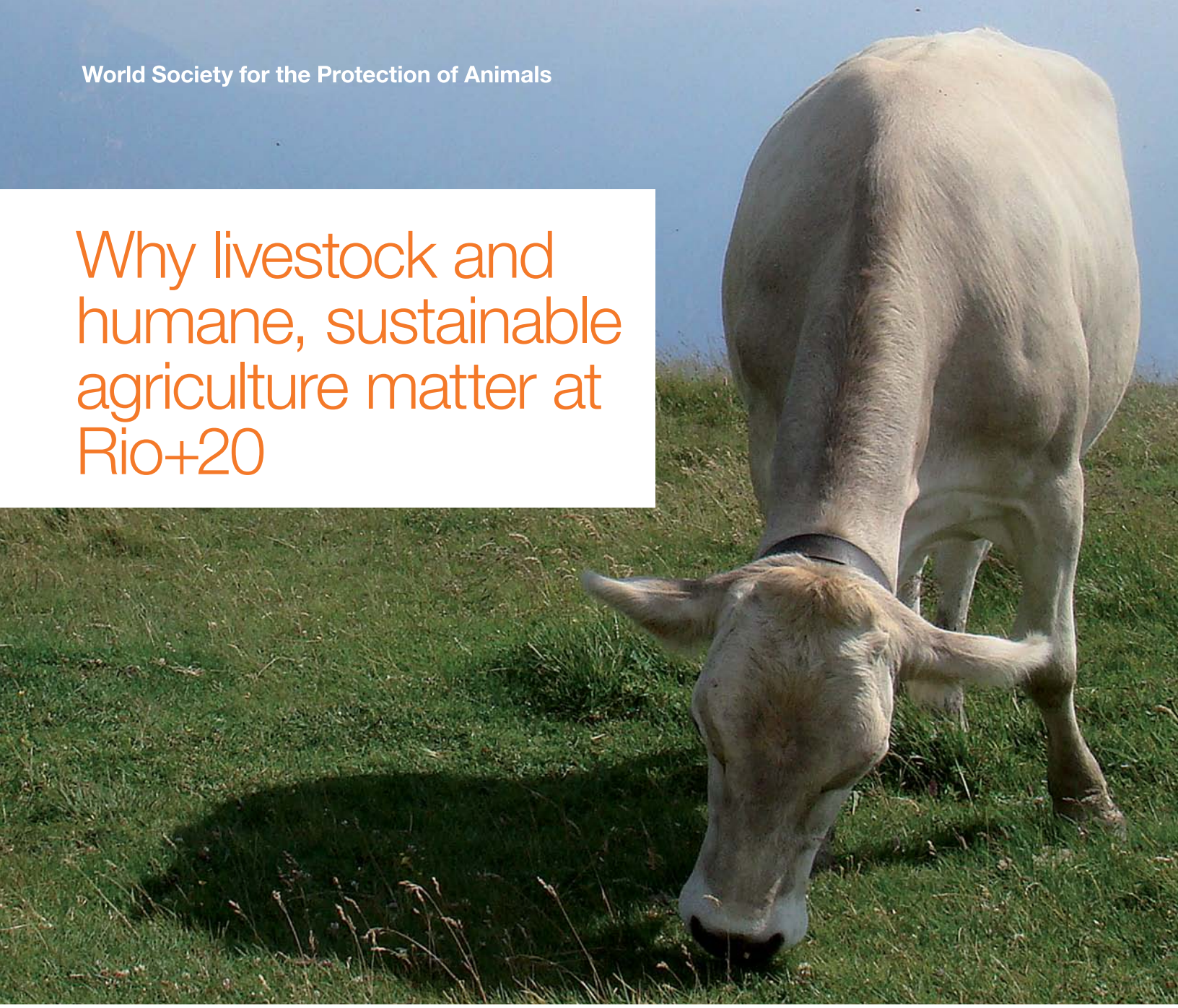
World Society for the Protection of Animals

Why livestock and humane, sustainable agriculture matter at Rio+20



The benefits of humane, sustainable livestock production are core to advancing the Rio+20 discussions on the future of food and farming. The rearing and use of animals has a major impact on the environment, society and the global economy; ensuring their welfare is an effective tool to help achieve a green economy in the context of poverty eradication and sustainable development.

