



# RUMINATIONS

NEWSLETTER OF THE GLOBAL LIVESTOCK COLLABORATIVE RESEARCH SUPPORT PROGRAM

## GL-CRSP Collaborators Convene in Tanzania for Annual Conference

The Global Livestock CRSP principal investigators joined host country collaborators, guest scientists, USAID officials, representatives of NGOs and IARCs, the program administrative council, the management entity, the external evaluation panel, and regional governmental and community leaders for the annual meeting December 7 - 11, 1998. The Conference was held in Tarangire National Park, Tanzania to highlight both the GL-CRSP's commitment to East Africa and to conservation in relation to livestock production. The meeting was attended by all of the GL-CRSP projects including those operating in Central Asia and Latin America as well as East Africa. More conference news begins on page 6.



*The African elephant is a dominant feature on the Tarangire landscape. In 1987, the elephant population was estimated in the Park at 6,000. Photo by Susan Johnson.*

## Pastoral Risk Management Project Holds First Kenya Outreach Workshop in Nairobi

The first GL-CRSP workshop for Kenya concerning outreach to improve pastoral risk management on East African rangelands was held on the campus of the International Livestock Research Institute (ILRI), on December 1. Sixteen persons attended representing 14 organizations. The objectives of this meeting were to: (1) review progress in research and training for the first year of the GL-CRSP project on pastoral risk management; and to have workshop participants, who largely represented governmental and non-governmental grass-roots organizations, (2) report on their development activities that pertain to pastoral risk

management; and (3) prioritize risk management issues in northern Kenya that most need attention from the GL-CRSP. This workshop  
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## Second Outreach Workshop for Ethiopia on Improving Pastoral Risk Management on East African Rangelands Held in Addis Ababa

The second GL-CRSP workshop for Ethiopia concerning outreach to improve pastoral risk management on East African rangelands was held on the campus of the Ethiopian Agricultural Research Organization (EARO), in Addis Ababa, Ethiopia, on November 23 and 24, 1998. Thirty persons attended representing 16 organizations. The objective of this meeting was to have participants elaborate on concepts and action plans that address priority risk-management interventions identified for southern Ethiopia in the first outreach workshop for Ethiopia held during August (see p. 8 of the Fall, 1998, issue of *Ruminations* for a review of the first workshop). Both workshops are part of a step-wise, participatory process whereby grass-roots development agencies help define and coordinate local risk-management interventions. This also provides feedback to help shape the applied research agenda of the project.

The three risk-management priorities identified in the August workshop were: (1) resource-based conflict resolution; (2) public education; and (3) formation of voluntary cooperatives to facilitate empowerment of pastoralists to market their products, diversify their economies, and invest their savings. In the second

workshop, day one was devoted to discussion of cooperative development concepts, while day two was split between conflict resolution and public education. Key individuals, knowledgeable on these topics and experienced in the administrative and legal dimensions of the problems, were invited by the GL-CRSP to participate in each session.

In the first day discussion chaired by Ato Haile Gebre, Head of the Oromia Cooperative Promotion Bureau (OCPB), the workshop participants concluded that significant opportunities exist to encourage formation of pastoral cooperatives or development associations in the Borana region, and that the strong social fabric of the Borana was an important asset to facilitate the process. Any new socioeconomic structures should complement traditional socioeconomic structures. Cooperatives or associations must be voluntary, business-oriented, and devised to improve economic welfare of participants. Such associations must also be multi-faceted and include components for marketing, rural finance, livestock health, public education, and environmental management. It was agreed that the first step in the action plan for 1999 was to have OCPB, Volunteers in Cooperative

Action (VOCA), and the GL-CRSP co-sponsor a two-week course at Yabelo in the southern rangelands to train some 40 Ethiopians in cooperative promotion and development appropriate for pastoral areas. The 40 people thus trained would form an extension nucleus to begin a pilot project in which some cooperative associations would be formed later in the year.

