GLOBAL RESEARCH ALLIANCE
ON AGRICULTURAL GREENHOUSE GASES

ALLIANCE COUNCIL MEETING REPORT

Palladium Business Hotel, Montevideo, Uruguay

Tuesday 18 June – Wednesday 19 June 2013

Meeting Report

OVERVIEW

The third Alliance Council meeting took place on Tuesday 18 and Wednesday 19 June 2013 in Montevideo, Uruguay. Uruguayan Minister of Livestock Agriculture and Fisheries Mr Tabaré Aguerre and Minister of Housing, Planning and Environment Mr Francisco Beltrame, opened the meeting welcoming all delegates to Uruguay.

Canada (Gilles Siandon, Assistant Deputy Minister, Agriculture and Agri-Food Canada), as outgoing Chair, then handed the Chair over to Uruguay (Walter Oyhantcabal, Ministry of Agriculture). Secretariat support was provided by Hayden Montgomery and Deborah Knox from New Zealand.

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

PARTICIPANTS

The meeting was attended by 38 representatives from 19 member countries and other invited guests:

- **Alliance Members attending:** Argentina, Brazil, Canada, Chile, China, France, Indonesia, Japan, Mexico, The Netherlands, New Zealand, Norway, Peru, Spain, Switzerland, Thailand, USA, Uruguay, Vietnam.
- **Alliance Members unable to attend:** Australia, Colombia, Costa Rica, Denmark, Finland, Germany, Ghana, Ireland, Italy, Malaysia, Philippines, Korea, Sweden, UK
- **Invited Partners attending:** UN Food and Agriculture Organisation (FAO), Inter-American Institute for Cooperation in Agriculture (IICA) – through a representative of PROCISUR
- **Invited Partners unable to attend:** Africa Development Bank (AfDB), Consultative Group on International Agricultural Research (CGIAR), Tropical Agricultural Research and Higher Education Centre (CATIE), Inter-American Development Bank (IADB) and World Bank
- **Invited Speakers attending:** World Farmers Organisation (WFO)

Refer to Appendix 1 for a full participants' list.

KEY OUTCOMES OF MEETING AND ACTION POINTS

Actions	To complete	By when
Council		
Canada handed over the Council Chair to Uruguay	completed	
The Netherlands was confirmed as Vice Chair of the Alliance Council	completed	
One year review of the Alliance Communication Policy agreed by Council and adopted	Completed	Review, as appropriate at the 2014 meeting of the Alliance Council
Agreement to continue with the Partner relationship activities as outlined in the 2012 Council workplan.	Council, Secretariat	To report on at the 2014 meeting of the Alliance Council
Invite the World Farmers Organisation to become an Alliance Partner	Chair and Secretariat	Following a report of the meeting between the WFO and Chair
Research and Cross-cutting Groups		
Council requests a list of organisations/institutes that each Research and Cross-Cutting Group is collaborating with.	Research and Cross-cutting Group Co-Chairs	To present at the 2014 meeting of the Alliance Council
Inventories and Measurement Cross-Cutting Group will consult with Research Groups to develop a draft paper on emissions intensity as a method of sustainably increasing agriculture production.	Inventory & Measurement Cross-Cutting Group, other Research Group participants	To present the draft at the 2014 meeting of the Alliance Council
Research Groups to conduct a review of mitigation and adaptation synergies in their work activities and in the new Networks created within each of the Research Groups related to those synergies and to improving productivity, resilience and adaptive capacity of agriculture	Council Chair and Vice-Chair, Research Group Co-Chairs, Secretariat and all interested member countries	To present at the 2014 meeting of the Alliance Council
Create specific Networks in each Research Group to promote synergies between mitigation and adaptation. The terms of reference of each Network will be elaborated with the participation of Members of each Group, led by their Co-chairs.	All Research Groups, Research Group Co-Chairs all interested member countries	To include in six-monthly and annual reporting to the Council
The Research Groups will report the results of the work of the Networks in the six-monthly reporting and to every annual Council meeting, for further progress on the issue and future developments.	All Research Groups, Research Group Co-Chairs all interested member countries	To include in six-monthly and annual reporting to the Council

Members		
Promote the Alliance and its activities at the World Agricultural Forum, 4-7 November 2013, Hyderabad, India.	Alliance Chair Netherlands, NZ, , Research Groups and interested Members	November 2013
Highlight Alliance in other related activities for example Ministerial meetings/speeches, information about national activities in agricultural research on GHGs	Member countries	When opportunity presents itself
All member countries to consider how they can best support the Alliance (as discussed in the mobilisation of resources session) and integrate the Alliance into national agricultural research programs	Member countries	When opportunity presents itself
Member countries should identify opportunities and activities to include in the Research Group workplans, including identifying and resourcing mitigation research projects or activities that have synergies with adaptation and that improve productivity, resilience and adaptive capacity of agriculture.	Member countries	Ahead of annual Research and Cross-Cutting Group meetings
Secretariat		
Liaise with existing Alliance Partners to identify and agree mutually beneficial activities to be pursued, and set out expectations for each Partner's relationship with the Alliance and report back to Council before its finalisation. Finalisation to be by letter or email.	Chair, Vice-Chair, Alliance Secretariat, Canada, other interested Members	Ongoing
Analysis of potential new Alliance partners for consideration by Council. These analyses will clarify and help achieve a balanced portfolio of Partners and will contribute to identify specific activities in which potential partners could be involved.	Alliance Secretariat, Chair, vice-Chair, Canada, UK, France, Ireland, USA, Brazil and Argentina	To present at the 2014 meeting of the Alliance Council
Secretariat to undertake a review of other international initiatives, the number of partners and the way they develop these relationships.	Alliance Secretariat	To report at the 2014 meeting of the Alliance Council
Update Council work plan based on discussions at Council meeting	Alliance Secretariat with Chair and vice-Chair of Council	To send out to Council Members for consideration by August 2013

