and/or at U.S. institutions. Likewise, the study found a great deal of evidence of institutional strengthening — improved institutional management, revised programs of study, new degrees, updated course content, improved teaching methods, focus on research and publications, and training for public service and extension.

Surprisingly, however, there was considerable evidence of additional capacity building with community groups, NGOs, and local communities and citizens. Building capacity ‘outside the walls of the institution’ is a standard goal of U.S. higher education, but rarely found in developing countries. These partnerships made substantial progress toward ‘sharing knowledge with the people’ through human and institutional capacity strengthening, non-degree training, and by promoting teacher training, training of trainers, village-level workshops, national conferences, online courses, printed documents, and other direct and indirect methods of information dissemination.

This study also looked specifically for evidence of higher education partnerships **on national development goals**. Looking back 10 years, this HED study reveals that these partnerships produced impressive evidence of higher education expertise influencing national development goals. Examples include: promoting national attention on private sector agriculture to support the food industry; encouraging private sector employment for newly trained university graduates; supporting income generation opportunities at the local and village levels; and advising national policy on a number of critical topics—domestic violence, women’s rights and protection, energy, earthquake preparedness, religion and gender issues, and the development of a new national constitution.

It was important that this impact assessment summarize partnership capacity building **benefits for both the U.S. and host country institutions** because a partnership implies reciprocal commitments and mutual benefits. Partners described valuable opportunities for U.S. faculty, students, and the communities they serve to learn more about international issues, strengthen culture and language studies, and participate in cross-cultural, interactive programs. U.S. faculty members have forged long-term collegial relationships with host country colleagues and continue with cross-cultural research, international publications, and policy advising.

At a global level, HED partnerships provide numerous opportunities for ‘positive public diplomacy’ both at home and abroad especially as the partnerships appear to be doing what partnerships are designed to do: provide value to both participants. The ‘so what’ impacts of the 15 partnerships clearly demonstrated that these collaborative ventures are in the vanguard, providing leading edge inputs for long-term academic change. The U.S. system of higher education is highly regarded as a model in many South Asian countries. Host country university administrators and faculty are eager to incorporate into their higher education structures many of the U.S. methods and processes for teaching, conducting research, promoting public and community service, and advising national policy. This assessment found that administrators and faculty were enthusiastic about adding changes that would strengthen human and institutional capacity building while addressing local and national development goals.

### **Partnerships in the Impact Assessment**

From 1999 through 2009, Higher Education for Development awarded \$3,557,556 in grants for 19 higher education partnerships in South Asia. The awards ranged in value from \$98,829 to \$400,000 and ran for two to three years (Eight of the partnerships were funded for \$100,000 or less). Additional cost-share contributions from the U.S. and host country partners of \$2,972,959, increased the total value of the partnerships to over \$6.5 million dollars (See Table 1).

During the spring of 2009, three HED impact assessment teams of three people each visited 15 of these 19 partnerships in three countries included in the HED program—Bangladesh, India, and Nepal. Scheduling and financial constraints prevented visits to the remaining four partnership sites.

The U.S. partners consisted of large and small, two and four year, and public and private institutions. In addition to higher education capacity building, the 19 partnerships focused on five program areas of high priority to USAID\*:

- Agriculture –seven partnerships
- Environment – five partnerships
- Public policy – two partnerships
- Health – one partnership
- Education – four partnerships

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\* One partnership combined D&G and Environment; another combined D&G and Women in Development

**Table 1**  
**Profiles of 19 Higher Education Partnerships in South Asia 1998 – 2008**

NOTE: Shaded rows represent HED partnerships in South Asia **not** included in this assessment sample

Country	U.S. Institution	HCN Institutions	Program Area	HED Funds#	Cost-Share*	Dates
<b>Bangladesh</b>	Southern Illinois University at Carbondale	Independent University of Bangladesh	DG/Public Policy /Journalism/ Women in Development	99,978	101,547	12/02-5/05
<b>Bangladesh</b>	University of Houston	Bangladesh University of Engineering and Technology	Environment/DG /Public Policy /Journalism	119,814	30,681	12/03-9/05
<b>Bangladesh</b>	Virginia Polytechnic Institute & State University	Bangladesh University of Engineering & Tech.	Environment/ Natural Resources	200,000	87,642	10/03-3//06
<b>Bangladesh</b>	Virginia Polytechnic Institute & State University/ University of California, Davis	Dhaka University	Education/ Women in Development	120,000	58,876	5/03-3/06
<b>India</b>	Cornell University	Tamil Nadu Agricultural University	Agriculture	300,000	471,854	04/04-10/06
<b>India</b>	Eastern Iowa Community College District	Vasavi College of Engineering	Education	99,810	103,978	10/01-9/03
<b>India</b>	Houston Community College-Southeast	University of Delhi	Health	99,778	101,631	9/99-12/02
<b>India</b>	Iowa State University	University of Agricultural Sciences, Bangalore	Agriculture	299,963	137,769	3/04-9/07
<b>India</b>	Michigan State University	Tamil Nadu Agricultural University	Agriculture	297,050	143,210	4/04-9/07
<b>India</b>	Ohio State University	Punjab Agricultural University	Agriculture	299,632	211,500	4/04-9/07
<b>India</b>	Purdue University	University of Agricultural Sciences, Bangalore	Agriculture	300,000	285,190	4/04-9/07
<b>India</b>	University of California, Davis	Tamil Nadu Agricultural University	Agriculture	299,974	124,329	10/04-9/07
<b>Nepal</b>	Indiana University	Kathmandu University	Education	100,000	149,674	10/99 - 9/03
<b>Nepal</b>	Michigan State University	Tribhuvan University, Institute of Forestry	Environment	99,316	210,330	10/01 - 9/04
<b>Nepal</b>	Red Rocks Community College	Tribhuvan Univ., (Inst. of Engineering)	Education	98,829	78,055	11/02 - 9/04
<b>Nepal</b>	Tufts University (School of Veterinary Medicine)	Tribhuvan University (Inst. of Agri & Animal Sci.)	Agriculture/ Animal Science	123,441	95,156	2/03 - 4/04
<b>Nepal</b>	University of Colorado-Boulder	Tribhuvan University, Institute of Forestry	Environment	100,000	309,847	10/00--9/03
<b>Nepal</b>	Virginia Polytechnic Institute and State University	Tribhuvan University, Institute of Forestry	Environment	400,000	193,449	10/07 - 9/10
<b>Nepal</b>	Washington University	Tribhuvan University, Law School	Public Policy	99,971	78,241	9/99 - 12/01
<b>Total</b>				<b>\$3,557,556</b>	<b>\$2,972,959</b>	<b>1999 - 2010</b>
<i># Amount of HED grant award</i>			<i>* Cost-share reported at close-out</i>			