Ato Daibissa Arero led the discussion on conflict resolution during the morning of the second day. Ato Daibissa is a Boran who has had many years of experience in police work and general zonal administration in southern Ethiopia. The group identified two layers of conflict in southern Ethiopia. The persistent nature of strife between the Boran and Somali to the southeast of Ethiopia is deep-rooted in old tensions, and all the GL-CRSP and outreach partners can contribute, as the project is currently configured, to improving information for relevant decision makers. The second layer of conflict deals more with stress that occasionally erupts among traditional Oromo neighbors. These conflicts are more local and resource-based, and hence more amenable to constructive interventions by the GL-CRSP and outreach partners. The view was that this type of conflict can  
*(continued on next page)*



*Workshop participants included: Front row (1 to r): Ato Alemayehu Azeze [BASIS CRSP and the Organization for Social Science Research in Eastern and Southern Africa (OSSREA)], Ato Alemayehu Boka [Pastoral Development Unit, Federal Ministry of Agriculture (PDU/MoA)], Dr. Tafesse Mesfin (PDU/MoA), Ato Solomon Desta (GL-CRSP), Ato Belete Tefera (Norwegian Church Aid), Ato Zerihun Tadesse [Oromia Cooperative Promotion Bureau (OCPB) Borana Zone], Ato Tadi Liben (private consultant on public education), Wzo. Almaz Fiseha (SOS-Sahel), Ato Haile Gebre (Head, OCPB), Ato Boku Tache [Borana Lowlands Pastoral Development Project/German Aid (BLPDP/GTZ)]. Back row (1 to r): Ato Dub Galma (private consultant), Dr. Fisseha Meketa (Save the Children/USA), Ato Alemayehu Sintayehu [Ethiopian Evangelical Church Mekane Yesus (EECMY)], Mr. Stephen McCarthy [Volunteers in Cooperative Action/Ethiopia (VOCA)], Ato Zerihun Ambaye [Pastoral Concern Association of Ethiopia (PCAE)], Ato Dadhi Amosha [Oromia Agricultural Development Bureau (OADB)], Dr. Abakano Kereyu (private consultant on animal health), Ato Abera Tadesse [Southern Rangelands Development Unit (SORDU)], Ato Daibissa Arero (private consultant on conflict resolution), Ato Galma Halake (EECMY), and Ato Yilma Tadesse (EECMY). (Photoby Wzo. Menbere W/Giorgis)*

still be effectively resolved in most cases by traditional mechanisms of negotiation and compromise involving elders. Problems can arise, however, when traditional mechanisms are disrupted or pre-empted by inappropriate interventions from outside institutions. These efforts may be well-intended, but the disruption caused can exacerbate conflict. The workshop participants concluded that the best role the GL-CRSP and outreach partners can play is in capacity building to improve the pro-

active capability of existing administrative systems to deal with conflict resolution. This interaction includes provision of training to better predict and contain eruptions of conflict and provide alternative, non-violent means to resolve disputes. It was also noted that impact from cooperative development described on day one could lead to economic diversification and investment, and this in turn could help release pressure that otherwise contributes to resource-based conflicts.

Ato Tadi Liben led the discussion on public education during the afternoon of the second day. Ato Tadi, now retired, is a Boran who has worked in the Ethiopian Ministry of Education for over 40 years. The group agreed that there is need to: (1) revise elementary school curricula in the southern rangelands to improve relevance; (2) better maintain and expand education infrastructure, including provision of “mobile” schools; and (3) offer adult education opportunities. It was also agreed that the Oromia Bureau of Education needs to join the GL-CRSP outreach network, and that a pilot project should be conceived and funded to realize goals listed above.

Ato Solomon Desta of Utah State University, who helped organize the workshop on behalf of the GL-CRSP, felt the meeting was productive and very useful, but recommended in his trip report that the GL-CRSP still must better define its outreach role. The GL-CRSP outreach should go beyond mere coordination and information sharing, and can include action research on local problems as well as facilitating creation and funding of special pilot projects.

*For more information on this workshop or project, see the project web site at <http://www.nr.usu.edu/~sanduku/crsp> or contact Dr. Layne Coppock, Dept. of Rangeland Resources, Utah State University, Logan, Utah USA 84322-5230, (LCOPPOCK@CC.USU.EDU).*

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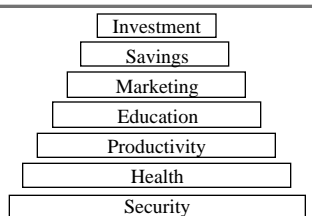
## First Outreach Workshop for Kenya Held in Nairobi

was part of a step-wise, participatory process whereby grass-roots development agencies help define and coordinate local risk-management interventions. This also provides feedback to help shape the applied research agenda of this GL-CRSP project.

Using a hierarchy of risk management options as a starting point (see figure to the right), participants broke out into two working groups to set priorities. The three risk-management priorities identified as most needing attention were: (1) public education; (2) facilitation of

pastoral marketing and investment; and (3) the need for innovative concepts for pastoral economic diversification.