Executive summary

The Earth Summit 2012 (Rio+20) aims to *"secure renewed political commitment for sustainable development, assessing the progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and addressing new and emerging challenges"*. The two themes of the conference are:

- **a green economy in the context of poverty eradication and sustainable development; and**
- **the institutional framework for sustainable development.**

The rearing and use of animals has a major impact on the global environment and on society, particularly in terms of rural livelihoods, public health, greenhouse gas emissions, land use and biodiversity. Animals also play a vital role in our lives, whether we rely on them for food, revenue, transport, companionship, or to help balance our ecosystems. Ensuring the welfare and responsible use of these animals is an effective tool to help achieve sustainable development, deliver poverty alleviation and enhance wellbeing. It is central to tackling specific environmental and public health issues including climate change, disaster management, deforestation, pollution, water, food security and gender equality.

In summary, the discussions to be held during the Rio+20 process on the future of food and farming – as part of considering a green economy and poverty eradication – must recognize the benefits of humane livestock systems[1] for achieving sustainable development in agriculture and food production. This means putting animal welfare at the heart of the Commission on Sustainable Development's (CSD) policy recommendations and work programmes before, during and following the Rio+20 events, with the aim of achieving humane systems globally while ensuring we can feed the growing population sustainably.

Five recommendations for Rio+20

1. Develop policies for sustainable food supplies

Intergovernmental organizations, national governments and food supply industries urgently need to develop policies for sustainable and humane food supply chains. For livestock production to have a reduced impact on climate change and to be sustainable, it must be biologically based, socially just and humane. To achieve this, animal welfare needs to be included in all future discussions on agriculture, land use and climate change.

2. Manage unsustainable demand for farm animal products and support producers in transition

National governments and intergovernmental organizations need to develop mechanisms to deal with the current acceleration in meat and dairy production, notably in grain feeding and intensive production methods that are not ecologically sustainable.

3. Research and development to support humane and sustainable agriculture

Research is urgently needed to support farmers in developing livestock systems, breeds, feeding and management to ensure humane and sustainable animal production. Research is also required to determine effective policies for addressing meat consumption.

4. Phase out subsidies and investment for unsustainable, inhumane systems

Financial support for industrial livestock production methods, such as unseen subsidies for externalized costs, should be ended. Economic mechanisms to support humane, sustainable livestock production (for example grants and research funding) should be prioritized.

5. Ensure animals are integrated in disaster management

Animal welfare is integral to protecting livelihoods and food security from disasters. Animal protection should be implemented into national plans and policies at the government level, along with the integration of animals into the processes, assessments and projects of humanitarian and development agencies.

Why animals matter at Rio+20

- **The economy, jobs and livelihoods:**
  The livestock sector employs 1.3 billion people.[2] About a billion of the world's poorest people depend on animals for food, income, transport, social status or cultural identification, as well as companionship and financial security.[3]

- **Feeding the world:**
  Global demand for meat, milk and eggs is growing rapidly, driven by rising incomes, growing populations and urbanization; it is further projected to double from 2000 to 2050. Livestock has a huge impact on the environment and land and energy use globally[4] – the predicted trajectory of intensification and industrialization of animal production presents a major challenge for sustainability and is not the solution to feeding the world**.**

- **Intensification and industrialization of livestock systems:**
  The vast majority of the recent growth in the production of meat, milk and eggs comes from intensive industrial systems. Globally, intensification involves a switch from low-input-low-output animal keeping (or mixed farming) to high-input-high-output animal production. Intensive farming is characterized by measures to increase yield per animal, such as indoor or feedlot housing, concentrate feeding (cereals and oilseeds such as soya), concentration/crowding (less space allowed per animal), selective breeding and/or a switch to commercial high input breeds.

  Industrial farming systems might at first glance seem efficient but they externalize many of their costs. In developed countries, subsidisation of feed crops and energy artificially reduces the costs of inputs. In developing countries where a weak regulatory framework exists, many of the health and environmental impacts of concentration and industrialization of livestock systems are externalized. The welfare costs of such systems are extremely high for billions of animals: scientific research shows high levels of ill health (such as lameness and respiratory disorders) and the prevention of basic animal behaviours such as exercise, the ability to forage for food or even to stretch their wings (in the case of battery caged hens), or turn around (in the case of breeding pigs).