**Figure 1.**  
**Geographical Location of 15 South Asia HED Partnerships**



### **Partnership Sites Visited**

#### **Bangladesh** ●

- a. Bangladesh University of Engineering & Technology, Dhaka (2)
- b. Dhaka University, Dhaka
- c. Independent University of Bangladesh, Dhaka

#### **India** ●

- d. Panjab Agricultural University, Ludhiana
- e. Tamil Nadu Agricultural University, Coimbatore (3)
- f. University of Agricultural Sciences, Bangalore, Karnataka (2)
- g. University of Delhi, New Delhi

#### **Nepal** ●

- h. Tribhuvan University/ Faculty of Law, Kathmandu
- i. Tribhuvan University/ Institute of Agriculture & Animal Science, Chitwan
- j. Tribhuvan University /Institute of Forestry, Pokhara (2)

## DESCRIPTIONS OF PARTNERSHIPS IN THE IMPACT ASSESSMENT

### BANGLADESH (2002)

#### *Removing Barriers of Domestic Violence from Women's Full Participation in Civic Society and Democracy in Bangladesh*

- Southern Illinois University (SIU) at Carbondale
- Independent University of Bangladesh (IUB)
- Khan Foundation
- Women for Women



CII photo

Staff members (pictured) at Nari Jibon, an NGO supported through this HED partnership, are assisting young women in Bangladesh to become more competitive in the job market. At Nari Jibon, the students practice computer skills, learn English, photography and sewing. The organization also provides information on domestic violence.

The overall objective of the partnership was to assess shelter and program resources for individuals' knowledge, attitudes, and practices regarding domestic violence and to develop educational, training, and media materials. Specific activities included: 1) developing curricula, expertise, research, strategies, and educational materials at the Independent University of Bangladesh to address domestic violence in Bangladesh, and 2) removing barriers that domestic violence imposes on women's socioeconomic mobility and political participation. Among other activities, the partners surveyed more than 300 women workers and held focus groups on knowledge, attitudes, and practice regarding domestic violence; established links with various domestic violence programs and shelters; and consulted with legal experts, psychologists, health care practitioners, and women's organizations in both the United States and Bangladesh.

The partnership trained more than 600 Bangladeshi nationals (including 100 men) on legal matters, shelter programming, research methodologies, and interviewing techniques. The collection of organizations working on domestic violence with the partners provides a voice to this sensitive topic and services to women in the countryside. Reporters continue to write about domestic violence issues, and more articles are regularly appearing in the media. A project brochure, printed using HED support, is still being reprinted and circulated throughout Bangladesh.

**“[Concerning domestic violence], the people learn and develop an expectation for services and help. They really do not have any information and this information can go a long way to help them.”**

– Dr. Mahmuda Islam, Professor, Dhaka University



HED photo

Five students enrolled in the Energy Economics course at the Bangladesh University of Engineering and Technology discuss how the course's activities are helping shape energy policy in Bangladesh.

### **BANGLADESH (2003)**

#### ***Partnership to Strengthen Local Capacity for Economic, Financial, and Social Analysis of Energy Sector Initiatives***

- **Institute for Energy, Law & Enterprise at University of Houston Law Center**  
(Ctr. for Energy Economics, Bureau of Economic Geology, Univ. of Texas, Austin after June 1, 2005)
- **Bangladesh University of Engineering and Technology, Department of Petroleum and Mineral Resources Engineering (BUET/PMRE)**

Through faculty exchanges, mentoring, and training sessions in Texas and Bangladesh, this partnership enhanced energy economics education and research capacity at the Bangladesh University of Engineering and Technology's Department of Petroleum and Mineral Resources Engineering. The partnership revised the curriculum and updated teaching materials for BUET/PMRE, created a new energy economics course, developed short courses for industry professionals, enhanced the capacity of BUET/PMRE staff to provide energy training, and improved understanding of U.S. teaching approaches. Drawing on the curriculum developed by the partnership, BUET also developed a new online Ph.D. program under its continuing education program. The partners produced case studies and reports on energy policy issues of relevance to Bangladesh and established local chapters of U.S. and international organizations for energy professionals. As a result of these activities, PMRE is now better equipped and experienced to undertake quality research, perform policy analysis, act as an adviser to interested industry and government stakeholders, and offer graduate-level and professional courses in energy economics and regulation. BUET staff noted improved accuracy in media reporting on energy issues. Journalists continue to contact PMRE faculty for advice and guidance on energy policy. The HED partnership helped contribute to 'reverse brain-drain' with the recruitment of a faculty member in Texas to return to Bangladesh. The University of Texas is using the partnership model and tools developed from Bangladesh for several new USAID partnerships in other countries.

**“Basically, this collaboration has shifted me, helped me switch from an engineer to a policy-maker.”**

- Mohammad Tamim, Professor,  
Bangladesh University of Engineering and  
Technology (BUET) and  
Acting Energy Minister, 2007-08,  
Government of Bangladesh

## **BANGLADESH (2003)**

### ***U.S.-Bangladesh Partnership to Reduce Vulnerability to Seismic Hazards***

- **Virginia Polytechnic Institute and State University**
- **Bangladesh University of Engineering and Technology (BUET)**
- **Consortium of Universities for Research in Earthquake Engineering (CUREE)**
- **Earthquake Engineering Research Institute (EERI)**

This partnership helped to reduce Bangladesh's vulnerability to seismic threats by enhancing the teaching,

research, and service capacity of the Bangladesh University of Engineering and Technology in areas related to earthquake safety. Major partnership activities included: expanding undergraduate and graduate offerings in earthquake education; creating case study materials relevant to local conditions; designing and implementing pilot training courses for local seismologists, geotechnical engineers, structural engineers, architects, planners, and regulatory officers; and developing tools and strategies for national seismic hazard mapping, urban area seismic microzonation, and earthquake vulnerability assessments; and developing a set of seismic vulnerability assessment tools. These included adapting the U.S. Federal Emergency Management Agency's (FEMA) earthquake loss estimation



HED photo

Dr. Tameed M. Al-Hussaini stands beside an infrastructure model on the Bangladesh University of Engineering and Technology campus at the Department of Civil Engineering. This model is shared with builders to help improve industry practices and reduce the effects of seismic hazards. BUET partnership participants serve as national experts and resources on the issue of seismic hazards and are central to bigger initiatives in Bangladesh's earthquake safety.

methodology to conditions in Bangladesh. The partnership received a donation of 60 strong motion/seismographs, valued at about \$180,000, from the Consortium of Organizations for Strong-Motion Observation Systems (COSMOS). These instruments have significantly bolstered Bangladesh's capacity to collect accurate ground motion data. EERI members and institutions also shipped to BUET whole libraries of major journals and books totaling 1,000 volumes. The BUET team contributed to the drafting of a new "National Strategy for Earthquake Hazard Mitigation."