SUMMARY OF DISCUSSIONS

OPENING REMARKS

1. **Uruguayan Minister of Livestock Agriculture and Fisheries Mr Tabaré Aguerre and Minister of Housing, Planning and Environment Mr Francisco Beltrame** welcomed participants to the Council meeting. The Alliance has successfully contributed to the development and increased

interest in mitigation research since its establishment in 2009. The Alliance addresses multiple challenges for sustainable development, which is especially relevant for countries facing the impacts of climate change on agriculture such as Uruguay.

2. Uruguay is pleased to be the first developing country to chair the Alliance Council and views this as a reflection of the country's interest in developing a dynamic agriculture sector. As a country that relies on agricultural exports, Uruguay wishes to be recognised as an exporter that meets international expectations of food safety, food security, animal welfare and preservation of natural resources.

3. Uruguay is supportive of the Alliance's aim to mitigate greenhouse gas emissions and promote synergies with adaptation through increased international research collaboration, building capacity and knowledge, and developing new mitigation technologies and information. Sustainable intensification of agricultural production, for example in Uruguay's beef and dairy systems, is possible by improving the processes and efficiencies of productions systems. In the same way that mitigation and adaptation support each other, the Alliance is able to bring together all these aims and natural synergies.

- Uruguay believes there is a possibility to work, in the context of the general objectives of the Alliance, in support of the adaptation strategies of each member country, and in the development of the resilience of agriculture production systems, taking advantage of multiple synergies.

4. The Alliance is already showing it is able to meet the challenges facing the global agricultural sector and Uruguay encourages all members to remember that active participation is needed to continue meeting the Alliance's aims.

CHAIR HANDOVER

5. Canada, as outgoing Chair, remarked on how pleased they had been to hold this position over the past year in particular seeing how far the Alliance and the Research and Cross-Cutting Groups had progressed during this time. In the past year Canada has supported enhanced communication and outreach of Alliance activities through the development of an Alliance overview presentation which has been shown at various international events. Standardised reporting on the work of the Groups, including increased collaboration between Groups and regular meetings between the Co-Chairs, has been established. The Groups have developed a wide variety of innovative activities, and developed new networks to meet the challenges of specific scientific areas. Capacity building and the collating and sharing of measurement methods have increased across the Alliance.

6. The outgoing Chair tabled a letter from Canadian Minister of Agriculture and Agri-Food Gerry Ritz (see Appendix 2) in which the Minister outlined the Alliance's achievements over the past year and his hopes for continued success.

7. Canada then handed over the role of Alliance Chair to Uruguay (Walter Oyhantcabal, Ministry of Livestock, Agriculture and Fisheries), who has been the Council's Vice-Chair since the 2012 Council meeting.

MINUTES OF PREVIOUS COUNCIL MEETING

8. The meeting minutes from the second Council meeting in Saskatoon, Canada 2012 were reviewed and adopted without amendment.

CONFIRMATION OF NEW VICE-CHAIR

9. Prior to the Council meeting, the Alliance Secretariat had requested nominations for the new Council Vice-Chair and the Netherlands had expressed its interest. At the Council meeting, the Netherlands was confirmed as the new Vice-Chair and host of the next Council meeting (2014) whereupon it will assume Chairing responsibilities and a new Vice Chair will be confirmed. The Netherlands announced that the 2014 Council meeting could be held outside of the Netherlands, with the meeting location chosen for its strategic advantage to the Alliance goals and encouraging new members.

REVIEW AND ADOPTION OF THE ALLIANCE COMMUNICATION POLICY

10. The Alliance Communication Policy was discussed as per article 4 of that policy, which allowed for review after one year. The Council asked for examples of when the Communication Policy had been invoked and activities approved by the Council. The Secretariat noted that the Alliance overview presentation developed by the Council Chairs and the Secretariat then approved by the Council following the 2012 Council meeting was an example of this. The presentation has been used twice at the Global Conference on Agricultural Research and Development (GCRAD 2012) and G20 Meeting of Agricultural Chief Scientists (MACS) and the Council had been informed and agreed to its use ahead of each event.

11. The Council also agreed to restate article 4 of the Communication Policy, in order for this Policy to be reviewed by the Council at the 2014 Council meeting, with the possibility of modifying it by subsequent decision of the Council.Members were also reminded that Research Groups are able to promote their own activities once they had been approved by that Group, and included on the Group workplan. The Groups provide their workplans to the Council for review as part of their six monthly reporting to the Council. All Members are free to publicly discuss the activities they undertake to support the Alliance as they see fit by the use of the appropriate disclaimer, in accordance with paragraph 8 of the Communication Policy.

RESEARCH GROUP ACTIVITY UPDATE

12. The Research and Cross-Cutting Group Co-Chairs presented their annual report of activities to the Council, building on their six monthly electronic reports to the Council (circulated by the Secretariat, January 2013).

