Online consultation on Climate Change, Food Security and Nutrition

INTRODUCTION

Compassion in World Farming was founded in 1967, by a farmer, who became concerned at the growing disconnect between agriculture and the wellbeing of animals and the environment. This disconnect in farming has widened as farming has intensified over the decades, and is now combined with climate change and increasing consumption levels, presenting unprecedented and severe impacts on people, the planet and farm animals. Compassion in World Farming welcomes the opportunity to input into this important debate and works towards a world where farm animals are treated humanely.

OPTIMAL FARMING

It is key that policy-makers seek farming solutions which optimize outcomes for a wide range of agendas, including food security and nutrition – notably for the poor and children; food sovereignty; human health and disease; cultural identities; livelihoods - especially women farmers; biodiversity – especially pollinators, water, climate, soil, pollution, and farm animal welfare. Planning for a select few agendas alone can lead to sub-optimal solutions and have unintended consequences on other agendas. Taking a holistic approach, balancing some trade-offs may be inevitable, but significant win-wins are also possible with a fully multi-disciplinary and stakeholder-lead planning process. As an example, achieving climate mitigation and adaptation, along with stabilizing water and soils, enhancing biodiversity and animal welfare, and creating sustainable livelihoods may be achieved through combining extensive livestock farming with agro-forestry. Stakeholder dialogue lead agro-ecology with human and animal welfare considerations built within may be a useful model to promote small-scale all-agenda-smart farming that can create optimal farming solutions. These farming systems can also be more robust and resilient to climate impacts. They also need also to be supported by economic and social security mechanisms; political and governance policies and practices; and infrastructure and energy systems which are fit for purpose as the tensions of climate change intensify and affect each of these background conditions.

FARM ANIMAL WELFARE

The industrialisation of farming in the past has resulted in intensive farming, where production is prioritized above all else; animals are treated as commodities rather than as sentient beings. They are often denied their basic physical and behavioural needs, causing great suffering. As examples, a sow stall cramps a sow as she gives birth into a cage so small, she can not turn around to tend her young properly. Typically, male chicks and dairy calves are killed at birth as they are of no further use to industrial farms. It is

common for farm animals to have nerve rich and sensitive portions of their bodies removed with no pain relief. Depending on the animal species, this can include portions of an animal's beak, teeth, tail or testes. Industrially farmed animals are often bred and fed in ways that push them beyond their physiological capacity, leading to pain, diseases and premature death.

GREENHOUSE GAS LEVELS

It is significant that the consultation text refers to the need to reduce greenhouse gas emissions *and* remove greenhouse gases from the atmosphere. Both of these objectives are vital to reducing climate change and achieving food security. IPCC scenarios to reduce greenhouse gas levels sufficiently to have a c,50% chance of restricting global warming to 2°C rely on net negative emissions, i.e. the removal of greenhouse gases from the atmosphere. The maintenance of grassland and soil carbon is key to this, and ways to enhance soil and forest carbon storage, such as bio-char and agro-forestry will be key in this regard, as well as offering co-benefits. Deforestation to grow soy or other crops for pigs, chickens or cattle, would detract from climate mitigation, adaptation, food security and nutrition, and hold dis-benefits.

INTENSIFICATION OF LIVESTOCK AGRICULTURE AND OF DIETS CAN REDUCE FOOD SECURITY AND NUTRITION

The current food system provides enough food for 10 billion people, but the food system is failing due to losses, waste, poverty, regulations, storage, distribution, and disparity in production levels. Intensification of animal farming and overconsumption have added to food-related public health problems rather than solving them. It has fuelled greater meat consumption, which is linked to cancers and heart disease. It also produces food of lower nutritional value[i] and increases the risks to humans of zoonotic diseases. Grain-based livestock farming also reduces the food resource base available for people.

Research shows that intensifying livestock diets towards grain-based farming would be detrimental to food security, most particularly in areas where food security is already at risk; and that extensive livestock farming provides more scope for delivering food security[ii]. Increasing consumption of livestock products at a global level reduces food security. Interventions that reduce animal and crop losses, waste and overconsumption will improve the environmental, economic, social and ethical sustainability of food systems. The research adds that improving crop yields and reducing poverty are also key to achieving food security, and particularly in the face of climate change.