**“[The HED grant] was kind of a launching pad.”**

- Dr. Tahmeed Al-Hussaini, Professor,  
Department of Civil Engineering, BUET

## BANGLADESH (2003)

### *Partnership to Improve the Status and Opportunities for Women in Bangladesh*

- Virginia Polytechnic Institute and State University
- University of California, Davis (UC/D)
- University of Dhaka, Women and Gender Studies Department (UD)



HED photo

Dr. Ayesha Banu, former chair of the Department of Women and Gender Studies at the University of Dhaka, shows the resources available to the students at the department library and lab. “This course is the only place where students can discuss these issues. They called for the course, and it is constantly evolving and adapting to student interest and needs,” Banu said.

This partnership strengthened the Women’s Studies Department at the University of Dhaka (UD) by developing courses, increasing the skills of students and faculty through collaborative research projects, and improving the research agenda. The partnership’s long-term objective was to improve the condition of women in Bangladesh by strengthening UD’s institutional capacities for research and analysis on topics relevant to women’s issues and by enabling UD to become more responsive to the needs of those working in sustainable development to improve the condition of women in Bangladesh. The partners developed syllabi, readings, and other materials for online courses on women and the environment, women and demography, gender and globalization, gender and development, and transnational Muslim women. A course on ‘Women and Religion’ and gender sensitivity workshops that were created by the partnership have helped students and graduates to gain jobs in the non-profit sector. The project also developed a widely circulated and referenced gender atlas of Bangladesh, which received an overwhelmingly positive reception locally and internationally has helped launch additional research projects on transnational feminism and reproductive health. The lessons learned from the HED partnership also helped Virginia Tech develop new programs in Nepal and Haiti (the latter involving a majority of

women).

**“The Gender Atlas of Bangladesh was the most successful output of the partnership and generated a number of articles in the local press.”**

- Dr. Janet Momson , Professor, UC-Davis, (currently at Oxford University)

## INDIA (2004)

### *Experiential Learning in Globalization and Agriculture in India*

- **Cornell University (CU)**
- **Tamil Nadu Agricultural University (TNAU) – Coimbatore**
- **University of Agricultural Sciences (UAS) – Dharwad**
- **Acharya N.G. Ranga Agricultural University (ANGRAU) – Hyderabad**
- **Sathguru Management Consultants – Hyderabad**

This partnership implemented an innovative program on experiential learning in globalization and agriculture, encouraging public-private sector linkages to boost Indian agricultural productivity, exports, and rural incomes. Jointly created curricula will address relevant agricultural development issues and generate a cadre of skilled, globally aware graduates. The partners introduced a two-part International Agriculture and Rural Development (IARD) course, “Agriculture in Developing Nations: India,” which was offered twice over the course of the partnership and taught for academic credit both in India and the United States.

The first part of the course involving classroom lectures attracted 240 US and India students. The course, which included 20-day field visits to India and involved the participation of 90 Cornell and 75 Indian students, illustrated for the students and accompanying faculty from both countries the changes necessary in agricultural policy and technology to improve productivity and promote competitiveness and integration in a global economy. The partners also implemented an Agribusiness Management Program for 75 mid- and senior-level managers and policy makers from both the public and private sectors focusing on technology transfer opportunities and challenges in agriculture, food product commercialization, food retailing, supply chain management, international food marketing standards, and World Trade Organization regulations. Perhaps the single most important “legacy” of the HED program was the creation in 2008 of India’s first-ever dual degree program in agriculture with a U.S. university, allowing Indian students to receive a master’s degree in Professional Studies from Cornell in Plant Breeding and Genetics or Food Science and Technology and a master’s degree in Technology in Biotechnology and Business Management from TNAU. Among other factors, the success of the IARD course – which now continues under separate funding and has expanded to include the participation of students and faculty from four universities in Thailand – enabled the partners to leverage more than \$5 million from the Tata Foundation, Sathguru Management Consultants, and other entities to develop and launch the dual-degree program. The first group of students will matriculate in the summer of 2009.



HED photo

Tamil Nadu Agricultural University/Cornell University: TNAU, the lead India institution for three of HED’s six U.S.-India agriculture partnerships, worked with Cornell to provide experiential learning opportunities for students and agribusiness managers through field visits in the United States and India. The two universities also collaborated to develop India’s first-ever dual degree program in agriculture.

**“Our curriculum is now much more responsive to the needs of the market.”**

- Dr. R. Chandra Babu, Dean of Post Graduate Studies, TNAU

## INDIA (1999)

### *Supporting Educational Programs in India—Building human capacity through education and training for improved health services in India*

- Houston Community College-Southeast (HCC)
- University of Delhi (UD), India
- Delhi Centre for Women’s Studies, India
- PHD Chamber of Commerce, India
- Centre for Higher Education in Professional Development, India
- Texas Medical Center, U.S.
- Spantran Services, Inc., U.S.
- The East End Chamber of Commerce, U.S.

**“(The HED partnership with Houston Community College)... opened our minds to providing a vocational tilt to all academic experiences, hands-on experience, and the use of various pedagogies... We are experiencing a huge multiplier effect as one change begets/inspires another.”**

- Dr. S.J. Passi, Reader in Nutrition,  
Department of Nutrition and Dietetics,  
University of Delhi

The focus of this partnership was to design market-responsive curricula to prepare students for immediate employment in the health sector. During an intensive, three-week summer workshop in Houston, seven leading educators from India actively engaged with more than 30 U.S. faculty, doctors, and administrators from including HCC, Texas Medical Center, and the Texas Children’s Hospital to ultimately design 12 new vocational courses, seven more than originally planned. These courses focused on maternal and child nutrition, nutrition and dietetics, HIV/AIDS, and health management. The Indian participants also received training in innovative teaching methodologies, test preparation, recruitment, and student and faculty evaluation. Following the U.S. workshop, the partners conducted a workshop in New Delhi on the “Internationalization of Higher Education in the Health Sector,” attracting more than 200 participants from HCC, UD, and other higher education institutions,



Photo: Dr. Lakshmi Devi (Univ. of Delhi)

Dr. S. J. Passi and Dr. Adarsh Sharma discuss with Marisa Rivero (HED) how their experience with HCC has impacted Indian institutions as well as their own and their students’ professional development.

leading hospitals, government agencies, voluntary organizations, and other local institutions. The gathering served as an effective forum to discuss and better understand contemporary issues related to health education and training and information technology applications. More than 50 participants attended a second workshop, which addressed technical training needs for health care professionals in India and the ways in which universities could make higher education programs more responsive to those needs. The partners also developed four new certificate and two distance education courses on HIV/AIDS being used by Indian academics and health professionals.

