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POLICY RECOMMENDATIONS FROM THE FOOD SECURITY SESSION AT THE JULY 2011 ALGHERO CONFERENCE

Food security issues crosscut different disciplines and production systems (arable, pastoral). Presentations during the session on Food Security at the July 2011 International Conference on *Dryland Ecosystem Functioning and Resilience: Integrating Biophysical Assessment with Socio-economic Issues* were titled as follows:

- Livestock as a means of sustaining livelihoods in drylands: resilience and adaptive capacity of the production system.
- Food production and environmental variability: from problem to asset? An insight from specialised pastoral systems.
- Food sovereignty and trends in global markets: outlook for future for agricultural research?
- Climate vulnerability and food security.

Discussions and policy recommendations emerging from the session suggested:

- **Recognition should be given to the strength of pastoral production as a low-carbon production system.** Pastoral production systems can make use of resources characterised by low energy concentrations and a spatially and temporally heterogeneous energy distribution to produce high value protein products. Research on the actual gains from pastoralism should be promoted, as well as the potential costs (economic, ecological and social) associated with conversion of pastoral land to other uses.
- **Investment is needed in participatory research programmes** to better understand the ways in which populations manage the changes inherent to drylands in order to help close the yield gap between farmers in developed and developing countries. This also needs to be grounded in broader political-economic analyses.
- **A revised approach to international-trade legislation is required that explicitly attempts to balance the need for ecologically diverse and resilient agriculture with the present focus on industrial agriculture.** This would require a review of both supply and demand sides, as well as critical reflection upon tariffs, subsidies and other economic mechanisms that influence food production, distribution and consumption.
- **Supportive policy initiatives need to promote and secure possibilities for livelihoods within mobile pastoral production systems.** Dryland pastoral systems embed vast reservoirs of knowledge (individual and collective) which can be used to strategically exploit the variability inherent to drylands and manage the land sustainably. There is much to be learned from pastoral producers. To avoid system-blind sedentarisation and consequent loss of knowledge and economic and ecological services requires policies that promote mobile pastoralism on both an economic and ecological basis. Rangeland

ecosystems are 'pastoralist ecosystems', largely the result of the human-animal-environment interactions that are characteristic of dryland pastoralism and are no more 'natural' than other agricultural landscapes.

- **Social networks play a key role in reducing vulnerability and need to be recognized within policy.** National policy support needs to be provided to facilitate the implementation of social coping mechanisms, particularly during times of drought and famine.
- **Policy support is needed to improve information and capital flows to and between pastoralists and farmers in order to enhance their adaptive capacity** (e.g. improving information flow through modern communication media like mobile phones, radio or the internet and improving capital flow through appropriate marketing, banking and insurance services). Improved information flows, especially closing the service gap between rural and urban areas, can help early warning systems by speeding up reaction time and increasing precision at times of crisis (e.g. drought or famine).
- **Institutional and legal mechanisms should be promoted to secure tenure and resource-management arrangements which effectively reflect the way pastoral production systems make use of land and water.** Land tenure frameworks define the spectrum of land use possibilities. Efforts to securing tenure rights in pastoral areas are typically taking place within land tenure frameworks designed for farmed agriculture. It is crucial to expand formal land tenure and resource management frameworks to reflect and serve the ways in which land (and water) is used in pastoralism.
- **Promotion of analytical tools capable of representing the reality of production systems to exploit production conditions characterised by asymmetric (non-uniform) distribution of key resources is needed.** Most analytical tools used in natural resource management are designed to pick up uniformity and stability. Analytical tools based on standard statistics cease to be meaningful simplifications in drylands. This discrepancy between the context and the analytical tools applied carries the risk of grossly misleading results. Besides being potentially very costly for existing production systems, this ultimately reduces options relevant to the present conditions of increasing environmental variability.
- **There is a need to bolster extension advice in relation to food storage programmes to target local food systems and enable them to act as an insurance mechanism against both climatic phenomena and vagaries in international commodity markets.** Dryland producers are not isolated from the global market and therefore they too are subject to market dynamics. Investment in extension advice to help dryland communities to store excess food following productive seasons can help reduce risk and vulnerability and improve food security in leaner years.

Several other areas need future research in order to inform policy, including threats to food production, rural-urban relationships (linked to production and consumption), land tenure, political aspects of land transactions (land and water grabbing); links between land condition, biodiversity, nutritional diversity, human health and well-being; integration of indigenous/local knowledge alongside scientific and technical knowledge, institutional and market aspects as well as aspects of food safety. These will form the basis of the Food Security Working Group of DesertNet International's activities.