

Livestock Research Group Meeting

Banff Park Lodge, Banff, Canada

8-9 October 2010

Meeting Report

OVERVIEW

The first meeting of the Livestock Research Group of the Global Research Alliance on Agricultural Greenhouse Gases (“the Alliance”) was held in Banff, Canada from 8-9 October 2010, immediately following the international Greenhouse Gas and Animal Agriculture (GGAA) Conference from 3-7 October.

2 The meeting was held in two parts. An open session for GGAA delegates was held from 9am-12pm on Friday 8 October. A closed session for Livestock Research Group representatives then ran from 12pm Friday to 3pm Saturday. Both sessions were co-chaired by New Zealand (Dr Harry Clark, New Zealand Agricultural Greenhouse Gas Research Centre) and the Netherlands (Dr Martin Scholten, Wageningen UR) as the co-coordinating countries of the Livestock Research Group.

3 This report is a summary of discussions during both sessions, and the outcomes and action points overall. The presentations from both sessions are provided separately as PDFs.

PARTICIPANTS

4 The open session was attended by approximately 190 GGAA delegates and Alliance representatives. The closed session was attended by 45 Alliance delegates, representing 27 Alliance member and observer countries:

- **Alliance Members attending:** Argentina, Australia, Canada, Chile, Colombia, Denmark, France, Germany, Ghana, Indonesia, Ireland, Mexico, The Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, UK, USA, Uruguay, Vietnam
- **Alliance Members unable to attend:** Finland, India, Japan, Malaysia, Pakistan, Peru, Philippines, Russia
- **Observers attending:** Brazil, China, European Commission, Republic of Korea, Thailand
- **Observers unable to attend:** South Africa

MEETING OUTCOMES

5 The meeting achieved the following outcomes:

- Alliance briefing and update on progress provided to around 190 science delegates attending the GGAA conference.
- Development of a collective understanding of individual countries' activities and priorities for livestock emissions research, based on the results of the stocktake exercise. As well, feedback on the stocktake process and template, with a view to its refinement and recirculation to countries for their completion by end of November.
- Feedback from the Group on the draft Alliance Charter, as requested by the governance working group.
- Agreement that in the short term, the Livestock Group should focus its attention on:
 - Further analysis of countries' stocktake information, with a view to publishing this in the future.
 - Formation of an initial two sub-groups, one on Ruminants and the other on Non-Ruminants. Countries to notify contact points for participation and nominate individuals to lead these sub-groups **by 31 October 2010**.
 - Development of a set of topics/projects for immediate action by the sub-groups. A preliminary list was drawn up for consultation during October that included:
 - Facilitate data sharing and the development of protocols on animal breeding/genetics;
 - Development protocols and guidelines on measurement: N2O (chambers), SF6 good practice, CH4 chambers design;
 - Synthesis papers on growing areas of interest and/or mitigation potential, e.g. dietary supplements (oils), manure management, etc.
 - Creation of an international database of researchers and other experts (including policy) in livestock emissions, building on the existing LEARN database maintained by New Zealand.
 - Development of a communications plan for the Livestock Group. As part of this, countries to use appropriate national networks (e.g. animal societies) to raise domestic awareness of the Group. Closer links to the GGAA conference also to be explored (the next conference will be held in 2013 in Dublin, Ireland).

6 The above actions should be mostly completed in advance of the Group's next meeting, to be held as part of an Alliance senior officials meeting in France, 1-4 March 2011. The Livestock Group will then use this meeting in early 2011 to agree its longer term objectives and outcomes, including developing an agenda for priority actions (e.g. joint programming of research, foresight studies etc) and an approach for engaging the policy community, ahead of reporting on its progress to Alliance Ministers at the Ministerial Summit in mid-2011.

SUMMARY OF DISCUSSIONS

FRIDAY 8 OCTOBER – OPEN SESSION

7 The Livestock Research Group meeting was preceded by an open session from 9am-12pm on Friday 8 October with delegates from the GGAA conference. Around 190 people were in attendance.

