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World Animal Protection

Submission - (FCCC/SBSTA/2014/L.14)



1. Overview

In response to the SBSTA call for submissions (FCCC/SBSTA/2014/L.14) World Animal Protection addresses the relevant points of the decision.

Our organization moves the world to protect animals with offices located on every continent. We work cooperatively with farmers, business, government agencies and other civil society groups worldwide to promote more humane and sustainable food systems.

(a) Development of early warning systems and contingency plans in relation to extreme weather events and its effects

While disaster responses prioritise the immediate needs of people, effective risk reduction measures must address a community's long-term resilience and recovery. Such activities focus on reducing and mitigating the negative effects that extend beyond the initial disaster. The world's poorest people rely heavily on livestock and working animals, which means their ability to resist and recover from disasters is closely interlinked with animal wellbeing. For these vulnerable communities, integrating animals into disaster risk measures is necessary to protect livelihoods, build resilience, guarantee food security and deliver long term recovery. By actively including animals in disaster preparation, planning, response and recovery, we can reduce losses and aid dependency.

The importance of animal protection is recognised in the Sendai Framework for Disaster Risk Reduction (2015-2030) which lists under Priority 3 the need to "*Strengthen the protection of livelihoods and productive assets, including livestock, working animals, tools and seeds.*"

Presented here are two very different case studies which demonstrate the importance of integrating animal protection into disaster risk reduction activities.

Typhoon Haiyan: effective response, preparedness and resilience in the Philippines

Typhoon Haiyan, one of the worst meteorological disasters on record, hit the Philippines in 2013 affecting around 14 million people. During the first two weeks of Haiyan's aftermath, livestock and poultry smallholders in some of the heaviest hit areas lost 20-30% of their animals. These included buffalo, goats, cattle and poultry.

Because the Philippines experiences an average of 20 typhoons every year, it was clear a typhoon-resistant model was urgently needed. Its aim was to prevent future animal losses for communities whose farm animals were suffering in Haiyan's aftermath through lack of shelter and protection. With the University of Aklan we are piloting a typhoon-resistant pig and cattle farm



with two core elements to reduce risk. The first of these elements was an underground shelter to protect animals during the storm. The second is a typhoon-resistant shelter with a roof that can be easily dismantled and protected from high winds. The design means pigs and cattle can be moved to safety before a typhoon. The shelter can be dismantled to avoid destruction, and then reassembled to give shelter when the winds subside.

The first element of this model farm is the underground protection shelter designed for housing animals during a cyclone. It protects them from high winds and potential injury or death keeping them safe for their owners and livelihoods.

Shortly after Typhoon Haiyan, many pigs who survived the typhoon's initial destruction subsequently died from heat stress through lack of shelter when their pen roofs were destroyed. The typhoon-resistant shelter is a World Animal Protection modular design and holds 10-12 pigs. It has a deep bed flooring system made of layers of natural materials.

These layers include micro-organisms that decompose pig waste, reducing the requirement for tens of thousands of litres of water to clean the floors. It is a non-polluting system that produces healthy compost at the end of the production cycle. This allows pigs to be raised in high welfare farming conditions that respect their natural behaviours and needs. Animals raised humanely are healthier which is better for the animals, people and the environment.

The process can use less feed, fuel and water than intensive farming, reducing costs. And because healthy animals produce more it is an economically viable option.

Providing alternative forms of transport increases the mobility of vets in the aftermath of disasters when roads are blocked; allowing them to reach areas that would otherwise be cut off. As part of their training the vets devised an early warning system for small farmers. They guided communities to create local risk maps and identify what they could do to protect their animals. The system involves the vets, via SMS, issuing specific typhoon preparedness warning messages for small producers. The producers are expected to act according to the preparedness plans previously developed with their communities and the vets. They are then expected to report back on how the warnings and actions decreased the negative impact of typhoons. After each event (or on an annual basis), the vets will update the plans accordingly.

To sustainably safeguard communities' food security and ultimately resilience, healthy, well-cared-for animals are vital in maintaining life and preventing reliance on aid. By combining best-practice farming models with early warning systems that include animal protection, our approach offers practical community level solutions to improve the resilience of small farmers and communities



Chihuahua, Mexico: building resilience and contingency planning

The state of Chihuahua experienced devastating drought that effected both animals and people. The people of the state are largely economically dependent on agriculture and livestock, in particular cattle farming. But at the start of 2012, they faced consequences of two years of drought and three successive failed farming seasons.

Without rain, green pasture dried up; what was left was overgrazed. Malnourished cattle were forced to eat fallen leaves and cotton leftovers from nearby plantations. Livestock deaths rose into the thousands. After the Mexican Government responded to the plight of its people by authorising US\$250 million for emergency measures, including sanctioned disaster response activities related to livestock, sustainable, longer term contingency plans were required. Animal-based livelihoods were not safe in the medium to long term. Destocking (selling off cattle in disaster aftermath) meant producers lost their productive asset, undermining resilience.

World Animal Protection in partnership with local government and communities developed undertook activities to build cattle owners' resilience to droughts over the long term. There were three core elements: improving pastures, developing water management systems, and improving water efficiency.

To improve pastures, indigenous fodder was planted which is resistant to both drought and low temperatures. This fodder can also be a source of emergency animal food. To improve water management systems we supported to construction of wells and a borehole to provide water for livestock and irrigate pastures. We also advised on the construction of modified 'sand dams'. The sand dams, a type of retention pond collect run off rain water to supply animals and pastureland. Built with the help of local families, the small reservoirs created by these dams now exist as an ongoing cost-effective risk reduction measure with the potential to benefit many thousands of animals and people in future emergencies. To increase water efficiency and provide alternative income sources we also supported farmers in setting up aquaponic systems.

