CapEx in supporting pastoral development

Livestock insurance for risk management

Abdi Kunow, February 2016

Key messages

- Index-based livestock insurance (IBLI) schemes are still in the piloting and promotion stage in relatively few countries with pastoralist populations. These schemes are complementary to pastoralists' traditional risk-management mechanisms.
- The economic potential of pastoralism and the low interest generated by IBLI pilot projects do not provide sufficient incentive for private insurance companies to enter such schemes on a large scale. Therefore, the insurance schemes need to be supported by development partners and government programmes until IBLI becomes widely accepted as a risk-management tool.
- Poorer pastoralists tend not to buy insurance coverage because people living in poverty have to be risk averse in order to survive. Governments and/or donors might integrate into their poverty-reduction strategies a way of subsidising insurance premium payments.
- Major constraints to IBLI are lack of long-term data on livestock mortality, poor communication infrastructure, low levels of "modern" education among pastoralists as well as factors related to tradition and culture.

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CapEx series on pastoralism

Pastoralism is practised on a quarter of the globe's surface and provides a source of food and livelihood for millions of people, especially in areas that are too dry or high for reliable production of food crops. For the Swiss Agency for Development and Cooperation (SDC) work in the Sahel and the Horn of Africa, pastoralism is a key domain. Having recognised the value of learning from experiences in development cooperation across countries and regions, the Subgroup Pastoralism in the SDC network for Agriculture and Food Security undertook an internal learning process called "Capitalisation of experiences in supporting pastoral development" (CapEx Pastoralism for short). The Subgroup members identified issues about which they wanted to learn more, so as to be more effective in supporting the development of pastoral economies and livelihoods. During the CapEx process, they compiled information and formulated texts on selected topics. This brief is one of a series of briefs that came out of this process. The briefs are intended primarily for SDC and its partners at country and regional level, particularly in West and Eastern Africa, and SDC staff in Switzerland, but also for other development practitioners and donors engaged in pastoral development.

1. Introduction

The frequency of droughts and other climate-related risks has increased in the recent past, leading to the loss of large numbers of livestock and livelihoods, and particularly affecting pastoralist communities. In Kenya for instance, 28 severe droughts were experienced in the last century alone; there has been no timely response to drought over the years and no contingency in place to avert catastrophic loss of livestock and livelihoods. This situation has further exacerbated the food security crisis among the already food-insecure pastoralist households. Losses due to drought are estimated for Kenya at USD 12.1 billion for the period 2008–11. This state of affairs calls for a continued effort to find ways of improving the resilience of vulnerable communities and to create a holistic approach to protect household entitlement.

Pastoralists have traditionally used various risk-management mechanisms; these include splitting herds, pasture management by creating dry- and wet-season grazing areas, and movement of herds to access water and pasture in other areas. Recently, livestock insurance has been tested in a number of countries as one of the modern risk-management tools. The insurance systems are designed to cushion households against unpredictable losses. Some countries that have piloted livestock insurance include Mongolia, India, Senegal, Kenya and Ethiopia.

Individual insurance schemes are generally regarded as expensive and difficult to implement because of the cost and logistics involved in verifying individual claims. A communal insurance system has been tried in the above-mentioned countries, based on a satellite index-monitoring tool to reduce the cost of running the insurance scheme. Payout is based on the measurement of an index such as the degree of vegetation cover using the Normalized Difference Vegetation Index (NDVI), in the case of Kenya and Ethiopia, or average livestock losses at the level of a village, in the case of Mongolia. This eliminates the need to verify losses suffered by individual farmers. The contract is drawn up using a standardised livestock unit known as Tropical Livestock Unit (TLU) to calculate the individual contribution of a pastoralist.

The use of an index and standardised livestock units makes the insurance "communal", since a large group of people may be using the same index trigger. Because it is not based on verification of individual losses, index insurance clients may sometimes miss out on payouts despite experiencing losses. Similarly, index insurance clients may receive payouts when they had no livestock losses, resulting in "false" payouts.

ILBI can build resilience among the participating households not only for the compensation for livestock losses in a bad year; it can also give an opportunity for farmers to participate in markets, credit and other banking services, including saving accounts, during the good years.

This brief looks into specific cases of IBLI availability and uptake, draws initial lessons to identify entry points for development cooperation, and outlines some key principles to guide the cooperation process.

Key terms

Index-Based Livestock Insurance (IBLI): an insurance product based on index monitoring whereby payouts to insured individuals will only be made once an index is triggered by a specific natural event such as harsh weather conditions that result in lack of water or pasture based on the availability of forage. During severe dry periods such as droughts, pasture availability is usually greatly reduced and the trigger for insurance payment may be activated.