- **Land use:**
  Livestock production represents the largest human use of land (70 per cent); this use is growing in size whilst forests are shrinking. A third of arable land is used to produce feed for animals that are increasingly reared in intensive systems. The dual demands for feed for heavily industrialized intensive animal production systems and for increasing amounts of meat are driving the requirement for greater land use. Lower input, extensive systems have the potential to rebalance land use.

- **Environment and climate:**
  Livestock production is responsible for seven billion tonnes of greenhouse gas emissions globally each year (9 per cent of all carbon dioxide, 37 per cent of all methane and 64 per cent of all nitrous oxide);[5] it is one of the largest polluting sectors – including phosphorus, nitrogen and pesticide contamination of water.

- **Biodiversity:**
  Livestock production has both positive and negative impacts on biodiversity – it may maintain biodiverse rich grasslands but also causes deforestation for pasture and the growing of feeds. Of the 35 global 'hotspots' where biodiversity is most threatened, livestock production is a contributing factor in 23.[6]

- **Water:**
  Seven per cent of global water is used to produce livestock feeds alone – it takes 990 litres of water to produce one litre of milk.[7] The growth of industrial livestock systems is increasing the need for water to be poured into feed crop production.[8]

- **Public health:**
  Around 75 per cent of new diseases affecting humans over the past 10 years have been caused by pathogens originating from an animal, or animal products.[9] This is strongly affected by how farmed animals are treated – the use of industrialized systems can increase risks.[10] Excessive consumption of animal products, particularly meat, is also a major contributor to the global rise in diet-related diseases such as obesity.

- **Disasters:**
  It is estimated that millions of animals are affected by disasters every year. The impacts on their owners and the economy can be huge, as livestock forms the backbone of livelihoods in many developing countries. The loss of, or decrease in productivity of, these animals can have considerable implications for both short and long-term food security along with a harsh financial impact which can lead to ruinous debt, reduced access to education, migration to urban centres and significant health impacts. Furthermore, with rapid population growth and climate-related disasters expected to increase in number and severity, those people and animals being pushed into at-risk areas will become more vulnerable.

The benefits of ensuring animal welfare

Humane animal production systems are central to sustainability. Many of the world's people – particularly in developing countries – depend on animals for food, income and social status.

- Moderate-scale, humane farms with local supply chains and markets contribute to national and regional self-sufficiency and food security and create and retain value and jobs locally.
- Humane animal production systems often require fewer inputs of grain feed, fuel and water. They also keep animals at stocking densities that reduce the risk of major pollution. Animals bred to live outdoors are also often more robust and resilient to environmental challenges than breeds chosen primarily for high yield.
- The environmental, biodiversity and resource use problems linked to livestock production are growing, particularly where the concentration and intensification of livestock operations is prevalent. It is therefore urgent to answer the challenge posed by further expansion of production by increasing the proportion of the world's food that is derived from humane, sustainable farming.
- Well-managed mixed farming systems combining crops and livestock production go a long way toward reducing the environmental damage caused by livestock, by recycling nutrients and enhancing soil fertility.
- Good animal health and welfare can reduce costs and raise profits for producers. For example, in dairy production, investing in increased cow longevity and fertility will help to achieve better returns in the form of milk and calves during the animal's lifetime. Due care for the welfare of animals during handling and transport can limit bruising and levels of stress, preventing financial losses from poor meat quality and unnecessary damage to carcasses at the slaughterhouse.
- The proper, humane management of animals is critical for the management of disasters and disease outbreaks, in order to protect human livelihoods as well as lives.
- The nutrition and food security of poor or malnourished people should be safeguarded and improved and this can be achieved through humane, sustainable farming methods.
- The perceived quality of high welfare products also often attracts a premium from consumers. By eating less but better, reductions in the consumption of animal products by those better off and better fed in developed countries may also improve human health.

Livestock and the green economy in the context of poverty eradication and sustainable development

The sustainable production and consumption of livestock can play a significant role in the development of a green economy globally through 'greening' agriculture and food systems. The greening of agriculture must address the key aspects of sustainability: ecologically sound, economically viable and ethically acceptable.

