



## PHASE I ACHIEVEMENTS AND IMPACTS

This document synthesizes research achievements and impacts for October 1996-September 2001, in particular research findings, extension of knowledge, and policy results and impacts. Often, the final stage of policy results and program impacts can only be anticipated since outcomes tend to be highly dispersed and unpredictable and since research projects are brought to closure before some impacts are fully realized.

### Phase I key research findings

1. Missing or imperfect factor markets and tenure insecurity contribute to poverty and are constraining the ability of the poor to gain access to land, labor and financial capital [\[hyper link\]](#)
2. For the poor who are disenfranchised from markets by tenure insecurity, high transactions costs and market segmentation, innovations in the way markets are organized help broaden market access [\[hyper link\]](#)
3. Diversifying farm earnings with off-farm income is one of the keys to unlocking sustainable rural livelihoods [\[hyper link\]](#)
4. Accumulating physical, social and human capital is key to securing rural livelihoods and protecting the poor against climatic and economic shocks [\[hyper link\]](#)
5. In addition to missing factor markets, economies undergoing privatization are constrained by organizational inefficiencies in the design of emerging farm enterprises [\[hyper link\]](#)
6. Achieving sustainable use of water resources emerged as a major policy issue in all regions, but the solutions—market or non-market—remain under debate or are untested [\[hyper link\]](#)
7. High transactions costs continue to drive a wedge between the integration of factor and product markets, resulting in low market integration; priority need for investments in human capital formation, health and physical infrastructure [\[hyper link\]](#)
8. New technology must be developed for and divisions must be bridged between resource, agriculture, health, and nutrition specialists so that improved policies can be implemented and coherent development responses can be initiated. [\[hyper link\]](#)

### **1. Missing or imperfect factor markets and tenure insecurity contribute to poverty and are constraining the ability of the poor to gain access to land, labor and financial capital**

#### **(1.1) Institutional Framework for Land Market Transactions, El Salvador.**

Government land transfer programs have contributed little to alleviating rural poverty and have introduced a male bias in land access. BASIS researchers questioned the historical emphasis on land redistribution as the only approach to strengthening access to land in El

Salvador, and suggest the need to complement redistribution with an institutional infrastructure that would facilitate private land transfers. How? Better mechanisms for financing land transactions. Complete land titling efforts. Improve information about land transactions and improvements in land records. Simplify the administrative machinery managing land reform. Reduce the ceiling on land holdings to facilitate development of contract farming and agribusiness development.

### **IMPACT: BASIS seminar receives press and TV coverage in El Salvador**

The seminar, *The Influence of Labor, Financial, and Land Markets on Rural Poverty*, 12 August 1999, San Salvador, presented research findings to more than 300 policymakers, researchers and practitioners. The discussion confirmed how rigid and shallow land markets have contributed to agricultural stagnation and the absence of a vigorous response to trade liberalization earlier in the decade.

BASIS researchers were interviewed for *Entrevista al Día*, a major media program, and *El Diario de Hoy* and *La Prensa Gráfica*.

**(1.2) Land Market Liberalization and Land Access of the Rural Poor, Honduras and Nicaragua.** The titling process is flawed in Nicaragua and there is substantial unmet demand for titling services. Research showed that full titling and registration of land had an impact on fixed land investment, even though it did not have an impact on access to credit. Land values were found to be enhanced by land titles; indeed, the capitalized value of the additional income that the investment increment is estimated to create is very close to the estimate of the additional value that full title gives to agricultural land (about \$50/hectare). Notwithstanding these results, preliminary analysis detects some significant signs of land reconcentration. Better understanding is needed of the agrarian dynamics (and the role that titling can play in it) so Nicaragua does not lose its potentially beneficial egalitarian agrarian structure.

