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## **Potential of geographical indications in reducing food insecurity in Kenya: A producer awareness assessment**

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### **Introduction**

Geographical indications (GI) can contribute to food security in rural areas, as far as they are implemented as a rural development tool (FAO, 2009). Lots of literature has focused on protecting food cultures as well as food quality as benefits producers and consumers can accrue from GI protection. Further to this, GIs can determine and influence food security where the protection results in higher and steady income for the producers, hence better and stable access to food (FAO, 2009). Following the TRIPS<sup>2</sup> definition (Article 22), a geographical indication identifies a product as originating from a territory, or a region or locality where a given quality, reputation or other characteristics of the product are essentially attributable to its geographical origin. This link between product and place can differentiate a product in the market, as it appeals to specific consumer demands and interests.

Kenya is in the process of developing a *sui generis* GI law. In the meantime, the Kenya Industrial Property Institute (KIPI) has modified the trademarks act, to provide for protection of products as GIs. Various publications have shown that there are commodities in the country that have potential to be protected and marketed as geographical indications, including semi-arid areas (IPI and KIPI, 2009; Blakeney et al., 2012; Bagal et al., 2013).

The arid and semi-arid lands (ASAL) in Kenya are characterized by low annual rainfall and high food insecurity, but also have products with characteristics uniquely attributable to these regions. Due to increasing food prices, producers often engage in production of commodities not suitable to the regions, in an attempt to meet the subsistence needs of households. Further, an increase in demand for land has resulted in more land in such regions being used for agricultural production. Without appropriate practices, these lands can be further degraded, complicating food insecurity (Houser and Rosenberg-Carlson, 2012). Therefore, there is need to increase value from commodities adapted to the regions in order to preserve productivity, the environment and ensure food security. The objective of this study was to assess producers' awareness of place-based uniqueness in the products of interest and assess whether this GI potential can contribute to improved food security in semi-arid regions of Kenya. This would contribute to the already existing government efforts to make semi-arid regions sustainable in access to food, as well as provide incentives to farmers to improve productivity and environment management

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<sup>2</sup> Trade-Related aspects of Intellectual Property Rights (TRIPS)

## **Material and Methods**

The study followed results of a scoping study earlier conducted (*Maina et al, unpublished*) to identify agriculture related products that have potential to be registered as geographical indications in Kenya and the EU. The identified products had (i) reputation among consumers as being (ii) unique due to area of production; (iii) and different from similar products from other areas. This study then compared two of these products in two ASAL regions, Apple mango in Makueni and Goat meat from Baringo County. Both have distinct origin-based attributes with reputation among consumers, are semi-public goods such that all the producers in the target regions can produce the commodities with the same characteristics. There is already an aspect of premium prices especially for the goats. Mango production is more prone to exploitation by traders in terms for prices due to the high perishability of the commodity.

To address the study objectives, qualitative and quantitative data was collected through expert interviews, focused group discussions and household survey, all conducted face to face. A qualitative approach was used due to its ability to represent perspectives of different participants in a study (Yin, 2011). Household survey data was collected using structured questionnaires from a sample of 137 and 135 households in Makueni and Baringo counties respectively. Secondary data (from ASDSP) was used to establish the link between the food security status of the counties and the likely influence of protecting the products as geographical indications.

## **Results and Discussion**

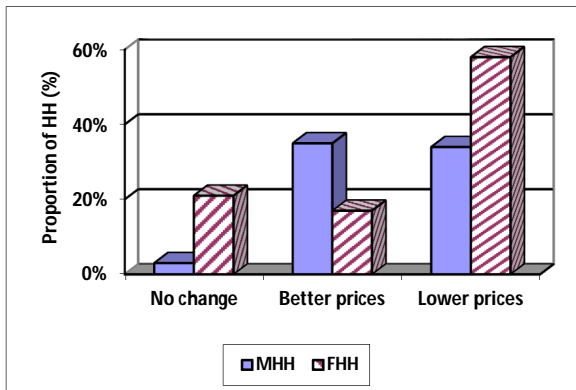
### ***Awareness of geographical attributes in agricultural commodities***

Producers in both counties were aware of the uniqueness of the products, Apple mango in Makueni and naturally salted goat meat in Baringo. In both counties, the respondents mentioned taste as the main distinguishing characteristic of the products. The apple mangoes are “sweeter” and “juicier” than those from other regions. This agrees with (Ouma et al., 2014) who on comparing attributes of apple mangoes grown in Makueni and Embu counties in Kenya, concluded that those from Makueni had better sensory attributes (including acidity, sweetness, mouth feel, flavour, aroma, colour and general acceptability). In Baringo, the producers attributed the distinct taste of the goat meat, described as “naturally-salted”, to the salty deposits on the soils and the natural herbs and trees where the goats browse.

