GLOBAL RESEARCH ALLIANCE
ON AGRICULTURAL GREENHOUSE GASES

ALLIANCE COUNCIL MEETING REPORT

Ministry of Economic Affairs and the Hague Meeting Centre New Babylon, The Hague; and Wageningen Campus, Wageningen, the Netherlands

Monday 16 June – Thursday 19 June 2014

Meeting Report

OVERVIEW

The fourth Alliance Council meeting took place on Monday 16 to Thursday 19 June 2014 in The Hague and Wageningen University, the Netherlands. Professor Rudy Rabbinge incoming Chair of the Alliance Council opened the meeting on Monday afternoon and welcomed all delegates to the Ministry of Economic Affairs in the Netherlands.

Uruguay (Walter Oyhantcabal, Ministry of Agriculture), as outgoing Chair, then handed the Chair over to the Netherlands (Professor Rudy Rabbinge, Wageningen University). Secretariat support was provided by Deborah Knox and Melissa Quarrie from New Zealand.

This report is a summary of the key discussions and outcomes from the meeting.

PARTICIPANTS

The meeting was attended by 51 representatives from 21 member countries and other invited guests:

- **Alliance Members attending:** Argentina, Belgium, Brazil, Canada, China, France, Germany, Ireland, Italy, Japan, Mexico, the Netherlands, New Zealand, Paraguay, Spain, Sweden, Switzerland, Thailand, UK, USA, Uruguay.
- **Alliance Members unable to attend:** Australia, Bolivia, Chile, Colombia, Costa Rica, Denmark, Ecuador, Finland, Ghana, Honduras, Indonesia, Korea, Malaysia, Nicaragua, Norway, Panama, Peru, Philippines, Sri Lanka, Vietnam.
- **Observer Countries attending:** Lithuania, Poland, Tunisia.
- **Invited Partners attending:** World Bank, World Farmers' Organisation, FONTAGRO-Inter-American Development Bank
- **Other invited organisations attending:** CABI, Climate and Clean Air Coalition, Sustainable Agriculture Initiative Platform

Refer to Appendix 1 for a full participants' list.

KEY OUTCOMES OF MEETING AND ACTION POINTS

Outcomes	Action	By when
Council		
Uruguay handed over Council Chairing responsibilities to the Netherlands	completed	
Vice-chair of Alliance Council to be identified, New Zealand confirmed as interim Vice-Chair (will not be the 2015 Chair)	Council Chair, Secretariat, Council Members	Before 2015 Council Meeting
Chair to send letter to Alliance Ministers outlining achievements and objectives for the next year and requesting support for the Alliance.	Council Chair, Secretariat, Council Members	Draft to be circulated to Council August 2014
Council to continue working with current Partners to identify concrete actions.	Council Chair, Secretariat, Council Members	ongoing
Council to continue identifying potential Partners and develop guidelines for new Partners.	Council Chair, Secretariat, Council Members	2015 Council meeting
Chair to discuss potential Partnership with the CCAC Secretariat.	Council Chair, Secretariat.	Report back to Council following initial discussions.
Annual review of the Alliance Communication Policy.	Council Members	2015 Council meeting
Research and Cross-cutting Groups		
Framing the profile of the Research Groups, outcomes, partner collaborations and synergies with adaptation	Research Group Co-Chairs	For RG discussion
Developing partner relationships, roadmaps for engagement	Research Group Co-Chairs	For RG discussion
Communication and promotion of activities	Research Group Co-Chairs, Member countries	ongoing
Adaptation synergies stocktake	Research Group Co-Chairs, Member countries, Secretariat	For RG discussion
Cross-Cutting Issues, creation of Networks supported by RG representatives.	Research Group Co-Chairs, Member countries	For RG discussion
I&M Cross-cutting Research Group activities and focus document, updated following Council feedback	I&M Co-Chairs, Member countries	For RG discussion
Members		
Promote the Alliance aims and achievements at the UN Climate Summit	Council Chair, Secretariat	23 September 2014
Identify stable country representatives for each Research Group and the Alliance Council	Member countries, Secretariat	Update contacts by September 2014
Build Alliance activities on to national research	Member countries	ongoing

programmes		
Create/Update Member country webpages outlining national activities and participation in Research Groups	Member countries, Secretariat	Contact secretariat by November 2014
Secretariat		
Develop terms of reference/guidelines for the role of the Alliance Council Member	Secretariat, Member countries	Ahead of 2015 Council meeting
Develop discussion for future of the Secretariat	Secretariat, New Zealand	2015 Council meeting
Develop work plan for Council based on discussions at Council meeting	Secretariat , Council Chair	Draft sent by to Council August 2014
Include action items in Alliance Council report	Alliance Secretariat	Draft circulated July 2014

SUMMARY OF DISCUSSIONS

OPENING REMARKS

1. Professor Rudy Rabbinge, Wageningen University, The Netherlands; opened the Council meeting and welcomed all participants to the fourth Alliance Council meeting, hosted by the Ministry of Economic Affairs in the Hague. The Netherlands looks forward to continuing the work of the Council as established by previous Chairs, New Zealand, Canada, and Uruguay. The Council meeting discussions are designed to encourage discussion among Members, Observers and Partners and will cover:

1. Promoting the Global Research Alliance on Agricultural Greenhouse Gases (the Alliance) in the wider agriculture and climate change space.
2. The Council role in supporting the workplans and future activities of the Research Groups.
3. A visit to Wageningen University to explore the role of agricultural research from universities, research institutes and private sector in developing resilient systems and reducing greenhouse gas emissions.
4. Changing systems to produce less greenhouse gas emissions; intensify production.
5. Council Partnerships and collaborations with other organizations.

CHAIR HANDOVER

2. Uruguay as outgoing Chair provided thoughts from the past year beginning by thanking the Netherlands for their organisation of this Council meeting and welcoming the eight new members of the Alliance, as well as new partners and observers attending. Uruguay as one of the first Countries to join the Alliance was honoured to support the Council during its term. The role of Council Chair has become very collaborative, working as a team with the Secretariat, Vice-Chair and the Research Group Co-Chairs.