### Risk Management Hierarchy



The first two priorities are similar to priorities forwarded for southern Ethiopia during the First Outreach Workshop for Ethiopia, held in Addis Ababa during August (see p. 8 of the Fall, 1998, issue of

*Ruminations* for a review of this workshop). The last priority forwarded for Kenya was not mentioned in the Ethiopian workshop, however, and this perhaps reflects differences in rural economic development between the two countries. For example, Mr. Käsler of the GTZ Samburu District Development Project voiced a strong concern that the extreme economic, resource and social pressures affecting Samburu society in north-central Kenya could no longer be mitigated by “more honey-making projects”—rather, a broader and deeper economic strategy is needed. In contrast, however, the

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## ASARECA Elects New Leadership and Welcomes New Members

The ASARECA Committee of Directors elected a new team of leaders during its October 1998 meeting in Entebbe. Dr. Cyrus Ndiritu, Director General of the Kenya Agricultural Research Institute (KARI) was named the new Chairman and Dr. François Rasolo, Director General of Madagascar’s Centre National de la Recherche Appliquée au Développement Rural (FOFIFA) will serve as Vice-Chairman. Dr. Ndiritu replaces Prof. Joseph K. Mukiibi who has served as Chairman since ASARECA’s inception in 1994. Prof. Mukiibi, Director General of Uganda’s National Agricultural Research Organization (NARO) completes a distinguished term as leader of ASARECA during its formative years. Prof. Geoffrey C. Mrema and Mr. Techalew Negash will continue to serve as Executive Secretary and Finance Officer respectively.

In addition, two new members joined ASARECA’s Committee of Directors. Dr. Seyfu Ketema, Director General of the Ethiopian Agricultural Research Organization (EARO) replaces Dr. Tadesse Gebremedhin, former General Manager of the Institute of Agricultural Research in Ethiopia. IAR was recently dissolved and its functions were assumed by the newly established EARO. Dr. Ketema was Minister of Agriculture in the Ethiopian Government prior to his July 1998 appointment as Director General of EARO. Member Prof. Salih H. Salih, new Director General of Sudan’s Agricultural Research Corporation (ARC) replaces retiring Prof. Osman Ageeb.



PROFILE

## Combining Art and Science

Joyce Turk has been with the United States Agency for International Development for over 18 years. Along with her many other duties at USAID, she has served as Program Officer for the Small Ruminant/Global Livestock CRSP since 1987.

Influenced by her father who painted for pleasure, and encouraged by both parents to follow her dreams, Ms. Turk has combined a career in science with continuing art production for over twenty years. As a student, Ms. Turk concentrated her studies in livestock production. She attended the Ohio State University for undergraduate and Cornell University for graduate studies. Between these two stints of formal training, she joined the U.S. Peace Corps which took her halfway across the world to the Philippine Islands. Following the two-year Peace Corps service, she backpacked for one year alone

overland through Southeast Asia. Her sense of adventure has led her in a myriad of directions, but her intense interest in international livestock development has guided her steadily in that career.

She compares exploring the world of art to exploring her own wonder-filled world, a world that encompasses the jungles of Borneo to African savannahs, the altiplano of South America to the majestic Himalayas. Following the paths of early explorers while creating one of her own has led Joyce Turk toward a new horizon.

Ms. Turk has participated in group and solo shows, art festivals and other types of exhibitions. Ever ready to capture a moment, she carries her art materials wherever she travels. She is most drawn to



USAID Program Officer, Joyce Turk, holds a skull on a recent trip to Tanzania. Despite rumors to the contrary, the skull is NOT the head of the GL-CRSP Program Director. Photo by Susan Johnson.

dramatic light which transforms simple scenes into exciting moments of memories. As one who has spent half a lifetime exploring the nooks and crannies of the world, Ms. Turk describes her adventures in painting by quoting Marcel Proust: "The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." 🐾

### BOOK CORNER

***Drylands, sustainable use of rangelands into the twenty-first century.*** Edited by Victor R. Squires, Consultant, and Ahmed E. Sidahmed, IFAD Technical Advisor.