## INDIA (2004)

### *Next Generation: Developing India's Institutional Capacity to Confront Agriculture's 21<sup>st</sup> Century Challenges*

- Iowa State University (ISU)
- University of Agricultural Sciences (UAS), Bangalore, Karnataka



HED photo  
HED assessment team touring ornamental fish production tanks with UAS faculty. Thirty village households have now taken up ornamental fish farming as a result of the success of the initial pilot project, now considered a model for the entire State of Karnataka and beyond.

The partners explored alternative approaches to traditional, heavily subsidized grain production and provided local farmers, educators, and policy-makers with new farming models that could ultimately ensure the future of India's sustainable agriculture. By examining different models of agricultural innovation and community development, the partners accumulated the knowledge needed to develop new, more relevant curricula and extension services. The partnership helped strengthen women's self-help groups (SHGs) income generation activities, including silkworm production, finger millet malt processing, and ornamental fish rearing. Although ornamental fish rearing was not among the partnership's originally planned activities, it has enjoyed particular success in bolstering household incomes. During the pilot phase, five SHG households were selected and trained to raise five types of fingerling (fish stock), but the project has since grown to include more than 30 households in the two test villages. These families are raising more than 30 varieties, with some even having expanded into aquarium production. This relatively non-

labor intensive activity provides an average of approximately \$10 per month in supplemental income for the women, with amounts expected to increase. The ornamental fish project is now considered a model program by the government of Karnataka State, which is seeking to replicate it throughout the state and beyond. The partners, during and after the HED funding period, also introduced 58 biogas digesters and 56 smokeless *chulas* (ovens) in the villages to provide clean and efficient fuel for cooking, lighting, and other purposes resulting in a 50 percent saving in firewood consumption and improved health benefits for women derived from decreased drudgery of hauling firewood and decreased smoke inhalation. Other important partnership interventions included drip irrigation, organic mulching and composting, and training in micro-financing, which has allowed SHGs to purchase cows, sheep, goats, sewing machines, and the ornamental fish. Because of the various income-generating and income-saving activities introduced by the partnership, the families in the test villages have increased their income by approximately 3,000-4,000 rupees (about \$60-\$80) per month. Additionally, the UAS partners hosted an "International Conference on 21<sup>st</sup> Century Challenges to Sustainable Agrifood Systems" to provide a forum for more than 400 leaders in agricultural education, research, policy, agribusiness, and development to deliberate and present papers on meeting the challenges of sustainable agriculture through more efficient management of natural resources.

**"We never imagined it would enjoy the kind of success that it has. This is now the most successful extension program in Karnataka State."**

- Dr. D. Seenappa, Chief Scientific Officer,  
Inland Fisheries Division, UAS-Bangalore

## INDIA (2004)

### *Building University Capacity to Improve Fruit and Vegetable Supply Chain Development in India*

- Michigan State University (MSU)
- Tamil Nadu Agricultural University (TNAU), Coimbatore, India

The overall goal of this partnership was to promote greater awareness of and capacity for assisting small farmers to link into high value fruit and vegetable supply chains. The primary objectives of the collaboration were to (1) strengthen TNAU's competencies in all aspects of supply chain development (especially ensuring that small- and medium-scale producers are included); (2) enhance relevant curricular and extracurricular learning opportunities; and (3) build partnerships with the private sector, government agencies, NGOs, and farmer groups to improve TNAU's ability to support supply chain management. Major accomplishments under this partnership have included: faculty development in the

area of supply significant undergraduate horticulture; farmers with and exporters; workshops and 1300 farmers, agribusiness scientists in Practices, Good Practices, Good and issues; and the

**One mango farmer said, "The [MSU] partnership's greatest contribution was bringing all of us together. We all live in the same State but never had the opportunity to come together. This program has allowed us to leverage our collective resources." Another farmer said, "Being a member of the federation has increased my household income – my family is happy."**

chain management; revisions to the curriculum in connecting local traders, processor, 26 training seminars for over traders, processors, managers, and Good Agricultural Management Harvest Practices, phytosanitary establishment of the

first banana and mango federations in the State of Tamil Nadu in 2005 and 2006, respectively. Initially, the mango federation was comprised of 115 members and now has 450 members representing 18 of the State's 30 districts while the banana federation's membership has increased from 85 members to 260 members representing 14 districts. Membership in the federations have enabled the farmers to increase their incomes, better leverage their collective resources to impact policy, and receive continued training from TNAU. The HED partnership project helped leverage a 10.5 million Rupee (\$210,000) grant from the Indian Council of Agricultural Research to provide training for farmers in supply chain management.



Dr. T. N. Balamohan and other TNAU faculty explain effective agricultural practices for mango farmers to Marisa Rivero (HED) and Elizabeth Callender (USAID). Online mango sales for the partnership-established Tamil Nadu State Mango Federation reached 3,000 tons in 2008.

## INDIA (2004)

### *Punjab Agricultural University and Food Processing: New Linkages with the Private Sector*

- The Ohio State University (OSU)
- Punjab Agricultural University (PAU), India



HED photo  
Two PAU graduate students in the Food Science and Technology Department test samples in one of the laboratories of the pilot Food Industry Center, which, among other services, provides analytical services for local food industries. A permanent state-of-the-art FIC will open in 2010.

The partners collaborated to promote agricultural diversification and the transformation of raw food products into quality, high-value commodities with extended shelf life and potential for export. They worked to establish new programs at Punjab Agricultural University (PAU) in agricultural education, research, and extension; enhance rural economic growth; improve rural incomes and employment opportunities; and create greater opportunities for the export of agricultural products. Introducing alternative crops into the rice-wheat farming system will help improve soil and water quality, create off-farm employment, generate additional income, and provide more equitable income distribution. After surveying local food processing capabilities and reviewing teaching practices and the undergraduate curriculum at PAU, the partners focused on developing systematic links between the university and the private sector, culminating in the creation of a pilot Food Industry Center (FIC) staffed by 11 faculty members, seven of whom received training at The Ohio State University. With \$2.35 million in leveraged funding from the Indian government, PAU is overseeing the construction of a permanent state-of-the-art FIC on its campus which is slated to open in 2010. Since its inception in 2006, the pilot FIC – using funding from government, industry, and the World Bank – has trained more than 1,000 small farmers, women from Self-Help Groups, unemployed youth, and other stakeholders every year. Through these trainings, sample product testing services, and the sale of new technologies and products, the Center, which houses a business incubator, has thus far earned about \$100,000.