3. Agriculture and climate change challenges must be addressed within the scope of food security and agro-ecosystems. The key focus of the Alliance is to decrease emissions intensity and look for the

co-benefits of resilience and adaptive capacity which are more easily communicated to farmers. The Alliance has grown to form many links across governments and research institutes with a strength being that many of the key people who understand agriculture's role in reducing greenhouse gas emissions are involved in the Alliance.

4. Future opportunities for the Alliance:

- Recognise the importance of partnerships on a project basis and for coordinating regional activities
- Creating strategic workplans that take a medium term view and could be used to communicate with partner organizations and attract greater resources.
- Opportunities for the Alliance to provide inventory support with changes in future inventory reporting expected to increase requirements from developing countries.
- Increased promotion of resilience and adaptive capacity goals in the Alliance and from this, produce tangible products/outcomes for policy makers and farmers
- Improve communication between the Research Groups and Council.

EXPECTATIONS FOR THE ALLIANCE ACROSS THE NEXT YEAR

5. Professor Rudy Rabbinge presented to the Group opportunities that the Netherlands sees for the Alliance to meet agriculture and climate change challenges and the aims for its term as Chair. The Alliance's goals to reduce emissions while increasing productivity include the global challenges of ensuring we are producing food for all, that the products produced are of high value, and that the production systems used have a low impact on the environment and do not increase climate change. Climate change issues will only be solved by considering mitigation and adaptation activities in combination.

6. To improve productivity and limit agriculture's impact on the climate farming needs to shift from a craft into an industry. Farmers and the food industry must work together to meet the multiple objectives of food production, improved human health and reducing environmental impact. In return government, science and industry should all work closely together to produce science for the purpose of improving agricultural practices.

7. A new opportunity for the Council to consider is how the Alliance might link with the Alliance on Climate-Smart Agriculture (ACSA). The ACSA should build on the ideas, knowledge and expertise of the Alliance and Alliance achievements to rapidly progress their goals. The ACSA has generated political support and increased interest in the idea that agriculture is a part of the solution and should combine policy in the areas of food security, adaptation and mitigation. The Alliance has developed research and networks to address these concerns already and this should be used to leverage support and create links to the ACSA.

PREVIOUS COUNCIL MEETING AND WORKPLAN PROGRESS

8. The Secretariat provided an overview of the minutes from the previous Council Meeting in Montevideo, Uruguay and presented the progress on the Council workplan covering the activities under six strategic objectives:

- Promoting the achievement of tangible results for farmers
- Promoting mitigation and adaptation synergies
- Expanding Membership and engagement
- Communicating tangible results
- Engaging key global institutions as partners
- Establishing procedures for the reporting of Research and Cross-Cutting Group activities.

CHALLENGES IN AGRICULTURE, FOOD SECURITY AND CLIMATE CHANGE

9. Frank Heemskerk an Executive Director with the World Bank provided an overview of the World Bank including recent changes to funding, improving the Partnership with the Alliance, and funding activities that can support a growing global population alongside erratic climate conditions.

10. The Alliance is an example of a fruitful collaboration addressing global concerns around agriculture production and climate change. Agriculture needs to make changes and reduce its climate footprint as projections show that unless agriculture can reduce greenhouse gases it will contribute the major percentage of global emissions. Six main areas will be responsible for changing agriculture and food production over the coming years and will require farmers to produce as much food in the next 40 years as has been produced over the last thousand years. These are:

1. Climate Change, weather extremes reducing yields
2. Food availability due to population growth
3. Decline of food stocks leading to higher food prices
4. Global dietary changes leading to a greater demand for meat and dairy products
5. Globalisation of food systems
6. Post harvest losses and waste within homes

<u>Nexus of food security and climate change and Climate-Smart Agriculture</u>

11. There needs to be a shift in the way landscapes are managed to rapidly increase yields and develop resilient systems to protect vulnerable systems and communities. Agriculture needs to identify ways to become more efficient and replicate the successes of agricultural research and trials on a larger scale. For example; livestock efficiency could be increased by improving the production levels on farm so they are producing as much as the top 10% of farms are now, increasing the use of agroforestry in Africa could increase land productivity and carbon storage while reduced erosion and storing water, and expanding alternate wetting and drying (AWD) water management practices in paddy rice systems can improve yields as much as 10%.

12. The World Bank strategy is to leverage efforts similar to those mentioned above and increase knowledge sharing across regions. The World Bank is growing new lending from USD16 billion to 28

billion and see opportunities to work closer with the Alliance to develop evidence based solutions for agricultural efficiency.

RESEARCH AND CROSS-CUTTING GROUP PRESENTATIONS

13. Each of the Research and Cross-Cutting Groups were asked to present past and future outcomes and issues to the Council and engage the Council in discussions and expressions of commitment. Discussions of the Research and Cross-Cutting Groups took place over two days during the Council meeting and were influenced by the other presentations and discussions across the week.

14. Martin Scholten (Wageningen University, the Netherlands) on behalf of all the Co-Chairs presented an overview to the Council that reflected discussions from the Co-Chairs meeting that had taken place just prior to the Council meeting. This presentation identified five key areas of work for all Groups and considered the Council support that will be required for each.

1. Framing our profile to show the Alliance is about research for impact, focussed on mitigation in a wider context and working globally with partners.
2. Key global players; the Alliance works with four key Partners (FAO, CCAC, World Bank, CGIAR) and others. Research Groups require guidance from the Council to decide how we interact with new initiatives.
3. Communicating our achievements: so far this has been only through reporting to the Council. We need each Research Group and the Alliance as a whole to go beyond this and communicate our successes.
4. Adaptation synergies in the Research Groups: propose to Council that an additional stocktake is completed, to collate studies on adaptation looking for the trade-offs and synergies with mitigation.
5. Communication between the Groups needs more of a two way approach ensuring that Research Groups are supporting the Cross-Cutting Groups (and attending meetings/workshops) as much as the Cross-Cutting Groups are leading on Cross-Cutting issues.