8 Participants received an overview of the Alliance concept, its structure and approach from the Secretariat and an overview of the Livestock Research Group from its New Zealand and Dutch Co-coordinators, Dr Harry Clark (Director, New Zealand Agricultural Greenhouse Gas Research Centre) and Dr Martin Scholten (General Director, Animal Sciences Group, Wageningen UR). Presentations were also received from four examples of successful international networks in greenhouse gas and animal agriculture research:

- Joe Harrison from Washington State University on the Livestock and Poultry Environmental Learning Center, ‘connecting experts on manure with animal producers and their advisors’.
- Stephen Morgan Jones from Agriculture and AgriFood Canada on ‘finding partnership models that work’.
- Charlie Walthall from USDA’s Agricultural Research Service on the ‘Greenhouse gas Reduction through Agricultural Carbon Enhancement (GRACEnet) network’.
- Martin Scholten from Wageningen UR on the European ‘Animal Task Force’.

9 All presentations to this open session on the Alliance are available on the Alliance website¹. During the open session’s Q&A, the following key points were raised in terms of the potential role and contribution of the Livestock Group:

- Livestock emissions research and its discoveries must be well-connected to and used to inform policy-making processes and also extension activity at the farm level. The science community needs to be better at making its results “policy and farmer friendly”. The Livestock Group has a lot to offer these debates because of the Alliance’s broader aim of bridging science and policy worlds.
- Clearer links must also be made with social sciences research in terms of understanding the drivers of land management decisions and behavioural change, acknowledging that many/most of these drivers are not related to climate change, e.g. trade, economic development, infrastructure, other environmental factors etc.
- The above two points mean that there are a number of potential audiences for the Livestock Group’s work (e.g. scientists, policy makers, farmers, consumers etc). Perhaps the Alliance needs a third ‘cross-cutting issue’, on delivery of messages and communications?

¹ <http://www.globalresearchalliance.org/livestock-research-group.aspx>

- Early outputs and deliverables from the Livestock Group, e.g. “success stories”, will be important for garnering public support for the Group, and having it seen as a credible body of advice. Publishing a white paper or a policy forum paper in a generalist journal to publicise the Alliance with a wider international audience was also suggested.
- As well as clear messaging on the Group’s achievements, communication will also be needed on the links between its work and that of organisations in related/similar fields, such as the FAO and the CGIAR, to avoid the potential for confusion.
- The Livestock Group should avoid falling into a paternalistic “North-to-South” mindset, i.e. the developed world imposing its ideas on the developing world, and instead encourage an approach of sharing experiences and knowledge between all countries, irrespective of background or economic development. “We all have much to learn from each other”.
- GGAA delegates should make contact with their in-country Alliance representatives and involve themselves in the work of the Alliance.

FRIDAY 8 OCTOBER – CLOSED SESSION

Opening remarks

10 In opening the closed part of the Alliance meeting, the Livestock Research Group Co-coordinators welcomed representatives and provided a brief overview of the Group’s origins². The Co-coordinators set out their objectives for the Banff meeting as being to:

- Develop a collective vision for the Livestock Research Group, i.e. what does success look like;
- Explore the structure needed to achieve that vision;
- Identify priority actions; and
- Agree an implementation plan/road map

11 The Secretariat updated participants on progress with the Alliance’s establishment, including activities in the other Research Groups, development of the Charter, and upcoming meetings and milestones (refer to separate Presentations PDF). Of note were the following key dates:

- Friday 5 November 2010: Meeting of the Coordinators of the Research Groups and Cross-cutting Issues; Long Beach, California
- February/March 2011: 2nd Alliance Senior Officials Meeting including opportunity for the Livestock Group to meet again; venue TBC
- June 2011: Alliance Ministerial Summit, including Charter signing and presentations to Ministers from the Research Groups; venue TBC but New Zealand has offered to host

² The Livestock Group was formed at the Alliance Senior Officials Meeting in New Zealand in April 2010.

Alliance Stocktake

12 Alliance countries (members and observers) received the stocktake template in July for completion ahead of the Research Group meetings in September-November. Twenty two countries had submitted either their full stocktake or the livestock portion to the Secretariat ahead of the Banff meeting. Harry Clark presented an analysis of this information to the Group (refer to separate Presentations PDF), addressing the following: focus areas for livestock emissions research across countries; key outcomes; different domestic/international funding sources; and an exploration of ruminant vs. non-ruminant research and the gas and emissions pathways studied.

13 Three countries then presented on their experiences with completing the stocktake - Uruguay, Denmark and New Zealand (refer to separate Presentations PDF). In addition, the Group received a short presentation from Ghana on the place of agriculture within its national inventory and its efforts to set up a programme of work to further develop its inventory. Information gaps and poor quality data are a real concern for Ghana, hence the importance of aligning with groups such as the Alliance to help improve data capture and measurement techniques.