Particularly successful new products developed at the Center include buffalo mozzarella cheese and fruit juices. The FIC has also established formal ties with 47 food industries, including Nestle India and Pepsi Foods, which are taking advantage of the Center's well-equipped food analysis laboratories. The Center's Food Business Advisory Board is comprised of one farmer, three industry representatives, and two PAU faculty members. Additionally, farmer field days at PAU have attracted more than 125,000 farmers seeking new technologies.

**“The best thing about the OSU-PAU partnership was that PAU got linked into the local agribusiness community. This would not have happened – at least not this soon – without OSU’s assistance.”**

**“They were a catalytic force.... OSU has helped sow the seeds of change at PAU. There has been a tremendous change in the mindset of both the faculty and students [with regard to approaches to teaching and learning and making academic programs more demand-driven]. We especially learned from OSU’s Dept. of Agricultural Education. No such department exists at PAU.”**

- Dr. Chahal, Dr. Dilawari, Punjab Agricultural University

## INDIA (2004)

### *Partnering with Higher Education in India for Improving Nutritional Quality of Food by Biotechnology Approaches*

- **Purdue University (PU)**
- **University of Agricultural Sciences (UAS), Bangalore**

The overall goal of this partnership was to educate the rural masses, especially women and children, about nutrition and enhance awareness among farmers and policy-makers about the potential benefits of biotechnology in improving human nutrition. Toward the realization of this goal, the partners: developed Web-based educational materials regarding biotechnology and nutrition; developed training modules and bulletins for the local population; developed a transgenic tomato with increased levels of the antioxidant, lycopene; established kitchen gardens for local schools to improve the nutritional content of mid-day meals; and strengthened women's Self-Help Groups in two test villages near the University of Agricultural Sciences-Bangalore (UAS). The UAS partners also organized and hosted an international conference on "Biotechnology Approaches for Alleviating Malnutrition and Human Health," attended by more than 800 Indian participants from academia, the private and public sectors, and farmers and about 60 participants from Australia, Canada, Germany, Iran, the United States, and USAID/India. The partners anticipate that changes in perspectives about biotechnology and nutrition will incline farmers, extension educators, and policy-makers to support the use of biotechnology in enhancing the nutritional quality of food. Overall, almost 1,000 men, women, and children from local villages received training through partnership activities in areas including micronutrients and health, preparation of nutrient-rich foods with locally available vegetables, fruit and vegetable processing, mushroom cultivation, finger millet malt production, food safety and quality control, and the relationship between nutrition and health. As a direct result of this collaborative project, the partners leveraged funds from the State government of Karnataka to establish two new undergraduate programs in Agricultural Biotechnology and Agricultural Food Sciences at both UAS and the College of Agriculture, Hassan. Through its professional connections with Purdue, UAS signed a memorandum of understanding with the Embassy of Afghanistan in 2006 to launch a new three-year program with four Afghan universities, enabling Afghan students to enroll in M.S. degree programs at UAS in areas including soil science, horticulture, entomology, and plant pathology. To date, 40 students have matriculated with eight more slated to arrive in 2009.

**"I became more humble after this experience. I've been away from India for 25-30 years inspired by how much has changed and how much capacity, talent, know-how there is in India for us to help stimulate."**

- Dr. K. G. Ragthothama,  
Partnership Director,  
Purdue University



HED photo  
Dr. D. Vijayalakshmi (UAS)  
and Marisa Rivero (HED)  
visit with a member of a  
women's Self-Help Group  
trained by the partnership  
in finger millet malt  
production. This calcium  
and fiber-rich product is  
marketed and sold to local  
hospitals and grocery  
stores.

## INDIA (2004)

### *Center for Post Harvest Biology and Food Quality for India for the 21<sup>st</sup> Century*

- University of California-Davis (UCD)
- Tamil Nadu Agricultural University (TNAU), Coimbatore

This partnership sought to increase economic efficiency, raise productivity, and reduce rural poverty through the establishment of a Postharvest Technology Center at Tamil Nadu Agricultural University (TNAU). The Center focuses on biological and engineering principles and practices, food safety, agricultural economics and marketing, and postharvest management to address major postharvest losses (estimated at 30-40 percent of perishables and 10-15 percent of durables) resulting from improper processing, inadequate food and safety standards, and underdeveloped infrastructure. The Center's overall aim is to improve food yield and delivery and ensure food security, availability, and health through proper processing as well as to bolster the conversion of perishables into value-added products. Six scientists from TNAU were selected for a Postgraduate Certificate Program in Postharvest Biology and Technology at the University of

California, Davis (UCD). Upon their return to India, they developed and conducted a regional training workshop at TNAU for local researchers, education specialists, and extension agents directly addressing these issues which resulted in the strengthening of TNAU's curriculum in the areas of food safety, total quality management, minimal processing, and fresh-cut fruits and vegetables; resulting in peer reviewed papers and articles. A second team of three TNAU scientists traveled to UCD to receive training in experimental economics. Overall, the partners conducted 41 on-campus and 12 off-campus training programs on food safety, Good Agricultural Practices, and postharvest technology of horticultural crops for approximately 250 farmers, Self-Help Group women, and entrepreneurs. The success of their collaborative activities enabled TNAU to leverage almost \$2 million from the Ministry of Food Processing Industries and the Canadian International Development Agency (CIDA) for infrastructure and equipment for their state-of-the-art food processing facility on campus. Six of the 10 scientists who work in the laboratory received training at UCD through the HED partnership. Another legacy of the partnership was the creation of two new graduate courses at TNAU: Food Quality and Safety Engineering and Post-Harvest Pest and Disease Management. Most recently, the Ministry of Food Processing Industries granted the TNAU partners another \$4,000 to train 25 Self-Help Group women per month for 36 months in applied food processing such pickling and jam/jelly making.



HED photo

TNAU faculty and Marisa Rivero (HED) in front of the Postharvest Technology Center established by the partnership which, with leveraged funding from the Canadian International Development Agency, houses a modern food quality analysis laboratory and a business incubator.