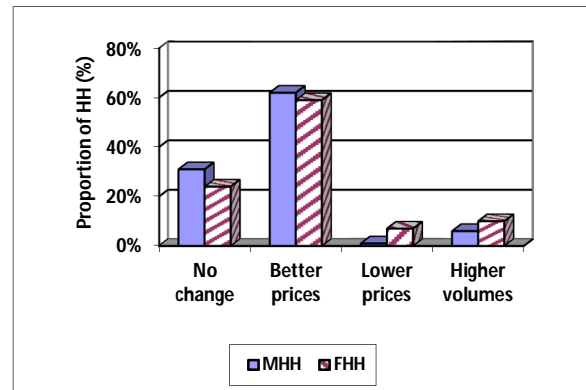
At least 95% of respondents in Makueni attributed the unique characteristics of the apple mangoes to the temperature, soil and rainfall in the region. In Baringo, 94% of the respondents attributed the uniqueness to the combination of the unique soils, salt deposits and the resulting variety of bitter shrubs and acacia tree pods that the goats feed on. Further, 40% and 56% of respondents in Makueni and Baringo counties respectively indicated that under current management practices, the uniqueness of the product might diminish. There is therefore need for community initiatives that encourage producers to maintain the environment and hence uniqueness of the commodities produced.

### ***Perceived effect of uniqueness on prices and willingness to participate in GI protection***

Fifty percent of female-headed households in Makueni indicated that the farm gate prices they received were lower than prices received in other regions with different quality attributes (Figure 1). They mainly attributed this to exploitation by middlemen. In Baringo at least 60% of the respondents indicated that the unique taste resulted in better prices compared to other goat rearing regions (Figure 2). However, the producers indicated that since most of them sold the goats especially when in need of food and school fees, the desperation of the moment made them not get the best prices for their goats.



**Figure 1: Households perception of effect of uniqueness of apple mangoes on farm-gate price**



**Figure 2: Households perception of effect of uniqueness of goat meat on price received**

In both counties, at least more than 80% of the respondents were also willing to participate in registering their produce as geographical indications, including making monetary contribution to the process. The mango producers in Makueni were willing to contribute an average of USD 4.62 (USD 4.61 and USD 4.70 for male and female-headed households respectively). In Baringo, the goat keepers were willing to contribute an average of USD 6.94 (USD 6.94 and 6.89 for male and female-headed households respectively). Awareness of the uniqueness and willingness to participate in product registration are important steps in the GI registration process

***Food security status of the two counties***

Literature review was used in assessing the food security status of the two counties and comparing with the producer perceptions and willingness to participate in registering their commodities as GI. Using calorie intake, a study by the Agricultural Sector Development Support Program (ASDSP) studying a sample of 284 and 160 households in Makueni and Baringo County respectively found that at least more than 65% of the households were food insecure (Table 1). The study compared the sample calorie intake with the standard required level of 2,620 kcal per adult unit per day as given in Claro et al. (2010).

**Table 1: Proportion (%) of food secure households based on mean calorie intake per man-equivalent in 2013 (food secure have mean calorie intake >2,620 kcal per adult equivalent unit per day)**

	Baringo				Makueni			
	Male HHH	Female HHH	Youth HHH	Total	Male HHH	Female HHH	Youth HHH	Total
Food secure	27	24	62	34	18	23	45	22
Food insecure	73	76	38	66	82	77	55	78
<i>n</i>	105	21	34	160	207	44	33	284

Source: ASDSP (2014a) and ASDSP (2014b)

During the FGD, the mango producers in Makueni indicated that they received low prices for their mangoes since they often marketed as individuals and middlemen exploited this fact together with the high perishability of the mangoes. Among the goat producers, trade is also conducted individually hence, the price received depends on the negotiating ability of the producer. In both counties, considering the two products are perceived to have attributes that are place-specific with reputation among traders and consumers, GI registration is plausibly a possible step towards reducing food insecurity. By engaging in collective action to package their unique products and present it to the market as a differentiated product, the households would get better prices, and hence contribute to reduction of food insecurity as shown on Table 1.

## Conclusion

The study has shown that in ASAL regions, characterised by food insecurity, there are unique products with producers aware, not only of the uniqueness, but also the possible source of these quality traits. Their willingness to contribute towards legal protection of the commodity further provides an opportunity to explore the economic benefits that would accrue to the communities and the environment, including the plausible reduction in their food insecurity status. Successful registration of these unique products could fetch premium prices for the communities, if differentiated and protected by certain policies and laws. Better prices and a differentiated market would enhance the communities' access to food in better quality and sufficient quantity. As food security situation is improved, producers would more easily tend towards better management practices hence contributing to environment sustainability, currently threatened by inappropriate practices.

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