14 A roundtable followed these presentations where countries were invited to share their views on the stocktake process and how it could be improved for future use. The following is a summary of comments made during the roundtable:

- In general, countries found the stocktake to be a **helpful exercise** in terms of better understanding the extent of their own research efforts on agricultural GHGs. Countries also found it very useful to see how their efforts **compare to other countries**, to see who else is working in similar areas and what they are doing. It was suggested that completing the stocktake could be a prerequisite of joining the Alliance.
- For many, the exercise was the first time that key ministries and research institutions had coordinated across these areas of work. Given this, more time was needed to allow for proper **internal coordination** in order to complete the template. This was particularly important for countries requiring input to the stocktake from multiple institutions and individuals.
- Having **clearer information about the stocktake's objectives** and how its data would be used would also help facilitate countries' completion of the template and ensure better quality responses, particularly in terms of completing Part A ('Country Overview'), which it transpired had been the most difficult section to complete.
- It would be helpful in the future to receive the stocktake template in sections according to the Research Groups (e.g. livestock, cropping, rice), rather than as one form which countries then have to split up.
- The template was seen to be a good starting point for data capture. Several suggestions were made to improve it, although it was noted that care should be taken not to expand the questions too much as it would become a big(ger) burden on individuals to complete and could risk lesser quality results being returned. The **suggestions for improvement** were:
 - Each country should appoint one person responsible for the overall stocktake (in particular compiling the Country Overview information), and/or appoint single contacts for each component of stocktake e.g. livestock, paddy rice, croplands, etc.

- Further clarity of the definitions and look-up values would assist in determining the level of data required, e.g. what is the definition of a 'project'?
 - Useful to have a column for details on research outcomes, including the ability to distinguish between intermediate and final outcomes.
 - A clearer definition of 'full time equivalent (FTE)' or an alternative metric should be provided for measuring the human resource spent on projects. FTE is an unfamiliar term to many countries and so was a difficult measure to apply.
 - Useful to have a column to capture information about the amount of funding invested in each project and the source (e.g. international or national). As well as helping indicate the size of a project, this information would also help measure investment in agricultural GHG research worldwide.
 - The template should give countries two categories of projects: (i) projects that are ongoing, and (ii) projects that have been recently completed and enable provision of information about the start and end dates for projects (see comment). There was discussion about whether this should also include 'potential' projects, however it was agreed that this would be too speculative to include. Some countries confirmed that their current stocktake responses only cover current projects in 2010, not completed ones.
Comment: One of the aims is to get an actual overview of the worldwide research efforts in this field. To get this information past and present should not be mixed; so information about completed projects in the past is interesting but should be kept separate. In this context a database is needed where data of start and of end of projects can be given.
- The suggestion was made that stocktake responses should be compiled in a central and searchable database and made available to Alliance countries. The database should be kept up-to-date, although the challenges of doing this, including the resourcing required and the need for future archiving, were acknowledged. Agreement would be needed in the future of the regularity of these updates, i.e. annually etc.
 - The value of having a single point of contact for each country's stocktake was emphasised in terms of follow-up enquiries for particular countries.
 - The stocktake results should be useful to all countries, regardless of the size, focus or maturity of their research effort. Also, potentially the stocktake's results will not just be used by the research community but by the policy community as well. The Livestock Group will need to think about how the information can help support this community's needs.
 - Other suggestions included:
 - Creation of a separate contact database of researchers/other experts (including policy) working in the area of livestock emissions (potentially this could build on the existing LEARN³ database held by New Zealand).

³ Livestock Emissions Abatement Research Network: www.livestockemissions.net

- The stocktake results should be used to inform the creation of the Livestock Group's sub-structure and/or priority actions in the longer term.
- The co-coordinators' preliminary analysis of the stocktake data (refer Harry Clark's presentation) could be developed into an article for publication as a first piece of work from the Group.
- Annual update of the stocktake.

15 On the basis of this discussion, the following actions were agreed:

- Co-coordinators to discuss this stocktake feedback with the other Research Group Coordinators and the Secretariat at their meeting on 5 November, with a view to agreeing a revised template and also longer term use of stocktake data, including potential development of a database.
- Revised stocktake template and more comprehensive explanatory material to be circulated to countries for their completion by the end of November, so that a more complete analysis can be undertaken ahead of the next meeting of the Group in February/March 2011.
- New Zealand to review existing LEARN database for its potential to act as a contact database for the Livestock Group.
- Co-coordinators to further develop the livestock data analysis into a paper for publication.

