



Towards Sustainability, Livestock on the Move

Summary and notes from the 'Technical' Days of the 8th
Multi Stakeholder Partnership meeting of the Global
Agenda for Sustainable Livestock, Ulaanbaatar, Mongolia
12-13 June 2018

Peter Ballantyne

25 July 2018



Contents

The Technical Agenda at the 8 th MSP	1
Summary of the technical session outputs	3
1. Livestock Global agenda offers major opportunities for GASL	3
2. FOCUS: Food and Nutrition Security	3
3. FOCUS: Livelihoods and Economic Growth	4
4. FOCUS: Animal Health and Welfare	4
5. FOCUS: Climate Change and Natural Resource Use	5
6. FOCUS: Key roles identified for GASL	6
Annex 1: Contributed sessions and posters	7
Action network session – Tuesday	7
Open space session – Wednesday	9
Poster contributions	13
Annex 2: Panels and workshops	15
Annex 3: Agenda for the technical days	17



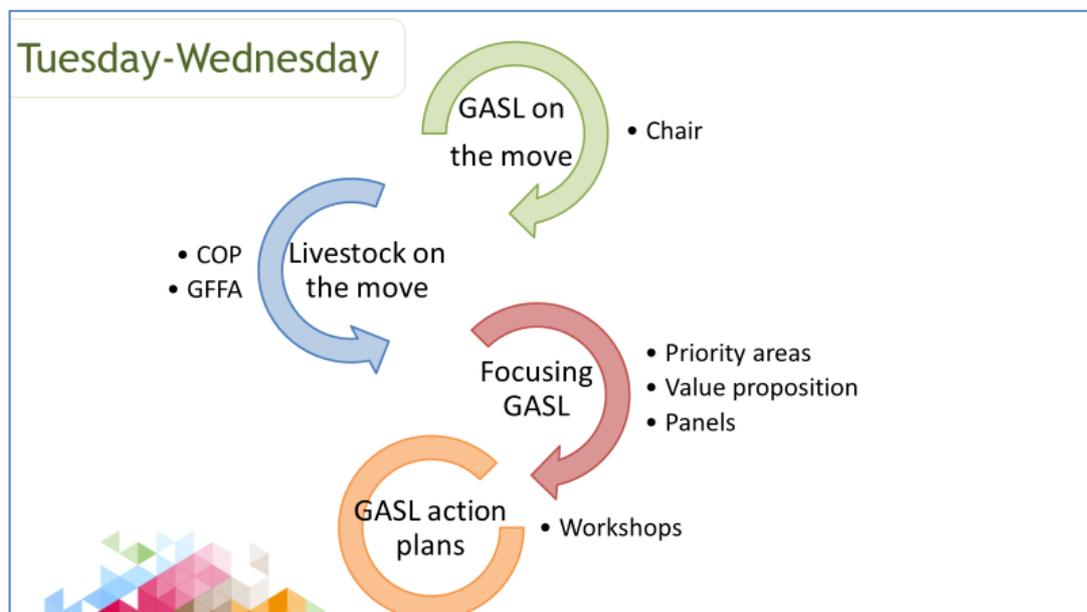
The Technical Agenda at the 8th MSP

The 8th GASL Global MSP Meeting was held in Mongolia from 11-15 June 2018. Globally, the MSP aimed to address how the stakeholders of the Global Agenda can best deliver its vision and mission through Clusters and Action Networks.

The second and third ‘technical’ days were structured around four global livestock sustainability priorities and how these could best be used to guide GASL work: food and nutrition security; livelihoods and economic growth; health and animal welfare; and climate and natural resource use.

Aside from this operational focus, the MSP provided space during these days for the different stakeholders to showcase their work in dedicated parallel sessions on Tuesday and Wednesday afternoons. A display of posters was also organized.

The diagram below illustrates the flow of these two days. The first session was a presentation by the GASL chair reporting on activities and plans and explaining some of the ways the initiative needs to evolve.



The wider agenda in which GASL operates is undergoing rapid change and the following session introduced two major policy arenas where the livestock sector is gaining ground in global discourses. The first is the UN Framework Convention on Climate Change where the most recent discussions at COP23 decided on a program of joint work on agriculture, with livestock prominent as an issue. The second was the January 2018 Global Forum on Food and Agriculture which focused on “Shaping the Future of livestock – sustainably, responsibly, efficiently”. This resulted in, among other things, a joint communique by 69 ministers of agriculture calling on stakeholders, including GASL, “to collaboratively promote the international consultation on sustainable, responsible and efficient livestock production systems, and to develop good practices, based on integrated assessments, intergovernmental processes and multi-stakeholder consultations; ... identify knowledge gaps, to initiate respective research and to make knowledge available to farmers and the public.”



Moving from this wider environment back to GASL, the third scene-setting session presented first, GASL's value propositions and how it delivers these and, second, four global priorities for sustainability that GASL can use to guide its activities. These same priorities were the basis for a set of panels where people drawn from across GASL commented on the issues and opportunities in each priority area. Thereafter, participants joined one of 4 workshops in each priority area to sketch priorities and potential actions for GASL (see annex 2).

Alongside this action agenda for GASL, two sets of parallel sessions provided 27 opportunities for the GASL Action Networks and other partners to showcase their work. Fifteen posters were also prepared (see annex 1).

The conclusions from the two days of deliverations was presented by the GASL Chair in the closing session at the end of the week¹.

This report introduces the two-day discussions, presents the summary conclusions from the two days, and provides summary information from the parallel sessions. Separate powerpoint files contain more detailed bullet points and other notes produced during the panel and workshop discussions.

¹ All the presentations and posters from the event are available online at: livestockdialogue.org/events/events/multi-stakeholder-meetings/ulaanbataar11-15june2018/en



Summary of the technical session outputs

1. Livestock Global agenda offers major opportunities for GASL

Climate change negotiations

- At global level, Koronivia joint work on agriculture (at COP23) calls for inputs to address issues related to agriculture, including issues related to livestock.
- At national level, 58% (80) of 165 Intended Nationally Determined Contributions to reduce emissions under the Paris Agreement include livestock:
- So opportunities for GASL partners to engage at different levels.