13. Martin Scholten, Co-Chair of the Livestock Research Group provided the overview of the Groups, including structure and the ways in which the Groups coordinate their activities. It was noted that the Co-Chairs work as a team including three-monthly teleconferences and an annual coordination meeting ahead of the Council meeting. The Co-Chairs also regularly liaise on joint activities and common issues/opportunities. Individual Co-Chairs from each of the Groups then

presented key activities for their Group, progress being made and achievements, along with any challenges faced and the details of when the Group will next meet.

14. The Research and Cross-Cutting Groups' full presentation can be found in the members only area of the Global Research Alliance website. Note that the Soil Carbon and Nitrogen Cycling Cross-Cutting Research Group Co-Chairs were unable to attend the Council meeting and Harry Clark of the Livestock Research Group presented on their behalf.

Recommendations and requests to the Council

15. The Groups' presentation concluded with a list of requests and recommendations from the Co-Chairs which they asked that the Council keep in mind during the next two days of discussion. These were:

1. **Resourcing the ambition: seed money for initiation of collaborative actions based on existing national programmes**
2. **Resourcing the function of the Research Groups: time and support for Co-Chairs, participation**
3. **Specific funding initiatives e.g. FACCE-JPI**
4. **Increasing commitment from existing members**
5. **Expanding membership**
6. **Mobilise partners to support scaling up of activities**

16. The six points raised by the Groups are <u>not</u> about asking for new money, but are instead concerned with finding the proper resources to sustain and support the activities of the Groups. The Groups need the Council's support to undertake workplan activities, with each member country of the Alliance asked to identify how they can better support the Groups.

Council discussion of the Groups' presentation

17. The Council was pleased to see such complete and clear presentation of the activities, milestones and abilities of the Groups, and impressed with the number of activities underway.

18. The Council commented on how a very small amounts of seed funding (e.g. $1000s), a relatively small amount compared to national research programmes, was able to facilitate the development of a well functioning science network. When establishing new domestic projects or funding opportunities in the area of agricultural greenhouse gas research, Members should consider allocating some of the funds to supporting networks and meetings. It is not always about the amount of funding provided, but allowing for some flexibility to encourage collaboration and knowledge sharing.

19. The Council agreed that there is often a need for improved communication between Ministries that provide research funding and the organisations that undertake the research. Council members should ensure they have the internal connections to make the most of the collaborations and that Research and Cross-Cutting Group representatives are reporting back the outcomes and opportunities from meetings to their Council contact. There is also a need for Members to more actively promote and communicate the Alliance domestically and internationally.

20. The Council appreciated the Group Co-Chairs' thoughts on how the Alliance can make the most of its formal partnerships. The Alliance is not a funding initiative but by facilitating the early stages of a project through funding workshops and pilot studies, it is then possible to take a well developed and supported proposal to Alliance Partners for their assistance in scaling up activities.

21. The Council would like to see increased follow up on the Alliance fellowships awarded and use the Alliance fellows and their reports as promotion of the Alliance and a possible entry point for expanding membership, but also so we can see how the money has benefitted both the scientists and the science.

22. This discussion closed with the Council expressing an interest in focussing on a particular topic or work area in more detail in addition to having a complete list of all activities the Research Groups are undertaking without having any knowledge of what the project involves. This could then allow for greater understanding among members on particular Alliance activities. The Co-Chairs will take this on board in preparing their next annual presentation to the Council.

MEMBER REPORTS AND ANNOUNCEMENTS

23. There was then an opportunity for individual member countries to update the Council on their own Alliance activities and related work:

24. *Argentina* – Organised internal conferences and projects on livestock and croplands´ research and is participating in the regional Fontagro research project on livestock emissions´ intensity quantification from pastoral agriculture.

25. *Brazil* – participating in several greenhouse gas networks including AGMip, GRACEnet and a nitrous oxide network. Brazil is currently undertaking three main projects on livestock, cropping and forestry systems.

26. *Canada* – Described new projects on agricultural greenhouse gases, including six livestock projects, six crop projects, five projects on inventories and measurement and three projects on soil carbon and nitrogen cycling. Proposals have also been submitted to the FACCE-JPI multi partner funding call.

27. *Chile* – Involved in the Latin America regional Fontagro project. Chile has recently completed a new national inventory of greenhouse gas emissions, including agriculture.

28. *China* –Identified an opportunity to become involved in databases developed by the Alliance Research Groups and other collaborative activities.

29. *France* – Interested in better describing soil carbon and nitrogen activities across the Alliance and propose that this is discussed in more detail at the next Council meeting. France is also considering how to provide more targeted support to the Alliance and its activities.

30. *Indonesia* – the country report is provided in appendix 3.

31. *Japan* – New activities include research and developing new technologies in paddy rice, projects on greenhouse gas mitigation in irrigated rice systems, and guidelines for measurement reporting and verification (MIRSA). MIRSA2 is a five year project that will include participants from

several Alliance members in South East Asia. An existing fellowship programme to build capacity of developing country scientists will in 2013 support greenhouse gas research relevant to the Alliance. There is a new webpage outlining Japan's activities in the Alliance in both Japanese and English (see appendix 3 for the complete report).

32. *The Netherlands* – Increasing activities related to food security, adaptation, intensification and agribusiness, including the communication of policy decisions to farmers. Contributing activities and ideas to the grasslands network being developed through the Livestock Research Group.

33. *New Zealand* – The New Zealand Fund for Global Partnerships in Livestock Emissions Research has held two funding rounds and is supporting seven successful international projects. LEARN fellowship awards continue as does specific project funding to support the Research Groups including workshops and regional projects.

34. *Norway* - Nordic platform aligns common agricultural greenhouse gas challenges and research funding across the region.