15. The Research Groups have successfully focused on bringing together the science community and developing global science networks. The next step for the Groups is to extend support to farmers, policy and partners although these actions will require support from Members and the Alliance Council.

16. The Research Groups also request that members identify a stable national representative to participate in each Group. The Groups plan and develop activities between the annual meetings and need a national representative who can coordinate national actions throughout the year. The connections the representative builds with the research community is the way the Alliance can have real impact within Member countries.

17. Additional resourcing is also required to implement research outcomes, the Groups are work on the research end and look to the Alliance Partners to fund activities beyond research.

Croplands Research Group

18. The presentation from the Croplands Research Group was given by Alan Franzluebbers (USDA-ARS) as the Brazilian Co-Chairs were not able to attend the Council meeting. The Croplands Research Group focuses on the management of croplands systems, including the sequestration of carbon in soil and quantifying these changes. The emphasis is on developing technologies and management practices that can reduce emissions of agricultural greenhouse gases (CO_2, N_2O and CH_4) but also on understanding the effects of management practices such as climate conditions, tillage and crop rotation on the condition of the soil.

19. The activities and component areas that the Group concentrates on are led by countries that have identified an interest and a will to coordinate activities. It is important that each country identifies the specific issues that are of importance to their agricultural systems and brings ideas to the Group that can develop research and share knowledge. The Council should support representatives to the Research Groups and encourage participation in activities that bring benefit to countries. Future activities that the Groups need Council support to achieve are:

- Developing collaborations with databases, networks and Cross-Cutting Groups,
- Cultivate effective partnerships: CCAFS, universities and government,
- Communicate with stakeholders within the Alliance but also out to policies makers, farmers and extension workers and including both existing and additional partners,
- Synergies between mitigation and adaptation such as conservation agriculture,
- Resourcing our ambitions, how can the Alliance do this more effectively.

20. The Group aims to identify simple mitigation options that can work across a range of climates, crop types, management practices and also a range of soils. Developing databases and improving models are some of the ways to identify the differences and potential solutions that can have a wide effect across several factors.

21. The strength of the Alliance is in its global membership, with the Research Groups able to build on the activities already underway, comparing management systems within countries and validating national best practice while identifying options that may improve production for other countries with similar conditions. The Alliance can identify information sources and help assemble the data to support basic emission factor calculations; this type of activity would involve partner organisations and link to the workplan of the Inventories and Monitoring Cross-Cutting Group, and would not be the work of the Alliance on its own.

22. The representative from CABI mentioned that the Plantwise project (http://www.plantwise.org/) has developed a set of tools to help farmers diagnose on-farm pest and diseases. The project is willing to share the lessons they have learnt regarding packaging information in a way that suits the audience and how to communicate science outcomes to farmers.

Inventories and Monitoring Cross-Cutting Group

23. The Co-Chairs of the Inventories and Monitoring (I&M) Group, Jan Verhagen (Wageningen, the Netherlands) and Brian McConkey (Agriculture and Agri-Food Canada) both presented on the I&M Groups workplan and challenges it faces. The Co-Chairs announced a decision to change the name of the Group from Inventories and Measurement to Inventories and Monitoring. This change better reflects the activities and focus of the Group which is to consider the changes in emissions overtime and consider the measurement techniques/ technologies used to monitor these changes. The Group are not responsible for individual measurements and sampling of greenhouse gases as this work already occurs in the Research Groups. "Inventories" activities include upscaling greenhouse gas emissions estimates to consider the effects of mitigation and adaptation actions, and will not be limited to IPCC guidelines and requirements. "Monitoring" activities are the assessment of states and trends of emissions following the application of adaptation and mitigation options.

24. Ahead of the Council meeting the Co-Chairs circulated a discussion document (Appendix 2) explaining the difficulties that have been faced in establishing this Group. The Group is a mix of research and government, which has proven to be a difficult mix with participants not necessarily able to participate in discussions across a range of activities. The I&M Group require by-in from Members, and have chosen to focus the activities in their workplan to the four areas where an active lead country is developing the work area. The Group will also improve the cross-cutting nature of the work and organise Network meetings alongside Research Group meetings. However, to implement the changes to the Group countries need stable funding and support from Council for representatives to attend meetings.

25. The Co-Chairs presented future ambitions for the Groups direction and change in focus:

1. Data management and information flow
    - There is a need to support the organisation of inventories within many countries and to provide guidance around data collection and storage.
    - Research should inform inventory development and inventory practitioners should understand the science behind the data.
2. Lessons learnt and best practice
    - Provide guidance on how to move inventories from the Teir 1 default numbers to Teir 2 or 3 measurements.
3. Economics of mitigation and adaptation
    - MAC curves, developing methodologies and guidance using the experience of Alliance members.
4. Metrics of adaptation and mitigation
    - This would be a large research effort and require coordination from a group of countries, but could produce a credible piece of work.

26. The Council supported the comments of the I&M Co-Chairs and the direction they propose for the Group. It was noted that government employees are often the nominated participants for the I&M

Group and they should be encouraged by Council representatives to contribute. It may not be seen as necessary for inventory compilers to become involved in international collaborations.

27. The project considering how earth observation techniques can be used in inventory is led by the UK and was developed nationally to connect with the Alliance ensuring that national funding can be used more widely. Countries interested in participating in the earth observation project should contact the project leaders through the Group.

28. The Co-Chairs agreed to revise the discussion document on the future directions for the Group, to reflect the discussions and decisions of the Council.

Livestock Research Group

29. Livestock Research Group (LRG) Co-Chair Harry Clark (New Zealand Agricultural Greenhouse Gas Research Centre) presented an overview of the LRG to the Council and request to support future ambitions of the Group.

30. The LRG has created six networks which work in the core areas of the Groups interest and contribute to wider capability building and training under the LRG. The networks and the activities they undertake are all looking to create something that would not be achieved without the Alliance. The LRG promotes science to achieve action, which will be used to support policy makers, farmers and partner organisations. The partner role is essential to the way in which the Alliance works; the Research Groups have unique resources to offer partners by drawing on a global network of information and the ability to take up information from partners.