The United Nations Environment Programme's (UNEP) recently released *Green Economy Report* recognizes the role of livestock in greening agriculture and mixed farming systems using *'livestock and crop integration'*. Key issues emerging from the *Green Economy Report*[11] and others[12] include:

- There are serious challenges facing the current models of both conventional/industrial agriculture in richer countries and small scale/traditional subsistence farming in the global south. Both need to change.
- The modelling undertaken suggests that green agriculture will reduce poverty and enhance sustainable development. However it will take global and national policy change, major capacity building, financing and efforts to address dietary change to achieve this across the world.

Globally, the rapidly growing markets for poultry, pork and dairy products are mainly supplied by large-scale intensive livestock operations that are based on internationally sourced animal feed. Traditional mixed family farms are often consigned to the informal market and gradually squeezed out as formal markets gain hold. This means far fewer people will be able to earn their livelihoods through livestock farming, compared to the extensive sector. Although in some areas small producers could contribute to this developing market, the initial evidence suggests that as the industrial livestock sector develops, small-scale producers exit the sector.[13] Large transaction costs and an inability to compete with large-scale production typically block market access. The introduction of intensive farms in developed countries is predicted to drive out small-scale farmers. In just one example in the UK, a proposed mega dairy could have forced 50 average-sized family dairy farms out of business.[14]

Many studies confirm that local, family-based farming is an effective way of achieving the desired objectives of food security, social stability and environmental sustainability.[15] In livestock farming, a positive approach to animal welfare and animal care is an important means to those ends.

Positive economic signals from higher welfare livestock systems

In poor rural areas of India, a backyard system of poultry rearing has contributed to up to 500 per cent rate of return on investment and has reached more than 800,000 poor rural families. From experiencing severe food insecurity and low returns from indigenous birds, the poorest households have gained valuable profit margins, better nutrition and their poultry operations have become more market-oriented. The system, which uses a new hardy dual-purpose bird which lays well and can be kept in backyard conditions, was developed by Keggfarms – a business which became a social entrepreneur to tackle rural poverty. They also developed a robust supply chain which crucially involved women who are expert at rearing poultry at the household level. Replicating this successful model could be hugely beneficial while maintaining and enhancing animal welfare and environmental sustainability in the egg and chicken meat supply system.

In the USA, a study carried out by the Federal Emergency Management Agency (FEMA) in 1998 showed how large-scale disasters have both local and state-wide effects The case study showed that the impact was much greater than the losses to farmers and producers alone – based on the distribution of the expenditure on food, it was estimated that for every dollar lost in disasters by a farmer, the allied industries lose (on average) an additional four dollars. During the disaster some of the producers projected a long-term drop in production of 30 per cent or more.

In Costa Rica, a 2005 study estimated the economic loss caused by poor animal welfare was US$3.70 per cow, in line with results found in other countries. Costa Rica's national livestock association – Corporacion de Fomento Ganadero (CORFOGA) – then recognised that better animal welfare increases yield and expands market opportunities, resulting in economic benefits for the whole chain. CORFOGA went on to incorporate animal welfare throughout their meat production and achieved increased food safety, meat quality, and better animal welfare 'from farm to fork'.

Globally, sales of organic food and drink have recently been increasing by over US$5 billion a year, reaching US$46 billion in 2007.[16]

Livestock and the blue economy

Livestock production contributes to the overexploitation of marine resources, because fishmeal and fish oil are often major components in feed. In 2004, 24 per cent of world fishery production was used for livestock feed.[17] In addition, fertilizer used for feed and livestock waste is a significant source of freshwater and ocean contamination.

Animal welfare: Integral to addressing new and emerging challenges

Animal welfare is a global cross-cutting solution to many new and emerging challenges. These include:

Climate change

In relation to livestock, the main sources of greenhouse gases are enteric fermentation from ruminants and changes in land use to expand arable land for feed production or grazing land. Even in an optimistic scenario, where reductions in emissions are achieved through a combination of technology and management measures, these savings will be cancelled out by the projected growth in livestock numbers. It is therefore necessary to consider cutting the consumption of livestock products as a mitigation measure and explore policy options to achieve this.

Climate related disasters

As the frequency and severity of climate related disasters increase, incorporating consideration of animals and their welfare into each stage of the disaster cycle is proving to be critical for both animals and people. Reinforcing communities' preparedness before a disaster and rebuilding after the impact is vital and requires ongoing aid, assistance and education.