35. *Peru* – Improving local and traditional crops and identifying mitigation options.

36. *Switzerland* – Leading and coordinating the Feed and Nutrition Network that supports the Livestock Research Group.

37. *Thailand* – Held a national workshop to inform scientists about the Alliance. Identifying ways to organise national researchers to best support key interests and activities, this could help to overcome the barrier of limited capacity of greenhouse gas researchers.

38. *Uruguay* – promoting the synergies between adaptation work and mitigation research. Current and new projects underway with the World Bank, Fontagro, Adaptation Fund and FAO.

39. *USA* – Borlaug fellowships scheme continues, 21 fellows awarded under the Alliance, four accepted this year. Connecting national measurement and mitigation programme "GRACEnet" to the Alliance's Research Groups and scientists. Recent activities include awarding a grant to focus on dairy industry research and developing an Alliance project proposal within the Climate and Clean Air Coalition (CCAC) as the US is a member of both initiatives. Future activities will see the Californian rice industry involved in the work of the Paddy Rice Research group and the US is exploring ways to share results of mitigation options and cost research through the Alliance.

40. *Vietnam* – Building capacity of national scientists by supporting international training opportunities (see appendix 3 for the complete report).

MOBILISATION OF RESOURCES

41. A series of presentations related to resource mobilisation identified ways to increase support for Alliance activities and the Research Groups, ensuring that resources made available can have the greatest impact and benefit to the Alliance and its Members. There were four presentations providing examples of activities underway in countries, across regions or through international collaborations. This led into a Council discussion identifying barriers to resources, systems and processes that Member countries already have in place and opportunities to facilitate an increase in resource.

Climate Change and Beef Cattle Production: quantification and mitigation of methane and nitrous oxide emissions from grazing beef cattle.

42. The first presentation from **Verónica Ciganda, INIA Uruguay** covered a regional project involving five Latin American countries (Uruguay, Chile, Colombia, Argentina, and Dominican Republic) to quantify greenhouse gas emissions and evaluate mitigation options from grazed beef cattle systems.

43. The FONTAGRO consortium involves research institutes from the five participating countries, with funding provided as a grant from FONTAGRO (under the Inter-American Development Bank) and the Government of New Zealand.

44. The objective of the project is to develop country specific emission factors for grazed beef cattle, and looks at both enteric methane and nitrous oxide production from cattle on native pasture and cultivated pasture. Each country is undertaking their own research including evaluating mitigation options and building science capacity in greenhouse gas measurements and methodologies. However, samples and data are sent to those institutes that have the equipment to undertake analysis and the consortium takes a cooperative approach to sharing the results.

45. It should be noted that success for this regional research approach in each participating country can be linked back to the strong support from existing national research programmes.

The Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE-JPI)

46. **Ludovic Larbodière, Ministry of Food Agriculture and Fisheries, France** presented the Joint Programming Initiative (JPI) model that EU members are using to improve research for Food Security, Agriculture and Climate Change (FACCE). The initiative aligns the national research programmes and strategies of the participating countries and identifies a shared vision across five core themes:

1. Food security and climate change
2. Intensification of agriculture systems
3. Assessing and reducing trade-offs
4. Adaptation to climate change
5. Mitigation of greenhouse gases

47. The Alliance is involved in the JPI through an international multi-partner call on greenhouse gas mitigation. The call involves several European JPI partners but also involves Canada, New Zealand and the US, with each project needing a consortium of at least three partner countries to submit a proposal to the fund. Countries support the participation of their own scientists in the collaboration, either with cash or “in-kind” funding.

48. The call was developed in collaboration with the FACCE-JPI Secretariat and the Alliance Secretariat with a view to enabling international research projects. The call also allows for participation from private research organisations. Full proposals are due in early September and

funding decisions are expected in mid-November. Many of the applications being developed are being submitted by Alliance members and will strongly support the workplans of the Research Groups.

Greenhouse gas emissions and advances in mitigation strategies in agriculture in Brazil: ABC Plan

49. **Renato Rodrigues, EMBRAPABrazil** spoke on Brazil's strategy to develop low carbon agriculture. Brazil's national policy to target the reduction of greenhouse gas emissions identified that the greatest challenges would come from the agricultural sector.

50. The "ABC Plan" is a set of actions that reduce or avoid emissions of greenhouse gases from agriculture and contribute to climate change adaptation. The Plan includes capacity building, funding for research, and monitoring activities with a focus on the continuous improvement of sustainable agricultural systems and practices by promoting low greenhouse gas emissions and increasing carbon fixation in soils. The ABC Plan will:

1. Assist in the accomplishment of Brazil's Nationally Appropriate Mitigation Actions under the UNFCCC;
2. Assist in decreasing deforestation rates;
3. Promote productive arrangements that contribute to reduce greenhouse gas emissions and increase farmer income

51. Advantages to this plan include the potential research and adoption of other technologies for use in tropical agriculture systems. There are also great opportunities develop and customise this plan in cooperation with others, for example Brazil has supported African countries in developing inventories using this methodology.

New Zealand's support for the Global Research Alliance

52. **Chris Carson, Ministry for Primary Industries, New Zealand** provided an outline to Council members on New Zealand's Alliance activities. New Zealand has a long history of science research partnering with the agricultural sector to improve productivity. New Zealand's reliance on its agricultural sector is the key reason behind the New Zealand Government's commitment to the Alliance. New Zealand's Alliance activities support the national agricultural greenhouse gas research programme, the Alliance is seen as a way to extend knowledge and participate in international collaboration.