Global Forum for Food and Agriculture (69 Ministers of Ag) in January 2018 calls on:

- FAO, OIE and ILRI to collaboratively promote sustainable, responsible and efficient livestock production systems, and to develop good practices, based on integrated assessments, intergovernmental processes and multi-stakeholder consultations;
- calls upon them to identify knowledge gaps, to initiate respective research and to make knowledge available to farmers and the public; encourages them to include other relevant actors such as the (...) Global Agenda for Sustainable Livestock (GASL) and to report to the GFFA Ministers [reporting mechanism not defined]

2. FOCUS: Food and Nutrition Security

Big challenges

- Overcoming the breakdown in trust between consumers and the livestock sector
- Adapting to changing consumer information-seeking behavior: millennials want to discover the truth by themselves ...
- Produce better quality products by overcoming technical constraints: access to water, good genetics, good health, access to land ...
- Food quality and safety across the whole value chain

Promising solutions

- Trust building with consumers: focus on the right messaging; avoid PR
- Strong messages, well-compiled and communicated, to counter negative messages
- Place evidence where millennials are looking;
- Better animals, better practices, better technologies

Priority areas for GASL

- Animal-source foods nutritional value
- Animal-source foods and balanced diets
- Livestock role in sustainable and safe food systems
- Access and availability across the value chain



3. FOCUS: Livelihoods and Economic Growth

Big challenges

- Bringing resource-poor, poorest and smallholders into formal sector markets and value chains
- Under-appreciation and under-valuing of women and livestock roles
- Give private sector conducive environment to act in
- Achieve growth with sustainability

Promising solutions

- Many simple interventions, practices and experiences are available, which need to be scaled
- Bring gender into the main agenda; Capacitate women, giving women the tools available
- Involve the private sector
- Harmonise donor community for investment in the livestock sector

Priority areas for GASL

- Smallholders left behind
- Overgrazing
- Structural change in pastoralism
- Insufficient income
- Succession

4. FOCUS: Animal Health and Welfare

Big challenges

- Access to good quality veterinary and disease management services
- Moving from reactive to proactive health management and planning
- Mobilizing public investment for transboundary diseases

Promising solutions

- Better narratives – we are better managing animals, not exploiting them; Animal health and animal welfare are closely linked and they are linked to sustainability. Healthy animals require less water and emit less GHG per kilogram product.
- Adopt frameworks that guide us to a ‘one step at a time’ adaptive approach
- Look beyond diseases: Much good health comes from good animal management

Priority areas for GASL

- Livestock diseases – transboundary, zoonotic, endemic and production, economics of
- Animal health services quality, access and coordination
- Livestock associated AMR
- Animal welfare



5. FOCUS: Climate Change and Natural Resource Use

Big challenges

- Overgrazing, carrying capacity overload, land degradation
- To obtain accurate reliable emission factors for developing countries livestock systems
- To properly value livestock systems – social, environmental, landscape, etc.
- Devising sustainable futures for nomad communities

Promising solutions

- Make the case for multiple roles of nomads: Not just as ‘keepers’ and ‘herders’, but as environmental service providers.
- Attract consumers: ‘sustainable nomad’ branding?
- Develop quality as well as quantity incentives for herders, so they have fewer, better, less-damaging (to environment) animals
- Increase adaptive capacities of communities and adopt improved NRM/land management practices
- Improve animal production efficiency to reduce emissions
- Develop ‘whole rangeland/grassland’ models of missions/sequestration to show they are in balance

Priority areas for GASL

- Global Level: Greater focus on regional issues and context; Guidance, methodology, data, reference for sustainability assessment ; Close the fluxes of carbon, nitrogen and phosphorus; Integrated assessment considering the reality of different stakeholders and scales of production
- Landscape Level: Database of livestock, water information and best practices at country level; Improved water management and provision; Herd size and grazing management to avoid pasture degradation; Legal frameworks or government institutions for sustainable use of land in common property ownership
- Animal Level: Bring science together – tools - knowledge; Quantify impact of animals on climate and climate on animals, and how to manage and adapt accordingly; How to appreciate the trade-offs; Help farmers reduce risk and maximise opportunities

Priority issues, what participants liked from the workshop reports (quickly identified in plenary)

- Recognizing the contributions of women pastoralists
- Reaching millennials
- Using the ecosystems approach
- Call for different standards to allow smallholders to enter ‘formal’ markets
- Focus on multifunctionality of systems
- Putting pastoralists at the centre of discussion
- Framework of triangles from the livelihoods group – and going beyond this to action



6. FOCUS: Key roles identified for GASL

Initial value propositions for GASL

- GASL connects all livestock stakeholders to deliver sustainable food and nutrition solutions through sustainable livestock.
- GASL ensures the livestock sector globally, regionally, nationally and locally responds to increased demand, and supports balanced, healthy diets.
- GASL as a multi-stakeholder platform is ideally placed to advocate a common understanding across stakeholders on key issues related to Animal Health and Welfare and their interconnectedness to improve productivity

GASL core roles

- Facilitates dialogue
- Generates evidence
- Supports the adoption of good practices and conducive policies

What GASL offers/brings

- Multi-stakeholder nature and convening roles
- Helps to find and communicate the good solutions
- Generates and brings robust evidence and tools
- Fosters open discussion
- Encourages exchange of experiences on best practices
- Helps to reach consensus on sustainability in the livestock sector
- Connects evidence from different production systems, learning from each other, engage with governments, share findings, experiences and evidence between countries
- Analyses problems, suggests solutions, disseminates results and evidence
- Engages with international and regional communities through meetings
- Shares practices from mixed stakeholders: NGO, industry, science. Sometimes we should talk with one voice but also, we need not make all interactions through GASL. Members have many networks.
- Convenes expertise and interests
- Connects to high level processes and fora

