

Animal and human health in the Sahrawi refugee camps

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Health challenges in the Sahrawi refugee camps in the Algerian desert are faced by both human and animal populations, and therefore responses must benefit both.

The Sahrawi refugee camps are situated close to the Algerian settlement of Tindouf and have grown from camps to de facto cities since mass displacement of the Sahrawis in 1975. Following conflict in the former Spanish Western Sahara, thousands of people crossed the border into Algeria, settling in refugee camps. Forty years later, the UN Refugee Agency (UNHCR) estimates the camp population at approximately 173,600 refugees.¹

Each case of mass forced displacement has a unique set of circumstances and

resulting health challenges. However, from the perspective of the international humanitarian community, at the time of crisis the humanitarian concerns are namely that – human concerns. The needs of people in acute distress shape the form of the response; food, water, shelter, protection, sanitation and medical care are provided – for humans. The presence of animals is not ignored; indeed it is often noted in official reports and needs assessments conducted by humanitarian agencies. A League of Red Cross Societies mission in June 1977, for

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example, 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.

Alice Wilson's research suggests that most Sahrawi refugees in exile were familiar (from childhood or more recent experience) with life in a nomadic encampment, with sedentarisation being a fairly new process in the mid-1970s and early 1980s.² However, during the initial mass displacement, few animals were transported by the refugees and by the 2000s opportunities for mobile pastoralist practices remained constrained, not least by the inhospitable environment.

Life in a refugee camp in the middle of the desert deprives the population of the hope of food self-sufficiency, leaving them largely dependent on international aid. In fact, non-supported survival in the desert is guaranteed only by nomadic practices and any enforced sedentarism of the refugee camp disrupts and constrains these practices. However, it also provides opportunities for the creation of new responses led by the refugees themselves.

The role of animals in human nutrition

Recent studies of the Sahrawi population have suggested that the chronic emergency status in the camps, reflected in a food basket based mainly on calories than on a diversification of diet, is struggling to counter widespread nutritional problems. The camps were intended to be temporary by the refugees and international agencies alike, so mechanisms to produce higher quality food systems were not established. One of the main problems present in the camps

today is the increasing prevalence of anaemia in women of childbearing age. UNHCR is leading interventions to reduce numbers of children with severe acute malnutrition, and the World Food Programme (WFP) is working to improve prevention and treatment of anaemia, and to reduce stunting and moderate acute malnutrition among children under five years of age and pregnant and nursing women. With anaemia rates in the camps as high as 39% among children and 45% among women of reproductive age, these are pressing challenges, not helped by

insecure funding which can lead to diminished rations and inadequate supplies of interventions such as High Energy Biscuits.³ Furthermore, the results of UNHCR's March 2018 assessment, which found there to be a population of over 170,000 – far higher than the 90,000 given in official statistics – also suggests that

the population has been long underserved.

Despite the Sahrawis' overall dependence on food aid, their livestock has for centuries enabled their survival in the Western Sahara and continues to be a hallmark of their cultural identity. Animal breeding by refugees increases the availability of animal proteins and can help address the nutritional problems of the camps. About 80,000 goats and sheep and 80,000 camels are present in the camps. Goats and sheep are fed almost exclusively with domestic organic waste, while camels spend part of their life in pasturelands close to the refugee camps. A lack of suitable pasture means there are limited opportunities to raise large numbers of camels for sale, so the importance of livestock (camels, but also goats and sheep) in refugee camps lies



A veterinary clinical visit, Sahrawi refugee camp.

predominantly in its potential contribution to increase opportunities for self-sufficiency.

Attempts to establish projects for improved animal feeding to support livestock production (which is currently insufficient) and livestock-derived diets in the camps should require little or low technology, and refugees can take the skills they learn with them if they leave the camps. The creation of plantations of the tree *Moringa oleifera* is one such project. More high-tech projects such as hydroponics may provide a provisional increase in food production but they require higher levels of investment and non-sustainable energy sources from outside the camps. These systems are not easily transportable, are susceptible to deterioration and need maintenance which is difficult in the local context since the systems are not part of local culture.

The Sahrawi refugees are renowned for their resilience, religious tolerance and organisational skills, and the refugee population is far from passive. Several refugee-initiated projects take place. The above-mentioned *Moringa oleifera* plantations in the Hammada desert is one example, supported by several non-governmental organisations (NGOs) including Vétérinaires Sans Frontières (VSF) Italy and Africa '70. This leguminous source, able to grow in extremely dry conditions, has wide-ranging benefits for both human and animal nutrition, being very rich in proteins, vitamin C, iron and other macro and micronutrients, and offers a sustainable solution for diet diversification and enrichment.

The presence of a large number of animals needs a local veterinary system to ensure the best possible animal and human health. Since 1996, a Veterinary Directorate, now composed of 24 Saharawi operators in the camps, has been supervising slaughter procedures, surveying the dominant zoonoses,⁴ giving clinical assistance to smallholders, raising awareness of good animal management practices and working on the prevention of infectious diseases. Resources may be limited but the desire among NGOs and refugees alike to stretch capacities and maximise resources is strong. Brucellosis, tuberculosis, Rift Valley fever, echinococcosis, rabies and

toxoplasmosis are some of the major zoonoses, which must be addressed in a collaborative effort by veterinarians and medical NGOs providing health care. Alongside the veterinary infrastructure, a hospital and dispensary infrastructure with six health centres supports the human population of the refugee camps. Disease associated with animals is not limited to livestock; pets can also be a source of infection, although these animals are mainly free-roaming cats and dogs rather than fully domesticated animals. Recent studies conducted with Sahrawi people and cats have shown high incidences of antibodies specific to the parasite that causes toxoplasmosis, in both people and cats.

Approaches such as *Moringa* production benefit both human and animal populations and offer a holistic response to exceptional circumstances such as those of the Sahrawi refugee camps. A review of the food basket needs to take livestock challenges into consideration, and the camp health systems need to accommodate both human and animal health, in order to maximise limited resources and stimulate effective collaboration between different NGOs, as well as between the NGOs and refugees themselves. The Sahrawi refugee camps are an exceptional case, and the roles of humans and animals within refugee camps as a broader topic merits further research.

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1. UNHCR (2018) Operational Update: Algeria, 1 January–31 March 2018 <http://bit.ly/UNHCR-Algeria-2018>
2. 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.2014.180104
3. WFP (2017) WFP Algeria Country Brief, August 2017 <http://bit.ly/WFP-Algeria-2017>
4. Zoonoses are diseases which can be transmitted to humans from animals.