53. Most of New Zealand's Alliance budget is spent on research activities although there is some flexibility to also invest in project initiation and seed funding for collaborative activities. Part of the budget is used for the New Zealand Fund for Global Partnerships in Livestock Emissions Research, which is an international contestable fund supporting collaboration between New Zealand and other Alliance members. New Zealand is also supporting targeted research funding with most projects funded identified as priority projects of the Alliance's Research Groups. Funding is also set aside so that New Zealand may participate in other international collaborative funds, such as Australia's Filing the Research Gaps (FtRG) programme and the FACCE-JPI multi-country call.

54. The presentation concluded with a list of requirements identified to successfully resource the Alliance:

1. Dedicated support for Research Groups

    a. Time and resources to lead and administer the Livestock Research Group
    b. Support for New Zealand scientists to attend meetings of the Research Groups and participate in activities that align with New Zealand's interests.
2. Communication and promotion of New Zealand's role in the Alliance; Ministers are kept well-briefed on Alliance progress and regularly mention it during their international meetings and visits
3. Flexible funding arrangements; there is a need for research funding to include project administration and collaboration opportunities.

Discussion of the resource mobilisation presentations

55. During the discussion following these presentations the Council noted that the issues raised aligned with the earlier presentation given by the Research Groups. The Alliance was established as a research network, to share knowledge and ideas. Members should market the Alliance as a resource which may provide technical knowledge and support for national capacity building and the development of national strategies in Members, and collaboration with other scientific networks and organisations.

56. Members of the Council agreed that promoting the focus on mitigation and adaptation synergies could increase interest in the Alliance from non-member countries who do not currently undertake any research on mitigation, but are instead concerned with food security outcomes. There are also several international funds that can provide support for countries wishing to undertake adaptation activities, which could open up some funding opportunities not currently available. Opportunities to consider adaptation benefits within workplan activities already exist in the Alliance and Research Group participants should be encouraged to identify these linkages by their Council representatives.

57. Resourcing is not only about money to fund research activities, countries should look to develop national science platforms and programmes that support the Alliance. Members should identify relevant domestic opportunities for research collaboration that are already offered and see how these can fit with the work of the Alliance. The role of Alliance Council representatives is to identify and enable the ways in which each country can best contribute to the workplans of the Research Groups. The Alliance should bring together funding that is already in place and build on the research interests of each Member. Multiple outcomes and benefits can result from supporting science collaboration in international research projects.

AQUACULTURE – SEAFOOD

58. Martin Scholten, Wageningen UR, presented a paper that the Netherlands had developed to look at any potential opportunities for the Alliance in the area of greenhouse gas emissions research in aquaculture and seafood production. The aquaculture/seafood production sector is rapidly increasing, in 2050 it is expected the seafood/aquaculture industry will be half the size of the livestock sector but the impact of greenhouse gas emissions from the sector are unknown. There has been very little research undertaken in this area, therefore the Netherlands proposed to undertake a stocktake of research activities across Alliance Member countries.

59. The Council agreed that the aim of the Alliance is to add value and a stocktake of research on aquaculture would support knowledge sharing in the international science community. Many member countries mentioned that they have a large fisheries sector, and that the issue is overseen by different ministries due to the particularities of the sector, therefore the proposal to undertake a stocktake of research will be the first step to coordinate all related institutions that could contribute.

60. The Netherlands has offered to facilitate this stocktaking activity and will be circulating a template for interested members to complete and for its further discussion in the next Alliance meeting. Those interested members should try to provide the template to universities due to the current academic work being undertaken on the subject by students.

SUSTAINABLE INTENSIFICATION AND GHG MITIGATION

Sustainable intensification and GHG intensity: how to couple food security and mitigation opportunities

61. Jan Verhagen, Wageningen UR, presented a paper from the Co-chairs of the Inventories and Measurement Cross-Cutting Group on sustainable intensification of agriculture production and how measurement of greenhouse gases can be used. The topic comes from discussions that have been had within the Group, and it was felt that the Council could contribute with a wider view across the Alliance.

62. Increasing food production is not a new idea; what is being considered here is how to best identify an increase in the amount of product produced per hectare. The calculation for emissions intensity "activity multiplied by emissions factor" requires an accurate measurement of the emission factor for the product that is being looked at. This is why improving emission factors is an important first step for many countries before they can consider an emissions intensity approach to increasing productivity. When increasing productivity per hectare, tradeoffs and inputs should be considered as well, a low emission intensity is defined by high productivity and low emissions, but users need to be aware of the model's limitations.

63. The Inventories and Measurement Cross-Cutting Group recognise that this paper will need to have the input and support of all Alliance Groups, but do not wish for the document to be considered wider than the Alliance or subject to international review. The model needs to remain simple and focused so that it can be easily used to identify agricultural systems or processes/stages within agricultural systems that could offer the greatest opportunities for improving productivity and reducing emissions´ intensity. However, it should also be recognised that there will be factors not able to be captured in such a simple model and that guidelines need to be provided around the models use, including data that is and is not captured by the model and limitations in its use.

64. There were ideas presented in terms of the structure and content of the paper, and the Council agreed that it should have a focus on emissions intensity of production, in terms of the efficiency and the opportunities for its improvement. In this sense, this could be looked by assessing, inter alia, the possibilities related to the improvement of: feed production; genetics; nutrition; reproduction; use of food additives and animal health. It was also suggested that the paper should recognize the adaptability of this method to account for diversified production systems, the question

being of how to best allocate greenhouse gas emissions to a diversity of outputs such as meat, milk, crops, wood, fibre, manure, transport etc.