As the world prepares to enter the 21<sup>st</sup> century, traditional range and livestock systems on arid and semi-arid rangelands are being impacted by global change. In November of 1996, a four-day workshop was organized to explore sustainable use of rangelands and desertification control. Proceedings of that workshop have recently been published by the International Fund for Agricultural Development (IFAD). The publication, edited by Victor Squires and Global Livestock CRSP PAC member, Dr. Ahmed E. Sidahmed, presents issues in restoring ecological stability in range/livestock production systems, use of modelling and other management tools and the potential of satellite imagery, remote sensing and related technologies for natural resource estimation and monitoring. A paper by GL-CRSP Principal Investigator Michael Coughenour and Jim Ellis on the SAVANNA integrated modelling system is featured in the publication. To order a copy, please contact IFAD, Via del Serafico 107, 00142 Rome, Italy. Email: IFAD@IFAD.ORG

# Global Livestock CRSP Year-End Conference

7 - 11 December 1998  
Tarangire National Park  
Tanzania

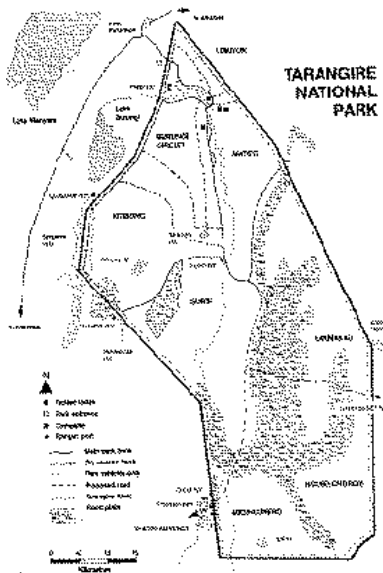


*Latin America project collaborator, Fernando Larrea (left), Heifer Project International, works with communities in Ecuador to establish long-term community planning for sustainable management of natural resources and livestock. The Maasai have long been good stewards of the land in East Africa but land-use policies and increasing human populations have impacted the sustainability of traditional livestock production systems. Photo by Leticia Garcia.*

**E**ast Africa is a major focus of the GL-CRSP global portfolio. The annual meeting was held in the region to increase regional participation and interaction. Emphasis was also placed on the GL-CRSP's commitment to livestock/conservation issues. Nowhere are the potential rewards and consequences of the interaction between food production systems and the conservation of biodiversity more critical than in the East African region. Tanzania has made a remarkable commitment to conservation, and as a country it places the greatest proportion of its land in protection than any other nation.



*A leopard emerges from a nap on a fallen tree. Leopards are quite common in Tarangire. They are traditionally one of the most dangerous of the wild cats. Photo by John Corbett.*



*Tarangire National Park* lies 120 kilometers west of Arusha. The Park covers approximately 2600 sq. km. and is home to over 300 species of bird. The Park is to the south of the large, open grass plains of southern Maasailand and derives its name from the Tarangire River, which provides the only permanent water for wildlife in the area. Tsetse flies are found in Tarangire and have played a major role in the land-use of the area. Increasing human population and large scale ranching and farming schemes in the surrounding areas threaten the traditional wet/dry season migration patterns of Tarangire wildlife.



*Jonas Mundogo (left), Tanzanian Ministry of Agriculture and Jim Else (right), Ugandan Ministry of Tourism, Wildlife and Antiquities listen to presentations.*

**P**resentations included annual progress reports from all GL-CRSP projects as well as region specific topics. Demonstrations of new technology and panel discussions on problems at the agriculture/environment interface were also part of the agenda.



*Margaret Kingamkono, left, had the daunting task of being regional coordinator for the conference. The ME is most grateful for her hard work and dedication.*



*Azimkhan Satybaldin (left) seen here with translator Sofia Sidelnikova attended from Central Asia. Mr. Satybaldin is General Director of the National Academic Center for Agrarian Research. His institution oversees the Agricultural Research Centers in Kazakhstan.*

*Jean Ndikumana, right, makes a point during his presentation on ASARECA's Animal Agricultural Research Network (A-AARNET).*



**A** large number of the participants came from the East African region. Historically host country partners have been the cornerstone of the Collaborative Research Support Program model.



*The NGO, African Wildlife Foundation, was represented at the conference by Geoffrey Mlowe (left). The IMAS project is working with the AWF Community Conservation Center in Arusha. Solomon Desta (right) is the in-region outreach coordinator for the Pastoral Risk Management project.*

During the course of the GL-CRSP conference, Program Director Tag Demment, right, and Program Administrative Council Chair, Ed Price, left, met with local reporters from Tanzania. After the conference, the Global Livestock CRSP was featured on “African Panorama” and two other prominent radio broadcasts. The stories centered on the GL-CRSP projects and their benefits to local pastoralists. The coverage also informed the audience about the main themes of the year-end conference and highlighted many of the presentations.