**[Discussing implementing changes at TNAU] "It was our very first time working with U.S. faculty on an individual basis. It was a great experience! When we say education and training, it's a long-term investment."**

– Dr. R. Viswanathan, Partnership Director, TNAU

## NEPAL (2001)

### *Building the Capacity of Nepal's Institute of Forestry to Support a New Master of Forestry Degree Program*

- Michigan State University (MSU)
- Institute of Forestry (IOF), Tribhuvan University, Pokhara, Nepal

The partnership supported a new Master of Science (M.Sc.) degree program in forestry at the Institute of Forestry (IOF) at Tribhuvan University. Among other accomplishments, the partnership: built faculty expertise in natural resources and social science through visits to Michigan State University (MSU) and professional development workshops at IOF; improved the curriculum of the M.Sc. in forestry at IOF; established research programs for IOF students; and strengthened IOF library and Internet resources. MSU faculty members assisted with curriculum development and teaching on community forestry at IOF.

Additionally, three two-week faculty training programs were conducted for IOF staff on research methods, resource economics, and social/community forestry. Five IOF faculty members participated in a three-week study tour at MSU, and

MSU faculty offered a short course on research data analysis and provided technical assistance to develop a Community Forestry Resource Center at IOF. The partners provided partial funding to carry out the M.Sc. thesis projects of several students. As a result of the project activities, the IOF leveraged an additional \$3.5 million from the Danish Government and Winrock International. The MSU partnership catalyzed the IOF to start other partnerships; most important has been the new HED/USAID funded partnership with Virginia Polytechnic to create a memorial center of excellence.



HED photo  
In the town of Pokhara, HED staff visit faculty from Tribhuvan University's Institute of Forestry (IOF). The Master's degree curriculum implemented as a result of the partnership has led many IOF Master's students to work in communities to disseminate ideas on natural resource management and community forestry to those outside the institution.

**“The partnership between MSU and the IOF was instrumental in supporting the empowerment of IOF faculty...the partnership catalyzed the IOF to start other partnerships...(and) has had positive impacts on the image of IOF in Nepal.”**

- Mr. Abadhesh Singh, Coordinator, Memorial Center of Excellence

## NEPAL (2003)

### *Training Communities in Livestock-Derived Food Safety and Hygiene in Chitwan District, Nepal*

- Tufts University, Cummings School of Veterinary Medicine (TCSVM)
- Tribhuvan University, Institute of Agriculture & Animal Science, Veterinary School (IAAS)
- National Zoonoses and Food Hygiene Research Center, Nepal (NZFHRC)
- Heifer International Nepal (HI)

**“The original partnership has spurred a long term relationship between IAAS and Tufts.... That is *truly* a partnership. The social mobilization and extension work occurring in Chitwan has the potential to address/affect food safety and security issues on a national scale.”**

- Dr. I.P. Dhakal, IAAS Rampur,  
Campus Chief  
(former partnership director)

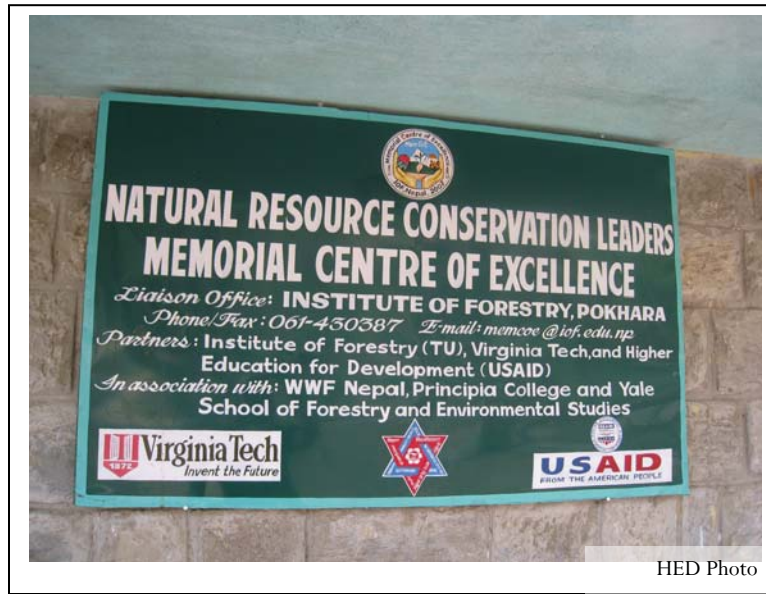
This partnership helped to document the nature and extent of human health risks associated with livestock-derived food in four Nepalese communities. The partners contributed to improving public health education by creating a new course within the social mobilization curriculum of the Institute of Agriculture and Animal Science (IAAS) at Tribhuvan University, which addresses community-based public health interventions in livestock production. As a result of partnership activities, Heifer International (HI) has intensified its work with four women’s groups and has opened a regional office in Chitwan. Two Nepalese veterinary students have carried out a prevalence study of zoonotic salmonellosis in poultry production units, supported by the Nepal national veterinary laboratory. An introductory course on social mobilization was given at IAAS to fourth- and fifth-year veterinary students, based on the results of the project’s previous poultry research. The course included a health camp for farmers in the study community for 181 women and 275 household heads. The course was designed to teach Nepali veterinary students the basics of social

mobilization. The course brought together Nepali veterinary students and subsistence farmers, to further mutual understanding and assist students to better meet the farmers’ needs. Follow-up research in 2006 demonstrated sustainability by documenting the difference in the Hygiene Score and TB Prevention Score between the training and non-training groups. This supports the hypothesis that the program was effective in teaching the farmers better behaviors in livestock management for the improvement of livestock and human hygiene.



HED photo

The Women’s Group Coordination Committee meets with HED staff to discuss changes in women’s food production and preparation to address dairy health hazards in Chitwan, Nepal. Trainings conducted as a result of the Tufts/IAAS partnership were effective in teaching farmers better behaviors in livestock management for the improvement of livestock and human hygiene.



The Memorial Centre of Excellence at Tribhuvan University's Institute of Forestry (IOF). While the Virginia Tech/IOF partnership is still ongoing, gender development and inclusion have been raised to a position of more importance than in the original proposal, with strong support from the government.

### NEPAL (2007-Ongoing)

#### *Establishment of a Memorial Center of Excellence at the Institute of Forestry, Pokhara*

- **Virginia Polytechnic Institute and State University**
- **Institute of Forestry (IOF), Tribhuvan University, Pokhara, Nepal**

This ongoing partnership between Virginia Polytechnic Institute and State University and Tribhuvan University is providing TU's Institute of Forestry (IOF) with exposure to current trends in commercial and social forestry, natural resource management, and other topics identified in a joint course-by-course review of the current IOF curriculum. The partners will assemble relevant syllabi, publications, extension materials, and models for experiential learning to assist in review and revision of the curricula. Faculty exchanges, with visits to Yale University and Principia College, will augment professional skills, knowledge, and teaching effectiveness among IOF faculty. Exchanges will generate guest lectures, collaborations on applied research, joint publications in scholarly journals, and the development of a distance-learning course in gender sensitivity for faculty and administrators based on a Virginia Tech model. The partners recently established a Center of Excellence in Forestry at the IOF, which commemorates the conservation leaders who perished in a tragic helicopter accident in 2006. With the assistance of the partnership, the IOF will create excellence in research capacity, improve teaching, and promote the engagement of all sectors of Nepali society.