Roles for GASL, what participants liked from the workshop reports (quickly identified in plenary)

- GASL offers investors a great opportunity to meet, partner, discuss with private sector, centres of excellence – this is unique
- It offers opportunities for collaboration and interaction and getting tools that others can access and use

BUT

- Use the power of the members and their networks
- Don't duplicate efforts
- Take advantage of contrasting situations where GASL members are – diversity



Annex 1: Contributed sessions and posters

Action network session – Tuesday

1. **A field guide to investing in sustainable livestock, part 1: environment – Simon Oosting, World Bank**
A presentation of the 7 environmental principles to “Investing in Sustainable Livestock”, a case example, and discussion of the principles and approach, followed by a presentation and discussion of the webtool elements being developed for the “Investing in Sustainable Livestock” project.

2. **An integrated approach to improve the livelihood and resilience of vulnerable small-scale livestock keepers: The case of Mongolia - Quentin Moreau, VSF Mongolia and Margherita Gomasca, VSF International**

Smallholders’ livestock farming face several challenges, including climate change (increased droughts, floods, storms, and adverse weather patterns); limited access to markets and to basic services (including education, health and veterinary services); low productivity and quality of animal products due to poor animal health conditions; environmental degradation and restricted access to land, among others. In these conditions, in order for livestock to effectively provide socio-economic benefits, integrated/multidimensional approaches are needed that combine interventions related to nutrition, animal health, value chain development, access to market, environment, education, etc.

During this session, some concrete examples from the experience of the VSF International network, and specifically from AVSF in Mongolia, were presented on the benefits of adopting a multidimensional approach to make pastoral livestock farming more environmentally sustainable and economically profitable. In Mongolia, a pilot sustainable cashmere value chain is being successfully put in place by AVSF and its partners, with direct contribution to strengthen the resilience and improve the livelihoods of Mongolian herders. Through a partnership with herders’ organizations and local stakeholders, the project focuses on improving: Land management; Animal health, herd productivity and resilience; Capacity building; Certification; and value chain development.

3. **Classification and main drivers of silvopastoral systems adoption by farmers in America - Julián Chara, CIPAV**
An analysis was carried out on the main SPS found in different regions of America in order to determine the factors that have contributed most to their development and adoption by farmers. SPS were classified according to the main promoter (government, farmers, pastoralists, private companies), incentives used, region or ecosystem type, main benefits (services provided or products) and efficiency in using natural resources. Particular emphasis was put to an analysis of the main factors that have contributed to their development. Based on the findings and more successful examples, some general recommendations were provided to improve the adoption of SPS and to promote them in other regions of the world.
4. **Dairy Asia into action - Melina Lamkowsky, FAO**
5. **Implementing guidelines and tools to measure socio-economic impact of the dairy sector - Ernesto Reyes, IFCN Dairy Network**

IFCN Dairy Network, Global dairy Platform, FAO and the Global Agenda are working together for implementing a systematic approach for measuring benefits of the dairy sector to social development. This “systematic approach” plans to develop guidelines and tools for measuring dairy impact at different levels such as measuring the current contribution of dairy in socio-economic terms, Return On Investment (ROI) and social ROI. This will be implemented on a stepwise process providing different opportunities for discussing it at different forums and levels and taking into account different stakeholder’ interests.



6. Informing and influencing sustainable livestock investments with evidence and facts – Shirley Tarawali, ILRI and Michael Hoevel, Marchmont Communications

Recent reviews indicate that underfunding of the livestock sector in developing countries is partly due to a global lack of awareness and understanding of livestock as well as negative views of livestock by some people in industrialized nations. This session introduced several initiatives that are tackling these problems - by distilling facts and evidence for wide use, making the case for sustainable livestock in the media and in high-level political processes, and facilitating communities of practice for people engaged in this area. A multimedia communication resource will be briefly introduced. Read more at whylivestockmatter.org

7. Livestock, climate change and smallholder farmers in Latin America: victims, perpetrators or partners in climate change - Martha Hirpa and Oscar Castaneda, Heifer International

Smallholder farmers in the Americas facing climate change and natural resource management, and the positive role livestock plays in restoring and sustaining natural resources.

8. Low use, good health and high productivity: best practises from the antibacterial world - Ulf Magnusson, SLU

The LAMP network is currently collecting “best practices” from different parts of the world for different species about how to reduce and keep the use of antibacterials low and use then in an efficient way, maintaining or improving livestock health and productivity. The presentation provided an update about the role of livestock on the global antimicrobial arena as well as some examples of “best practices”.

9. Multiple functionality of grazing systems (includes the integrated assessment of grazing lands methodology framework) - Alexandre Ickowicz, CIRAD

The network has designed an integrated assessment methodology framework for assessing the contribution of grassland systems to multiple functions and values in relation to the SDGs. The session described the development of the framework built on a series of participative processes including film and interviews and shared how this framework has helped design cases on the ground from Brazil, Vietnam, Senegal, France, Argentina. The framework was available to test and a fully interactive data base that is now on the GASL web site that holds grassland cases generated through the network was demonstrated.

10. Socio-economic contribution of pastoralism: insights from cross-continental case studies - Mariana Quiroga, INTA, Argentina

Pastoralist systems are a source of livelihoods to millions of people worldwide, providing multiple benefits including – but not only – income, high quality food, preserved environment and social cohesion, often in arid environments where livestock is the only local food source. Such benefits are however scarcely quantified, and they are only made visible when they disappear. There is an increasing interest in such systems precisely because of the increased instability in pastoralist areas that has triggered multimillion investment from international donors. A more thorough knowledge, based on country case studies, would however improve diagnosis, forecasting of problems and options for action worldwide, but also stimulate investment in novel, emerging fields envisioned by the communities themselves. The case studies proposed are the Chaco region of Argentina, Paraguay and Bolivia, the Llanos region of Colombia and Venezuela, the Aragon region of Spain, the Sahelian area of Mali, the Omo and Awash valleys of Ethiopia, and the Kutch region of India. They include issues such as the transformation of parklands into monocultures for intensive livestock feed, transformation of grazing floodplains into rice and sugar plantations, competition for land use between pastoralism and other land uses, and impacts of white revolution in nutrient cycling, malnutrition and economic equitability.