**(1.3) Farm Restructuring in Uzbekistan.** Rural financial markets in Uzbekistan are comprised of repressive and inefficient formal financial institutions, underdeveloped semi-formal agents, and rudimentary informal arrangements. Inflation, late payments, inter-enterprise arrears, and a farm liquidity crisis have undermined farm purchasing power and, in some cases, pushed farmers towards a barter economy, thus further reducing their creditworthiness and debt servicing capacity. Farms have no economic incentive to produce, although they are legally obligated to fulfill production quotas for cotton and wheat. They have no financial incentive to minimize costs, because they know government will bail them out. How, under lack of private markets, does one break this circle of low profitability and indebtedness? One suggestion is to adjust the producer price to levels that reflect the world market, and charge landholders an economically determined land rental fee that compensates government for all or part of the current marketing margin the government enjoys. If accompanied by a futures contract with partial advance payment, this would enable suppliers and workers to be paid in a timely manner.

## **2. For the poor who are disenfranchised from markets by tenure insecurity, high transactions costs and market segmentation, innovations in the way markets are organized can help broaden market access**

**(2.1) Determinants of Access to Financial Services, El Salvador.** In 1995, fewer than 12 percent of all rural households had received loans from any source and only 20 percent had loans outstanding. Data from the 1997 National Rural Household Survey showed that only 13 percent of all rural households received loans from any source. Innovations in lending technologies are prerequisite for broadening the poor's access to financial services. A BASIS study of Financiera Calpiá, a leader of new lending technologies in El Salvador, documented the reasons for its successful expansion into rural areas and agriculture: 1) extending its well-tested urban lending technology; 2) cautiously adapting this technology to rural areas; and 3) building into its strategy a strong human capital formation component with rigorous recruitment and training of loan officers. Moreover, by providing individual rather than group loans, it has enhanced the value of the organization-client relationship. A combined urban-rural component is also critical for diluting fixed costs and diversifying lending operations.

### **IMPACT: BASIS influences financial initiatives and economic planning in El Salvador**

Results of the survey of rural loan officers undertaken at the end of FY 1997-98 were incorporated into a detailed analysis of the lending technology by Financiera Calpiá in reaching poor clients.

On 9 August 1999, BASIS researchers met with El Salvador's Minister of Economy and his team to discuss implications of BASIS research for rural poverty alleviation.

BASIS researchers asked to contribute preliminary results to the Plan de Nación, a major pluralistic exercise to build a national strategy for El Salvador.

The President of El Salvador on 6 August 2000 unveiled a new project to broaden access of the rural poor to microfinance; i.e. reorganizing the Banco de Fomento Agropecuario (BFA) to provide credit to rural farmers, and to support new credit lending technologies developed by the Banco Multisectorial de Inversiones, CALPIA, and FEDERCREDITO.

BASIS supported the 1998 and 2000 National Rural Household Surveys, building upon a World Bank funded survey in 1996. According to Mary Ott, former chief of the Economic Growth Office at USAID/El Salvador, this BASIS research supports the mission's strategic objective on economic opportunity, and the mission would like to see this biennial panel data extended at least through 2002 to assist with the new USAID/El Salvador five-year plan

**(2.2) Irrigation, Participation, and Factor Markets in Tanzania.** Informal discussions with landowners, tenants, and laborers revealed widespread demand for training in soil conservation, gully and water control that constrain farmers ability to adequately respond to increased water supply provided by the new irrigation project. Furthermore, leadership's lack of training in financial planning and management, conflict resolution, and methods for teaching farming, field leveling and water management skills to farmers are seriously undermining the sustainability of the irrigation scheme. Finance is a serious constraint: 17% of villagers in Mtandika had applied for loans from government or other financial intermediaries, but only 1% received them. Small group discussion revealed considerable problems and costs farmers face in gaining access to financial information.

Serious structural problems were also revealed in the way irrigation schemes are organized.

**IMPACT: BASIS assists with organizational and institutional reforms that improve the administrative allocation of water in Tanzania**

1. **Institutional reforms.** The irrigation organization in Kikavu Chini, *Uwakici*, has restricted its membership since 1999 to landowners. This restriction, controversial among owners, is contentious for most tenants who feel isolated from the organization. By the end of the research period, *Uwakici* leaders were committed to opening membership to tenants.
2. **Gender.** Women's access to water is compromised when their irrigation turn is scheduled at night, especially for female household heads who require night-time childcare. Water distributors argued that limiting women's turns to daylight hours would violate equality. Women successfully argued that since gender-specific constraints are not shared equally by men and women, the solutions cannot be gender neutral. Access to irrigated plots for women in two other villages was the most important problem because of social mores that make it difficult for women to control self-earned income. Women's implicit demand for land access was rendered more socially acceptable to both sexes as a result of gender training provided by an NGO affiliated with BASIS. In Msosa village, where a government project brought new land under irrigation, project advocacy and training resulted in a village plan to distribute small newly irrigated plots to female household heads and to married women. The research also provided persuasive evidence that government and NGO-promoted irrigation and credit projects need to bring younger men into planning and scheme management activities. These successes help demonstrate to the Irrigation Section and other parts of government, the value of gender training in communities.