**“Nepal has major lessons to share with the world....  
community forest user groups are empowered to protect and  
use the natural resources.”**

- Tom Hammett, Professor,  
Virginia Polytechnic Institute and State University

## NEPAL (1999)

### *Social Policy in Law Program: A Collaboration of Faculty of Law at Tribhuvan University in Nepal and the George Warren Brown School of Social Work at Washington University in St. Louis*

- Washington University (WU) in St. Louis
- Tribhuvan University (TU), Katmandu

This partnership broadened legal training in Nepal to include a focus on social policy. The partners designed a new social policy analysis course, which introduced law students to social policy tools critical for sound advocacy. They also launched a partnership web site to give faculty and students access to a comprehensive bibliography of published legal materials and sustainable development topics related to Nepal, and they established Tribhuvan University (TU) Law School's first computer lab. The partnership placed 17 U.S. social work students in internships at organizations in Nepal, working in areas such as human rights, environment, and the empowerment of women. The partnership also played a large role in the development of the TU's Centre for Human Rights in 2001, the first institution of its kind in Nepal. The focus of the Centre is to strengthen and promote teaching, training, and research on human rights and international humanitarian law. The partnership gave TU faculty the confidence to discuss gender and ethnic inclusiveness in drafting Nepal's new constitution and to increase faculty participation in the building of new law structures.



Tribhuvan University's Law faculty (pictured) with HED's Manny Sanchez and CII's Jill Wisniewski. Professor Kanak Bikram Thapa (seated second to left) sits on a committee that is assessing the role of Nepal's judiciary which is currently under review.

**“Nepal’s entire judiciary and constitutional structure is currently under review....**

**The partnership established a feeling of closeness with the faculty and mutual respect for each other. We worked as colleagues around the topic of law. We all believe in working towards democracy.”**

- Professor Kanak Bikram Thapa, Faculty of Law,  
Tribhuvan University  
(former partnership director and Dean of Law School)

*Attachment 1: Success Stories*

**Selected Success Stories  
from South Asia Partnerships**

# SUCCESS STORY

## Bridging the Gap between Energy Engineering and Economics

*University of Texas at Austin/Bangladesh University for Engineering and Technology*



CII photo

Five students, Dr. Mohammad Tamim and Dr. Rahman outside of BUET's Petroleum and Mineral Resources Engineering. These full-time engineering employees and part-time students are enrolled in the Energy Economics course.

Engineering students are charting a new path for their careers and faculty members are refueling dialogue on tackling energy issues in Bangladesh. This is because of new curriculum on economics and petroleum developed in partnership by the University of Texas at Austin and the Bangladesh University for Engineering and Technology (BUET).

The partnership, which is managed by Higher Education for Development and funded by USAID, led to a new Energy Economics course, the first of its kind, at the department. The course helped students connect engineering and economics by challenging them to consider economic aspects in their technical work. Now in its third cycle, the course has received much positive feedback, as working students note they have opportunities to suggest ideas in their workplace based on course activities, which include keeping abreast of the latest market costs of petroleum. "I always try to develop myself as an economist even though I am not an economist," said Md. Moniruzzaman, student and senior assistant secretary at the Energy and Mineral Resources Division, Ministry of Power, Energy and Mineral Resources.

The partnership also allowed BUET's Dr. Mohammad Tamim to attend a New Era four-month conference, which propelled his understanding and exposure to energy economics. This understanding, along with advice from U.S. partner Gürcan Gulen, then helped Tamim directly impact Bangladesh national policy on renewable energy when he served as interim Minister of Energy in Bangladesh before rejoining BUET. Tamim noted the collaboration "shifted me, helped me switch from an engineer to a policy-maker."

Tamim and his U.S. colleagues also developed innovative ways to teach BUET students. For example, working with the Bangladesh Energy Reporters Forum, partners held workshops to engage 25 Bangladesh journalists in energy-related issues, including ways to improve the sector's future.

Dr. Ijaz Hossain, who also attended a New Era training, said it deepened his knowledge of his home country's energy issues. In addition to new perspectives and materials obtained, Hossain was able to produce two papers about energy issues in Bangladesh. "I am teaching from a more informed and knowledgeable position on the same subjects," he said. Hossain now hopes to provide a future course specifically on the issue of value chains.

Dr. Ijaz Hossain published papers on conditions in his country because the New Era four-month course.



HED photo

# SUCCESS STORY

## Partnership Brings Confidence and Resources to Women and Gender Studies in Bangladesh

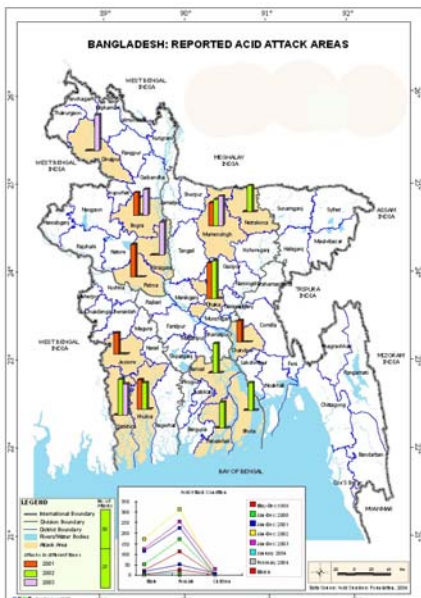
Virginia Tech/University of California, Davis/Dhaka University



CII photo

Above: Dr. Shahnaz Huq-Hussain, chair of the Department of Geography and Environment explains the process of mapping using a map that displays the growth of Dhaka city.

Below: A page from “Gender Atlas of Bangladesh,” illustrates acid attacks reported throughout the country.



An HED supported and USAID funded partnership between Virginia Tech, University of California, Davis and Dhaka University quickly demonstrated that the study of gender issues is important and relevant at Dhaka University in Bangladesh. The partners focused on curriculum development with the objective of “Improving the Status and Opportunities for Women in Bangladesh,” which involved faculty members from across various disciplines, such as the economics, the geography and environment, Islamic history and culture, in addition to the women and gender studies.