11. The LEAP Partnership: An update on LEAP activities - Lionel Launois, Ministry of Agriculture, France



Open space session – Wednesday

1. **A multi-stakeholder multi-disciplinary approach for sustainable livestock sector growth and transformation. Lessons from Ethiopia and Nigeria - Olaniran Alabi, Federal Ministry of Agriculture and Rural Development, Nigeria and Cherenet Thomas Ministry of Agriculture and Livestock, Ethiopia**

There is consensus on the importance of a multi-stakeholder multi-disciplinary (One Health) approach to promote a livestock development that is sustainable from a human, animal and environmental perspective. The operationalization of such an approach, however, has proved challenging, as it calls for human, animal and health practitioners to cross their disciplinary and institutional boundaries.

This session discussed and shared lessons on the implementation of the One Health approach by the Ministries in charge of livestock, the environment and human health in Ethiopia and Nigeria. Their joint effort resulted in an integrated approach that allowed: (i) characterizing the livestock sector, including pastoral and agro-pastoral production systems; (ii) quantifying its impact on social, environmental and public health dimensions; (iii) highlighting the trade-offs embedded in any policy supporting livestock sector growth and transformation.

The core element to operationalize the One Health approach in Ethiopia and Nigeria has been a common definition of the different livestock production systems, agreed upon by the Ministries in charge of livestock, the environment and human health. The lack of a common denominator, that is a common understanding of livestock production systems, was in fact a major constraint for operationalizing One Health. A multitude of stakeholders were consulted to statistically characterize and map cattle and poultry (only for Nigeria) production systems, using nationally representative statistics and data from the FAO Gridded Livestock of the World. The identified livestock production systems were linked to national datasets to assess the contribution of livestock to household income and nutrition. The livestock maps served as an input to quantify GHG emissions from the characterized livestock production systems using the FAO Global Livestock Environmental Assessment Model. An Expert Elicitation Protocol was implemented to assess the monetary impact of selected zoonotic diseases on society, including estimating the value of animals and production lost and the cost of morbidity and mortality in humans, proxied by the willingness to pay for a disability adjusted life-year (DALY).

The multi-stakeholder multi-disciplinary approach adopted by the government of Ethiopia and Nigeria to operationalise one Health is considered a Good Practice, which other countries should consider following to support a sustainable growth and transformation of the livestock sector.

2. **Animal source foods, health and nutrition what is the latest evidence - Delia Grace Randolph, ILRI**

This session summarised recent evidence that ILRI has contributed on the links between animal source foods, nutrition and health. This draws from 3 major reports launched or to be launched in 2018 covering: Animal source food and the first 1,000 days; The now and future cost of foodborne disease in India; Metrics for measuring foodborne disease; Investments in food safety

3. **Building sustainable livelihoods for herders: Applying integrated approach and pilot testing results - Enkh-Amgalan Ayurzana, Center for Policy Research, Mongolia**

In 2017, Mongolia has counted 66.2 million livestock achieving a historic record. However, herders and the livestock sector have not gained from the hugely increased herd size. In contrary, it has resulted in widespread environmental damage and made livelihoods of most herders less sustainable. Overgrazing and malnutrition caused animals to lose body weight, produce less output and become vulnerable to diseases and natural risks and fail to reach export markets. The market value of animals has declined by 37% in the last 3 years. Animal productivity declines cost MNT 2.6 m annual income loss per herder household. Poor herders lose their grazing rights to expanding rich herders and mining activities. Poor herders with less than 200 animals account for a half of the herders' population and one third of them have no own winter and spring camps. 65% of the pastureland has been degraded seriously endangering the national biodiversity. Thus, the key development problem is how to free herders from a vicious circle in which they strive hard to maximize animal numbers after a dzud winter disaster but end up with no good returns as their strategy destroys pastures, decreases productivity and swallows up reserve pastures



making losses for the next dzud even more devastating. The applicant has tested innovative incentive mechanisms to encourage herders towards adopting sustainable livelihood strategies. Pastureland use agreements were piloted as a mechanism to tackle the overgrazing problem by building formal commitment on the herders' side to reconcile livestock numbers with pastureland carrying capacities as well a protection of herders' grazing rights against expansions by the rich and mining companies. In 2009-2012, the applicant has tested the feasibility of pastureland use agreements for 384 herder groups in 42 districts based on the existing land use patterns and keeping herders' mobility as a key risk management strategy. Agreements were signed by each male and female member of herder groups to ensure gender equality in the key resource use.

The herders' willingness to pay, as a proxy grazing fee, for building livestock risk management fund was also tested. It proved that herders are willing to pay and they can benefit greatly from undertaking risk management and value chain activities in a collaborative way. Herders voluntarily paid MNT 500 per sheep unit and the use of generated fund, augmented by the project's matching contribution, in the value chain collaboration greatly assisted herders selling more animals to reach the optimum stocking density targets of land use agreements. In 2017, 2 herder groups in the Khovd province have increased the animal sales by 0.8-2.6 times and reduced the herd size by around 500 sheep units from the previous year, while the district livestock has grown by 7%, - the result that still seems unbelievable in today's Mongolia.