31. Future actions:

1. Communicating our achievements: focus on demonstrating what has been achieved and how the Alliance makes a difference.
2. Strengthen connections to Africa: support the Alliance aim to increase African membership e.g LRG training workshop in South Africa, September 2014 will include Alliance promotion to non-member countries.
3. Developing practical management options for manure, enteric methane, and grasslands with partners.
4. Identify integrated management options to improve livestock productivity through breeding, animal feed and health which support aims to improve productivity and efficiency while reducing the carbon footprint of the sector.
5. Resourcing ambitions with support from Members and Partners. This is not always requesting new and additional resourcing but aligning national funds and organising existing money to fund scientists. From Partners this may mean identifying mutually beneficial projects.

32. The Council noted that the Networks enable the LRG to work across different systems and identify real productivity and sustainability improvements. Members who participate in the networks bring expertise from their own country systems and both contribute to and gain a wider understanding of the processes and improvements possible.

33. The Alliance needs to bring in existing and new partners to create stronger links in Africa. The focus to link the research community with government officials will need to be supported by connection and promotion of the Alliance through existing regional/pan Africa organisations. The LRG has connections through ILRI, but is looking for suggestions and contacts within other influential organisations – suggestions include the Comprehensive Africa Agriculture Development Programme (CAADP) http://www.nepad-caadp.net/, and the Alliance for a Green Revolution in Africa (AGRA) http://agra-alliance.org/.

34. The LRG needs to be clearer about communicating the work underway in each of the Networks. However, the responsibility of sharing project information and outcomes more widely requires good national contact points at the Research Group and the Council levels to disseminate information within member countries.

35. To improve efficiency in the livestock sector Council members need to support efficiency options that are relevant to their region. Agricultural improvements need to be fit to each environment, system and social situation to develop the solutions that can meet local circumstances. The development of projects such as the LRG GLEAM project in collaboration with FAO, aims to identify simple easy wins by implementing existing practices and encouraging better adoption across a range of existing technologies. Reducing greenhouse gas emissions will be a co-benefit of improving practices on farm.

36. The success of the LRG is the result of dedicated support from governments for the time of the Co-Chairs and the support of Members through the LRG Networks. Council members should look for ways that they can create some flexibility around research funding and to allow important networking to occur. Developing and supporting networks is a low cost option; the research and funding for research already exists and only requires coordination.

Soil Carbon and Nitrogen Cycling Cross-Cutting Group

37. Soil Carbon and Nitrogen Cycling Cross-Cutting Group (SCN) Co-Chair Jean François Soussana (INRA, France) presented the work of the Group via video link. The SCN is closely connected with the work of the other Research Groups through the development of improved modelling methods for mitigation options across agricultural systems. The Group coordinates scientists to test mitigation options through the comparison of models or by using combinations/components of different models. The eventual outcome is that the SCN will develop a platform of models that can be applied to identify potential mitigation options for specific systems and conditions. The Group is working initially with both arable crops (with a wheat pilot) and with grasslands, and will eventually move into more complex integrated livestock/crop systems.

38. Currently the Group has achieved funding under the European Joint Programming Initiative (JPI) funding mechanism of four projects that support the SCN activities and has organized a series of meetings in Europe, USA and Australia. An internationally coordinated benchmark of 25 models has been launched based on site data from seven contrasted world regions. Moreover, the sensitivity to

climate change of yields, GHG emissions and soil carbon sequestration is being tested in an internationally coordinated exercise run in collaboration with AgMIP.

39. The models that the group are testing were not designed to test mitigation options specifically, and are mostly process based models including GHG emissions and removals developed for use in research and extension. Although these models are able to be applied to a range of conditions, a clear deliverable for the SCN would be to identify which model can be used to test a specific mitigation option under different systems.

40. The Co-Chairs of the other Research Groups expressed support for the activities of the SCN which they see as an integration point for work that is taking place in other groups. Benchmarking models shows which models really work and there are opportunities to include crop or livestock specific models that are commonly used by participants in the other Research Groups. The Cross-Cutting teams also play a key role looking beyond greenhouse gas emissions to consider opportunities for storage of carbon in agricultural soils.

Paddy Rice Research Group

41. Paddy Rice Research Group Co-Chair, Dr Kazuyuki Yagi (NIAES, Japan) presented the vision and background of this Group. The difference between the Paddy Rice Research Group and the Croplands Research Group is that the focus on methane emissions which make up a large percentage of emissions from rice as opposed to other crop systems. The Group also considers trade-offs between methane and nitrous oxide and the ability of paddy soils to store carbon. The Group collaborates with many Partner organisations, with international reserach networks, and rice experts from non-member countries; building on their knowledge and existing networks.

42. Recently the first meeting of the Latin America Sub-Group was held in Cali, Colombia at CIAT. The meeting outcomes included: each country developing its own action plan, identifying the next steps for the region, and developing a multi-site project relevant to Latin American rice systems, which lead to the GreenRice project concept note. Dr Gonzalo Zorrilla (INIA-Uruguay) as the other Co-Chair of the Paddy Rice Research Group noted that now is the ideal time to establish an America sub-Group as some of the new members are just starting to consider measuring greenhouse gas emissions and have funding available for this purpose. The Alliance can offer support and coordinate efforts across the region.

43. The Group held a scientific symposium on “Mitigating Greenhouse Gas Emissions from Rice Paddy Soils” at the World Congress of Soil Science, 13 June 2014 in Jeju, Korea, which was attended by representatives from a number of member countries. The symposium included five speakers and 17 scientific poster presentations.

44. Messages to the Council:

- Support greater mobilisation of resources by providing experts time and funds.
- Identification of consistent reference points.
- Strengthen participation in the sub-Groups and invite European participants (Spain and Italy) to attend the America sub-Group.

- Identify opportunities for capability building actions in Africa.