*GL-CRSP scientists from all regions had the opportunity to interact. Above, from the Latin America project Michel Wattiaux (left) and Fernando Larrea (center) converse with Emilio Laca, Central Asia project PI. To the right, Nimrod Bwibo (left), University of Nairobi listens to Penelope Nestel, nutritionist on the GL-CRSP Program Administrative Council.*



*A walking tour outside the National Park area gave participants a chance to view the area’s biodiversity. Principal Investigator Layne Coppock, left, and EEP member Nancy Conklin-Brittain are pictured.*



One of the objectives of the year-end conference was to refine the GL-CRSP’s global goals and develop a global logical framework. Participants worked in groups centered on the CRSP’s four thematic areas of focus: environment, economic growth, human nutrition and policy. The workgroups refined the global objectives and developed an implementation plan. In the refinement

of the objectives, consideration was given to the strategic objectives of regional organizations such as ASARECA and USAID’s Mission and Global Bureau R4s. Project and regional contributions to the plan were also discussed.



**G**lobal Livestock CRSP values its strong ties to the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). Collaboration began in 1996 with the GL-CRSP priority setting workshops and continues today with all of the GL-CRSP projects tying directly into the themes of ASARECA's research framework. Presentations by representatives of ASARECA's Animal Agriculture Research Network (A-AARNET) and Eastern and Central Africa Programme for Agricultural Policy Analysis (ECAPAPA) were a valuable addition to the discussions at the GL-CRSP 1998 year-end conference.



*A-AARNET Coordinator, Jean Ndikumana with Zinash Sileshi, Director of Livestock Research at the Ethiopian Agricultural Research Organization (EARO).*

**T**he GL-CRSP is fully integrated into the work programme of the regional livestock network (A-AARNET). At the year-end conference, Dr. Jean Ndikumana, Coordinator of A-AARNET spoke about the network's implementation plan for strengthening research and development, training and information exchange activities for improved and sustainable animal agriculture production. A-AARNET and the GL-CRSP have, since the planning phase of their activities, worked hand-in-hand to avoid duplication, create positive synergies and ensure complementarity of their programs.



*Linkages and communication between university researchers and governmental policy makers gives greater impact to a researchers work. On the left, Emmanuel Severe with the Tanzanian Ministry of Natural Resources and Tourism listens with Feetham Banyikwa, right, University of Dar es Salaam, Tanzania.*

**D**rs. Isaac Minde, Coordinator, and Donald Brown, Technical Advisor represented ASARECA's regional policy network (ECAPAPA) at the year-end conference. Their presentation, entitled "Policy and Designing an Effective Project", outlined the need for researchers to engage policy makers at the planning stage of their projects. ECAPAPA is working to create an inclusive agricultural policy network in the Eastern and Central African region to serve as a basis for improved agricultural policy analysis and formulation.

## Extensive Grazing Systems: Persistence under political stress and environmental risk

*By Dr. Jim Ellis, Natural Resource Ecology Laboratory, Colorado State University. The following is an abstract of Dr. Ellis' keynote address.*

Extensive livestock herding has existed as a successful and persistent resource exploitation strategy for several thousand years. Over the last century and particularly since the 1930's, there have been continuing attempts by governments and development agencies to do away with this mode of land use and the lifestyle which supports it. In the last few decades, population pressure, land alienation and other forces have compelled pastoralists to themselves modify their life styles and land use patterns. Nevertheless extensive pastoralism persists in many parts of the world, because it works. Both capitalist and socialist governments used similar ideological models or concepts to organize the elimination of extensive pastoralism. Both ideological

concepts included sedentarization of people and livestock and intensification of production. The model favored by the west included land privatization and wealth stratification, while the communist model centered on collectivization and 'industrial pastoralism'. Neither of these approaches seem to have been economically successful in the long run, based as they were on political-ideological considerations and the perception that extensive land use is backward and economically inefficient.

New models are now emerging from integrated social, ecological and economic analyses of pastoral systems. Although incomplete, the new models are centered on the concept that spatial scale is



*Dr. Jim Ellis delivers the keynote address at the GL-CRSP year-end conference.*

crucial and extensive land use is indeed efficient and sustainable, under conditions of aridity, uncertainty, variability and heterogeneity. Research suggests that spatial scale reduces risk and stabilizes herbivore population flux. Spatial heterogeneity increases the continuity of energy flow in grazing systems and may increase production rates and carrying capacity. Economic inputs, in the form of water development, winter fodder, etc. can compensate for the value of spatial scale, but use of these inputs presupposes that grazing system outputs will cover the costs of the inputs. Past models and the policies they spawned attempted to regulate land use to fit political-ideological concepts. A challenge for new models will be to find an effective interface between the ecological principals constraining land use and the economic realities driving land use policies.