**(2.3) Broadening Access to Land Markets, Southern Africa.** Government assisted land transfers have attempted to redress the unequal legacy of commercial farming in Zimbabwe, Namibia and South Africa. A census survey of all farmland transactions was conducted in the province of KwaZulu-Natal, South Africa in 1997, 1998, 1999, and 2000. In 1997, researchers found that government assisted transfers were not as important as private transactions in redistributing land wealth to the historically disadvantaged. Even the quality of land purchased privately by disadvantaged people appears to have been higher than that associated with white-to-white transactions in more recent years. Women are well represented in private transactions, except those financed with mortgage loans, but they acquired farms of much smaller size and of lower quality than men. Private land transactions thus contribute substantially to secure asset ownership for the historically disadvantaged in Southern Africa. Government-assisted land redistribution programs should therefore aim to strengthen both the demand for, and supply of, private mortgage finance through innovative contract designs. BASIS researchers also conclude that the appropriate policy to increase tenure security remains uncertain and on some points hotly debated. Governments are still tending to seek state-administered solutions over private market solutions, as the latter in many camps remain distrusted.

**IMPACT: BASIS assists in the design of a new credit program, South Africa**

In 1999, the Department of Land Administration in South Africa launched the Land Reform Credit

Facility to help draw private sector finance and human capital into commercially viable land reform projects.

This facility, the development of which was advised by BASIS researchers from the University of Natal and Ohio State University, offers loans with graduated repayment schedules to reputable banks and venture capitalists who finance equity sharing projects and land purchases by historically disadvantaged and aspiring farmers. Early response to the scheme has exceeded expectations. According to a BASIS researcher, the loan target of R15 million set for the first year was reached after only 8 months.

### **3. Diversifying farm earnings with off-farm income is one of the keys to unlocking sustainable rural livelihoods**

**(3.1) Differential Responses of Rural Residents to Long-Term Economic Change, in Kita, Mali.** Three strata of households were found to correlate with living standards: successful households with the most wealth; coping households who sustain livelihoods under normal conditions; and unsuccessful households whose livelihoods are in jeopardy all the time. Successful households are engaged in agriculture, livestock and non-agricultural activities. Within the coping group, even higher diversification strategies are used. Among both groups, farmers have taken up cotton cultivation for cash (except those with major investment in non-agricultural activities). The poorest strata have low income, few large livestock, small household size, and limited ability to participate in cash crop cultivation. Beyond agricultural-based strategies, organizations need to promote diversification into non-agricultural activities. Local markets providing these non-farm opportunities are limited. However, new opportunities will arise with the opening of a new road between Kita and the capital. Agricultural extension agents need to be able to advise on diversification strategies, and study new possibilities for community acquisition of plows and draft animals, and mutualization of agricultural credit. Lack of physical infrastructure and human capital are severe constraints to achieving these strategies.

#### **(3.2) Rural Land and Labor Market Participation Strategies, El Salvador.**

Researchers use the two-year 1996-98 panel of rural households to trace the impact of an economic downturn in 1997. The significant fall in incomes among poorer families was driven by an abrupt decline in agricultural and non-agricultural wage employment. Households had only limited access to formal credit, savings accounts or to public safety nets; hence, their main response was to increase labor supply, fall back on self-employment activities, and cutback on planned investments. Households with more educated heads were better able to preserve their income levels after the economic shock, and were less inclined to remove children from schools. The study confirms the important role of non-farm self-employment activities in rural household income generation, but also suggest the very fluid ways that households juggle labor between different types of employment activities. The analysis clearly points out the need to better integrate households in the market, both through increasing the availability/productivity of farm and non-farm self-employment activities. These activities help to insure income when more lucrative wage employment fails. While landownership helps protect the marginal return to labor when households fall back on self-employment during economic downturns, it is not clear whether this suggests the value of landownership, or the failure of land and credit markets.