65. The Inventories and Measurement Cross-cutting Group will ask the other Alliance Groups to contribute to the further development of the paper. It is expected that a stocktake of examples will be completed mid-2014. The Council also agreed for the draft paper to be presented and considered in the next Council meeting in 2014.

ALLIANCE PARTNERSAND INVITED ORGANISATIONS

66. Two organisations attended the Council meeting and gave presentations to the Council (PROCISUR on behalf of IICA, and the World Farmers Organisation). The Secretariat also gave a presentation on behalf of CGIAR who could not attend. Following the three presentations there was an opportunity for the Council to discuss the organisations and ask questions of the presenters.

PROCISUR: Strategies for Cooperation in Science, Technology and Innovation 2011-2014

67. **Emilio Ruz from PROCISUR, Uruguay** was invited to share how this regional organisation coordinates and shares information across its six member countries. Note that the Inter-American Institute for Cooperation on Agriculture (IICA) is the parent organisation of PROCISUR and an Alliance Partner.

68. PROCISUR and other agricultural research institutes from Argentina, Brazil, Paraguay, Bolivia, Chile, and Uruguay cooperatively develop a research funding agreement, which is renewed and refocused on a four year basis by IICA. The organisations aim to produce more food, with less environmental impact, including reducing greenhouse gas emissions and agricultural contaminants. PROCISUR's current work programme includes six strategic lines of regional cooperation:

1. The sustainable use natural resources in the of agriculture and forestry sectors
2. Developing alternatives for agricultural adaptation to climate change and mitigation options
3. Technology developments for agricultural improvement and information sharing.
4. Improving agri-food chains, and adapting production to needs of consumers
5. Promoting sustainable family farming practices and improving access to markets
6. Improving innovation in regional research institutes.

69. The research projects may involve some or all member countries and are funded by a combination of partners including the World Bank and FONTAGRO. IICA also supports a competitive fund for technical cooperation which many aligned projects bid into.

70. PROCISUR is currently coordinating a research project on sustainable development and agricultural intensification looking at the diversity of crops that are now grown across the region, and the number of crops that grown per year and how climate variation can affect these. The project is focusing on measuring livestock emissions for meat and milk to develop local emission factors for these systems and will then look to develop emission factors for cropping systems.

Climate Change Agriculture and Food Security Research Program of the CGIAR (CCAFS)

71. The CGIAR has a Climate Change and Agriculture and Food Security programme (CCAFS), which is spread across all CGIAR institutions, each of which then considers climate change as it affects its agricultural systems research and programmes. The CCAFS programme is divided into regions, with identified benchmark measurement sites in each region which compare measurements, mitigation options, trade-offs for adaptation and mitigation as they apply to regional smallholder farming systems.

72. The presentation identified areas of collaboration between CCAFS and the Alliance for the Council to consider:

1. Capacity building
    - Coordinating capacity building activities across regions. We target many of the same people and institutions in national government. For example, CCAFS regional programme leaders have proposed participants for Alliance workshops and CCAFS leaders have advertised the US Borlaug - GRA scholarship programme to regional contacts.
    - Collaboration of livestock greenhouse gas inventory training opportunities; South East Asia, East and West Africa in 2012 with ILRI.
    - Pasture based systems inventory training, Latin America, 2013 with CIAT

2. Measurement and data
    - Alliance members (e.g. Brian McConkey, Canada's Co-Chair of the Inventory and Measurement Cross-Cutting Group) have served as formal advisors, champions and resource people for CCAFS projects on smallholder whole farm and landscape quantification, including contributing to CCAFS workshops.
    - Collaborating in the development of guidelines for a protocol with the Alliance's Paddy Rice Research Group via IRRI.
    - CAD$500,000 for support of greenhouse gas quantification fellows in 2012-13 from Environment Canada, supported by Alliance members
    - CCAFS Standard Assessment of Mitigation Potential and Livelihoods in Smallholder Systems (SAMPLES) consulted with the Alliance and used stocktake results to inform CCAFS development of methods.
    - The Alliance has offered to host a webinar for CCAFS to report on a review of measurement issues to Alliance members.

World Farmers Organisation

73. The World Farmers Organisation (WFO) is not a member of the Alliance, but has previously expressed an interest in learning more about Alliance activities. The Council also has an interest in promoting research outcomes and new technologies to farmers, and has discussed the way in which farmer organisations could be involved in this objective. A regional representative of the WFO was invited to attend the Council meeting, both to identify ways the Alliance could support the WFO but also to inform the Council about the WFO and its local relationships and farmer interactions.

74. **Raul Roccatagliata** the Argentinean representative of the WFO spoke on the WFO's interest in learning more about the Alliance and how we might be able to work together and with farmers. There is a need to inform farmers of the global issues facing agriculture. These no longer just relate to the traditional challenges of trade and health but increasingly include international pressure to address climate change through adaptation and mitigation, as well as responding to other environmental issues. Farmers have first reacted to the discussions of emissions of agriculture in

international fora as a threat and as a new barrier to trade and production. In this context, the WFO is pleased to learn about the different approach being taken by the Alliance and the work done in terms of developing methodologies that can adapt to the specific national and regional contexts, taking into account differences in production systems. It is important to match an increase in the levels of production with a more sustainable process with less emissions´ intensity, incorporating carbon sequestration, and increasing the adaptation of the sector to the adverse effects of climate change.

