Foreword

Bridging Institutional Barriers to Make Horizontal Connections in a Vertical World

By Dr. Montague W. Demment
Director, Global Livestock CRSP

Agriculture, natural resource management (NRM) and development are intimately connected presently and historically. To be most effective in our development efforts we should maintain that connection in our institutions. Unfortunately universities and USAID are moving in the opposite direction. Two recent books by Jared Diamond deserve attention by the development community and have particular relevance for the organization of agriculture and NRM within our institutions. The first, "Guns, Germs and Steel: The Fates of Human Societies "(Pulitzer Prize Winner for Non-Fiction in 1998), explains the reasons for the differences in the advances of different societies, and what happened when formerly isolated groups came into contact. Diamond argues that it was the natural resource base, primarily the array of plants and animals available for domestication, the nature of the physical environment and the shape of continents that gave groups their advantage in the development of agriculture. Agriculture then led to increased population, hierarchical societies, division of labor and technological development: the guns and the steel. The germs were the evolution of the zionotic diseases that came with domestic animals. Agricultural populations became resistant through exposure over time but those groups without domestic animals were literally wiped out when they had contact with the agricultural populations.

The importance of "Guns, Germs and Steel", is not just to remind us of the fundamental role of agriculture in the development of societies and economies but

also to emphasize the interconnection between agriculture and environment. Diamond takes the position that all men are created equal in intelligence and creativity but endowed with very different natural environments. His thesis is that this intimate link between agriculture and the environment was critical to the trajectory of societies' development. If we can explain historical patterns of human societal and economic development by this linkage, should we not preserve the same connection in our development efforts?

In his most recent work, "Collapse: How Societies Choose to Fail or Succeed", Diamond tackles the complicated question of why some societies succeed and others fail. He analyzes in detail the failure of the Mayans, the Norse Greenlanders, the Anasazi and the Easter Islanders and the successes of the New Guinea highlanders, the Tikopia islanders, and the 16th and 17th century Japanese against a 5-point framework: environment, climate change, hostile or friendly neighbors, and societal response to problems that are often considered only environmental collapses. However Diamond, with his usual keen insight, draws on this more complicated array of elements from his framework, but one cannot help be impressed by the role of environmental management and agriculture as a fundamental relationship whose management is critical to the trajectories of these societies.

What is equally important in determining whether societies succeed or fail is their ability to deal with short-term problems in a way that ensures long-term solutions. Perhaps the clearest example that Diamond provides is the contrast between the Dominican Republic and Haiti. Both share the same island yet their development trajectories are markedly different. A number of elements may be involved, but Diamond emphasizes the importance of NRM policy differences between the two countries as the basis for reasonably successful economic growth and environmental management in the Dominican (albeit by two relatively totalitarian dictators in the Dominican) and the struggles of Haiti. These strong

men imposed policies that saved the environment, not for benevolent but selfish reasons, in the face of strong and pervasive short-term interests that would have destroyed the natural resource base, which is what happened in Haiti. A consistent theme in Diamond's analysis is the problem caused when short-term rewards encourage behavior and policies that ignore the long-term problems that eventually cause societies to fail.

I think both of these points made by Diamond have strong relevance in development. We should insure strong linkage between agriculture and the environment and we should ensure that development is not guided by short-term needs that may be convenient and politically adaptive but which run contrary to our long-term objectives. Historically agriculture and natural resource management, particularly conservation, have often been at loggerheads. With increasing populations the world is filling up. In this ever connected and full world what happens in one sector of the economy affects others and the landscape becomes a complex, web of interactive use and impacts. The problems of agriculture affect natural resources and conservation, and NRM has impacts on agriculture. These two sectors are inextricable linked. Coupled with the 'filling up' is the fact that much of the world's poor live in marginal environments that are highly susceptible to major perturbations such as the results of Hurricane Hugo. Poor people struggle day-to-day to meet life's requirements and their agriculture is increasingly forced to have a short-term horizon which conflicts with long-term NRM strategies. In our development work we are in a position to address this conflict but only if our agriculture and NRM strategies are coordinated.

Why, then, are they often separated within our institutions? Institutional structure is critical to effectively tackling problems and achieving objectives. At University of California, Davis strong arguments have been made to separate agriculture and environmental sciences, largely to insure that environment moves out of the shadow of agriculture and thrives on its own. At USAID agriculture and NRM are separated in different offices although housed under the EGAT umbrella. Institutional structure determines how funds flow and how funds flow determines rewards of promotion. In both the case of the universities and the Agency, the directionality of the vertical resource flows makes horizontal programs that cut across institutional boundaries difficult to succeed. I suggest that we need a major effort to develop mechanisms that coordinate agriculture and NMR to address the crosscutting issues that are critical to the success of development and have a major impact on the future of developing societies.