4. Disease at the livestock/wildlife/ecosystem interface: a multi-disciplinary approach to securing positive health outcomes for wildlife, livestock, pastoralists and the environment - Amanda Fine and Enkhtuvshin Shiilegdamba, Wildlife Conservation Society Mongolia

A panel of experts from the Science for Nature and People Partnership (SNAPP) working group on "Steppe Health" will share their approach to addressing disease at the wildlife/livestock/ecosystem interface to conserve wildlife and the environment, and secure rural livelihoods for pastoralists in Central Asia's high elevation grassland and mountain landscapes. A presentation with short video on the emergence of the Peste des Petits Ruminants (PPR) virus in sheep and goats and wild ungulate populations in Mongolia and Central Asia will be used to illustrate the complexity of these events and the benefits of a multi-disciplinary and multi-sectoral approach to securing health outcomes for wildlife and livestock as a component of rangeland management and environmental protection. Potential benefits and implications for the PPR global eradication Programme will be discussed.

5. Effective and good quality proximity animal health services: the role of community-based animal health workers - Margherita Gomasasca, VSF International

In many pastoral areas where livestock keepers' communities are mobile and widely dispersed in the territory, access to basic services, including veterinary services, remains a big challenge. In these under-served areas, VSF International (a network composed by 13 NGOs) is supporting "proximity animal health services" to offer access to quality veterinary drugs, consultation, treatment and vaccination, and to report on disease appearance and transmission.

Proximity Animal Health Services consist of a network of Community-based Animal Health Workers (CAHWs) distributed in the intervention zone and under the coordination and responsibility of a graduated veterinarian, who ensures the follow-up and support-advice to CAHWs and supplies them with quality veterinary products. CAHWs are members of the community and often livestock keepers themselves, who are trained in basic animal health care in order to perform a limited range of veterinary tasks to the members of their community, in association with a graduated veterinarian. The functions that they can perform varies widely depending on the different legislative framework in each country.

In order to ensure the delivery of quality services and the sustainability of their intervention, CAHWs should be part of a broader institutional set up, which involves all different animal health actors at national and local levels and takes into account their complementarities. CAHWs are also trained on improved husbandry practices to improve the wellbeing and welfare of animals, and the projects often include several complementary actions (animal health, access to feed/fodder, restoration of pastures, rehabilitation of water points, community mobilization and sensitization, etc.).



The approach is built within a One Health focus, as its positive impacts are measurable on the animals, on the people that depend on them, and on the environment, through better use and management of natural resources. CAHWs contribute as well to achieve major public health goals, through improved disease surveillance network. The positive impacts of this approach include:

- reduced number of disease outbreaks,
- reduced mortality of sick animals and mortality during pastoral crises/droughts,
- increased productivity, milk production and fertility of animals,
- secured income of farmers through the sale of milk and animals in good health,
- better management of animal health, animal welfare and safety/hygiene of animal-sourced food.

VSF International supports proximity animal health services in 20 countries across Africa and Asia. During the session, some practical examples of implementing Proximity animal health services in different countries (mainly from Africa and Asia) were presented.

6. Impact on the Ground, GRSB and the National Roundtables for Sustainable Beef - Ruairaidh Petre, GRSB

From beginnings in Brazil in 2007 and an international conference in 2010, the Global Roundtable for Sustainable Beef has grown into a movement covering more than 25 countries and including many of the largest companies in the beef industry. But how has that translated to impact on the ground? What is the scale of the challenge, the opportunity, and how are they being met? This discussion took examples from around the world of genuine impact on the ground.

7. Increasing sustainable performance with cattle genetics adapted to grasslands - Alizée Sauron, Swissgenetics

Cattle production and intensification begins with the right bovine semen used. Breed diversity offers perfect solution for every breeding strategy. A lot of criteria must be considered to have: Long and lasting income and economic growth; Positive impact on human health and natural ecology

8. Maintaining mobility for good pasture management: Experiences from Asia and Africa - Fiona Flintan, ILRI and Hijaba Ykhanbai, JASIL

Maintaining mobility for good pasture management in drylands is vital for sustainable livestock production. This session shared experiences of community based pasture management in Mongolia, the role of local level electronic pasture committees for reducing pasture degradation in Kyrgyzstan, and village-level joint pasture land use planning in Kazakhstan and Tanzania. Members of the Rangelands Initiative of the International Land Coalition from Asia and Africa shared experiences how these best practices are contributing to more secure livelihoods, resolution of conflicts and better rangeland management. Tools/methodologies used for each of the cases were shared, together with the policy and legislative environment. Discussions revolved around the lessons learned from these good practices and their applicability in other contexts including the importance of good governance and facilitating land tenure. In addition the usefulness and importance of a facilitating an action network such as ILC Rangelands Initiative [and the FAO Pastoralist Knowledge Hub] for mobilizing, connecting and influencing was discussed.

9. Peste des petits ruminants on the March, Fighting rural poverty, Ensuring food security and nutrition, Strengthening resilience and national economies - Jean-Jacques Soula, OIE and Felix Njeumi, FAO

The session provided an update about the implementation of the PPR Global Eradication Programme (GEP), with focuses on support provided to countries such as Mongolia and partnerships built to advocate for and deliver the PPR GEP

10. Strengthening nomadic herders' traditional user groups for sustainable rangeland management in Mongolia - Tseelei Enkh-Angalan, Green Gold–Animal Health Project, Mongolia

The session shared how customary collective rangeland management organization of nomadic herders been promoted and empowered for sustainable management of common pool resources of shared rangelands in Mongolia. The experience of the Green Gold Project developing new tools to empower



herders being not only users but protectors of their traditional rangelands in cooperation with local agencies will be shared: These include:

- Ecological potential based rangeland health monitoring and assessment system
- Pasture user groups Rangeland use agreement, establishment and enforcement
- Promotion of herders bottom up institutional development to ensure their voices heard and reflected in the government policy and decision making (Pasture user groups of herders (PUGs)- Soum Association of PUGs-Aimag federation of APUGs and National Federation of PUGs).
- Based on the PUGs RUA, development of quality traceability system for livestock products