Wrap up of the Research Group presentations

45. Martin Scholten presented to the Council conclusions from the Research and Cross-Cutting Groups following the discussions with Council across the two days. The Co-Chairs have developed next steps and outcomes as a result of Council input and hope that these actions will provide opportunities for all members to engage. Taking the five key points from the overview presentation on Tuesday the Co-Chairs have identified the following actions:

1. **Framing our profile**
    - Focus on outcomes for stakeholders.
    - Consider regional circumstances and networks.
    - Define and study mitigation and adaptation synergies.
    - Strengthen partnerships, including those across Groups.
2. **Key global players**
    - Take steps to become an engaged partner – roadmaps for engagement.
    - Flexible to new opportunities and ways of working.
3. **Communication**
    - Effective partner communication and learn from partners.
    - Develop appropriate communication packages for specific audiences.
    - Improve website navigation and improvement.
    - Promotional opportunities.
    - Commitment from Council to identify and support dedicated Research Group contacts.
4. **Adaptation**
    - Stocktake to identify adaptation synergies to be coordinated across the Research Groups, with support from the Secretariat.
    - The Stocktake will be developed to allow for a focused and considered analysis allowing for partner support and input.
5. **Cross-cutting Networks**
    - Support the creation of Cross-Cutting Networks by sending representatives from other Research Groups.
    - Commit to a combined Alliance meeting every 2 Years (starting from 2016).
    - The I&M Group will undertake activities identified and supported by Members.
    - SCN testing and upscaling of mitigation options through the use of models.

46. The Co-Chair finished the presentation by requesting that Council provide the commitment and engagement required to continue achieving success in the Research Groups.

47. During discussion the Council noted that the role of Council members should be to provide support for scientists attending Alliance events and ways for the Council to maintain momentum between the annual meetings. Specific needs identified by the Research Groups; such as the SCN

request to identify potential mitigation options that can be modelled, are useful examples for the Council to understand what is needed by each country.

TWO PERSPECTIVES ON SUSTAINABLE PRODUCTION SYSTEMS

48. Two invited speakers then presented perspectives on creating sustainable agricultural production systems. Showing how companies are working together to better understand the effects of agriculture on climate change and the role that society and Non-Governmental Organistaions (NGOs) can play to improve sustainability.

Sustainable Agriculture Initiative Platform

49. On behalf of the Sustainable Agriculture Initiative (SAI) Platform, Frank van Ooijen from the dairy company Friesland Campina presented the partnership of 55 major international food and beverage companies under the SAI and the goals to develop agricultural products from sustainable sources. The SAI work closely together with farmers and producers to agree definitions of sustainable production and practices which farmers can use to complete a simple assessment tool. For example under the dairy sustainability framework the assessment covers categories including greenhouse gases, water use, working conditions, and animal welfare.

50. Where the SAI and the Alliance can support each other:

- The SAI can act as an early sounding board to ensure research projects are relevant,
- Could form an industry needs group to identify where there are knowledge gaps,
- and the Alliance can provide guidance on greenhouse gas issues.

51. The SAI is already partnering with the LRG to survey mitigation options available to the dairy sector and provide timeframes for when these options could be available, adding value to the SAI and the Alliance by making the research relevant. There may be opportunities to extend this work to the other sectors and involve the other Research Groups.

SNV Netherlands Development Organisation

52. The activities of the Netherlands Development Organisation SNV were presented to the Council by Eelco Baan. SNV is an international non-profit organisation that works in Latin America, Asia and Africa to develop market based solutions to support sustainable agriculture objectives. SNV has developed public-private partnerships at the local level across 35 countries with the support from a number of agencies (FAO, WB, US Aid and the Government of the Netherlands). Activities that SNV are involved in focus on sustainability and inclusive growth by developing sustainable markets, achieving food security and promoting climate smart agriculture.

53. A positive example of SNV action is the development of biogas digesters, which take livestock manure and create gas for domestic cooking and organic slurry to be used as fertiliser. SNV does not produce or sell the digesters themselves but develops and establishes the supply chains that then use the services.

Possible links between the Alliance and SNV could be in the implementation and scale up of practical research technologies similar to the biogas digesters. There is also the possibility of the Alliance monitoring the effectiveness of such technologies and projects to reduce emissions.

AGRICULTURE RESEARCH IN THE NETHERLANDS

54. Roald Lapperre from the Ministry of Economic Affairs provided an overview of agricultural research in the Netherlands. The Netherlands is the second largest exporter of agricultural products in the world and has a long history of innovating and developing new technologies for food production and processing. Although the Netherlands has a comparatively small land area, its focus on intensive agricultural production and energy and feed inputs, mean that farmers are able to produce more with less. The Netherlands uses the model of a golden triangle to explain the system of government, private sector and science working together to improve agriculture production.

55. The Netherlands is very honoured to host Members at this meeting in The Hague and take on the role of Council Chair. The Alliance has developed a unique way of working between governments and the research community; a link which is crucial at a time where farmers need to boost production and take on the challenges of climate change. The focus within the working groups to identify the synergies between adaptation and mitigation synergies has proven to be an area which is important to all countries and continues to attract new members to the Alliance.

56. The launch of the Alliance on Climate-Smart Agriculture in September will involve the participation of international organisations such as the FAO and the World Bank and NGOs. These relationships are essential to the ACSA way of working and the Netherlands hope that the Alliance agrees to work with the ACSA. The ACSA adds value by drawing both national and global attention to the urgency of agriculture and climate change issues.

WELCOME TO NEW MEMBERS AND OBSERVERS

57. Members new to the Alliance were invited to speak during the Council meeting and state their interests in the Alliance and reason for joining. Of the eight members who had joined since the previous Council Meeting two new members, Paraguay and Belgium were attending the Council meeting.

58. For Paraguay Dr Daniel Idoyaga, President of Paraguayan Institute of Agricultural Technology (IPTA) expressed Paraguay's greeting to Members and thanks for the invitation to join the Alliance. Paraguay's economy is based on agriculture and livestock with organic sugar, wheat and soy the main export crops from the Country. IPTA is the institute responsible for agricultural research and with limited research funding available Paraguay see the collaborative focus of the Alliance as a way to advance and develop research programmes.