To complement these efforts and increase local independence, the University of Coahuila delivered community training in animal and environmental management during disasters.

Improving pastures and water management is key in building the resiliency of local cattle owners and ensuring they are better equipped to handle future droughts. Initial studies have indicated that the potential economic impact of World Animal Protection's mitigation program in Mexico is seven dollars of benefits for every dollar spent.



(b) Assessment of risk and vulnerability of agricultural systems to different climate change scenarios at regional, national and local levels, including but not limited to pests and diseases;

The world is facing major challenges developing sustainable livestock production systems that can deliver against growing demands for meat and milk production. These systems must also demonstrate environmental stewardship and ensure essential aspects of sustainability, including animal welfare and livelihoods, are properly respected.

Sustainable livestock production

In today's world, livestock production can comprise a vast diversity of farming systems. Where climate change is reducing available natural resources, sustainable systems will need to become much more relevant.

There is a huge risk in ignoring sustainable livestock production as the impact on climate change has potential to become worse, if the risks are not considered. All systems are vulnerable to very low levels of production, in a scenario where climate change reduces available resources. Within this view, the sustainability of livestock production is a vital component of this discussion.

While the scale of growth of demand for meat and dairy is often debated, it is clear that dramatic growth in consumption is inevitable and sustainability of the sector has major implications, not just for food and farming, but for management of some of the largest global problems. Livestock production has a major impact on climate change – 14.5% of all human created emissions, and more than the emissions from road vehicles, trains, ships and aircraft (Bailey et al., 2014; Gerber et al., 2013). Increasing efficiency may reduce relative emissions (i.e. emissions per kg of product) by 30%, but this needs to be achieved in the wider context of sustainability of livestock. A 30% reduction in greenhouse gases per kg of meat will not be enough to balance out the massive predicted rise in meat production (Bailey et al., 2014). Demand for livestock products is set to grow dramatically. If the current trend continues it will grow 70% between 2014 and 2050, mostly in poor and middle-income countries, especially where economies grow – such as in South Asia and Latin America. Livestock products are often seen as a significant contribution to nutrition, especially important for malnourished populations, while overconsumption and consequent obesity is proposed to be the world's largest health challenge (Bailey et al., 2014; Gerber et al., 2013). There is significant direct competition for land use for feed crops for humans and animals. A quarter of all crops grown are fed to animals, representing half of all protein and over one-third of all calories produced. However, animals can utilise the 80% of the feed crop matter that is not edible to humans and ruminants are particularly efficient at turning areas of grazing land not suitable for feed production into human edible product (see Global Agenda for Sustainable



Livestock, 2014). The current food system is also wasteful, both in terms of food loss and waste. These amount to 1.6 gigatonnes annually, of which 11% is livestock product (Bailey et al., 2014).

In this context, what needs to be taken into consideration when developing a more sustainable livestock sector? The livestock sector needs to meet its responsibilities in the context of sustainable production:

- Economic – promoting business profit and growth, producer livelihoods, local economies and economic development
- Environmental – mitigating climate change, promoting water and land management and preservation of biodiversity and resources (e.g. forests)
- Animal health and welfare – the wellbeing of livestock and the contribution of welfare to productivity
- Social impacts – promoting livelihoods, local food sufficiency, employment, and respect for societal values (e.g. animal welfare)
- Public health – avoiding zoonoses and antimicrobial resistance, promoting nutritional sufficiency

Putting livestock production into practice: a case study

In a recent case study involving silvopastoral systems in Colombia, a distinct connection between the health and welfare of livestock and the ability to adapt to changes in the environment, with a corresponding connection to the resistance to disease, was demonstrated. By using animal breeds well adapted to tropical environments, the intensive silvopastoral system showed the potential to achieve high levels of production from local feed sources in pasture-based environments. This system maintained good animal health, natural behaviour and ease of animal management.

The role of animal health is important as a key part of welfare on its own, but also for its economic consequences. Diseased animals very often have difficulty in coping with their environment, or fail to do so, hence their welfare is poorer than that of a healthy animal in otherwise comparable conditions and productivity is decreased



Intensive silvopastoral systems alter the livestock environment in ways that affect disease, and hence welfare. In tropical and sub-tropical environments, some important disease-causing agents are carried to livestock by ticks. Others are carried by insects, such as the head-fly *Hydrotaea*. In some areas, the most important causes of poor welfare are diseases caused by ticks or insects. Intensive silvopastoral systems have increased numbers of birds, lizards, large insects and other predators which consume ticks and harmful insects.

The more complex soil fauna in intensive silvopastoral systems may also encourage animals that reduce numbers of harmful insects. Livestock disease transmitted by ticks and insects has been demonstrated to be less in silvopastoral systems.

Livestock in silvopastoral systems also have better control of their immediate environment, more normal social interactions and hence have better welfare and may have more resistance to some diseases than animals in pasture-only systems. The data supporting this come largely from tropical and sub-tropical countries, but all of the benefits, except that of predation on ticks, would also be likely to be important in temperate countries.

World Animal Protection is engaging with international, solutions-driven processes to help with the question of sustainable livestock production. One such process is the Global Agenda for Sustainable Livestock which is a multi-stakeholder dialogue with industry and government, and with NGOs including World Animal Protection as part of its strategic 'guiding group', to advise and design solutions for future approaches to these global challenges. Global multi-stakeholder processes such as the Global Livestock Alliance and the Global Agenda for Sustainable Livestock hold the key to identifying and proliferating the solutions that will provide a future for sustainable livestock.