11. Support to employment creation in Mongolia - Gankhulug Ganbat, FAO Mongolia and Munkhbolor Gungaa, UNIDO Mongolia

Concrete results were presented showing how nomadic herders have started benefiting milk income through establishing cold chain within dairy value chain in Mongolia. It included: Isolated and scattered nomadic herders of Mongolia have organized into the cooperatives and started supplying milk to the newly established collection centers; Facilitated timely, reliable transportation; and quality based milk pricing system is used as an incentive for herders for sustainable milk production

12. Sustainable and wildlife friendly cashmere project example from Southern Gobi of Mongolia - Enkhtuvshin Shiilegdamba and Onon Bayasgalan, Wildlife Conservation Society Mongolia

Mongolia's move to democracy in 1990 coupled with the privatization of the livestock system and a worldwide growth in the demand for cashmere, has driven a rapid increase in goat numbers within the country. This demand together with a changing climate and unregulated pasture management has led to the deterioration in pasture quality over the last 20 years. The degraded pasture threatens the long-term existence of some of Mongolia's iconic wildlife as well as the nomadic way of life and cultural mainstay of Mongolia, and ultimately the long-term viability of the cashmere trade.

The Sustainable Cashmere Project in the South Gobi region of Mongolia is a collaboration of global leaders from the luxury fashion, mining, conservation and academia sectors, borne from shared values and the recognition that a multilateral approach was required to drive lasting change in the Mongolian cashmere industry. This project is using market mechanisms to deliver an incentivized price for more sustainable production of cashmere. The Project uses a multi-faceted approach to improving the quality of the cashmere, improving livestock health through better livestock husbandry practices and supporting herders to shift to more sustainable grazing patterns and practices, which will allow the natural recovery and restoration of degraded rangeland. Improved rangeland condition will support a more sustainable fiber supply, while providing better biodiversity protection in the South Gobi province. The Project is currently located in the Omnigovi (South gobi) province and represents 146 herder households.

13. The CGIAR Research Program on Livestock: Accelerating livestock research into impact – Tom Randolph, CGIAR Research Program on Livestock

The theory of change and experience to date of the Livestock CRP was described. The approach looks to improve our ability to translate research on key components of smallholder livestock systems into tangible impact. To do this, the standard type of 'international public good' research agenda is complemented with efforts in specific settings to integrate research results as development interventions that unleash the potential of smallholder-based value chains and strengthen resilience of livestock-based livelihoods. Examples of the challenges faced in implementing such an approach, as well as examples of benefits, were discussed.

14. Towards accurate statistics on antibiotics use in livestock farming: the Uganda experience - Patrick Okello, Uganda Bureau of Statistics

The 2018/22 Uganda One Health Strategy aims to control and manage antimicrobial resistance, which will contribute to achieving Uganda Vision 2040 and, more broadly, the SDGs. However, as there is no robust information on antibiotics use (AMU) in livestock farming, the Ministry of Agriculture, Animal Industry and Fisheries finds it difficult to allocate resources efficiently to prevent the emergence of antimicrobial resistance (AMR) from livestock agriculture.



Some information on AMU has been collected as part of implementation of the FAO Africa Sustainable Livestock 2050 Project. The Ministry of Agriculture, Animal Industry and Fisheries, the Ministry of Health and the Ministry of Water and Environment facilitate the administration of an expert elicitation protocol on zoonotic diseases and AMU, with experts selected using a snow-ball sampling technique. Results suggest that, on average, between 45% and 62% of Ugandan poultry and cattle farmers use antibiotics, respectively, with higher proportions in intensive systems. However, official statistics from the Uganda Bureau of Statistics (UBOS) indicate that only 14% of farmers utilize livestock extension services, and 22% treat their animals when sick. Given this inconsistency, UBOS, in consultation with national Ministries and stakeholders, has developed a basic AMU module to include in nationally representative surveys targeting livestock farmers. The inclusion of 5 AMU questions in a nationally representative survey is expected to provide reliable baseline data on farmers' use of antibiotics. Such baseline data will represent a starting point for the government to effectively operationalize and monitor the implementation of the One Health Strategy. This session discussed the importance to collect data on AMU in livestock farming through nationally representative surveys, and to present and get feedback on the proposed AMU module before implementation and wider dissemination. The AMU module aims to become a good practice for the collection of good quality data on the use of antibiotics in animal agriculture.

15. Where's the beef? Opportunities for Mongolia to satisfy growing demands for meat - Daniel Miller, Mercy Corps Mongolia

Mongolia's nomadic heritage and thousands of years of livestock raising can be capitalized upon in building a more modern, market-oriented livestock sector; Kazakh Whitehead and Selenge breeds of cattle – that are basically Hereford beef cattle -- are adapted to Mongolia's environmental conditions and provide the foundation for developing a modern beef industry in Mongolia. There is also a growing demand for quality beef, in both domestic and export markets. But challenges remain: Inferior beef cattle; Milk or beef?; Traditional practices; Over-grazing; Poor animal nutrition; Foot-and-mouth disease; Standards for export; as well as drought and dzud. Rangelands, which cover 75% of Mongolia's land area are the foundation for the livestock industry. Managing these rangelands, not only for forage for livestock, but also for water and forage for wild ungulates and as wildlife habitat for other animals is critically important. A new approach introduced is to use a market systems approach to develop Mongolia's livestock sector. This involves: Building alternative economic hubs in support of livestock markets that are as adaptive as they are competitive; Designing industry-standard livestock production models, which take into account cultural, economic, legislative, and ecological conditions; Promoting innovative financing and financial management practices to support a resilient livestock industry; and increasing economic participation of youth in the livestock sector.