**(3.3) Agriculturalists' Asset and Income Diversification Patterns to Ensure Sustainable Livelihoods, Kenya, Rwanda and Cote d'Ivoire.** The research revealed that livelihood strategies that include non-farm income sources (especially those derived from skilled labor) are associated with higher income realizations and upward earnings mobility. Those households with limited access to non-farm activities or productive assets (land and livestock) to devote to on-farm production, typically must rely on a low-return strategy of dependence on the agricultural sector, and are often trapped in poverty. Improved agricultural productivity and broader access to land can help improve the livelihoods of the poor. But this analysis clearly points to the need for a vibrant rural non-farm economy and to secure access for all to attractive niches within the non-farm sector through improved liquidity and market access. The land poor and those with limited education were especially likely to depend on livelihood diversification strategies with low returns and limited risk reduction because they are structurally unable to enter higher-return niches of the non-farm economy or to engage household labor fully in their own farm production. This population depends especially on unskilled, low-wage labor and has very poor prospects for upward income mobility.

#### **4. Accumulating physical, social and human capital is key to securing rural livelihoods and protecting the poor against climatic and economic shocks**

**(4.1) Dynamics of Poverty, El Salvador.** Systemic shocks such as El Niño, La Nina and Hurricane Mitch have affected rural El Salvador in the past 5 years. Between 1995 and 1997, the rural household average annual income declined 2.5 percent (excluding remittances). Agricultural income declined sharply, while non-agricultural income had an appreciable increase. Climate changes caused by El Niño were a primary determinant of these changes. The most important effect was a decrease in the demand for agricultural labor. Households dealt with these losses of income by developing household-based non-agricultural enterprises. Incredible household mobility was observed as a consequence of income volatility. While incomes stagnated or declined between 1995 and 1997, capital accumulation was unaffected for poor and non-poor households.

**(4.2) KwaZulu-Natal Income Dynamics Study, South Africa.** Significant numbers of South African poor are trapped in chronic, structural poverty, lacking the assets and entitlements needed to escape poverty over time. Some two-thirds of households below the poverty line in 1993 remained there 5 years later, and relatively large numbers of households that were just above the poverty margin in 1993 fell below that line in 1998. Education and social capital changed substantially from 1993 to 1998, and initial endowments predicted growth in future material well-being. Households that enjoyed initial endowments of transfer income were also positioned to improve their situation over time. However, without these assets, household well-being at best held steady and, especially for households with only unskilled labor power, deteriorated over time. About half of the South African families observed to be poor at any point in time are *transitorily* poor in the sense that some shock rendered them temporarily poor, or they are well enough positioned to work themselves out of poverty over time. The other half are stuck in a poverty trap and are in need of targeted interventions. Government housing programs and improved social welfare payments have helped some members of this group. However, social capital appears to play a very large role in explaining why some households get ahead economically while others fall behind. There is also strong

evidence that when women control more assets and income, expenditure patterns tend to favor investments (food and education) that benefit the next generation.

### **IMPACT: BASIS assists governments in Southern Africa**

In July 1998, BASIS sponsored research on poverty and inequality reported policy recommendations to the Deputy President and nine cabinet ministers of South Africa.

In September 1998, BASIS in a multi-donor effort assisted the Government of Zimbabwe with the design of its Land Reform and Resettlement Program II. The USAID mission in Zimbabwe is now providing funding to BASIS to continue to assist with this important initiative.

