**Comments from International Livestock Research Institute on**

**V0 Draft Report on ‘Sustainable Agricultural Development for Food Security and Nutrition, Including the Role of Livestock’**

The International Livestock Research Institute (ILRI) welcomes the opportunity to comment on the draft report. We very much welcome the focus on livestock which often gets little balanced attention in debates about sustainability of agriculture.

Overall we believe the team has done a good job in assembling this overview of the key drivers and changes in the agriculture sector with a specific focus on the livestock sub-sector and the critical importance of these for sustainable food security in the future. The recognition of the complexity of the livestock sub-sector, and thus diversity of challenges and solutions is also welcome. However this could also be a shortcoming if attention is not paid to clearly articulating the constructs and keeping those threads connected throughout the document – there are rather too many different frameworks etc.

In relation to the invitation to respond to specific questions posed we have the following comments:

* There is a mis-match between the title of the report and the balance of the content in different chapters between agriculture generally and livestock. The title suggests a more comprehensive treatment of agriculture in general than is the case. While some of the report deals with agriculture the majority of the report focusses on livestock. The opening sentence on Chapter 3 is very explicit that it focusses on livestock. So much of the background information, trends, drivers and analysis is about the livestock sub-sector, but the responses to the challenges in Chapter 4 and most of Chapter 5 are mainly about the agriculture sector generally with little specific reference to livestock. We believe that that it would be better to be clearer about the focus on livestock in the title of the report, e.g. ‘Sustainable Agricultural Development for Food Security and Nutrition; he Role of Livestock’. Then the overall agriculture sector can be included and discussed where it either impinges on the livestock sector or there are lessons to be learned.
* The context, trends etc. are well articulated.
* The classification of livestock systems is fairly ‘traditional’ and static and does not take account of the dynamics now and into the future. While we recognise that it is necessary to keep the classification simple, it might be worth thinking about the trajectories that livestock systems are on. The ILRI Strategy 2013-2122 identifies three broad trajectories (Annex 1) ([https://cgspace.cgiar.org/bitstream/handle/10568/27796/ilristrategy2013\_print.pdf?sequence=11 HYPERLINK "https://cgspace.cgiar.org/bitstream/handle/10568/27796/ilristrategy2013\_print.pdf?sequence=11&isAllowed=y"& HYPERLINK "https://cgspace.cgiar.org/bitstream/handle/10568/27796/ilristrategy2013\_print.pdf?sequence=11&isAllowed=y"isAllowed=y](https://cgspace.cgiar.org/bitstream/handle/10568/27796/ilristrategy2013_print.pdf?sequence=11&isAllowed=y))
* A reference with scenarios for Africa is the African Livestock Futures (Herero et al, 2014): [https://cgspace.cgiar.org/bitstream/handle/10568/41908/Livestock\_Report\_en.pdf?sequence=3 HYPERLINK "https://cgspace.cgiar.org/bitstream/handle/10568/41908/Livestock\_Report\_en.pdf?sequence=3&isAllowed=y"& HYPERLINK "https://cgspace.cgiar.org/bitstream/handle/10568/41908/Livestock\_Report\_en.pdf?sequence=3&isAllowed=y"isAllowed=y](https://cgspace.cgiar.org/bitstream/handle/10568/41908/Livestock_Report_en.pdf?sequence=3&isAllowed=y)

The two volumes Livestock in a changing Landscape: (<http://www.fao.org/agriculture/lead/lead-resources/en/?no_cache=1>) look at differ trajectories and may give some additional information.

A recent EU report may also be useful

(<http://europa.eu/expo2015/sites/default/files/files/Recommendation%20Document_pre%20conference%20version-NS%282%29.pdf>)

* Some consideration of the new opportunities (and challenges) offered by new biosciences would be helpful. For example new genomic and breeding technologies could transform not only productivity but also help livestock systems to mitigate and adapt to climate change, including disease resistance. New second generation biofuel technology could revolutionise monogastric feeding and reduce competition between livestock feed and human food.
* Yes a decision-making framework is useful
* The case studies are dominated by developed and emerging economy countries. Other examples could be:

Operation Flood (small-holder dairy development in India). Much has been written about it.