Working with communities and their animals at each of the different stages of the disaster cycle can positively impact livelihoods, reduce poverty levels, promote food security and address climate change and other key issues such as the key role of women in livestock management.

The role of animals in disaster management

The effect of the cyclone that hit Myanmar in 2008 provides an example of how the intricate relationship between communities and their animals can be vital to poverty reduction. The considerable livestock deaths devastated the communities who relied on their buffalo to till their land to produce crops. The impact of livestock losses can result in elevated levels of debt and poverty among some of the most rural and vulnerable communities affected by disasters.

Five point plan:
The changes that Rio+20 can achieve

The benefits of humane livestock production are core to the Rio+20 debate on the future of food and farming as part of a green economy and poverty eradication. Animal welfare is also central to tackling specific emerging issues including climate change, disaster management, deforestation, pollution, public health, poverty, water scarcity, food security and gender equality. The final Rio+20 outcomes need to acknowledge the role of animals and their welfare within greener agriculture systems and wider society, and make ongoing political and financial commitments to guarantee that we can feed the world's growing population sustainably and humanely.

The World Society for the Protection of Animals (WSPA) will contribute to the debates held during the Rio+20 process and makes five core recommendations.

Recommendation 1:
Develop policies for sustainable food supplies

Intergovernmental organizations, national governments and food supply industries urgently need to develop policies for sustainable and humane food supply chains. For livestock production to have a reduced impact on climate change and to be sustainable, it must be biologically based, socially just and humane. Animal welfare needs to be included in all future discussions on agriculture, land use and climate change. Any long-term international agreement needs to address mitigation and adaptation in this sector and it is imperative that the United Nations (UN) finds equitable solutions to agricultural emissions that also account for food security, sustainability and animal welfare. Developed nations should provide financial and technical support to developing nations' efforts to stop deforestation and forest degradation related to feed and pasture use and promote forest management policies that benefit the poor.

Recommendation 2:
Manage unsustainable demand for farm animal products and support producers in transition

National governments and intergovernmental organizations need to develop mechanisms to deal with the current acceleration in meat and dairy production, notably in grain feeding and intensive production methods that are not ecologically sustainable.

Through future international and national agreements, as well as other means, governments and civil society groups need to raise awareness about the health, climate and environmental benefits of reducing meat, egg and milk consumption, particularly in developed nations and amongst higher income urban consumers in mid-income nations. Leading public health and nutrition experts have confirmed that such a shift can be achieved without compromising nutrition, and that a reduction in the consumption of animal products is in fact likely lead to health and other environmental benefits.

Recommendation 3:

Research and development to support humane and sustainable agriculture

Research is urgently needed to support farmers in developing livestock systems, breeds, feeding and management to ensure humane and sustainable animal production. Research is also required to determine effective policies for addressing meat consumption by people who consume more than others, while not causing hardship to poor or malnourished people in either developed or developing countries. As this addresses a 'public good' it may require support from public and philanthropic funding bodies.

Recommendation 4:

Phase out subsidies and investment for unsustainable, inhumane systems

Financial support for industrial livestock production methods, such as unseen subsidies for externalised costs, should be ended. Economic mechanisms to support humane sustainable livestock production (for example grants and research funding) should be prioritized. Governments should support these changes with high-profile, well-resourced public awareness campaigns.

Recommendation 5:

Ensure animals are integrated in disaster management

Animal welfare is integral to protecting livelihoods and food security from disasters. Climate change is likely to increase the frequency and severity of disasters globally which could have a particularly detrimental effect on developing countries. Indeed, the loss of animals in a disaster can be seen as a significant barrier to the achievement of millennium development goals and the economic growth of a country. The UN, governments and global agencies must promote a universal approach to emergency preparedness and response in order to protect animals from disasters. Through the implementation of animal protection into national plans and policies at governmental level, along with the integration of animals into the processes, assessments and projects of humanitarian and development agencies, we can mitigate the effects of disasters by preparing communities in advance, providing rapid responses and long-term rehabilitation projects.

Notes

1. The welfare of farm animals relates to their physical and mental wellbeing. Most industrial farming methods keep animals in ways that prevent good welfare by restricting basic behaviours such as exercise, or the ability to stretch wings, turn around or nurse their offspring. A significant proportion of intensively reared production animals experience inherent health problems such as lameness or respiratory disorders due to breeding for fast growth.
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