*External Evaluation Panel Members, Nancy Conklin-Brittain (left) and Susan Thompson (center) discuss the LEWs project with Stella Bitende, SARI.*

*In response to the redesign of GL-CRSP operations, the annual conference combines the functions that previously represented separate meetings: external evaluation review, annual reporting of the projects, and meetings of the program administrative council and technical committee.*



*GL-CRSP Director, Tag Demment, left, with USAID Mission Directors Meg Brown (Ethiopia) and Dennis Weller (Kenya).*

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### **Meeting with ILRI Scientists Kicks Off CRSP Pre-Conference Activities**

The Global Livestock CRSP pre-conference activities commenced with a meeting between GL-CRSP participants and ILRI personnel. The meeting opened with ILRI's Director General, Dr. Hank Fitzhugh. Dr. Fitzhugh emphasized the importance of the relationship between ILRI and the GL-CRSP. He described the relationship as "synergistic and symbiotic". ILRI scientists participate in three of the four GL-CRSP East Africa projects and there is potential for further collaboration as ILRI expands into Central Asia. The mutually beneficial relationship between ILRI and the GL-CRSP has been built on a shared vision by the two entities interdisciplinary approach and missions.

Other presenters included Dr. Robin Reid who is a Senior Ecologist with ILRI's socioeconomic unit. Dr. Reid serves a regional coordinator on the GL-CRSP Integrated Modeling and Assessment System (IMAS) project. Dr. Jean Ndikumana, ASARECA-AARNET Coordinator and ILRI scientist, presented ASARECA's Crisis Mitigation Project. Dr. Ndikumana is the regional coordinator for the Livestock Early Warning System (LEWS) project. ILRI's collaborators in the other CRSP project are based in Ethiopia and were not present at the meeting.

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### **USAID Well-Represented at GL-CRSP Annual Conference**

At the annual conference, GL-CRSP collaborators had an opportunity to hear first-hand about USAID's regional strategic objectives. REDSO officials and Mission Directors from Ethiopia, Kenya and Tanzania summarized their strategy for supporting agriculture and food security in the region and noted potential integration of GL-CRSP research activities.

USAID's strong presence at the conference was an invaluable contribution to the discussions. The array of key staff participating from USAID included: Joyce Turk, Tracy Atwood (USAID/Global Bureau/EGAD/AFS/Washington); Jeff Musser (USAID/ENV/ENR); Kimberley Lucas (USAID/Greater Horn of Africa Initiative); Dennis McCarthy and Patricia Ogwang (USAID/REDSO/ESA); Margaret Brown (USAID Mission to Ethiopia); Dennis Weller (USAID Mission to Kenya); and Joel Strauss (USAID Mission to Tanzania).

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In addition, a presentation was made by Dr. Chip Stem of Tufts University. Dr. Stem is working with a community-based animal health delivery project in Kenya. The meeting closed with a discussion of the pastoral systems initiative and the administrative arrangements for the CRSP and ILRI.

The meeting was attended by GL-CRSP principal investigators, members of the external evaluation panel and the program administrative council, the management entity, USAID/Washington officials and ILRI scientists and administrative personnel. Dr. Ralph von Kaufmann, PAC member and Director of External Relations at ILRI was instrumental in the development of the ILRI/GL-CRSP meeting agenda.

## Embu Visit Highlights Collaborative Partnerships

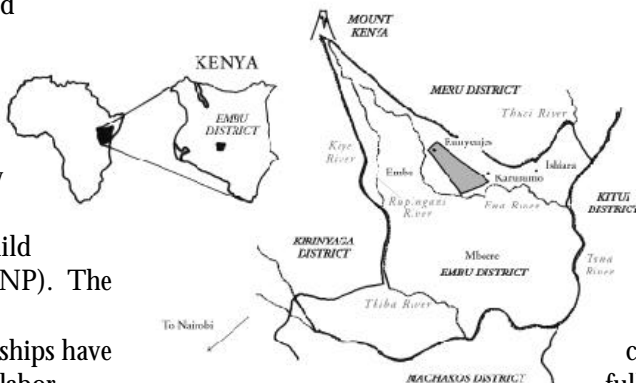
Anyone who attended the Embu Site visit in December felt the pride with which all the collaborators, from the community to the ministry level, participate in the Child Nutrition Project (CNP). The genuinely integrated collaborative partnerships have placed the complex, labor intensive nutrition intervention study on the road to success. Everyone involved with the project from the school administrators, teachers,



*Dr. Edith Mukudi was hired as Field Coordinator in September 1998. She received her PhD in Education Development with a minor in Nutrition. Photo by Susan Johnson.*

policy-makers, community leaders, doctors, scientists, food preparation staff to parents and school children expressed great enthusiasm for the work being accomplished.