Backyard poultry development in Bangladesh by BRAC

Zambeef in Zimbabwe is a private sector initiative. (<http://www.economist.com/news/business/21579012-fast-growing-food-firm-looking-beyond-its-home-country-customers-rare-meat-success>)

* Lack of data is a real challenge. On gender, the book ‘Women, livestock ownership and markets: Bridging the gender gap in eastern and southern Africa’ by J. Njuki, J. and P.C. Sanginga gives a good overview. (<https://cgspace.cgiar.org/handle/10568/34088>)

11. There is a dearth of information on livestock data. A good overview with recommendations for the way forward can be found in Investing in the Livestock Sector: Why Good Numbers Matter. (<http://www.fao.org/3/a-i3706e.pdf>)

12. Other comments:

The conceptual framework (Fig 1) does not convey a very clear message.

The increasingly important role of the private sector in driving development warrants more attention.

Many small holder systems can be considered intensive too, e.g. backyard pig production in SE Asia which are posing some of the same challenges as in the industrial sector (page 43/line 25).

This also presents an opportunity to influence positive transition (page 43/line 39

Welfare can also be comprised in extensive systems (page 52/line 21). It could be compromised by poor nutrition, high disease burden extreme climate (hot or cold) and in extreme cases by high mortality, for example due to drought.

Land degradation has many causes beyond livestock (page 52. See for example presentation at a recent World Food Prize event 2015 (<https://www.flickr.com/photos/ilri/15641105035/in/photostream/>).

Proper grazing management – ie including livestock is necessary to get the best C sequestration (page 52/line 48).

The social category of the challenge matrix (page 59) is a very mixed bag. Is there a more logical way of organizing this?

**Annex 1**

Livestock subsector trajectories

This strategy expands the previous focus to include livestock-based options that help people to meet their food and nutritional as well as economic needs while mitigating their livestock-associated environmental and health threats. It recognizes three scenarios of livestock systems change, but focuses ILRI’s efforts on the first two, in particular the first. These were chosen based on the likely transformations of major livestock systems of the poor in this decade and livestock-sector growth scenarios derived largely from a High-Level Consultation for a Global Livestock Agenda to 2020, co-convened by ILRI and the World Bank in early 2012.

**Strong growth systems**: There is urgent need to develop sustainable food systems that deliver key animal source nutrients to the poor while facilitating a structural transition in the livestock sector of developing countries. This entails a transition from most smallholders keeping livestock in low-productive systems to eventually fewer households raising more productive animals in more efficient, intensive and market-linked systems. These mostly mixed smallholder systems now provide significant animal and crop products in the developing world and are likely to grow the most in aggregate. In many parts of Africa and Asia, the transition is happening slowly, with smallholder

marketing systems still largely informal, although there are pockets of more rapid change in higher potential systems with good market access. ILRI and its partners are working to make this transition as broad-based as possible, helping those who can to continue on their path to sustainable, highly productive and resource-efficient smallholder systems, or to accumulate sufficient capital to exit from agriculture without falling back into poverty. This research aims to develop and upscale practices, strategies and policies that support inclusive growth and maximize the wellbeing of people and the

environment, now and in the future.

**Fragile growth systems**: It will not be possible to create the same level of opportunities for rapid, market focused growth for all poor livestock keepers, especially in areas where growth in productivity is severely limited by remoteness, harsh climates or environments, or by poor institutions, infrastructure and market access. In these livestock systems, what is urgently needed are nuanced approaches that, where appropriate, help achieve incremental growth in livestock production and market engagement that matches well with the natural resource base. In other situations, rather than productivity, the emphasis will need to be on enhancing the important role livestock play in increasing the resilience of people, communities and environments to variability in weather, markets or resource

demands. Livestock research will help people make better use of their livestock-based livelihoods to feed their families and communities, protect their assets and conserve their natural resources.

**High growth with externalities**: In parts of some developing countries, particularly in Asia, where dynamic markets and increasingly skilled human resources are already driving strong growth in livestock production, fast changing small-scale livestock systems may be damaging the environment, exposing their communities to increased public health risks, and furthermore excluding participation of those livestock keepers and sellers living in deepest poverty. In these circumstances, what is urgently needed is an understanding and anticipation of all possible negative impacts of small-scale livestock intensification. Research can help promote or generate the incentives, technologies, strategies and product and organizational innovations that will mitigate health and environment risks while supporting

the poorest people to comply with increasingly stringent livestock market standards.