Among other things, this partnership produced a new course, “Women and Religion,” offered by the Department of Women and Gender Studies. Additional research also strengthened existing curriculum in other departments and led to the first gender atlas from the Department of Geography and Environment. The knowledge created through the project has been shared beyond the walls of Dhaka University as professors Ayesha Banu and Firdous Azim, for example, have published articles together and made presentations at BRAC University and Nari Pohko, and Pathways for Women’s Development. Further, Dr. Shahnaz Huq-Hussain, the Geography and Environment Studies Department chair, worked to produce the first gender atlas of Bangladesh.

This partnership resulted in personal and professional improvements. Hussain learned to use geographic information systems to complete the atlas, became a better-known, more knowledgeable resource in the community, and gained renewed confidence in her classroom teaching style. “I am much more confident to talk about gender studies and women’s issues,” she said. Hussain and U.S. partnership director Janet Momsen analyzed data with master’s degree candidates to provide a gender issues tool that reflected important and measurable issues in Bangladesh, such as the amount and geographical distribution of female-headed households, adolescent mothers, reported acid attacks and unemployment.

Hussain said the research process identified gaps in knowledge and served as a good example to the students who were working with her on the project. Much of the numbers used to create the statistics came from the national government and micro-administrative levels – where information was not always available or easily shared, she said.

The gender atlas is now used as a resource in two courses at the geography department, “Women in Development,” and “Gender Development and Environment.” Hussain also noted an increase of male enrollment in her courses also. Initially there were three males in one class, now 10 out of 35 are men.

## SUCCESS STORY

### Indian mango farmers cultivate unity, reap market power

*Michigan State University/Tamil Nadu Agricultural University*



HED photos

Dr. T.N. Balamohan of Tamil Nadu Agricultural University explains best practices to mango farmers, Marisa Rivero (HED) and Elizabeth Callender (USAID).



Visit to Crystal Garden – A EurepGAP certified mango farm.

For years, many farmers in the state of Tamil Nadu were highly focused on cultivating several varieties of mangos and bananas. But so many varieties meant that competition among individual farmers was intense and profits were weak, especially for smallholder farmers.

Through a USAID-funded Higher Education for Development partnership between Tamil Nadu Agricultural University and Michigan State University, the farmers in Tamil Nadu united and gained control of their livelihoods. In particular, a partnership-initiated SWOC analysis led to the creation of large- and small-holder mango and banana growers' federations that served to unite farmers and to collectively shift their focus to expanding the markets.

Partnership activities included supply chain management workshops and agribusiness site visits at MSU which helped TNAU faculty members to take a more market-driven approach and to develop curriculum. Such training and collaboration then helped TNAU's departments of horticulture, agriculture and business reach out to farmer communities and to equip them with skills to determine which varieties of mangos and bananas to grow in order to reap bigger profits. In addition to production decisions, farmers also learned how to market their products. Approximately 1,327 farmers, buyers and other stakeholders learned about supply chain management, food safety and production through their seminars and trainings. The partnership helped TNAU view farmers as "clients" of the university's agricultural program and research.

*"In Tamil Nadu, a sea of change has taken place due to this program...  
Now we are producing market-driven banana varieties  
rather than the same old lower-demand ones we used to."  
-- Indian banana farmer and federation member*

Award funds also allowed member farmers of the Tamil Nadu Mango Growers Federation (TAMAFED) to learn to use the Indian SAFAL National Exchange to trade mangos online. Further, TNAU, the government and TAMAFED continue to educate farmers about fertilizers, irrigation and marketing using their own funding.

Although initial project funding ended in 2007, MSU continues to benefit greatly from having participated in this project. MSU Project Director John Kerr said he learned a great deal and continues to share his new-found knowledge with his students today. Other ongoing partnership benefits have also emerged over time. For example, in 2009, the 11 MSU-trained faculty members at TNAU produced the book *"Good Agricultural Practices and Mango Production,"* which is used by students.

3/09

## SUCCESS STORY

### Students mobilize, educate community to promote food safety

*Tufts University School of Veterinary Medicine/Institute of Agriculture and Animal Science at Tribhuvan University*



HED photos

Above: Veterinary students from the Institute of Agriculture and Animal Science at Tribhuvan University gather at local centers to share best health practices for animal care.

Below: Tufts University Professor Gretchen Kaufman discusses extension work with Dr. Peetambar Kushwaha of Heifer International in Nepal.



Through an award funded by USAID and managed by Higher Education for Development Tufts University School of Veterinary Medicine and the Institute of Agriculture and Animal Science at Tribhuvan University in Nepal are collaborating on the design of a social mobilization curriculum. The curriculum will teach veterinary students how to work with local citizens to improve the care of their animals. “New veterinarians must understand and be able to interact with subsistence farmers to promote food security and food safety,” said Dr. I.P. Dhakal, associate professor of Veterinary Medicine at Tribhuvan. Types of contamination in the local meat products include brucellosis, tuberculosis, and E. coli., as well as antibiotic residues in milk. These diseases spread because of inadequate slaughtering facilities and unsanitary meat handling practices.

As a result of the social mobilization effort undertaken by the veterinary students, health camps are now held to encourage the testing and treatment of farm animals. Heifer International also holds classes for community groups and women in particular, as they are the primary caretakers of the family animals. These classes provide veterinary students opportunities to teach meat, milk, and poultry safety techniques and procedures.

As of March 2009, nearly 200 local women have received training in their villages about dairy health hazards, proper care of animals, safe handling of milk and poultry products, and sanitary butchering techniques. Further, more than 700 animals have been tested for brucellosis and tuberculosis.

An important outcome of this social mobilization effort is a healthier commercial livestock farming enterprise. This positive financial enterprise is persuading some young Nepali men not to travel abroad for employment, but instead to remain at home and raise healthy dairy cows. In March 2009, the Kathmandu Post under the headline “Youths Prefer Farming to Jobs Abroad,” reported this story:

*“After an uncertain year, Rau Sharma finally dropped the idea of going aboard for employment. Five months ago, Sharma bought five jersey cows with Rs.90,000 he had accumulated to pay for his Dubai visa. He is now a commercial livestock farmer, who says the profession has started paying off well—far better than his prospective foreign job. He now earns a net profit of Rs. 20,000 a month. He was told he would earn about Rs.19,000 a month had he gotten a job in Dubai. ‘But now my earning is better, and in my own home,’ adds an elated Sharma. Dr. Laxman Ghimire, a veterinary doctor, says, ‘Commercial livestock farming can definitely reduce the percentage of Nepali youths going abroad for employment, but the animals must remain healthy.’ ”*