In a somewhat bottom up response to institutional challenges the GL-CRSP has, with strong support from the Office of Agriculture, been allowed to encompass both agricultural and NMR issues with its portfolio and often within its projects. The interface between livestock production, particularly extensive systems, and conservation and NMR issues is widespread and important. In east Africa for example, pastoralists historically used most of the arid and semi-arid lands for their livelihoods. The strong demands for meat regionally and globally are attracting focus on connecting pastoralists to markets and increasing the economic productivity of these rangelands. At the same time tourism revenues and biodiversity conservation concerns argue for protecting large portions of these lands. Our projects, such as PARIMA and LiTEK, deal directly with pastoral livelihoods, their markets and welfare to try to make the economies of these pastoral groups grow. POLEYC, now ending as a project, developed modeling tools to allow policy makers and managers to make better decisions on managing the livestock wildlife interface. Our Livestock Early Warning System (LEWS) has much potential for a satellite based system for managing the conservation areas and is yet unused by conservationists. Our new effort, YESEMA, links Yellowstone and Serengeti/Mara ecosystems, to allow an examination of problem solving approaches to managing national parks within a complex array of jurisdictions, peripheral uses and stakeholders. Land use has a direct impact on water quality and quantity. In SUMAWA we are building the capacity of a Kenyan coalition to do long-term research on watersheds and, through stakeholder involvement, solve watershed problems of a key tributary into Lake Nakuru National Park.

While the GL-CRSP is committed and pleased with this bottom up approach, we are also eager to participate in a more top down effort to integrate agriculture and NRM effectively within USAID. The challenge of successfully integrating our food production systems with our NRM efforts is one of the great challenges facing our world. Now that we are more globalized and connected, the world's future is much more a single entity like each of the societies that Diamond examines. In the end we will be the society of planet earth with a global environment and if our development efforts do not make a more equal world then no matter how rich the rich may be, we will all suffer the consequences together.

Program Overview

The Global Livestock CRSP has expanded its research to address important topics in the international livestock development sector. The program, comprised of broad-based interdisciplinary projects, focuses on human nutrition, economic growth, environment, and policy linked by a global theme of agriculture at risk in a changing environment. The projects involve researchers from 14 U.S. universities, 2 international agricultural research centers, 5 international research organizations, and 91 foreign institutions. The program is active in four regions of the world: West and East Africa, Central Asia, and Latin America.

History

Established in 1978 as the Small Ruminant CRSP, the Global Livestock CRSP is one of nine CRSP programs developed under Title XII of the International Development and Food Assistance Act of 1975. The CRSP model, pioneered by the SR-CRSP, was built on the structural strengths of U.S. land-grant universities and collaborative partnerships with international organizations. Four characteristics ensure the effectiveness of this model: 1) Collaboration with U.S. land-grant universities; 2) International training; 3) Long-term scientific relationships; and 4) Program cost-effectiveness.

Reengineered

In 1995, the CRSP began a major restructuring of the program in response to USAID's own reengineering efforts and the changing needs of the international development community. The process, a comprehensive planning and assessment procedure, was initiated with priority-setting workshops in the three regions. As forums for client input, the workshops were intended to maximize the opportunity of regional professionals to present their views on the development issues confronting them. The problem models they developed established the scope for activities within the region. Assessment teams, selected in an initial competition, developed projects that addressed the top priorities within the regions. The problem model was the central component of the assessment process. Each team was charged with refining its problem model through in-field explorations. To ensure grassroots input, over 20 regional workshops involving 35 countries were conducted during the assessment period. The teams submitted final proposals, competing to be in GL-CRSP's current grant, and winners were selected. The process was designed to be problem-driven and has produced results-oriented projects.

Program Goals

The goal of the GL-CRSP is to increase food security and improve the quality of life of people in developing countries while bringing an international focus to the research, teaching, and extension efforts of U.S. institutions. This goal is to be achieved through collaboration between U.S. universities and other institutions, and national and regional institutions abroad that are active in livestock research and development.

Strategic Objectives

To achieve this goal, the following objectives have been identified:

- Improve the interaction between livestock production and natural resource use and conservation, and more effectively integrate livestock production systems with the rational use of natural resources, such as wildlife and water.

- Decrease poverty and increase the security of people whose livelihoods depend on livestock by providing mechanisms to manage risk.

- Enhance the nutritional status - and decrease morbidity and mortality - of targeted populations, particularly children and women, through increased availability and utilization of animal source products, thereby increasing human capacity.

- Strengthen the ability of institutions in developing countries to identify problems in livestock production and develop appropriate solutions.

- Provide support to decision makers in developing policies that will promote: a) livestock production, marketing, and trade; b) human nutrition and child physical and cognitive development; and c) natural resource conservation and management.

- Develop and strengthen communication systems (including but not limited to extension) among livestock producers, policy makers, businesses, researchers, and consumers that promote greater market participation, increase human and institutional capacity, and improve policy.