The Child Nutrition Project is



in Phase I of its study to test if animal source foods, particularly meat, improves a child's micronutrient status, rate of growth, school performance, attention, and physical activity and health. A controlled feeding intervention study of school children began in August 1998. Twelve schools in the Embu District were randomly assigned to four groups: three groups, each for a specific type of feeding intervention, and one as a control or comparison group. The comparison group will receive school feedings next year enabling between-child and inter-child comparisons. Each school has one to two Standard I classrooms per school with about 110-125 children per group. All feeding groups

receive the local dish githeri, a mixture of maize, beans and greens with the addition of meat, oil (calories) or milk.

The site visit to Embu, Kenya was one of the highlights of the pre-conference activities. A full day of activities began with presentations by scientists and collaborators on the project. The Embu District Nutritionist, Rosemary Ngaruro, gave an overview of the history of nutritional problems in Embu and Cecilla Nyaga, Kenya Ministry of Health, spoke about the programs for school children in Kenya.

Presentations on the project design and progress were made by Dr. Charlotte Neumann (Lead-PI), Connie Gewa (Nutritionist), Minnie Kamore (Psychology Data Supervisor), Monika Grillenburger (Nutritionist) and Dr. Edith Mukudi (Field Coordinator).

Following the presentations, participants visited the food

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**Health and nutrition are equitable and cost effective interventions that contribute to human capital and social capital development.**

**--World Bank**



The two PIs (Neumann and Bwibo) are joined by a large team of additional participants whose input, contributions, and level of involvement with the project give new meaning to the term "collaborative".

--1998 EEP Report

*Teachers and administrators have provided input into the cognitive and observational aspects of the study as well as the design of the school feedings. School children such as these from Karurumo school participated in "taste tests" of the various recipes. Photo by Susan Johnson*

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preparation house, education office, schools and health center. One of the most impressive events was the visit to two schools currently participating in the intervention study. Parents and students alike waited long hours and gave up their Saturday to greet the visitors. The guests were treated to welcoming songs and dances by parents and children. Headmasters and teachers from both schools confirmed their commitment to the project.

The Ministries of Education, Health and Agriculture in Kenya have been wholly supportive of the project. The Ministries at the provincial and district level have provided extensive use of vehicles, laboratory and clinic facilities, food preparation houses at the Rural Health Center at Karurumo as well as seconded personnel (district nutritionist

and community nutritionist) to the project.

Parents, teachers and key school administrators have been equally supportive. The intervention study has stimulated interest and awareness within the community of the need for school feedings. Currently, many children in Kenya travel long distances to school without

having eaten. School feedings have been shown to bolster school enrollment and attendance. Improving the health, growth and development of children enhances their ability to learn and benefit from the educational experience.

*For more information, contact Dr. Charlotte Neumann, UCLA, School of Public Health, P.O. Box 951772, Los Angeles, CA 90095. Email: cneumann@ucla.edu.*



*Mothers like these at Karago school are an integral part of the study. Parents take an active part in the health assessment of the children and household surveys. Photo by Susan Johnson*



The Child Nutrition Project began full-scale feeding of over 500 children on August 31, 1998. The food preparation

group works under the supervision of two nutritionists and their assistants. The dedicated staff work overnight, from evening to 7 am, in order to have the food cooked and ready for delivery to the schools. To ensure quality control, exact nutrient composition, and high sanitation and food safety standards, the cooking, serving and feeding are carried out under strict supervision. A house for food preparation was donated by the Rural Health Center at Karurumo.



Over 50 members of the community are employed by the Child Nutrition Project. Local residents have been recruited and trained to work as field staff in food intake, anthropometry, cognitive testing, behavioral observation, morbidity census, socio-economic status, food planning and preparation.



Photos courtesy of Katherine Lui, Suzanne Murphy, Charlotte Neumann and Michel Wattiaux.



