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New approaches for coping with pastoral risk

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Introduction Pastoralists in East Africa face high and increasing exposure to risks, including limited access to grazing and water due to population pressure, insecurity, resource degradation, increasing climate variability, and lack of information about markets. In recognition that the traditional means of risk management--mobility--is much less available to pastoralists today, the Global Livestock Collaborative Research Support Program (GL-CRSP) has focuses on developing strategies to assist pastoralists in coping with risk. The approach is a three-part strategy to: 1) predict risk; 2) better connect pastoralists to markets; and 3) develop new capabilities to manage risk at the local level.

Materials and methods To predict risk the GL-CRSP developed the Livestock Early Warning Systems (LEWS: <http://glews.tamu.edu/africa>) that provides spatial predictions of forage availability 60-90 days out for most of Eastern Africa and is part of the FEWS network (Kaitho et al., 2007). To better connect pastoralists to markets the Livestock Information Network and Knowledge System (LINKS: <http://links.tamu.edu>) project has developed a cell-phone based market information system that provides public data on markets and collated data for national integrated market reporting. These projects created a suite of technologies that combine real-time, spatial-based forage and climate conditions with market information enabling pastoralists and managers/policy makers to make informed management and marketing decisions. In Ethiopia this has been augmented with outreach programs that have built market networks involving producers, trading associations, and livestock exporters (Desta et al., 2006). To gain understanding of risk factors and how they are perceived, the Pastoral Risk Management on East African Rangelands project surveyed hundreds of pastoral households in northern Kenya and southern Ethiopia to document the sources and perceptions of risk through periods of boom and bust in the livestock cycle.

Results and discussion The LEWS team has developed a robust forage monitoring and livestock market information systems covering all pastoral areas in Ethiopia, Kenya, Tanzania, Uganda, Djibouti and Somaliland. The two systems systematically and continuously collect and deliver timely information on forage supply and forecasts (60-90 days), and livestock market prices and volume trends to stakeholders. This information is updated every 10 days with situation reports and maps distributed via WorldSpace radios, email, internet and newsletters, impacting over 400 organizations and 600 decision makers in the region. Working closely with pastoral community groups dominated by women, the PARIMA team is assisting groups in problem solving and approaches to livelihood diversification. In southern Ethiopia, 59 collective action groups have been trained, involving over 2,000 members. These legally recognized savings and credit cooperatives have sustained themselves and created assets. Over 4,500 micro-credit loans exceeding \$559,000 have been extended based on an accumulated pastoral savings of US \$93,000, in part generated by animal trading. In associated efforts, PARIMA has organized 12 cross-border (Ethiopia/Kenya) meetings to address livestock production problems, trade, and conflict mitigation. Opening of export markets from Ethiopia to the Gulf States starting in 2003 has resulted in a large outflow of marketed stock from northern Kenya and southern Ethiopia; over 25,000 head of sheep and goats were traded by 11 collective-action groups assisted by PARIMA during 2004-05 alone (Desta et al., 2006).

Conclusions Only by investing in interdisciplinary field studies and bringing new technologies to bear on the problem can we provide new tools to mitigate risk in the contemporary pastoral environment. In order to understand "new" risks and how they operate and are perceived, it is important to invest in long-term survey work. Participatory research has shown remarkable results, as it integrates implementation and project design with community participation in a dynamic system of project monitoring, adjustment, and evolution. Projects, communities and development professionals learn by monitoring, rethinking, and adjusting their efforts.

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