Normalized Difference Vegetation Index (NDVI): index-derived satellite imagery that gives an indication of the level of forage or level of "greenness". The index is used to develop the insurance contracts and is created from the relationship between the level of forage during a given period against the historical mortality rates in a given target location.

Tropical Livestock Unit (TLU): a standardised livestock unit, in the case of IBLI in Kenya, calculated according to weights of different species of livestock given in the Kenya Range Management Handbook for Marsabit District (Schwartz *et al* 1991). One TLU is the equivalent to an animal of 250 kg liveweight. To calculate the insurance premium in Kenya, it was assumed that one head of cattle equals 1 TLU, one camel equals 1.4 TLU and one goat/sheep equals 0.1 TLU (Chantarat *et al* 2012).

2. Specific cases

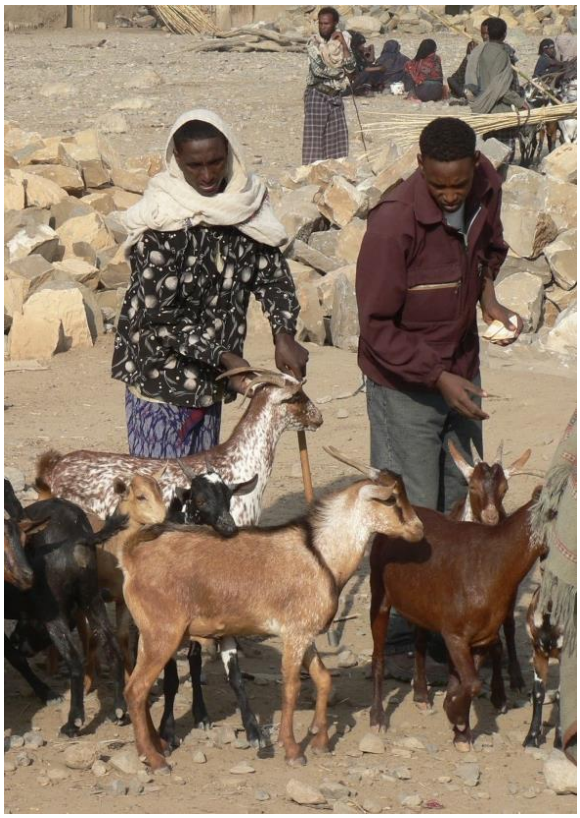
In Kenya and Ethiopia, IBLI schemes have been piloted by the International Livestock Research Institute (ILRI) in partnership with private insurance companies and humanitarian agencies. Over the last decade, intensive research work has been geared towards the availability of commercially viable insurance products for the pastoralist communities in the arid and semi-arid lands (ASALs). Pilot projects have been introduced in several counties in Northern Kenya and in the Borana area of Ethiopia. The first of such pilot schemes was in Kenya's Marsabit County in 2010. Even though still donor funded, the insurance products are currently commercially available and partnerships have been created with private insurance companies. In Kenya, applications, premium payments and insurance payouts are made by mobile phone (M-pesa system).

In both Kenya and Ethiopia, similar challenges have been faced in the implementation of IBLI schemes. Low levels of formal education among pastoralists have hampered understanding of how the product works. Furthermore, the targeted pastoralists' households are difficult to access because of the poor state of the infrastructure, in terms of both road access and telephone network coverage.

In the Mongolia case, index-based mortality insurance against *dzud* (extreme winter conditions that result in high livestock losses) was introduced by the Government in 2005. In 2014, this insurance programme was gradually transitioned from a donor-funded initiative to a private company enterprise and the insurance is commercially available. In 2016, the scheme will become a fully-fledged public-private insurance venture.

Key characteristics of the Kenyan and Ethiopian IBLI cases:

Kenya	**Ethiopia**
• Market-mediated insurance product; first pilot project introduced in 2010 in Marsabit County. • Protection against livestock deaths resulting from drought, especially lack of water and pasture. • IBLI uses livestock mortality data collected in Kenya for slightly over a decade. As opposed to the livestock insurance product in Mongolia, where 100 years of livestock mortality data are available, the Kenya case lacks such data to calculate basis risk.	• Market-mediated insurance product; product introduced in 2012 after lessons were learnt in the Kenyan pilot as a replication and scaling-up opportunity. • Protection against livestock deaths resulting from drought, especially lack of water and pasture. • No historical livestock mortality data are available to calculate basis risk. A deviation from the cumulative historical trend of vegetation growth in relation to the NDVI is used to prepare the insurance contract.