75. The WFO is based in Rome but has a membership of 60 countries across six regions. Each country in the region has its own practices and production systems so collaboration first requires countries to establish understanding and discuss the systems. The WFO participates in many forums, and represents the views of farmers and its member countries. It informs other international entities of the constraints on farmers to produce more food in a sustainable manner and the need to have government funding and support those who are trying to do this.

76. The challenge for the Alliance will be transferring messages to farmers who will be implementing the new technologies and practices. It will be better for the Alliance to interact with farmer organisations; the Alliance has no ability to influence farmers directly.

77. The Council recalled the discussion from the 2012 Council meeting, which questioned how the Alliance could better share practices and research outcomes with farmers and how could this information be made accessible in simple non-scientific terms for farmers, in ways that do not conflict with food security or the development of the agricultural sector. It seems that there is a role for farmer organisations in the Alliance; these organisations have the established regional farmer networks that the Alliance needs to inform.

PARTNERSHIP DISCUSSION

78. Following on from the Alliance Partner and WFO presentations, there was a closed session with only Alliance members present for the Council to discuss the status of Alliance partnerships more broadly. Canada provided a summary of partnership activities to date and an update on the outcomes that were agreed at the 2012 Council meeting including:

- Agreeing to an initial list of organisations to approach as Alliance Partners
- Confirmation of formal Alliance Partners would happen by way of letter
- A comparison of the organisations that the Alliance was already partnering with would be undertaken so that gaps and overlaps could be identified before new organisations were approached as partners
- A template would be developed to describe the level at which the Partner and the Alliance work together and to compare Partners so that we may identify work areas were we could look to invite new Partners.
- The template would be used to undertake an analysis of potential new Alliance Partners, with the aim of achieving a balanced portfolio of Partners

Inventory of global agriculture and climate change networks

79. The Netherlands then provided the outcomes of a survey they had conducted looking at international policy networks on agriculture and climate change. With more than 40 networks

identified as now working in a similar space to the Alliance, most recently established to support food security requirements in a changing climate. The Alliance should be aware of the differences between these organisations, and what opportunities there might be for collaborating or partnering with other initiatives. The presentation identified three points that the Council should keep in mind during partnership discussion:

- The Alliance can be an essential partner for existing/new networks
- The Alliance should have a good understanding of the goals of other organisations, in terms of their specific and focused relationship with agriculture and climate change
- Partners should have a specific contribution to the Alliance

Alliance Partner Comparison

80. The discussion papers provided to the Council ahead of this session included draft letters as developed for two Partners (FAO and IICA) and the draft partnership template which was developed by France, Canada and Uruguay then pre-populated with each of the Alliance's current Partners. The Council was asked to consider the draft templates suitability for this discussion and compare the Partner information that had been included.

81. The Council noted the unequal global distribution of current partners (three of the six Partners are from Latin America, with no partners from the regions of Europe or Asia) and agreed that the Alliance should look to identify potential partners to support our aims in these regions. The Council noted that the Alliance has not yet invited farmer organisations to partner and agreed that inviting the World Farmers Organisation to be a formal Partner would be a step in this direction.

82. The Council noted that the template could include an additional point that would capture where Partners are already working with the Alliance, especially particular activities or Research Groups that they are involved with, and if cooperation is tied only to the particular activity and therefore has an end-date. The final outcomes from the Partnership session are noted below:

- The Alliance should be open to organisations with which we can have a positive relationship – not all relationships need to become formal partnerships.
- The Partners template will be revised as members suggest and the programme of work outlined in the Council workplan will be continued.
- The Research Groups will be asked to provide a list of their partners to the Council
- The Secretariat will research and report on partner relationships of other similar organisations to the Alliance.
- Council Chair and Vice-Chair to continue developing letters of partnerships outlining work areas
- Formal Partners should be multi-country organisations, which have direct benefits identified before the Council agrees to the relationship.
- Policy organisations should also be considered for partnership
- The World Farmers Organisation should be invited to join the Alliance as a Partner
- There is a need for Members to further consult the possible partnership of FACCE-JPI
- The European Commission, which has not responded to the Alliance's offer of partnership, should be re-engaged.

OTHER BUSINESS

World Agricultural Forum, 4-7 November 2013, Hyderabad, India

83. New Zealand mentioned they (through the role of Alliance Secretariat) had been invited to participate in the 2013 World Agricultural Forum (WAF) in India in November. The Secretariat sent an email to all Council representatives on 26 February inviting other interested members to support New Zealand at this event. Both the Livestock Research Group and the Paddy Rice Research Group are interested in having a presence at the event with the Netherlands offering to support New Zealand in promoting the Alliance if this activity is agreed by the Council.

84. The Council agreed that this would be a good forum in which to promote the Alliance, and agreed that this WAF activity can be in the name of the Alliance. It was also agreed that Uruguay should attend this meeting as Chair of the Alliance Council.

New Zealand's activities in the Alliance

85. A series of other Alliance activities that New Zealand is supporting in the coming year were then mentioned to the Council for their information and support if interested, these included:

- Support a workshop of the Livestock Research Group in Poland late 2013, with the main aim to raise Alliance awareness and increase membership in Central and Eastern Europe.
- Proposal for the FONTAGRO/New Zealand research project phase 2 is almost finalised. This will establish a new regional project involving countries in the Central and Andean regions of Latin America, building off the existing FONTAGRO project involving Southern Cone countries.
- New Zealand has been invited to attend UN ECOSOC, high level science, technology conference and speak about Alliance activities, and invitation to partner in this activity was offered to members of the Council who are also members of ECOSOC.
- New Zealand is identifying ways to better engage with farmers and farmer organisations, including a recent invitation for regional representatives of the World Farmer Organisation to visit New Zealand.
- New Zealand is hoping to re-establish its Alliance Secretariat representation in Europe later this year.

