



## Process case study

# The interdependence of human and livestock nutrition in Sahrawi refugee camps, Algeria

LEGS guidance on displaced livestock keepers arriving in refugee camps highlights the importance of complementary programming. Refugees require support to feed and water their animals. To ensure public and animal health, veterinary support and environmental management are also needed to address the needs of both livestock and humans in camp settings. This case study from Algeria's Sahrawi refugee camps illustrates the additional benefits to human nutrition from supporting livestock nutritional needs.

## Background

In 1975, following conflict in the former Spanish Western Sahara, mass displacement of the Saharawi population saw thousands cross the border into Algeria, and settle in desert refugee camps. Forty years later, the Sahrawi refugee camps have grown from camps to *de facto* cities, with UNHCR estimating the camp population at approximately 173,600 refugees. Most of the Saharawi refugees were originally nomadic, but during the initial mass displacement few animals were able to be transported by the refugees. A League of Red Cross Societies mission in June 1977 however, reported an increase in the numbers of animals in the Sahrawi camps over the previous year – an increase that enabled the occasional addition of meat to diets.

## The role of camp animals in human nutrition

Refugee camp life deprives communities of much hope of food self-sufficiency, leaving them largely dependent on the non-perishables of an international aid food basket. Recent studies of the Saharawi population suggested that the food basket, which is based mainly on calories rather than a diverse diet, is struggling to counter widespread nutritional problems. A major problem in the camps is the increasing prevalence of anaemia. Anaemia rates are as high as 45% among women of reproductive age, and 39% among children.

As the Sahrawi camps were initially intended to be temporary, no mechanisms to produce higher quality human food were established. However, led by the refugees themselves, animal protein sources are now helping to address the nutritional problems. About 80,000 goats and sheep, and 80,000 camels, are now present in the camps. The goats and sheep are managed by women and children and fed almost exclusively on domestic organic waste, while the camels are largely based in pasturelands close to the refugee camps under the guidance of men. As the numbers of animals has increased over the years through breeding, this has significantly increased the availability of animal protein in the camps.

## Activities

### Animal and human health

The presence of a large number of animals needs a local veterinary system to ensure both animal and human health. Since 1996, a Veterinary Directorate, which is now composed of 24 Saharawi operators, has been based in the camps. They are responsible for supervising slaughter procedures, surveying the dominant zoonoses, giving clinical assistance to smallholders, raising awareness of good animal management practices, and working on the prevention of infectious

diseases. Alongside the veterinary infrastructure, a hospital and dispensary infrastructure with six health centres supports the human population of the refugee camps.

## Animal and human nutrition

In addition to participating in livestock production, and the veterinary systems to support it, the Saharawi refugees have initiated a number of projects to support nutritional needs. The creation of plantations of the tree *Moringa oleifera* in the Hammada desert is one such project for improved animal feeding to support livestock production, supported by several NGOs, including Vétérinaires Sans Frontières (VSF) Italy and Africa '70. This leguminous source is able to grow in extremely dry conditions, has low invasive potential, and has had wide-ranging benefits for both animal and human nutrition. It is very rich in proteins, vitamin C, iron and other macro and micronutrients, and offers a sustainable solution for diet diversification and enrichment. Other nutrition projects include a chicken farm.

## Lesson learnt

In a camp or settlement, coordinating the needs of humans and livestock - including their access to food/fodder - can lead to improved livelihood impacts in the long term. The health challenges faced by both human and animal populations in the Saharawi refugee camps in the Algerian desert led to responses being developed to benefit both.

A review of the food basket still needs to take the livestock production challenges into consideration, and the camp health systems need to better accommodate both human and animal health in order to maximise limited resources and stimulate effective collaboration between different NGOs.

Whilst the Saharawi refugee camps may be an exceptional case given their longevity, the interdependency of humans and animals within refugee camps is an important issue that warrants broader recognition.

**Sources:** This case study is drawn from Giorgia Angeloni and Jennifer Carr's article *Animal and human health in the Saharawi refugee camps* in 'Humans and animals in refugee camps', *Forced Migration Review* (2018) see: <https://www.fmreview.org/economies/angeloni-carr>

Their sources include:

- UNHCR (2018) Operational Update: Algeria, 1 January–31 March 2018 <http://bit.ly/UNHCR-Algeria-2018>
- Wilson A (2014) 'Ambiguities of space and control: when refugee camp and nomadic encampment meet', *Nomadic Peoples* 18 (1): 38–60. DOI: 10.3197/np.2014.1801
- WFP (2017) WFP Algeria Country Brief, August 2017 <http://bit.ly/WFP-Algeria-2017>

See also VSF Italy's work for the past 20 years at: <https://www.vsf-italia.it/news/saharawi-il-popolo-del-deserto/>

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