59. Representing Belgium at the Council meeting was Sylviane Thomas from the Public Service of Wallonie. Belgium thanked the Alliance Council for the invitation to join the Alliance and the opportunity to speak. A large part of Belgium's agricultural research takes place within the universities, who are

greatly interested in the work in the Alliance and willing to be involved in the activities of the Research Groups.

60. Tunisia was invited to attend the Council meeting as an observer country with Mr Ben Hamouda from the Ministry of Agriculture and Ambassador Karim Ben Bècher both speaking to the Council. Mr Hamouda thanked the Council and the Netherlands for the invitation to attend the Council meeting. Agriculture research in Tunisia is coordinated though the Institution of Agricultural Research and Higher Education (IRESA) the agency that is also developing the national agriculture strategy on food security, climate change, trade cooperation, and transfer of knowledge to farmers. Ambassador Ben Bècher announced Tunisia's intention to join the Alliance in the near future and noted that Tunisia is already committed to working with the Alliance and will host a regional workshop with support from the Netherlands in October 2014.

61. Poland representative Kartazyna Kowalczewska from the Ministry of Agriculture and Rural development thanked the Council for the opportunity to participate in the meeting. Poland has been following the Alliance since it was established in 2009 and is pleased to see a growing recognition of issues related to climate change and agriculture. Poland wishes to develop policy in this space and sees the added value that the Alliance can provide to researchers and the country. In April 2014 Poland was involved in organising an Alliance engagement workshop in Warsaw providing an opportunity to see how the Alliance works. Poland will become a member of the Alliance in the near future.

62. From Lituania, Zigmas Medingis spoke on behalf of the Ministry of Agriculture and expressed gratitude to Uruguay as previous Chair, and wished the Netherlands success as they take on this role. Researchers from Lithuania are excited to be involved in an initiative such as the Alliance. Lithuania thanks the Alliance for the invitation to attend this meeting and would like to announce their intention to join the Alliance in the near future.

OUTLOOK FOR THE ALLIANCE

Future of the Alliance Secretariat

63. New Zealand presented the Council with future options for the running of the Alliance Secretariat. Currently New Zealand has indicated to the Council that it is able to hold the Secretariat until June 2016, and would like to offer the opportunity to others beyond this date. Four options have been identified for ways that the Secretariat may be managed in the future:

1. New Zealand continues to hold the Secretariat until 2016 and may have the ability to extend this for another three years (until June 2019).
2. Rotate of the Secretariat among Members as was initially intended, an overlap of incoming /outgoing Secretariats would ensure that some continuity was maintained.
3. New Zealand maintains the Secretariat; with Members supporting this role through funds or secondment of staff.
4. Secretariat functions transferred to an international organisation; this option would require all Members to support costs.

64. New Zealand circulated a document (Appendix 3) to Council ahead of the meeting outlining the approximate costs ($100,000 USD per year for travel and website hosting exclusive of staff costs) and requirements for the Secretariat as it currently stands. The Council will consider this item and have a more formal discussion at the 2015 Council meeting.

Expanding Membership

65. Sjoerd Croqué from the Ministry of Economic Affairs, the Netherlands, introduced activities and workshops to promote the Alliance and expand membership over the next few months. The Netherlands have an interest in attracting new Members to the Alliance from central Europe and Africa, noting Uruguay as Council Chair had increased membership within Latin America. The Alliance needs to have global representation among its membership so that it can understand the challenges of all regions and provide relevant solutions to include the whole agricultural sector.

66. Ways to expand membership include linking Alliance promotion to regular meetings of the Research and Cross-Cutting Groups, development of activities designed to attract new members such as regional workshops and national engagement events, and promoting the Alliance at side events or similar alongside international forums.

67. It is important that the Council and our Partners support these activities and are willing to commit to expanding membership. Research and Cross-Cutting Groups should provide ideas for how their planned activities could include non-member countries. Members and Partners should consider how they can support engagement regionally or with their contacts and provide details of their support or further suggestions to the Council Chair and Secretariat.

68. The Council discussed their experiences on engaging non-members in the Alliance, agreeing that introducing new countries through concrete actions such as collaborative projects (e.g. FONTAGRO in Latin America) and becoming involved in Alliance activities that are supported by Partners provides tangible reasons for non-members to join. Promoting the Alliance and showing benefit both to the science community and to government can increase interest. The Council has already discussed the importance of communicating Research Group achievements and activities through the website, but Member Countries are also expected to communicate their contributions and involvement on the website.

Cooperation with the CCAC

69. Sunny Uppal from the Government of Canada was invited to introduce the Council to the Climate and Clean Air Coalition (CCAC). The CCAC collaborate in activities with the Livestock and the Paddy Rice Research Groups to implement research activities with work on the ground. The CCAC address short lived climate pollutants, some of which (e.g. greenhouse gases CH_4, CO_2) are included under UNFCCC reporting. Other contributors to climate change such, as black carbon, are not covered in other international forums, but have been shown to affect not only climate change but also human health and food security issues. The Coalition is made up of more than 90 partner states,

intergovernmental organisations, non-government organisations and the private sector and addresses all sectors, including agriculture under 10 initiatives.

70. The agriculture initiative is currently involved in four areas, methane emissions from livestock and manure, open agricultural burning and paddy rice production. The CCAC builds upon existing research, scaling up the options and identifying where different solutions are required, while raising awareness and additional resource to address the issue.

71. Interaction with the Alliance:

- Manure management component; creating an active network of practitioners and organisations connecting through an information kiosk. The central hub is managed by Wageningen University and FAO with regional hubs under development.
- Paddy rice production component lead by Bangladesh, Colombia and Vietnam. Providing policy guidance and information on the extension activities required.
- Newly launched discussion on an enteric fermentation collaboration.

72. The CCAC operates a voluntary trust fund which some members have contributed to. State members must be in agreement before the funding is distributed to component activities. The funding process is designed to be flexible and take advantage of opportunities; a science panel reviews the proposals before they are approved.