Comment from the Governance working group Chair

16 Before ending the meeting for that day, the Co-coordinators invited Jamshed Merchant, Canadian Chair of the Alliance's governance working group (the group charged with drafting the Charter) to address the Livestock Group in advance of its governance discussions the following morning.

17 Jamshed Merchant commended countries on getting off to a good start with the very constructive discussions around the stocktake. Saturday's agenda was focused on how the Livestock Group would work and what it should seek to achieve. Merchant commented that we are all helping to build the Alliance, and this is the Livestock Group's opportunity to design its 'room' in the Alliance 'house'. The Group needed to think about what that should look like, how it would work with other Groups, how it would engage internally and externally, and the kinds of governance structures and support it required.

18 Merchant concluded his remarks by encouraging attendees to go home and start Alliance conversations in their countries, using their existing networks and building new ones to ensure that the Livestock Group and the Alliance is well known around the world.

SATURDAY 9 OCTOBER – CLOSED SESSION

Livestock Research Group governance

CHARTER FEEDBACK

19 The second day of the Livestock Group meeting began with a discussion of the draft Charter. The Secretariat presented an outline of the Charter to help facilitate this conversation (refer to separate Presentations PDF). The Alliance's governance group had requested feedback from the Research Groups in order to further develop the Charter. The specific sections for attention in the Charter were paragraphs 26-43 on the Research Groups and paragraphs 52-59 on Partners. The Group was asked to consider whether these draft sections were sufficiently enabling to support the needs of the Group, whether anything was missing, and whether anything was covered in too much detail.

Charter: Research Groups

20 In the discussion on the paragraphs relating to Research Groups, the following key points were made:

- *Para 27 and 42: Council decision required to amend the number and focus of Research Groups and cross-cutting issues:* Countries agreed that this was appropriate.
- *Para 28: Maximum of two contact points per country in each Research Group:* Countries agreed that this was appropriate.
- *Para 29: Research Group chairing arrangements:* There was a discussion on the role of the Research Group Chair and agreement that it should mirror the function currently performed by the Co-coordinators, e.g. coordinating the Group and driving momentum between meetings, and not just chairing meetings. Countries sought that the Charter be amended to reflect this. Countries also sought reference in the Charter to the length of the Chair's tenure. This could be achieved by including it in the second sentence of para 29.
- *Para 33: Mode of operating:* Some countries saw that this paragraph as currently drafted was unnecessarily prescriptive and potentially limiting (e.g. use of "will" instead of "may"), considering that as long as the Group was in compliance with paragraph 32, it should be able to adopt and amend whatever operating approaches necessary to achieve its objectives over time. Others saw it as a helpful list in terms of setting out the Alliance's minimum requirements of the Groups and therefore ensuring a basic level of consistency across the whole initiative. There was agreement that the opening of paragraph 33 should be altered so as not to be a prescriptive and exclusive list.
- *Paras 34-42: Steering Committee, sub-groups, cross-cutting issues:* Countries agreed that the language as drafted was sufficiently enabling to allow the Group to design an appropriate internal structure. Further clarification was sought on para 38. As currently drafted, this could be interpreted to mean that sub-groups can only comprise a sub-set of the Research Group members, i.e. countries' national representatives. However, countries should have the

flexibility to nominate other representatives to the sub-groups, as appropriate for the sub-group's particular focus and the interests of individual participating countries.

- *Para 43: Science Advisory Panel:* Countries agreed that in the longer term, the Alliance may need a body such as a science advisory panel. However, in the absence of any detail about the functions of such a body or its terms of reference, and with the existence of the enabling paragraph 20 (regarding the establishment of 'permanent or temporary entities'), the Group considered that paragraph 43 was surplus to requirements and should be deleted. In slower time, the Alliance as a whole should think about the need for a science advisory panel.
- *Other feedback:* There was concern that the Research Group section of the Charter does not contain sufficient reference to the need for the Groups' work to connect with and inform policy processes. However, it was decided that this would be more appropriately addressed through the Alliance's overarching mission and objectives rather than in the Research Group section. The Livestock Group sought that this be considered in further developing the front end of the Charter.
- There was also concern that under the current draft of the Charter (paragraph 49), observers cannot attend meetings of the Research Groups, only meetings of the Council. This should be corrected.