**(4.3) Community Assessments, Ethiopia.** BASIS community assessments focused on perspectives of drought, markets and food security. Research found that female-headed households, families with many children, those without cattle/oxen, the elderly, and the landless are the most insecure. Food secure households have relatively abundant land, adult labor, oxen, and private and social capital. Purchases and sales of livestock and grain are key strategies to weathering the initial phases of drought. As drought worsens, however, private livestock and grain markets become increasingly risky, particularly as purchasing power dissipates and markets become disconnected. Poor households turn to foraging for wild roots and leaves, out-migration, and selling oxen and farm implements. Well-off households assist poorer households by hiring labor, loaning oxen, giving or lending grain, and providing cash loans or gifts. These transfers eventually begin to erode differences in socioeconomic status. With long-term, prolonged drought, land loses productive value, livestock herds become depleted, surpluses disappear, seed is consumed, and households converge toward states of poverty. Prices of wood and livestock collapse. For those unable to migrate or find survival wages off the farm, the outcome can be devastating. The most troubling policy questions arise following the drought. Households reemerge with depleted labor stocks and low levels of labor productivity. Land regains productive value but seed, labor and oxen are in short supply. Pasture becomes plentiful, but households lack borrowing power to purchase cattle. The ability of households to mobilize productive resources will determine the rate of their return to productive livelihood. Future, ongoing research hopes to explore policy options for dampening the severity of these asset swings and improving the ability to rebound from shocks.

## **5. In addition to missing factor markets, economies undergoing privatization are constrained by organizational inefficiencies in the design of emerging farm/farmer enterprises**

**(5.1) Farm Size, Farm Type and Competitiveness, Kyrgyz Republic.** No significant difference is discernable among four major farm types in the study when comparing indicators of net returns per worker or per hectare. Net returns are also shown to generally increase in a linear manner with farm size. Thus in 1999, neither farm type nor farm size were major determinants for economic success. This finding is important for a set of policy issues—the lease value of the Land Redistribution Fund, the political debate about the economic viability of smaller units, and the strategy of rural extension services. While production of grains, tobacco, cotton, oilseeds, sugar beets and dairy offer

favorable returns, risk, capital rationing and land market constraints prevent their expansion and intensification. Lack of information and uncertainty inhibits the land rental market, preventing potentially advantageous seasonal rental of lands in the relatively more land abundant northern region by farmers from the relatively more labor abundant southern areas. These findings suggest that producers in all farm type and farm size categories are being affected by perpetuating subsistence-oriented production strategies on both smaller and larger farms. Investment and intensification decisions thus continue to be constrained by lack of financial capital, trade restrictions, restrictions on land sales and rentals, small internal markets and limited off-farm wage opportunities.

**IMPACT: BASIS provides key data for assessing and monitoring the rate of privatization**

**Farm Size and Competitiveness, Kyrgyz Republic:**

“Two workshops...[were held] in 2000 involving policymakers, extension agents, and farmers of the main survey findings...These...findings are being used by the Republican Center for Land and Agrarian Reform in its policy formulation and training programs by the Rural Advisory Development Service.... The...research effort has assumed the role of the main monitoring and evaluation tool for the Ministry of Agriculture and Water Resources for farm level data....Discussions are underway with the Rural Advisory Development Service at their request to involve the service’s advisors in data collection. This involvement could lead to an institutionalization of the research tied to feedback of information to farmers.

During the course of this project, presidential decrees have been promulgated which will free up the land market during 2000-2001 (by permitting purchase/sale transactions).”

**Design of a Database to Monitor Land Privatization, Eastern Europe and Former Soviet Union.**

BASIS funding enabled 10+ regional representatives from the offices of Land Administration, Land Cadastre, and Geoinformation Systems to work with US scientists and donor representatives on the design of privatization and real estate market indicators for purposes of monitoring land policy impacts.

**(5.2) Design of a Database to Monitor Land Privatization, Eastern Europe and Former Soviet Union.** Minsk Workshop, 21-23 August 2000 was held to reflect on land privatization experiences in Albania, Azerbaijan, Belarus, Georgia, Lithuania, Moldova, and Russia. Recommendations were crafted about the viability and usefulness of an index (or indices) to monitor the rate of land privatization. Privatization programs have dealt with various types of state owned real estate since 1989; some types have been privatized more rapidly than others, real estate concepts vary across countries, and there are statistical limitations. Nevertheless, with existing data and limited “one-time” special studies to generate missing data, it would be possible to produce an average index based on four categories of land use: cultivated agricultural land, urban land under housing units, commercial real estate, and apartments in multi-unit structures. However, even more important than privatization is the need for indicators that compare interregional and international real estate for development of land market policy. The workshop strongly recommended that such indicators be developed, concepts defined and data maintained on a permanent basis.