73. The Council discussed establishing a formal Partnership between the Alliance and the CCAC as the Coalition shares objectives with the Alliance and could support the Alliance's expansion into Africa. It was decided that the Alliance Secretariat and Council Chair would discuss this idea further with the CCAC Secretariat and make a recommendation to the Council if Partnership is considered appropriate.

VISTS TO AGRICULTURAL INNOVATIONS AND WAGENINGEN UNIVERSITY

74. On Tuesday afternoon the Council was given the opportunity to experience local agricultural innovations visiting the Haagoort Dairy Farm in Waarder. This farm is a Dairyman pilot farm trailing the use of Annual Nutrient Cycling Assessment (ANCA) calculation programme developed by Wageningen University to intensify milk production without increasing pollution. The second stop was to Duijvestijn Tomatoes in Pijnacker who are running a demonstration project on the use of renewable energy for commercial horticulture. The project includes heating a research greenhouse using geothermal energy and efficient double glazing to prevent heat loss.

75. On Thursday the Council was invited to Wageningen Campus to understand how knowledge is at the heart of the Alliance. The Council was shown several through the research facilities on campus and presented the work of projects underway, including multiple projects that support the workplans of Alliance Research Groups. A visit to the Friesland Campina Dairy Innovation Centre in the afternoon highlighted opportunities for science to work in partnership with industry to support wider government aims.

FORMAL DISCUSSIONS

Alignment with the ACSA

76. The final session of the meeting in The Hague provided an opportunity to reach a formal agreement on topics that had been discussed during earlier sessions. The alignment of the Alliance with the ACSA was included in this session. A number of members highlighted the potential synergies between the Alliance and the ACSA, suggesting that the Alliance was well placed to provide knowledge and research inputs and should actively seek to partner with the ACSA. Several other members suggested that, while there was potential to look at partnership with the ACSA in the future, it was still not clear what shape or form the ACSA would take and that it would be inappropriate for the Alliance, as an established organisation, to be seeking partnership with the ACSA before it had even been formally established. The Council agreed that more information on the ACSA scope and activities are required before the Alliance can discuss aligning activities and developing collaborations. The Council is not able to consider partnership with the ACSA at this time.

Decisions for Council agreement

77. With 21 Members attending the meeting the Alliance Council did not achieve the quorum required to approve the decisions taken. Therefore, the decisions below are provided to all Council members for approval. Approval of these outcomes should be provided to the Alliance Secretariat before **22 August 2014. If the Secretariat is not informed of any concerns by this date, the decisions will be taken as approved.**

1. Support for the Research Group Co-Chairs' proposal to focus on five core areas; (1) framing the profile of the Alliance Research Groups, (2) roadmaps for partner relationships, (3) communicating achievements, (4) coordinating an adaptations stocktake, and (5) improved coordination of Cross-cutting Group issues. See the summary under the section "Wrap up of the Research Group presentations" for more detail on these actions. **AGREE: to support the activities outlined by the Research Groups, and identify ways to participate.**
2. Strengthening the relationship and develop collaborations with the World Bank – an Alliance Partner. The Research Groups will develop targeted proposals for collaboration which the Council Chair will then present to World Bank representatives. **AGREE: to explore concrete actions to improve this existing Partnership.**
3. Relationship with the Alliance on Climate Smart Agriculture. Council Members agreed to organise an Alliance side event at the UN Climate Summit in September to promote the aims and achievements of the Alliance, and the work we have already managed to achieve in the area of climate change and improving agricultural productivity. The details of this event will be sent to Council members once developed for final approval. **AGREE: Chair to contact the UN regarding Alliance promotion at the UN Secretary-General's Climate Summit - Council will approve the presentation material.**
4. Sustainable Agriculture Initiative (SAI) Platform. The Council were unable to agree on inviting the SAI to become a Partner of the Alliance without prior information on how this organisation works. **AGREE: The Chair will send the SAI Platform a letter on behalf of the**

Alliance outlining appreciation of their collaboration with the Research Groups and commitment to their objectives.

5. Next Vice-Chair. Due to the short notice the countries approached for this role were unable to confirm commitment ahead of the Meeting. New Zealand has offered to take on the role of interim Vice-Chair – with the proviso that another Chair is found ahead of the 2015 meeting. **AGREE: for New Zealand to act as interim Vice-Chair.**

APPENDIX 1: Participants List

Country	Attendees
Alliance Member Countries	
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APPENDIX 2: I&M Group Discussion Document

Proposed Future Directions for

Inventory and Measurement Cross-Cutting Group

of the Global Research Alliance on Agricultural Greenhouse Gases

co-chairs:

Brain McConkey, Jan Verhagen

16 May, 2014

Situation

Achieving broad participation in the work of Inventory and Measuring Cross-Cutting Group (I&M Group) has proved difficult. This is well demonstrated by lack of participation in the 2013 annual meeting of the I&M Group in Edinburgh.

The I&M Group has been purposely mandated to be cross-cutting to address the quantification gaps across greenhouse gas sources and sinks in agricultural systems and between best system science and practical national greenhouse gas quantification. These gaps exist because Alliance members have not generally made significant national investments in projects and personnel to address them.

Considering the above, it is difficult for individual member country representatives to the I&M Group to cover the full range of Group issues. Inevitably, the representatives come from different disciplines and so do not share a common direction- unlike the more research-oriented GRA Groups that share a goal advancing discovery and innovation in GHG science. This likely contributes to lack of country engagement.

Although the importance of the collaborating so that best science regarding both source/sinks and activity data is incorporated into national inventories, practitioners in inventory often do not have the work flexibility and/or funding to join in international collaboration to improve inventories. The existing demands to follow the reductionist approaches of IPCC inventory guidance also likely reduces appetite and capacity for countries to invest in new collaborative work to improve inventories. The strong desire of the GRA to keep separate from UNFCCC processes effectively eliminates many opportunities to collaborate on inventory capability-expanding initiatives that involve the UNFCCC directly (i.e. as partner or sponsor) or indirectly (i.e. intended for inventories and communications for the UNFCCC).