LARGE-SCALE FARMING: LARGE-SCALE IMPACTS

Recent farming history in many industrialised nations demonstrates that intensive farming leads to poor outcomes across many agendas: especially for livelihoods; food sovereignty; pollution and biodiversity; water use impacts; human health; and animal

welfare. Notably, large-scale intensive livestock farming has driven poor health and nutrition outcomes for many nations, which now suffer obesity and malnutrition simultaneously. Large-scale meat production also drives climate change directly and indirectly. Intensive animal agriculture, removing animals from the land and feeding them grain-based diets has also reduced the amount of calories available globally for human food security and nutrition. Top down planned, overseas-funded, large-scale mono-culture, grain-dependent, resource hungry farms which disconnect people, land, crops and animals do not seem likely to be robust in the face of climate change and grain price spikes.

EXTENSIVELY FARMED LIVESTOCK CONTRUBUTE TO COMMUNITIES

Livestock sustains the livelihoods of people all around the world, including the most vulnerable and food insecure among us. Livestock is key in providing valuable nutrients but also many other services, ranging from draught power to work the land and transport goods, to roles in maintaining community structure, acting as indicators of social status and as savings mechanisms that increase the resilience of people's livelihoods to extreme or unpredictable events. In some cases, these "non-market" values can be higher than the market ones. As these services are more pronounced in the livelihood strategies of poor and women livestock keepers, much work on pro-poor livestock interventions has found that enhancing these services provides a more effective tool for food security than improvements in productivity or markets.

CURRENT MEASURING OF SUSTAINABILITY IN FARMING IS FLAWED

Metrics matter

Compassion in World Farming commissioned two independent research reports showing that current metrics for measuring agricultural sustainability are limited and can lead to sub- optimal decision-making. Water footprints measure the amount of water used, and do not attempt to assess or indicate the size of importance of the impact of this water use on the local environment or water management[iii]. A high water footprint for beef, for example, is not a measure of impact on the environment or water availability for people. The impacts could be relatively small, given that cattle use mainly rainwater, often in areas of high rainfall. Yield is another input- output based metric which measures units of product per unit of land. It is no measure of the quality of land or the impact on land availability for other purposes. Cattle and sheep use large amounts of land to produce meat and other products, but this is often marginal land which is of no other potential nutritional value to people. In contrast, industrially farmed chickens are entirely dependent on high-grade grain from prime arable land which could otherwise be used to feed people directly far more efficiently. New metrics are needed.

To ensure that the ethical and social aspects of sustainability are delivered, metrics to measure animal welfare should be included in sustainability assessments. These can be

based on the widely recognised Five Freedoms, which indicate both animal health and welfare.

Methodologies matter

Carbon Foot-printing and Life Cycle Analysis are often used to assess the environmental performance of production systems. Research identifies a number of significant limitations when these are applied to livestock systems[iv]. These include the reliance upon modeling and averaged data and lack of clarity about the impacts of land use change. Major issues arise from different approaches to defining the boundaries of farm systems, especially for beef and dairy. These factors can produce conflicting results, and the ranges of uncertainties can be so large as to make comparisons between intensive and extensive systems meaningless. New methodologies are needed to assess the impacts of farming on all sustainability criteria, including animal welfare.

Some mitigation measures to reduce greenhouse gas emissions from livestock farming seem promising, such as carbon sink management in soils and forests. Overall though, the scale of livestock farming globally may be as important, or more important to greenhouse gas emissions and atmospheric levels than whether livestock farming is intensive or extensive. The multiple benefits of small-scale livestock farming in poor communities, which cannot be delivered through intensive farming, indicate that small-scale extensive integrated farming offers greater benefit to people, planet and animals.

RE-BALANCING CONSUMPTION AND PRODUCTION

Increasing livestock production would not create food security, and may put it at risk. It would also increase global greenhouse gas emissions and levels. Extensification of livestock farming and avoiding over-consumption of livestock products in some households will be needed, to support food security and nutrition for vulnerable households, and for climate change mitigation and adaptation.

[i]Pickett, H. 2012. Nutritional Benefits of Higher Welfare Animal Products. Pp1-43.
[ii]Karl-Heinz Erb, Andreas Mayer, Thomas Kastner, Kristine-Elena Sallet, Helmut Haberl, 2012: The Impact of Industrial Grain Fed Livestock Production on Food Security: an extended literature review. Pp 1-82.
[iii]Mekonnen, M. and A. Hoekstra, 2011: A Global Assessment of the Water Footprint of Farm Animal Products. Ecosystems (2012) 15: 401–415.
[iv]Cederberg, C., Berglund, M., Gustavsson, J. And M Wallman, 2012: Environmental impacts from livestock production with different animal welfare potentials: a literature review. Pp1-89.