**(5.3) Impact of Privatization and Restructuring of Russian Agriculture, Golitsyno I workshop, October 1999.** Household plots, while very important, are largely dependent on the large farms and most of their production remains in the barter economy. Policies

and institutional arrangements must be found to restructure and revitalize the large sector of the agricultural economy. Despite major structural changes, agrarian reforms have not created a sound basis for Russian agricultural growth and efficiency. The current agrarian crisis is caused by 1) macro instability; 2) started but unfinished institutional reforms; 3) underdeveloped market infrastructure; 4) regional trade barriers and interference of the regional administrations in agricultural markets; 5) government support for inefficient farms; 6) non-existent bankruptcy mechanism for insolvent farms; 7) partial execution of legislation and contradictions in implementation; and 8) and large farms continue to bear the burden of social infrastructure maintenance.

### **IMPACT: BASIS achieves success in capacity building and engagement of policymakers in Russia**

Although Russia has been a high priority to Global/AFS, CRSP involvement there has been limited. BASIS has made significant strides in engaging US and Russian researchers and policymakers in policy dialogue about Russia's market reform.

In October 1999, the BASIS CRSP helped support four US scientists at the Golitsyno I Workshop on Market Reform in Russia. Those meetings were followed by a second conference at the University of Maryland IRIS Center in July 2000, which demonstrated a new tide of thinking in favor of market reform. Russian scientists in the Ministry of Agriculture and the Institute for Economies in Transition are welcoming the opportunity to work collaboratively with BASIS researchers. A third conference (Golitsyno II) is scheduled for June 2001 to further these discussions. The USAID mission supports this planning effort. USDA formally includes BASIS in the working agenda of the Russian-US binational commission.

## **6. Achieving sustainable use of water resources emerged as a major policy issue in all regions, but the solutions—market or non-market—remain under debate or are untested**

**(6.1) Land Reform and Farm Restructuring in Uzbekistan and Kyrgyzstan.** Most farmland in Central Asia is irrigated. Under the former Soviet water management system, which survives in most areas, water resources were centrally managed. Water misallocation and pollution are serious problems. Privatization will require the design of new decentralized water management systems. BASIS research determined a series of remedies in this region, including: 1) increase efficiency of irrigation systems; 2) improve land quality via better drainage systems, crop rotation, and modification of chemical application regimes; and 3) introduce water pricing schemes with proceeds to be used to improve water management. BASIS researchers propose that water users associations be established where all types of enterprises would be represented, and that the associations would introduce water pricing and manage water allocation to the benefit of all their members.

**(6.2) Broadening Access to Water Resources in Southern Africa.** The water resources project was designed to inform policy on water resources management—particularly decentralized management systems—in the context of ongoing water sector reform in three countries (Zimbabwe, Mozambique, and Malawi) of southern Africa. Malawi is currently experiencing problems with river flows and silt deposition, inter alia, from

deforestation and poor agricultural practices. How could water management be improved to alleviate poverty and increase water use efficiency? 1) revise the existing water resources management policy and strategies, legislation and institutional roles; 2) restructure the water resources board into a national water resources board; 3) adopt a *river basin* as a unit for water resources management and establish river basin authorities; 4) formulate strategic plans for national and river basin development; 5) promote rural community organizations; 6) improve rural potable water supply and sanitation; 7) enhance catchment conservation and river bank protection; 8) enhance hydropower development and multi-purpose use water storage; 9) provide capacity building and develop research in water resources; 10) improve water resources data collection, analysis, storage and dissemination; and 11) enhance participation of NGOs and the private sector.

**(6.3) Changing Tenure Patterns, Institutional and Policy Responses to Water Management in East Africa.** Water policy and current activities of the Ministry of Water have made a serious attempt to categorize the large and ever-growing number of water abstractions in Arusha region. The theory of Water Law in Tanzania and the practices on the ground are very different. Local people need to be involved in planning water supply systems, negotiating the terms of use with nearby communities, and managing and monitoring their use. With regard to irrigation, traditional schemes would benefit from improvements at the “intermediate technology” level in order to improve water use efficiency and ease management problems.

