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in boosting small-scale
subsistence agriculture and
improving the nutrition
and health of their families
and communities in
Kajiado County*

STORIES OF CHANGE

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MAASAI COMMUNITIES IN KENYA ADAPTING TO CLIMATE CHANGE BY ADOPTING SMART-AGRICULTURE PRACTICES

In the Rift Valley, in the rain shadow of Mount Kilimanjaro and close to the border with the United Republic of Tanzania, the Maasai groups of Naishorua, Silale, Menjele, Innkarukok olmane and Olroup live in the heart of Kenya's Maasai Land: the Kajiado County, with its dryland conditions and semi-arid climate. The livelihoods of the Maasai groups depend on nomadic pastoralism to a far greater extent than on crop and livestock production. Traditionally, the men take care of the cattle and the women practise subsistence agriculture.

Heavily dependent on rainfed conditions, pastoral lifestyle is highly vulnerable to climate change and the resulting hazards of drought, increased temperatures and soil moisture stress. Reduced annual rainfalls exacerbate the challenges related to water scarcity and pasture degradation, threatening the traditional Maasai pastoral lifestyle and related livelihoods. Today, Maasai men must leave their families for longer times and travel further in search of pasture and water resources for their livestock, thus contributing to the increased transboundary movement of various animal herds in the region.

Using their observation and understanding of the changing weather patterns, these pastoral communities have been seeking to adapt to the ever-changing climate in an attempt to protect their livelihoods and lifestyle.

Among these local nomadic populations, two key figures, Ryan and Paul, from the village of Enkorika, Kajiado County, have been instrumental in helping their communities cope with the negative effects of drought and water shortage.

Ryan Kotene is a 50-year-old Maasai whose lifestyle has changed significantly over the years. First a traditional pastoralist, he later became a semi-settled agro-pastoralist; today, he is a local key actor in agricultural extension services for his community. He is a husband and is a father to five children: two boys and three girls.

Paul Tintayo Ole Toimasi, a 70-year-old Maasai pastoralist, had to downscale his herd cattle from hundreds to merely 40 heads because of climate change and variability. He has a family of two sons, one daughter, 16 grandchildren and two great-grandchildren.

Recognizing the importance of science and technology, Ryan and Paul pioneered the adoption of novel climate-smart practices to help their communities adapt in the face of climate change hazards and impact. Their efforts make a significant contribution to the reduction of animal movement and related transboundary

threats within and across the borders of Kenya. Furthermore, their work constitutes both an early warning action against and a response to the climate-change-induced effects of migratory movements of populations and their livestock within the country and across country borders.

Hosting the Naishorua farmers' field school on his own land, Paul collaborated closely with the Kenya Agricultural and Livestock Research Organization (KALRO) and the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in the development and implementation of a drip irrigation system for small-scale subsistence agriculture.

He and his family became settled farmers, using drip irrigation to grow vegetable and fruit crops including spinach, kale, onions, tomato, beans, watermelon and pawpaw. Paul has stated that his health has significantly improved since he started consuming the produce of his own farm.

Ryan is the main contact point for the above mentioned Maasai groups, which consist predominantly of women. Thanks to his experience in horticulture, Ryan quickly learned how to use the relevant technology and gained advanced training, provided by KALRO, on the amount of water needed by crops, the timing of irrigation and the use of small-scale drip irrigation systems optimized using nuclear techniques.

Through participation in the Joint FAO/IAEA Division project, Ryan gained crucial experience in climate-smart agriculture and was appointed a member of the smart-agriculture committee in the region. Ryan currently advises Maasai women on subsistence farming and on the sustainable use of water and soil resources. He is passionate about empowering Maasai women and helping them to grow their own food to improve the nutrition and health of their families and communities.

Paul has offered 5 acres of his own land to the community for the development of more irrigated land, for the purpose of boosting subsistence crop production and fostering local food security. Ryan plans to further assist in the development of drip-irrigation land for the community, the organization of farmers' field schools, and the education of farmers on the use of drip irrigation to grow vegetables, fruits and beans. Their hope is to reduce poverty, create employment, improve health and foster food self-sufficiency among the Maasai communities in Kajiado County.