Charter: Partners

21 The Charter's current section on 'partners' (paragraphs 52-59) was considered to be confusing. Countries could see the need for different kinds of partners in the Alliance, and at different levels. For example: partners who are involved in the work of specific projects, partners who are donors to the whole Alliance but not involved in project work per se, partners who are not affiliated to a particular country (e.g. international organisations), partners who provide explicit services e.g. technology transfer or extension, and so on. It was agreed that until we know how the Research Groups will operate, it is difficult to be clear about how they will work with partners. Countries suggested that in the first instance, this section of the Charter could be simplified and made more enabling so as not to limit or attempt to prescribe the potential partnerships that might take place.

22 Concern was expressed at the Charter's reference to partners as being 'individuals'. Countries in the Livestock Group saw this as inappropriate and considered that partners should be organisations or institutions. Individuals not already affiliated with a country's official Alliance representation but needing to be involved in the Research Groups should be seen more as 'technical experts'. In this way, they could be invited in by Research Groups at the project level (akin to the Paddy Rice Research Group consideration of them as 'resource persons'), rather than as partners. The Charter should be revised to remove reference to partners as 'individuals' in paragraphs 52-59. The role of 'technical experts/resource persons' should be addressed in the Research Group section of the Charter. This should also include guidelines around how such individuals could be invited to participate in the work of the Research Groups.

STRUCTURE AND FUNCTION

Livestock Group objectives and possible sub-groups

23 The Co-coordinators began by presenting their ideas for the Group's structure and function for discussion. Martin Scholten set the scene by outlining the key issues influencing livestock production's impact on climate change (refer to separate Presentations PDF). To help organise this

complex picture in terms of the Livestock Group’s structure, Scholten proposed the formation of a series of sub-Groups, so-called ‘expert groups’ on different topics and themes: Ruminants; Non-ruminants; Manure; Housing; Grazing; Systems Analysis. Suggestions were also made for possible objectives for the Livestock Group in the short and long term, as follows:

Short term objectives:	Longer term objectives:
Identify and list the requirements of the different stakeholders on the Livestock Group, e.g. to ensure we are clear on what the world is expecting of us	Understand and respond to the requirements of stakeholders
Share and exchange information and methodologies, e.g. disseminate what we already know	Joint projects and programming
Identify the main factors relating to GHG emissions from animal agriculture, drawing from the stocktake data to inform the development of possible priority areas	Agree the priority areas of work in terms of GHG emissions from animal agriculture, identifying the most effective measures for mitigation, etc.

24 There was a lengthy discussion on the Group’s possible objectives. Countries came back to the need for clear and achievable short term objectives to help deliver early results for the Group. This was seen as important for reporting back to Ministers at the proposed Summit in mid-2011 and also for reporting to the broader community in terms of demonstrating the value of the Group and of the Alliance. Such objectives would help focus the initial output of any sub-groups, and would allow for slightly slower time in terms of settling on the Group’s longer term objectives and areas of focus.

25 Turning to the proposal for sub-groups, countries agreed with this idea although reflected that a more inclusive title could be ‘working groups’ or ‘thematic groups’ rather than calling them ‘expert groups’. As well, any sub-groups should respect and provide for countries’ different levels of domestic expertise and experience to ensure that all countries can benefit from participating.

26 There was agreement that the sub-groups should be outcome focused. As such, a broader membership might be warranted over time than just researchers or the science community e.g. policy makers and people involved in implementation and extension, such as farmer organisations. Sub-groups will also need to think about how they communicate their work to these broader audiences and communities – a communications strategy could be helpful.

27 Countries agreed that to keep the Livestock Group’s short term objectives manageable and to ensure delivery of outcomes, it would be best to focus on just two sub-groups for now – Ruminants and Non-Ruminants – and to let those groups identify any further thematic areas as appropriate in the future (e.g. manure/housing). Limiting the number of sub-groups to two at this stage would also make it easier for countries with fewer researchers to participate.

28 There was a short discussion on coordination of the sub-groups, and their relationship to the broader Livestock Group. It was commented that these sub-groups would essentially be the engine of the Livestock Group, i.e. where the work happened, and so would need good leadership in order to get action happening, maintain momentum, and report back to the Livestock Group. A potential risk was identified that these sub-groups could potentially become mini Research Groups in themselves, and so it was agreed that the Livestock Group had an important oversight role to maintain. It was noted that the Charter as currently drafted states that sub-groups can only undertake work as directed by the Research Group (para 39) and so supports the proposed hierarchy for the Livestock Group. The Co-coordinators of the Group would steer its direction and work in cooperation with the leaders of the two sub-groups.

