

INDEX-BASED LIVESTOCK INSURANCE (IBLI)

Summary of Key Features (Marsabit contract)

The risk:

Index-Based Livestock Insurance (IBLI) is a product that is designed to protect against drought-related livestock mortality.

The index:

The index in IBLI is predicted livestock mortality. It is calculated by using a measure of pasture availability that is recorded by satellites, called the Normalized Differenced Vegetation Index (NDVI). This vegetation measure is fed into a response function that relates pasture availability with drought related livestock mortality.

Contract strike level:

The index threshold above which payouts must be made is called the **strike level**. The strike levels for IBLI are either 10% or 15%. The clients select which contract they would like to purchase. In other words, IBLI will compensate if predicted livestock mortality is above 10% or 15% depending on the type of contract purchased.

Geographical coverage of contract:

The Larger Marsabit District will be covered by five separate contracts. These are based on the old divisional boundaries consisting of Central & Gadamoji, Laisamis, Loiyangalani, Maikona and North Horr divisions.

IBLI Geographical Coverage

Marsabit

The Significance of Geographical Clustering:

1. The index – predicted livestock mortality – is given at the division level. That means that Central & Gadamoji, Laisamis, Loiyangalani, Maikona and North Horr could all have a different index level. Because insurance payments are made according to the index level, this means that IBLI may make different payments across all the divisions. Every insurance policy holder within the same division however, will receive the same rate of insurance payment (if the index is above the strike or trigger that they chose).
2. As will be explained below, premiums are different in all the divisions of Marsabit.

Contract premiums:

The premiums for IBLI vary every season depending on the forage conditions in the previous season which will also give an insight on the forage conditions in the coming season. The premiums for Marsabit for Jan/Feb 2014 are as follows:

Table: Premiums for IBLI

Division	15% Trigger	10% Trigger
Central/Gadamoji	7.6%	10.6%
Loiyangalani	6.6%	9.9%
North Horr	6.5%	10.0%
Laisamis	8.1%	11.1%
Maikona	7.7%	10.9%

Premiums are different in the different divisions due to the differences in the type of livestock they keep in the area as well as the forage conditions in the same.

These rates are applied to the value of the herd to be insured in order to give the amount that that must be paid for livestock insurance.

Consumer premium rates do not equal total market premium rates. A 40% premium subsidy has been provided by DFID, EU and AusAID to cushion the pastoralists until the market forces push the prices down.

Insurable Livestock Unit:

The standard livestock types for a pastoral herd will be covered. These are: Camels, Cattle, Sheep and Goats.

To arrive at a value for the insured herd, the four livestock types will be transformed into a standard livestock unit known as a **Tropical Livestock Unit (TLU)**. TLU is calculated as follows:

- 1 Cattle = 1 TLU.
- 1 Camel = 1.4 TLU.
- 1 goat/sheep = 0.1 TLU.

The examples below show two different herd sizes and how they can be calculated into TLU:

Example 1. If you would like to insure 3 cattle and 20 goats/sheep, your TLU insured is $3 \times 1 + 20 \times 0.1 = 5$ TLU.

Example 2. If you would like to insure 4 cattle, 7 camel, and 12 goats/sheep, your TLU insured is $4 \times 1 + 7 \times 1.4 + 12 \times 0.1 = 15$ TLU.

Value of the Insured Herd:

Once total TLU are calculated, you need the value of a TLU to determine the value of the total herd. Using average prices for livestock across Marsabit we have arrived at a set price per TLU insured of Ksh 20,000. Using the examples above, the total value of the herd will be as follows:

Example 1: $5 \text{ TLU} \times 20,000 = \text{Ksh } 100,000$

Example 2: $15 \text{ TLU} \times 20,000 = \text{Ksh } 300,000$

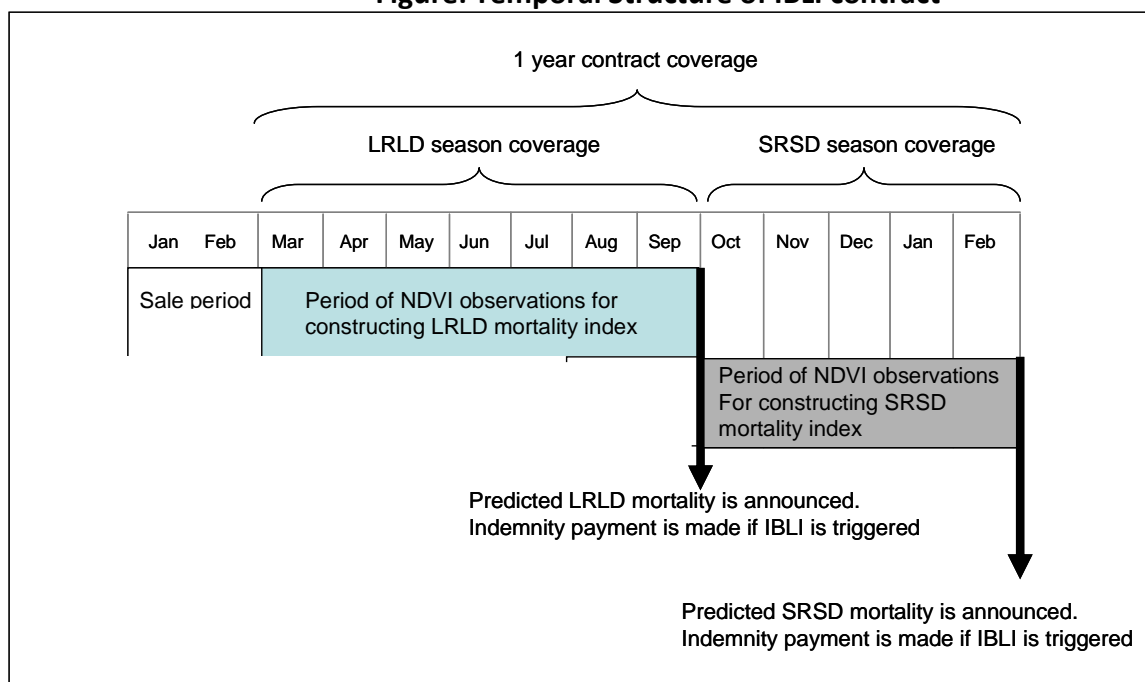
The premiums are then applied to this to arrive at the amount one would pay for IBLI coverage for the year.

Time Coverage of IBLI

The figure below presents the time coverage of the IBLI. The contract is an annual contract whose coverage spans from beginning of March of one year to February of the next year or from beginning of October of one year to end of September of the next year. IBLI will only be sold within specific time frames that end on February 28th for the first sales period and September 30th for the second sales period. Contracts must be sold within this time frame as the rainy season beginning right after that may give the potential buyer information about the likely conditions of the season to come that would unfairly affect his/her purchase decision.

This annual contract has two potential payout periods: At the end of the long dry season in September and at the end of the short dry season in February. At these points of time, if the index reads greater than 10% or 15% depending on the type of contract purchased, the insurance will pay clients.

Figure: Temporal Structure of IBLI contract



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