*The future of African development rests in the capacity of children. The GL-CRSP child nutrition project strives to assure that these children make the maximum creative contribution to their nation's future. Photo by Susan Johnson.*



*Mr. Tracy Atwood (right), USAID/Washington enjoys a taste test of the githeri used in the child nutrition intervention study. Participants sampled the three variations of githeri being fed to school children in the Embu District. All agreed, the "meat githeri" was very tasty! Photo by Susan Johnson.*

## RECIPE FOR GITHERI

Following is the githeri recipe the Child Nutrition Project is currently using for the children in the intervention study. It is very similar to the local githeri prepared in the home. These ingredients yield a 240 kilocalorie serving:

1. Soak 36 g dry, mature maize (field corn) in water for 6 hours, then boil in water for 1.5 hours.
2. Add 24 g dry, mature kidney beans to the maize, and continue boiling for another 2.5 hours. Add water as needed.
3. Fry 5 g chopped onions and 10 g chopped sukuma (kale) in 3 g fat. Add the drained maize/bean mixture, 1 g salt, and 50 ml water. Boil for 10 minutes.

The above recipe is modified as shown below to make "meat githeri", which is not currently a local dish. However, the children (and the teachers) seem to think it tastes great! This recipe also yields 240 kcal.

1. Proceed as above, but modify the ingredients to: 20 g maize, 13 g beans, 2.7 g onions, 5.2 g sukuma, 1.6 g fat, and 0.8 g salt.
2. In a separate pan, boil 60 g minced (ground) beef in 25 ml water until fully cooked and water has evaporated (20-30 minutes); stir and break into small pieces. Add to the fried onions and sukuma along with the maize/bean mixture, salt, and 50 ml water.

*Through a grant from Thrasher Research Fund, a related project has been initiated in Uganda. Penn State Graduate Student, Stephen Kieras (right) is working with the community-based project which is focusing on increasing household consumption of rabbit by children and women of reproductive age. The GL-CRSP team will monitor food intake and child nutrition status.*



(continued from page 4)

## Pastoral Risk Management Project Holds Kenya Outreach Workshop

pastoralists and agropastoralists of southern Ethiopia could probably still benefit markedly from small-scale economic diversification schemes given lower pressure on their production systems and a typically less-developed economy. In this sense a lateral transfer of small-scale diversification ideas from pastoral Kenya to pastoral Ethiopia could be helpful in some cases, but for Kenyan pastoralists to begin to prosper a more radical infusion of newer ideas may be needed.

During 1999 a follow-up meeting with the Kenyans is

planned to further develop concepts and action plans to deal with priority risk-management interventions as was previously done for Ethiopia (see page two this issue of *Ruminations*). Still later it is planned to unite outreach partners from northern Kenya with those from southern Ethiopia to craft coordinated outreach plans that operate across national borders. In this approach relative strengths from both sides can be brought to bear on solving pastoral risk management problems.

Workshop participants included: Mr. Vincent Lelei [Office of the President and National Coordinator, Arid Lands Resource Management Project (ALRMP)], Mr. Francis Chabari [Marsabit Development Program/German Aid (MDP/GTZ)], Dr. Christine Cornelius (World Bank, Kenya), Mr. E.M.N. Wekesa [Drought Preparedness Intervention and Recovery Program (DPIRP)], Ms. Helen Bushnell (DPIRP), Mr. John Waita (FARM-Africa), Ms.

Miriam Cherogony [Financial Services Association and Kenya Rural Enterprise Project (FSA/KREP)], Mr. George Käsler [Samburu District Development Project/German Aid (SDDP/GTZ)], Mr. Hussein [Kenya Pastoral Forum (KPF)], Dr. Jean Ndikumana [International Livestock Research Institute (ILRI)], Dr. Nick Maunder [Famine Early Warning System-Kenya (FEWS)], Mr. George Kariuki [Dept. of Livestock Production, Ministry of Agriculture (MoA)], Ms. Esther Muchiri [USAID Regional Economic Development Services Office, Eastern and Southern Africa (REDSO-ESA)], Mr. Frank Lusena (Dept. of Natural Resources, Egerton University and the GL-CRSP), Ato Solomon Desta (GL-CRSP), and Dr. Layne Coppock (GL-CRSP).

*For more information on this workshop or project, see the project web site at <http://www.nr.usu.edu/~sanduku/crsp> or contact Dr. Layne Coppock at the Dept. of Rangeland Resources, Utah State University, Logan, Utah, USA 84322-5230 (LCOPPOCK@CC.USU.EDU).*

### **Ruminations**

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