Poster contributions

1. Delivering solutions for livestock, zoonotic and foodborne human diseases - Delia Grace Randolph, ILRI
2. Livestock Fact Check: Moving Livestock Debate Forward with Evidence-based Credible Facts - Gareth Salmon, University of Edinburgh
3. Why Livestock Matter - Shirley Tarawali, ILRI and Michael Hoewel, Marchmont
4. Promoting Local Dairy Value Chains in West Africa - - Margherita Gomarasca, Vétérinaires Sans Frontières International
5. The Optimal Breed for Your Environment - Alizée Sauron, Swissgenetics
6. The CGIAR Research Program on Livestock: Accelerating livestock research into impact – Tom Randolph, CGIAR Research Program on Livestock
7. GRAZY! Fostering Partnerships and Cooperation between Diversity of Stakeholders to Build a Multidimensional Assessment Framework of Grazing Systems – Lucile Garçon, CIRAD
8. Vulnerability and Resilience of Mongolian Rangeland and Pastoral Systems: Key Findings of the Mongolian Rangelands and Resilience Project - María E. Fernández-Giménez et al.
9. Focus Area: Pastoral Agro-ecosystems. Puna, North-western Argentina - Mariana Quiroga Mendiola, INTA, Argentina
10. Assessment of the multi-functions of grassland livestock systems in a mountainous commune of North West Vietnam using the "Grassland Multifunctionality" ontology – Le Thi Thanh Huyen, National Institute of Animal Science Vietnam and Melanie Blanchard, CIRAD



11. Building More Resilient Livestock Production Systems in Mongolia - Enkhtsetseg Ganbold, Mercy Corps Mongolia
12. Dairy Asia sustainability framework and the Sustainable Development Goals - Melina Lamkowsky, FAO Regional Office for Asia and the Pacific
13. Dairy Asia Sustainability Framework Progress in Mongolia - Ministry of Food, Agriculture and Light Industry, Mongolia
14. Implementing a Ration Balancing Programme (RBP) in India - V. Sridhar, NDDDB, India
15. Central Asia Rangelands Initiative - Hijaba Ykhanbai, JASIL



Annex 2: Panels and workshops

On 12 June, 4 panel discussions were held to explore what the priority themes introduced by Henning Steinfeld mean and how they could apply to GASL. The key points of the panelists are summarized in this document.

	Moderator To lead the discussions	Panelists To share insights on questions
Each panel lasted 30 minutes. During this time, panelists were asked to address 3 questions: What are the most significant challenges and questions for the sustainable livestock sector in this priority theme, and why? 2) Which solutions exist that offer most promise in this priority theme? 3) How best can GASL contribute to this priority theme – specific roles, activities, interventions, outcomes.		
Panel on food and nutrition security	Shirley Tarawali, ILRI	Alwin Kopse, Federal Office for Agriculture, Switzerland Donald Moore, Global Dairy Platform Cherenet Thomas, Ministry of Agriculture and Livestock, Ethiopia
Panel on livelihoods and economic growth	Nancy Bourgeois, Bern University of Applied Sciences	Nicoline de Haan, International Livestock Research Institute Ernesto Reyes, IFCN Dairy Network Antonio Rota, International Fund for Agricultural Development
Panel on health and animal welfare	Barbara Wieland, ILRI	Brian Lindsay, Dairy Sustainability Framework Ulf Magnusson, Swedish University of Agricultural Sciences Fagouri Said, World Alliance of Mobile Indigenous People
Panel on climate and natural resource use	Gina Luccii, AgResearch New Zealand	Tseelei Enkh-Amgalan, Green Gold–Animal Health Project, Mongolia Alexandre Ickovicz, CIRAD Robin Mbae, Ministry of Agriculture and Irrigation, Kenya



On 13 June, 4 parallel workshops were organized in which participants were asked to identify priority outcomes, outputs and activities for GASL and its partners in each priority work area. Each workshop produced a powerpoint report; the main elements are summarized in this document.

	Convenor Overall team leader	Facilitator To manage the process/time and output delivery	Rapporteur(s) To produce ppt slides using format and ensure all the key points are captured 10-12 minute presentation to plenary at 1415 pm
<p>Each workshop 3 hours plus a 30-minute break. Participants to address several tasks and produce a PPT (using provided template) that can serve as an input to GASL action plans for each area:</p> <p>The most important issues or questions to address in this work area</p> <p>The expertise that GASL and its partners bring to this work area (including what ANs are doing) – value proposition</p> <p>Up to 3 outcomes that GASL and its partners could aim to reach in this work area</p> <p>3 or 4 key activities and outputs of GASL in this work area</p> <p>How GASL and its partners can best deliver in this work area: priority activities to undertake for each GASL focus theme</p> <p>A one paragraph description of the work area together with any new/improved name</p>			
Food and nutrition security workshop	Martha Hirpa, Heifer International	Shirley Tarawali, ILRI	Alwin Kopse, Federal Office for Agriculture, Switzerland Margherita Gomasca, VSF
Livelihoods and economic growth workshop	Ian McConnel	Nancy Bourgeois Bern University of Applied Sciences	Nicoline de Haan, ILRI Ruaraidh Petre, GRISB
Health and animal welfare workshop	Jean Jacques Soula, OIE	Ulf Magnusson, SLU	Barbara Wieland, ILRI Hendrik Jan Ormel, FAO
Climate and natural resource use workshop	Pierre Gerber, World Bank	Fiona Flintan, ILRI	Julian Chara, CIPAV Gina Lucci, AgResearch New Zealand