**IMPACT: BASIS uses workshops and conferences to engage researchers, policymakers and NGO practitioners in policy dialogue and program design**

1. Workshop on *Community Participation in Irrigation*, 10-11 August 2000, Dar es Salam, Tanzania. Workshop engaged 15 villagers, 15 staff from the Irrigation Section, 15 officials from the Ministry of Water, Ministry of Community Development, Cooperative Department, and local government offices, and 15 representatives from NGOs, training institutions and donors.
2. Seminar on *The Influence of Labor, Financial, and Land Markets on Rural Poverty*, 12 August 1999, San Salvador. Presented research findings to more than 300 policymakers, researchers and practitioners.
3. Symposium on *Agricultural Policy, Resource Access and Human Nutrition*, held in Addis Ababa, Ethiopia, 3-5 November 1999. Brought together more than 50 participants from teaching and research institutions, regional networks, government, NGOs and donor agencies in eastern and southern Africa.
4. Two workshops: 23 March 2000 and 24 July 2000, Bamako, Mali. Attended by 38 and 35 individuals respectively from NGOs (Point Sud, SOS Pauvre, APPF, ADOKE, DONKO, Plan International, Centre Djoliba), international organizations (ICRISAT, Institut du Sahel, USAID), government agencies (University of Mali, National Center for Research, Ministry of Rural Development, National Center for Assistance to Rural Areas, National Center for Functional Literacy, National Center for Promotion of Women, and National Institute of the Arts), and other interested parties (CMDT).

## **7. High transactions costs continue to drive a wedge between the integration of factor, markets and product markets, resulting in low market integration; priority need for investments in human capital formation, health and physical infrastructure**

**(7.1) Determinants of Market Integration, El Salvador.** According to the *Second National Rural Household Survey*, 11 percent of the households did not participate in the market at all and 40 percent devoted all of their labor supply to market-related activities. Market participation was found to be critically linked to household location and education levels. A 100 percent increase in the level of education (number of grades approved) increases participation in the market by 32 percent and household income by 27 percent. Gender, education, and access to land differences characterize labor market segments. Women participate more easily in informal markets and less in agricultural activities. Education is the most important prerequisite for a better market segment, and location also influences its quality. Households with low degrees of integration to the market tend to earn lower per capita incomes compared to more integrated households. If access to markets matters, the key role for the state in combating rural poverty will be the provision of the most basic public goods which brings down barriers to market integration. This includes providing education, health, physical infrastructure (rural roads and communications), information, and the institutional infrastructure needed for the smooth operation of markets to the whole population.

**(7.2) Cross-Border Trade and Food Security in the Horn of Africa.** Supply response to price changes across borders is weak in the region reflecting poorly integrated markets. A number of constraints inhibit cross-border trade in the region including border policies that regard the trade as illegal; lack of formal capital markets and imperfect informal substitutes; incomplete and poorly disseminated market information; undeveloped livestock routes; and difficult access by Ethiopian traders to the larger markets in Kenya. Because most pastoralists in the border region finance food purchases through livestock sales and much grain is imported with revenues from livestock trading, any change in cross-border commerce affects pastoral welfare and food security. Market imperfections could be reduced and incomes could be improved for herders, traders and government employees if the Kenyan and Ethiopian governments officially recognize and lift border controls. While BASIS cannot claim sole responsibility for the following impact, the wide circulation of its reports (some going back to 1980 by IDA) and ongoing dialogue between BASIS and the organizations mentioned had a positive influence on the policy debate.

### **IMPACT: BASIS research on crossborder trade in the Horn of Africa helps fill information gap on an important policy issue**

Extract from *Daily Nation*, 9 November 2000, *Livestock To Move Freely Across Borders*  
A common certification system for animal health will soon be in place to allow free movement of livestock across Ethiopia, Kenyan, and Somalia borders....This was resolved....in Isiolo last week. FAO, UNDP, OAU, European Union, USAID, were among organisations represented in the meeting. They lobbied governments through the Inter-Governmental Authority on Development (IGAD) to put cross border movement of livestock on its agenda. The certification system is important in enabling the livestock

keepers of the region not only to trade amongst themselves but also export their products....Kenya, which has an established veterinary department with a national network, has not been comfortable with free movement of livestock from Somalia and Ethiopian where disease control is either non existent or unreliable....Exchange of research information on pastoralism is also among programmes to be put in place and the agencies undertook to explore the potential for developing an “information hub” in the region. Among problems identified as hindrances to pastoral development included poor or total absence of enabling government policy frameworks, lack of information, poor infrastructure, and lack of coordination among development actors and planners....

