Session III – Role of livestock in livelihoods/Just transition

The final session of the day, chaired by Kirsty Blair, focused on the role of livestock in supporting livelihoods and contributing to a just transition.

The first speaker was **Professor Isabelle Baltenweck**, interim Programme Leader for People, Policies and Institutions at the International Livestock Research Institute, and Visiting Professor in the Division of Global Agriculture and Food Systems. Isabelle has over twenty years of experience in agricultural systems across Africa, South and Southeast Asia, with a focus on livestock value chains. In her presentation, Isabelle highlighted the economic and social importance of livestock in low- and middle-income countries. She noted their significant contribution to national GDP, rural incomes, especially in pastoral systems, and their role in resilience, nutrition and women's economic empowerment. She discussed the benefits of livestock asset transfer programmes and how challenging gender norms can support more inclusive systems. Isabelle concluded that achieving sustainable and equitable livestock futures will require multiple pathways, recognising trade-offs and synergies across sustainability goals and ensuring inclusive, diverse participation.

The second speaker was **Dr Mariana Hase Ueta**, a Postdoctoral Researcher at Wageningen University and Research, whose work focuses on food sociology, sustainable diets and emerging technologies. In her presentation, Mariana discussed the potential of precision fermentation as a disruptive food technology and the integration of Dutch dairy farmers' perspectives in just transitions surrounding the technology. Drawing on interviews and intergenerational group discussions she explored how farmers remember past innovations, their expectations or fears for the present, and how they imagine their future role in dairy production. Mariana emphasised the importance of including different stakeholders to ensure justice and autonomy in the transition. She argued that while the technology is still developing, there's time for farmers to be involved, and that by bringing together diverse perspectives, a more inclusive and sustainable technology development can be achieved.

The final speaker was **Professor Mizeck Chagunda**, Director of the Centre for Tropical Livestock Genetics and Health and Chair of Tropical Livestock Genetics at the Royal (Dick) School of Veterinary Studies. An expert in animal breeding and genetics, Mizeck's research focuses on disease resistance, resilience, and methane emissions in livestock. In his presentation, he discussed how emerging technologies can enhance livestock's role in supporting livelihoods while addressing the reciprocal relationship between livestock and climate change. He emphasised the need for technologies to monitor, measure, predict, and improve livestock systems, highlighting physical technologies for tracking movement, temperature, feeding habits, and health. Mizeck also explored the potential of data-driven approaches, methane detection, and genetic innovations to boost resilience and productivity. He concluded that a combination of these technologies will likely play a crucial role in improving livestock systems and supporting sustainable futures.

Following the plenary talks, table discussions and questions explored key themes around livestock, livelihoods and just transitions, summarised below:

Technology and Farmers
Some expressed concerns about the role of technology in food and livestock systems, particularly regarding farmers' autonomy. Some questioned whether farmers would have a genuine say in co-designing new technologies, with concerns about large industries benefiting while farmers lose out. Issues of biodiversity loss and potential social pushback against technological advancements were also raised.

Power Imbalances and Social Considerations
The adoption of new technologies and large-scale data collection raised concerns about power imbalances and whether farmers would directly benefit. Some questioned the feasibility of farmer-led implementation, while others stressed the need to ensure these innovations do not widen existing inequalities. Discussions emphasised the importance of developing technologies in ways that are inclusive, equitable, and socially sustainable.

Livestock, Gender and Equity
Some discussions highlighted the intersection of livestock ownership, gender, and social equity, raising questions about fairness in the distribution of animals and technologies. There were concerns about how technology/animal transfers might affect women's access and participation, and whether interventions are truly equitable and sustainable.

Farmers' Perspectives on Change and Risk
Some discussions explored the diverse factors influencing farmers' willingness to adopt change, such as perceived risk, past experiences, generational dynamics, access to information, and who promotes innovations. It was noted that transformation approaches must be tailored to different contexts, with no one-size-fits-all solution.

Animal Welfare and Ethical Perspectives
Debates touched on the definition of animal welfare, contrasting productivity-driven, human-centric views with those focused on animals' intrinsic wellbeing. Questions arose around how these perspectives shape technology adoption and ethical standards.

Overall, the discussions highlighted the need for inclusive, equitable solutions that balance technological innovation with the realities of farming communities and the wellbeing of animals, particularly in the face of climate change.