29 In closing this discussion, the Co-coordinators invited countries to indicate their interest in participating in one or both of the sub-groups and to provide appropriate contact details by **31 October 2010**. Countries were also invited to nominate leaders for these sub-groups by the same date. The Co-coordinators would then make their decisions regarding leadership and inform the members of the Group. The sub-groups would begin their work, based on an agreed set of topics/areas (refer to (g) on page 11 of this report) and report progress at the next meeting of the Group (February/March 2011).

Linking with the Cross-cutting Issues

30 The countries coordinating the Alliance's two Cross-cutting Issues (soil carbon & nitrogen cycling; inventory/measurement) gave brief presentations on how they saw these connecting with the Research Groups (refer separate Presentations PDF). It was acknowledged that it was early days for the Cross-cutting Issues as they would not meet until after the Research Groups had met.

31 In the first instance, the role of the Cross-cutting Issues was seen to be advisory and facilitative, focusing on information, knowledge and data sharing. Assisting the Groups with developing common protocols, guidelines and databases was also seen as a helpful contribution, along with improving methodologies. Workshops were envisaged in 2011 to complement/support the Research Groups. It was not the intent of the Cross-cutting Issues to act as Research Groups themselves, nor to duplicate or overlap with the work of the Research Groups. In that sense, it would be important to have good communication between the Cross-cutting Issues and the Research Groups. The Secretariat noted that all Coordinators (Research Groups and Cross-cutting Issues) would participate in the meeting in Long Beach on November 5 to help ensure clarity of role and function.

CONCLUSIONS

32 In concluding the meeting, the Co-coordinators presented a summary of the actions arising from the meeting. Following a short discussion, countries agreed that in the short term these would be:

- a) **By 31 October 2010:** Countries to indicate to the Co-coordinators: (a) their participation in either/both the Ruminant sub-group and the Non-Ruminant sub-group, including representatives' names; and (b) any nominations for individuals to lead each of the two sub-groups.
- b) **By early November 2010:** Coordinators to re-circulate revised stocktake template and accompanying guidance.
- c) **By end November 2010:** Countries to complete the updated stocktake and return results to the Secretariat.
- d) At their meeting on 5 November, Coordinators to discuss how the Research Groups and the Cross-cutting Issues will work together in the future.
- e) Creation of a database of relevant contacts for the Livestock Group, including researchers and other experts (e.g. policy). New Zealand to explore the possibility of using its existing LEARN database as the basis for this.
- f) Development of a communications plan to ensure the Livestock Group's messaging is well targeted. As part of this, countries are encouraged to use their existing domestic networks (e.g. national animal societies) to promote the work of the Group. In addition, links should be

explored with the GGAA conference (the next one is scheduled to be held in Dublin, Ireland in 2013). Overall, the Secretariat should be involved in developing the communications plan to ensure consistency with broader Alliance messages.

- g) Agreement of a set of topic areas for immediate action by the sub-groups. Initial proposals put forward by countries in the Banff meeting were:
- Publish the stocktake analysis (also connected to (c) above);
 - Facilitate data sharing and the development of protocols on animal breeding/genetics;
 - Development protocols and guidelines on measurement: N2O (chambers), SF6 good practice, CH4 chambers design;
 - Synthesis papers on growing areas of interest and/or mitigation potential, e.g. dietary supplements (oils), manure management.

33 Regarding (g) above, it was agreed that these proposed topics should be circulated to all countries in the Group for feedback by **31 October 2010**. Further ideas for topics were also welcomed.

34 The Co-coordinators also shared their thoughts on possible longer term objectives as being:

1. Agreeing the process for maintaining and the updating the stocktake;
2. Developing a 'forecast scenario study', i.e. placing the Livestock Group's work in the context of global agricultural production and climate change;
3. Developing an agenda for the Group's priority actions in the longer term, including joint programming of research ; and
4. Exploring the integration with social science expertise.

35 Countries considered that these longer term objectives needed proper discussion, but that this was not possible with the time remaining at the Banff meeting. The Co-coordinators would prepare more detail on these ideas for discussion at the next meeting of the Group.

