When the stars are aligned to improve the lives of poor African herders threatened by drought

Satellites and an insurance program help Kenyan pastoralists to cope with severe drought conditions in Northern Kenya.

Zurich, March 2017 Whenever land isn't fertile enough to grow crops, people in developing countries keep animals. It represents one of the oldest forms of agriculture still practiced in the world and more than 100 million of the world's poor live this way. About half of them are nomadic communities in sub-Saharan Africa with an average daily income of less than USD 2 per person.

When pastoralists in Kenya's arid north are being educated about satellites, Andrew Mude who developed the program from the International Livestock Research Institute (ILRI) at Nairobi, talks about stars that don't act like other stars since they are taking pictures of the ground. Herders, a star-gazing people, understand. These artificial 'stars' are now helping poor rural Kenyans to survive a severe drought - satellites can measure how much vegetation is on the ground.

Although managing drought is a normal part of pastoralism, in the past, drought came in ten-year cycles, enabling herders to build up their herds and regenerate pasture and water resources to withstand the next drought. Over the past 30 years, however, drought cycles tend to shorten to every five years and now every two years, and droughts are more prolonged.

Climate change is being experienced in many countries across the globe and it particularly impacts poor people in developing countries; moreover, it is exactly these population groups that are least resilient against such detrimental developments. Ever-shrinking drought cycles leave pastoralists with less water and grass for forage and they have nothing to fall back on when their animals die.

Villager Lokuukwi Achembe estimates, his village lost around 2,000 goats. "This is our food and our way of living," he said sadly. Not only that, animals represent also pastoralists' savings.

After Kenya's economy lost USD 12billion due to drought-related effects between 2008 and 2011, its government, supported by the World Bank, ILRI and Swiss Re, introduced the first livestock insurance scheme in Africa in late 2015. The program, operated by seven local insurers, applies satellite-based index insurance to protect semi-nomadic herders registered under the Hunger Safety Net Program.

As soon as drought conditions reach a certain threshold, pastoralists receive a lump sum payment, usually delivered to prevalent mobile-money accounts, to purchase emergency animal feed and water allowing the animals to survive. The trigger point for the insurance payout is set deliberately

early enough to prevent animals from becoming too weak and ailing in the first place.

75% of livestock deaths in the Horn of Africa are caused by severe droughts, leaving herders and their families destitute and inciting conflict, as can currently be observed in Northern Kenya, where distressed nomadic herders migrate with their frail animals further and further south into relatively densely populated and privately owned agricultural areas, themselves suffering from weak harvests.

The premiums, insuring five cattle or 50 goats and sheep per vulnerable and exposed household, are fully funded by public money, while local insurers, managing the overall program, offer additional coverage for a fee. In late February 2017, after the failure of the short rain season, 12,000 pastoral households benefitted, when nearly EUR 2m were paid out. In contrast to conventional livestock insurance this approach is cost-effective, sustainable - allowing herders to prevent the death of their animals - and can be scaled up significantly.

Kenya expects to cover 80,000 households by 2019 (and the program has expanded to Southern Ethiopia also); yet it only reaches a small percentage of households and only few animals per family. A drought-induced emergency has been declared across a number of Eastern (and to a lesser extent, Southern) African countries and apart from Kenya, in particular across Somalia and Ethiopia, with war-torn South Sudan in sight. Livestock deaths and fire sales are slashing pastoralists' asset wealth and cumulative bad harvests make recovery all the harder for small-scale farmers.

In parallel to the insurance scheme, the Kenyan government runs a "destocking" program, which pays herders for animals they would struggle to sell. It pays around EUR 18 for a goat or a sheep, and some EUR 130 for a cow. This is half of the price of a healthy animal. "If they are in good condition, they can be moved to graze elsewhere. When they cannot be moved, the animal is slaughtered so the community can benefit from more food," explained James Oduor, Head of Kenya's National Drought Management Authority.

Sustainable insurance relies on the laws of large numbers and on diversification – yet, local insurers run cluster risk and need to enroll herders from a broader geographic area so that a single drought will not clobber all customers at once. Making the program commercially viable, and thus, eventually independent from government subsidies, will require a massive expansion of the scheme, including the enrolment of less poverty-stricken pastoralists who have witnessed the value of holding such insurance, and are in a position to self-finance premiums.

While still in its infancy, the model already generates meaningful improvements for poor pastoralists whose precarious lives are further impacted by climate-change related effects that - if they continue to evolve - undoubtedly will require more fundamental adjustments in the economic activities of these population groups. But for now, the Kenyan Livestock Insurance Program (KLIP) is a high-impact role model. "Many developing countries and donors are studying the Kenyan scheme und we are seeing increasing interest in establishing similar insurance schemes", said Mark Ruegg, CEO of CelsiusPro, the Swiss company that sources the satellite data and calculates the underlying indices to determine the payouts under the program.

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About CelsiusPro:

CelsiusPro is a Swiss company specialized in providing technology to structure and administer parametric solutions to mitigate the financial impact of adverse weather, climate change and natural catastrophes.