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"Filling gaps and removing traps for sustainable resource management"

## Impact Evaluation of a Cooling Truck on the Camel Milk Value Chain in Isiolo, Kenya

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## Abstract

Providing livelihood in times of drought, the camel is a well-adapted animal to dry areas in the Horn of Africa and its milk plays an important role in the diet of pastoralist people. Some of them have moved into urban centres like the Eastleigh neighbourhood in Nairobi, where camel milk is mainly supplied by Anolei camel milk cooperative from Isiolo. When the milk was transported to Eastleigh with public buses, several inconveniences for the Anolei cooperative members as well as the Eastleigh milk dealers arose. Among others, milk got lost or spoiled and it was brought to Nairobi on unsteady times. As a consequence, the cooperative acquired a cooling truck in October 2017, partly subsidised by Vétérinaires Sans Frontières (VSF) Suisse. Since then, the truck is bringing a daily amount of approximately 4000 l of milk from Isiolo to Eastleigh.

This study assessed the impact of the cooling truck on the camel milk value chain from Isiolo to Nairobi. A value chain analysis determined benefits, downsides and social changes for the situation with and without cooling truck. A cost-benefit analysis established the economic viability of the truck for the cooperative income and a partial budget analysis gave insight into the changes for individual members.

According to Anolei Cooperative members, the benefits of the truck outweigh the constraints. Less spoilage and loss of milk, a reliable time schedule, convenient pick-up spots and more free time are only few of the advantages of the truck. On a purely economic level, the truck costs outweigh the benefits for the cooperative, that is to say that net present value and internal rate of return are both negative while benefit-cost ratio is below 1. Moreover, impacts on the individual members' household budget are slightly negative. The main reason for the adverse economic outcome is the unexploited potential of the truck. Its capacity could be utilised better if Anolei Cooperative was transporting milk from non-members or other cooperatives. Another way to boost total additional benefits is to increase proceeds by elevating transportation fees. These alternatives are discussed in the poster.

**Keywords:** Arid lands, camel milk, cooling truck, value chain

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