There is no stable predictable funding to facilitate I&M Group activities including participation in information sharing/work planning meetings or to provide initial funds to stimulate and leverage

resources for new initiatives. The latter is important because the potential Group work is often not likely to be incremental to existing national projects that have any budget or human resource flexibility so cannot be reliably resourced through rearranging resources and tasks within existing projects.

Proposed Directions

1) In line with the work program and member interest, I&M will focus on a limited number of targeted initiatives where there is committed support from a lead country or countries.
2) The group will arrange working meetings around the specific issues and try to arrange these back to back with relevant scientific conferences. And no longer hold general meetings covering all I&M Group issues.
3) Seek opportunities to add value to existing research projects. This may include working more closely with other GRA Research Groups via for example meetings in conjunction with other Groups.
4) Continue to urge the GRA members collectively for stable funding to enable facilitation of the work.

Ad 1. Targeted areas of work

Focus where resources have greatest potential to be networked to address I&M-related opportunities that align with GRA goals. More specifically of the original 13 identified areas of work (Table 1) focus on a limited number of targeted initiatives where there is committed support from a lead country or countries (Table 2).

Additional areas of work will be possible with committed and support from a lead country or countries.

We want to highlight an important cross-cutting area of work: 11. (To develop methods to evaluate the economic value of GHG mitigation), for which we so far have not been able to mobilise the required expertise and resources. It is a good example of an issue that is identified as high priority for fulfilling the GRA mission but that the current GRA structure makes difficult to initiate progress against.

Table 1. Original 13 areas of work of the I&M group

Area of Work
Information Sharing
1. To foster effective mechanisms of sharing emission factors and emission data
2. To produce an inventory and guidance on the use of tools and methods for Greenhouse Gas (GHG) estimation; Sharing approaches and lessons learned on application of Tier 3 methods.
3. To share methods and lessons learned on application of remote sensing to improve activity data.
Networking
4. To promote communication between inventory practitioners and research scientists working on specific inventory-relevant topics.
5. To identify opportunities to involve partners to further work on GHG inventory and measurements.
Guidance
7. To produce best practice guidance on measurement techniques, harmonisation of approaches, and standardisation of technologies and methodologies for soil organic carbon (SOC), nitrous oxide (N_2O) and methane (CH_4).
8. To produce the best practice guidance on development of activity data.
Methods and Capacity Development
9. To increase our capability to estimate and communicate uncertainties of GHG emission/removals.
10. To build capacity to estimate and measure GHG emission and removals.
11. To develop methods to evaluate the economic value of GHG mitigation.
12. To improve capability to quantify GHG emission and removals for further scenarios of farming systems and climates.
13. To produce guidance on methodologies for determining emission intensity.

Table 2. Selected target areas of work.

Areas of work
3. To share methods and lessons learned on application of remote sensing to improve activity data.
7. To produce best practice guidance on measurement techniques, harmonisation of approaches, and standardisation of technologies and methodologies for soil organic carbon (SOC~~), nitrous oxide (N_2O) and methane (CH_4).~~
12. To improve capability to quantify GHG emission and removals for further scenarios of farming systems and climates. (“farming system typology”)
13. To produce guidance on ~~methodologies for~~ determining emission intensity. (“sustainable intensification”)

Inventories and Measurement Cross-Cutting Group - Participants May 2014

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APPENDIX 3: Future of the Alliance Secretariat

The Global Research Alliance Secretariat

2014 Alliance Council meeting discussion paper

New Zealand has held the Alliance Secretariat since the establishment of the Alliance (following the Wellington Senior Officials meeting in 2010). New Zealand has agreed to hold the Secretariat until June 2016, unless another country is interested in taking it on sooner. The Secretariat and the systems it manages have been designed to be independent of the country that is hosting, allowing the functions to be transferred. The Secretariat was designed with the option to rotate hosting between Members providing an opportunity for all countries to offer their support.

The costs and expenses of the Secretariat are currently approximately USD 93,600 plus staff costs per annum:

1. Secretariat personnel are currently equal to approximately 1.5 - 2 Full Time Equivalents (FTEs), based in Wellington, New Zealand. Office space, computers, overheads etc. are currently held within a government Ministry.
2. Travel to Research and Cross-Cutting Group meetings, Alliance Council meetings (approx 6 trips per year) and may also include travel to other associated events (budget is approx USD 86,000/year for travel.
3. Ongoing costs for the Alliance website and email. Google Mail is USD 50/ year. There will be ongoing costs associated website hosting, maintenance, and any changes required to the website. Website costs are likely to vary depending on how the Secretariat host country chooses to manage these (e.g. in house support or contracted offsite). MPI currently pay USD 12,000/annum for offsite hosting and maintenance.
4. Alliance Publications, including Alliance banners and member country tent cards for meetings, brochures and printed promotional material to support Alliance events. Approx USD 1,000/annum.
5. Communication costs including the Secretariat acting as host to support regular teleconferences (or videoconferences) between Council Chairs and the Secretariat as well as hosting the three monthly teleconferences between Research and Cross-Cutting Group co-Chairs (approx USD $1,700 for 10 meetings).

Future of the Secretariat

Listed below are some options identified for the future support and hosting of the Secretariat. New Zealand would welcome the thoughts on each of these options from Members, and the identification of other options.

1. New Zealand could continue to hold the Secretariat until June 2019. New Zealand's Alliance budget has been extended to allow us to fund research out to this date; therefore we may be able to extend the hosting of the Secretariat to this date.
2. Rotate the Secretariat between Members. The Secretariat hosting role was initially expected to be shared between Members. New Zealand suggests a handover period transitioning from the present host to the next host (both present and future countries would support) to ensure a smooth transition. The term of the Secretariat should also be considered, with at least a three year term recommended to maintain continuity with Members, Research Groups and Partners.

3. Secretariat support is provided from Members in the terms of seconded staff or funding support. The Secretariat could continue to be hosted by New Zealand (maintain relationships as above) with costs of the Secretariat spread across several Members.
4. Members would provide funds to another organisation (such as FAO) that might host the Secretariat. Large organizations such as the FAO have established processes and contacts to offer stability but may lack the flexibility and timeliness that a dedicated Secretariat can provide.