Pastoralist youth selling goats on market in eastern Ethiopia (Credit: Wolfgang Bayer)

Camels and goats in a dry riverbed in Ethiopia (Credit: Wolfgang Bayer)

3. Lessons for development cooperation

3.1 Situation analysis

A negligible percentage of the pastoralist populations have taken up the IBLI products that have been piloted around the world. Several factors are associated with the low uptake, including misunderstanding of how the insurance product works, cultural and social factors such as limited trust in the introduced insurance products and low level of formal education among the pastoralist communities.

Index-based insurance as a risk-management tool has shown minimal impact at the household level in terms of poverty reduction and safeguarding assets, according to different studies in the last decade (e.g. Leblois & Quirion 2013, Miranda & Farrin 2012). These studies revealed that the households that benefit from livestock insurance are the better–off ones that can pay for the insurance premiums. Poorer households below the poverty threshold will benefit only if there is a subsidy programme that helps them pay for the premiums. If the poorer households pay fully for the premiums, this will lead to asset depletion, since the payouts do not fully compensate for all the losses incurred and since not all dry periods will trigger payouts, as this depends on the levels of the index. Therefore, continued payment of premiums by such households may reduce their livestock numbers overall.

In all the countries where IBLI has been introduced, the premium sales have been subsidised by donors or supported by the national governments. In Mongolia, livestock owners have been supported through a World Bank-funded project to access the insurance since its inception in 2005. Even though plans have been made to partner with private insurance companies, none of the IBLI programmes is to date fully independent of donor support.

IBLI has been introduced by ILRI in Kenya and Ethiopia in partnership with local commercial insurance companies and non-governmental organisations such as CARE International and Mercy Corps, which work closely with the local administrations in the pilot areas. The World Bank is currently working with the Kenyan Government to enable poorer households to access the insurance product.

3.2 Entry points for development cooperation

There is a need to monitor the uptake and to study the effectiveness and impact of the livestock insurance in the pilot areas in order to gain a well-grounded basis for decisions about supporting such insurance in the ASALs and to ensure that it is worthwhile entering into development cooperation related to IBLI. It would also need to be explored whether IBLI complements indigenous mechanisms for managing risks of livestock losses, or undermines them, e.g. by encouraging pastoralists to become less mobile and less flexible in their herd management.

To overcome some of the challenges and limitations of IBLI, it would be necessary to create partnerships between private- and public-sector organisations so as to improve the overall outreach and uptake of this new risk-management tool. For example, the current support to ASAL counties in Kenya could create synergies with the existing livestock insurance and other indigenous and government-supported risk-management mechanisms that are in place such as pasture management, livestock offtake during drought periods and safety-net programmes that help households cope during the lean season. Increased availability of water services would reduce the risks during drought, thereby safeguarding assets of the pastoralist communities. Improvement of institutional capacities in resource management may also help in strengthening the investments in new risk-management options.

Supporting the outreach to pastoral communities, increasing advocacy for IBLI where it proves to be effective in reducing risk, and highlighting the complementary role of providing livestock insurance as a risk-management strategy could protect the gains made in supporting communities and their institutions.

3.3 Interacting with policy processes

Livestock insurance falls under the disaster risk management and resilience building in both the national and the intergovernmental regional authority strategies. In Kenya, Sessional Paper 8 (2012) outlines measures to harness the potential of drylands in Kenya and to ensure equitable distribution of resources between high-potential and ASAL areas, which have historically been viewed as marginal. According to this Paper, the Government will introduce livestock-insurance schemes for pastoralist communities in order to strengthen livestock production and marketing.

The regional Inter-Governmental Authority on Development (IGAD), which incorporates eight member states in Eastern and the Horn of Africa, developed a policy to combat drought. One of the objectives of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) is to develop institutions, mechanisms and capacities to build resilience to drought. Disaster-risk management is integral to this policy. Implementation of this policy can best leverage the presence of commercially available livestock insurance products as one of the tools for reducing the risks of losing pastoral livestock during drought.

Despite the acceptance of livestock insurance as a risk-management tool in most countries with pastoralist populations, there are no laws or policies that are specific to livestock insurance. Development of such policies is a priority to entrench livestock insurance as a risk-management tool for pastoralists' households.

3.4 Key principles to guide this development cooperation process

To be able to guide a process of developing IBLI schemes, development partners and government programmes first need to gain a solid understanding of:

- Traditional risk management strategies;
- Any religious and cultural implications that may arise, which would still need to be studied;
- Any gender dimensions that are involved, which likewise need deeper investigation;
- Political economy dimensions at national and regional level.

Government institutions and commercial insurance companies should make their investment decisions based on a solid evidence-based analysis of the experiences made thus far in piloting IBLI schemes in their own and other countries, the socio-economic impacts of these schemes and the prevailing institutional and infrastructure conditions in the country.

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