**(7.3) Factor Market Constraints to Income and Food Security in Amhara Province, Ethiopia.** 19 market towns were inventoried to provide a census of economic activities and services in a market center. Accessibility to larger market centers was a serious problem for food security in at least 3 of the market centers that are 100 or more kilometers from Dessie over rough roads. Infrastructure was varied with notable deficiencies. Government services were mixed; four of the market centers surveyed had no access to local services of the Ministry of Agriculture. Non-Governmental Organizations operate in only seven market centers. While financial services are available in the majority of market centers, microenterprise lending is available in only two. All but 1 center had health services, and the majority of towns had skills training centers and other educational services. All but one market center reported experiencing food shortages. Food aid was largely provided by the government, but was often considered ineffective.

**8. New technology must be developed for and divisions must be bridged between resource, agriculture, health, and nutrition specialists so that improved policies can be implemented and coherent development responses can be initiated**

**(8.1) Agricultural Policy, Resources Access and Human Nutrition.** In Eastern and Southern Africa, there are wide divisions between nutritionists and social scientists, and between researchers and policymakers on appropriate interventions for enhancing nutrient utilization. Many nutrition and health scientists are not entirely familiar with linkages among policy, resource access, technology, food security, markets and income. Agricultural and social scientists tend to view these connections through different disciplinary lenses and often lack an adequate understanding of health constraints, micronutritional requirements, health care, and nutritional intake in order to design an integrated nutrition policy. An international symposium held in Addis Ababa, Ethiopia, 3-5 November 1999 brought together more than 50 participants from teaching and research institutions, regional networks, government, and donor agencies to develop strategies for narrowing these divisions. Major funding was provided by USAID/REDSO.

**IMPACT: BASIS assists USAID global bureau and missions in bridging differences between agricultural policy, resource access and nutrition**

The symposium sought to enhance understanding of policy, health, and nutrition linkages across disciplines of study; promote dialogue among agricultural policy and nutrition scientists and practitioners, articulate successful policy and program interventions and their impacts; and identify areas of collaboration among researchers and policy practitioners:

1. **Challenges.** The Greater Horn of Africa suffers from widespread and deep poverty which means widespread and deep malnutrition. Because malnutrition is multifaceted, so must be the solutions.
2. **The division.** Adequate nutrition requires secure and adequate food availability, food intake, health care, housing, clothing, water, and sanitation. However, the discussion on agricultural policy often emphasized the importance of increasing food availability with little or no regard for whether adequate nutrition was being served. Health and nutrition presentations rarely mentioned the contravening role of income and poverty in sustaining their interventions.
3. **Feasibility.** While more integration would be ideal, how, according to one minister, is government supposed to choose from the myriad complex of policies and interventions in pursuing a nutrition friendly path given the tight resources and limited capacity available?
4. **Is nutrition a luxury?** Those handcuffed to poverty and desperate to find sufficient food have little opportunity or means to seek or obtain higher nutrition. Health care and food supplements offer valuable short-term remediation, yet without long-term and sustained increases in agricultural productivity and economic growth, nutrition will remain a luxury for the majority of the world's poor.
5. **Technology.** Remarkably little consideration was given to the role of new technology in increasing food availability, improving nutrient content, or reducing food loss. Too often, participants tended to focus on distributional constraints. In Africa, economic returns are diminishing to efforts aimed at liberalizing markets or broadening control and access over resources. Technology is not the panacea, but neither can nutrition become sustainable without the emergence of agricultural technology that increases land and labor productivity, new employment opportunities that increase income, and food based approaches that improve the nutritional content of foods.

Karl Schwartz, program officer of the USAID Ethiopia mission, said the symposium played an important role in helping the mission develop its country mission strategy using an integrated nutrition framework.