Annex 3: Agenda for the technical days

Tuesday 12 June 2018: The Global Livestock Agenda				
0845	Introduction to the day – Peter Ballantyne, facilitator Objective: Introduce and develop a technical agenda and priorities for GASL and partners			
0900	The Global Agenda on the move <ul style="list-style-type: none"> • Presentation: The Global Agenda on the move - Fritz Schneider, GASL Chair 			
0920	The Global Livestock Agenda on the move <ul style="list-style-type: none"> • Presentation: Livestock @ COP23: context, background and outcomes/resolutions - Walter Oyhantacabal, Ministry of Livestock, Agriculture and Fishery, Uruguay and Henning Steinfeld, FAO • Presentation: Livestock @ GFFA: context, background and outcomes/resolutions - Philipp Graf zu Erbach-Fürstenau, Federal Ministry of Food and Agriculture, Germany • Short commentary: Fritz Schneider, GASL Chair 			
1000	Focusing the GASL technical agenda – Setting the scene <ul style="list-style-type: none"> • Presentation – GASL value propositions and modes of delivery - Shirley Tarawali, ILRI • Presentation – Shaping the future of livestock: Global priorities for sustainability - Henning Steinfeld, FAO • Brief participant reflections 			
1100	BREAK			
1130	Focusing the GASL technical agenda – Panels <ul style="list-style-type: none"> • Priority Theme Panel 1: Food and nutrition security • Priority Theme Panel 2: Livelihoods and economic growth 			
1235	LUNCH			
1415	Short process update			
1425	Focusing the GASL technical agenda – Panels <ul style="list-style-type: none"> • Priority Theme Panel 3: Health and animal welfare • Priority Theme Panel 4: Climate and natural resource use 			
1530	BREAK			
1600	Short Process Update			
1615	Investing in sustainable livestock: Remarks by Pierre Gerber, World Bank (dinner sponsor)			
1630	Livestock on the move: Spotlight on GASL Action networks			
1645-1715	AN: Dairy Asia into action - Melina Lamkowsky, FAO	AN: Multiple functionality of grazing systems - Alexandre Ickowicz, CIRAD	AN: Low use, good health and high productivity – best practises from the antibacterial world - Ulf Magnusson, SLU	A field guide to investing in sustainable livestock, part 1: environment – Simon Oosting, World Bank



1730-1800	AN: The LEAP Partnership - An update on LEAP activities - Lionel Launois, Ministry of Agriculture, France	AN: Integrated assessment of grazing lands methodology framework: On ground cases of sustainable livestock in practice - Alexandre Ickowicz, CIRAD	AN: Socio-economic contribution of pastoralism: insights from cross-continental case studies - Mariana Quiroga, INTA, Argentina AN: Implementing guidelines and tools to measure socio-economic impact of the dairy sector - Ernesto Reyes, IFCN Dairy Network AN: An integrated approach to improve the livelihood and resilience of vulnerable small-scale livestock keepers: The case of Mongolia - Quentin Moreau, VSF Mongolia and Margherita Gomasca, VSF International	
1815-1845	Sponsored session: Livestock, climate change and smallholder farmers in Latin America: victims, perpetrators or partners in climate change - Martha Hirpa and Oscar Castaneda, Heifer International	AN: Classification and main drivers of silvopastoral systems adoption by farmers in America - Julián Chara. CIPAV		Informing and influencing sustainable livestock investments with evidence and facts – Shirley Tarawali, ILRI and Michael Hoevel, Marchmont Communications

Wednesday 13 June 2018: Setting GASL priorities

0845	Introduction to the day – Peter Ballantyne, facilitator
0900	Building an Action Plan for GASL and its partners, 2019-2021 – workshops Objective: Identify priority outcomes, outputs and activities for GASL and its partners in each priority work area 4 parallel workshops by global sustainable livestock priorities.
1030	BREAK
1100	Building an Action Plan for GASL and its partners, 2019-2021 – workshops (continued)
1230	LUNCH
1400	Brief process update
1415	Building an Action Plan for GASL and its partners, 2019-2021 – feedback Reports from workshop conveners (technical priorities and implementation functions for GASL)



1530	BREAK			
1600	Open Space – contributed sessions			
1600-1630	Peste des petits ruminants on the March, Fighting rural poverty, Ensuring food security and nutrition, Strengthening resilience and national economies - Jean-Jacques Soula, OIE and Felix Njeumi, FAO	Maintaining mobility for good pasture management: Experiences from Asia and Africa - Fiona Flintan, ILRI and Hijaba Ykhanbai, JASIL	Sustainable and wildlife friendly cashmere project example from Southern Gobi of Mongolia - Enkhtuvshin Shiilegdamba and Onon Bayasgalan, Wildlife Conservation Society Mongolia	A multi-stakeholder multi-disciplinary approach for sustainable livestock sector growth and transformation. Lessons from Ethiopia and Nigeria - Olaniran Alabi, Federal Ministry of Agriculture and Rural Development, Nigeria and Cherenet Thomas Ministry of Agriculture and Livestock, Ethiopia
1645-1715	Effective and good quality proximity animal health services: the role of community-based animal health workers - Margherita Gomasasca, VSF International	Strengthening nomadic herders' traditional user groups for sustainable rangeland management in Mongolia - Tseelei Enkh-Amgalan, Green Gold–Animal Health Project, Ulaanbator, Mongolia	Where's the beef? Opportunities for Mongolia to satisfy growing demands for meat - Daniel Miller, Mercy Corps Mongolia	The CGIAR Research Program on Livestock: Accelerating livestock research into impact – Tom Randolph, CGIAR Research Program on Livestock
1730-1800	Disease at the livestock/wildlife/ecosystem interface – a multi-disciplinary approach to securing positive health outcomes for wildlife, livestock, pastoralists and the environment - Amanda Fine and Enkhtuvshin Shiilegdamba, Wildlife Conservation Society Mongolia	Support to employment creation in Mongolia - Gankhulug Ganbat, FAO Mongolia and Munkhbolor Gungaa, UNIDO Mongolia	Towards accurate statistics on antibiotics use in livestock farming: the Uganda experience - Patrick Okello, Uganda Bureau of Statistics	Impact on the Ground, GRISB and the National Roundtables for Sustainable Beef - Ruairaidh Petre, GRISB
1815-1845		Building sustainable livelihoods for herders: Applying integrated approach and pilot testing results - Enkh-Amgalan Ayurzana, Center for Policy Research, Mongolia	Sponsored presentation: Increasing sustainable performance with cattle genetics adapted to grasslands - Alizée Sauron, Swissgenetics	Animal source foods, health and nutrition what is the latest evidence - Delia Grace Randolph, ILRI