36 In closing the meeting, the Co-coordinators thanked countries for their active and constructive participation over the two days. They thought it was an excellent meeting, with strong commitment from countries to making the Livestock Group a success, recognising the many different backgrounds around the table but noting the shared ambitions for what the Group could achieve in the future.

APPENDIX 1: Participants List

Country	Attendees
Alliance Member Countries	
Argentina	<p>Med Vet Guillermo Berra: Researcher INTA (gberra@cnia.inta.gov.ar)</p> <p>Agr Ing Laura Finster: Researcher INTA (lfinster@cnia.inta.gov.ar)</p>
Australia	<p>Lee Nelson: Director, Research and Adaptation, Department of Agriculture, Fisheries and Forestry (DAFF) (lee.nelson@daff.gov.au)</p> <p>Josh Francis: Policy Officer, DAFF (josh.francis@daff.gov.au)</p> <p>Dr Beverley Henry: Queensland University of Technology (beverley.henry@qut.edu.au)</p>
Canada	<p>Jamshed Merchant: Assistant Deputy Minister, Agriculture & Agri-Food Canada (jamshed.merchant@agr.gc.ca)</p> <p>Dr Rick Butts: Agriculture and Agri-Food Canada (rick.butts@agr.gc.ca)</p> <p>Brian McConkey: Agriculture and Agri-Food Canada (brian.mcconkey@agr.gc.ca)</p> <p>Robert Patzer: Director, International Partnerships and Policy, Agriculture & Agri-Food Canada (robert.patzer@agr.gc.ca)</p> <p>Scott Wright: Agriculture and Agri-Food Canada (scott.wright@agr.gc.ca)</p>
Chile	Dr Marta Alfaro: INIA (malfaro@inia.cl)
Colombia	Dr Miguel Angel Ayarza: Coordinator of the Network on Agriculture and Climate Change, CORPOICA (mayarza@corpoica.org.co)
Denmark	Dr. Peter Lund: Senior Scientist, Department of Animal Health and Bioscience, Research Centre Foulum, Faculty of Agricultural Sciences, University of Aarhus (Peter.Lund@agrsci.dk)
France	Diego Morgavi: National Institute of Agriculture Research (INRA), (diego.morgavi@clermont.inra.fr)
Germany	Karl-Heinz Südekum: Professor of Animal Nutrition, Institute of Animal Science, University of Bonn (ksue@itw.uni-bonn.de)
Ghana	Dr Nicholas Iddi: National Project Coordinator, Ministry of Environment, Science and Technology (nicholasiddi@yahoo.com)
India	Unable to attend
Indonesia	Dr Amilus Thalib: Indonesian Centre for Animal Research and Development, Ministry of Agriculture (am_thalib@yahoo.com ; crianci@indo.net.id)
Ireland	<p>Liam Kinsella: Department of Agriculture, Fisheries and Food (liam.kinsella@agriculture.gov.ie)</p> <p>Padraig O'Kiely: Teagasc (padraig.okiely@teagasc.ie)</p>
Japan	Unable to attend
Malaysia	Unable to attend
Mexico	Dr Luis Ortega-Reyes: Assistant General Director, Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (luis.ortega@sagarpa.gob.mx)
Netherlands	<p>Jac Meijs: Programme Manager, Wageningen UR (jac.meijs@wur.nl)</p> <p>Andre Bannink: Animal Sciences Group, Wageningen UR (andre.bannink@wur.nl)</p> <p>Jan Dijkstra: Animal Nutrition Group, Wageningen UR (jan.dijkstra@wur.nl)</p>

New Zealand	<p>Peter Benfell: General Manager, AgResearch (peter.benfell@agresearch.co.nz)</p> <p>Mark Aspin: Pastoral Greenhouse Gas Research Consortium (mark.aspin@pggrc.co.nz)</p> <p>Heather Went: Centre Operations Manager, New Zealand Agricultural Greenhouse Gas Research Centre (heather.went@nzagrc.org.nz)</p> <p>Erica van Reenen: Ministry of Agriculture and Forestry (erica.vanreenen@maf.govt.nz)</p> <p>Koro Dickinson: New Zealand High Commission, Ottawa, Canada (koro.dickinson@mfat.govt.nz)</p>
Norway	Dr Odd Magne Harstad: Professor, Norwegian University of Life Sciences (odd.harstad@umb.no)
Pakistan	Unable to attend
Peru	Unable to attend
Philippines	Unable to attend
Russia	Unable to attend
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