Global Plan

The Global Livestock CRSP global program builds effectively on complementarities between projects in different regions. Centered on a theme of managing risk in our unpredictable world, the program is developing the capacity to predict risk so it can be better managed, improving the tools to cope with risk, and contributing to the mediation of risk. The GL-CRSP has chosen to work in ecosystems and regions where human populations and natural resources are most vulnerable, and in most cases, where biodiversity is most valuable. The GL-CRSP focuses on human nutrition, economic growth, environment and policy related to animal agriculture and linked by a global theme of managing risk in a changing environment.

Training Plan

The Global Plan recognizes human capacity building as a fundamental component of research and development. Training has always been a key component of the CRSP portfolio. The GL-CRSP design provides for a wide range of training possibilities and employs both traditional and innovative strategies to achieve its training goals.

Degree Training. The GL-CRSP provides funding for operational and research costs to both U.S. and host-country graduate students. Projects are encouraged to leverage funds to support tuition.

Non-Degree Training. Short-term training provides a cost effective means to build capacity. Training workshops and courses build capacity for not only students but host country professors, researchers and other development professionals.

The Jim Ellis Mentorship Program. Named in honor and memory of Dr. Jim Ellis, a renowned scientist, mentor and GL-CRSP principal investigator, these awards provide partial support to students in order to improve the overall quality of their research. The Program provides funds to conduct research in specialized facilities or field settings away from their home campuses and to provide opportunities for greater diversity in collecting and more creativity in analyzing data than would otherwise be possible. The awards are intended to provide supplemental funds for students already working on GL-CRSP projects.

Travel Grants for Students. To encourage student participation at the GL-CRSP conferences, a select number of travel grants are awarded to students for presentation of their findings at the conferences. The awards permit students to inform others about their research and bring them in contact with researchers from other disciplines and other projects.

Build Capacity of Institutional Partners. The GL-CRSP goal is to build both human and institutional capacity simultaneously within host-country partner institutions. Selective targeting of funds through project funding and program enhancement address key deficiencies within these partner institutions.

Characteristics of GL-CRSP Projects

The Global Livestock CRSP incorporates a broad and complex perspective on international development based on the following principles:

- Research should be demand-driven and problem-oriented, with considerable resources invested in problem assessment at the grass roots level.
- Impact should emphasize human outcomes, involvement of local communities, facilitation of research-extension links, and the building of partnerships with other stakeholders.
- Identification and communication of relevant policy issues should be a critical component of project planning and implementation.
- Integration of gender concerns and appropriate gender analysis should be an integral part of project research and results.

Global Livestock CRSP Projects

The Global Livestock CRSP program is not a static set of activities but a constantly evolving and dynamic array of problem-focused projects. The iterative process that developed the original core of projects in 1997 continues as new research findings guide the GL-CRSP portfolio. In addition to the core portfolio of projects, the GL-CRSP also funds assessment team projects and a limited number of small grant projects on topics of special interest.

Assessment Team Projects. Before a project begins its research program, it completes a short assessment phase, usually three to nine months. During this phase, teams are given modest resources to conduct in-country workshops, planning and assessment. This process allows the teams to refine the problem model iteratively, determine and adjust team composition to fit the evolving problem model and ensure that colleagues are compatible and the team is functional. These teams then produce a research proposal for a final competition.

Structure

The Global Livestock CRSP is administered as a grant to the University of California, Davis, which, as the Management Entity, administers subgrants to participating U.S. institutions and maintains fiscal responsibility.

The *GL-CRSP Program Director* is responsible for program development, coordinating activities of the projects across and within regions, and overseeing the daily operations of the GL-CRSP.

The *External Program Administrative Council* provides advice and guidance on the scientific management of the Global Livestock CRSP.

The *Technical Coordinating Committee* provides intellectual exchange and input on programmatic planning for the CRSP to the Program Director and the Program Administrative Council.

The *Pool for External Evaluation of Research* provides objective evaluations of the CRSP programmatic process on an as-needed basis.

GL-CRSP Organizational Structure

USAID Cognizant Technical Officer: Joyce Turk, EGAT/AG

Management Entity: University of California, Davis

Montague W. Demment, Program Director
Susan Johnson, Assistant Director
Cathy Miller, Budget Analyst
Gail Stroup, Program Coordinator
Quin Martin, Student Computer Resource Specialist
Corinna Cheung, Student Assistant
Marina Nasarova, Student Assistant
Suzanne Plant, Student Assistant

External Program Administrative Council

Deanna Behring, CHAIR, Pennsylvania State University
Gilles Bergeron, FANTA
Robin Mearns, World Bank
Salvador Fernandez-Rivera, International Livestock Research Institute
Dennis Poppi, University of Queensland
Ahmed Sidahmed, IFAD,

Lead Principal Investigators

Lindsay Allen, University of California, Davis
Layne Coppock, Utah State University (CHAIR, TCC)
Judith Ernst, Indiana University
Lisa Graumlich, Montana State University
Grace Marquis, University of Iowa
John McPeak, Syracuse University
Scott Miller, University of Wyoming
Robert Stobart, University of Wyoming
Jerry Stuth, Texas A&M University

Pool for External Evaluation of Research (PEER)

To Be Named