INCREASING MITIGATION AND ADAPTION SYNERGIES IN THE ALLIANCE

86. The Council supports a greater focus for Alliance activities on mitigation and adaptation synergies as mentioned in paragraph 7 of the Alliance Charter. Adaptation is an important consideration for agricultural research in order to improve the productivity, resilience and adaptive capacity of agriculture, in relation to food security. An increased focus on these synergies could enable leverage of greater international funds, many of which are dedicated to supporting adaptation research. It could also help to increase involvement from those member countries who

are more focussed on adaptation and the need for food security, and who do not have the resources to research mitigation options.

87. The Council discussed how these activities could be best supported by the Alliance, noting that existing Groups are already under resourced by members and that the Alliance is about aligning research where possible. It was agreed that the synergies between adaptation and mitigation could be best addressed with the creation of specific Networks in the existing Research and Cross-Cutting Groups and the inclusion of the issue in their existing work plans (in accordance with paragraph 24 of the Alliance Charter).

88. Participants in the Research Groups have an understanding of the synergies between mitigation and adaptation activities and should be encouraged to promote these activities. Each Research and Cross-Cutting Group should have the opportunity to explore mitigation and adaptation synergies and report to the Council on the activities that could be included in this area.

89. In this context, the Council decided the creation of a Network in each Research and Cross-Cutting Group to promote synergies between adaptation and mitigation efforts and improve productivity, resilience and adaptive capacity of agriculture, in the context of the achievement of food security and sustainable development. The Council further agreed that the terms of reference of each Network will be elaborated with the participation of Members of each Group, led by their Co-Chairs. The Council also decided that the Research and Cross-Cutting Group s will report (through their six monthly reports) the results of the work of the Networks to the annual Council meeting from 2014 onwards for further progress on the issue and future developments.

90. The Council encourages all Alliance Members to identify opportunities and activities to include in the Research and Cross-Cutting Group workplans, including identifying and developing mitigation projects and activities that have synergies with adaptation and improve productivity, resilience and adaptive capacity of agriculture, in the context of the achievement of food security and sustainable development.

CLOSE OF MEETING

APPENDIX 1: Participants lists

Country	Attendees
Alliance Member Countries	
Argentina	Julia Geraldine Hoppstock: Ministry of Foreign Affairs and Worship (hop@mrecic.gov.ar)
Australia	*Unable to attend*
Brazil	Renato Rodrigues: EMBRAPA (renato.rodrigues@embrapa.br)
Canada	Gilles Saindon: Agriculture and Agri-Food Canada (gilles.saindon@agr.gc.ca) Robert Patzer: Agriculture and Agri-Food Canada (robert.patzer@agr.gc.ca) Brian McConkey: Agriculture and Agri-Food Canada (Brian.McConkey@agr.gc.ca)
Chile	Jose Antonio Prado: Ministry of Agriculture (jprado@odepa.gob.cl)
China	Bo Li: Ministry of Agriculture (kjszyhjc@agri.gov.cn) Yihua Wei: Department of Climate Change (weiyihua@hotmail.com) Yu'e Li: Chinese Academy of Agricultural Sciences (yueli@ami.ac.cn) Hongmin Dong: Chinese Academy of Agricultural Sciences (donghm@ieda.org.cn)
Colombia	*Unable to attend*
Costa Rica	*Unable to attend*
Denmark	*Unable to attend*
Finland	*Unable to attend*
France	Ludovic Larbodiere: Ministry of Food, Agriculture and Fisheries (ludovic.larbodiere@agriculture.gouv.fr)
Germany	*Unable to attend*
Ghana	*Unable to attend*
Indonesia	Sri Rochayati: Indonesian Agency for Agricultural Research and Development (srochayati@gmail.com) Mutia Erti Dwiastuti: Citrus and Subtropical Fruits Research Institute (balitjestro@gmail.com)
Ireland	*Unable to attend*
Italy	*Unable to attend*
Japan	Yasukazu Hosen: MAFF (yasukazu_hosen@nm.maff.go.jp) Kazuyuki Yagi: National Institute for Agro-Environmental Sciences (kyagi@affrc.go.jp) Shigeto Sudo: National Institue for Agro-Environmental Sciences (ssudo@affrc.go.jp)
Malaysia	*Unable to attend*
Mexico	(gchoreno@sre.gob.mx) –secretariat to confirm.
Netherlands	Sjoerd Croque: Ministry of Economic Affairs (s.r.r.croque@minez.nl) Martin Scholten: Wageninegen UR (martin.scholten@wur.nl) Jan Verhagen: Plant Research International (jan.verhagen@wur.nl)
New Zealand	Chris Carson: Ministry for Primary Industries (chris.carson@mpi.govt.nz) Harry Clark: NZAGRC (harry.clark@nzagrc.org.nz) Trish Ranstead: Ministry for Primary Industries (trish.ranstead@mpi.govt.nz)
Norway	Jan Henrik Martinsen: Ministry of Agriculture and Food (jan-henrik.martinsen@lmd.dep.no)
Peru	Sara Yalle Paredes: Ministry of Agriculture (syalle@minag.gob.pe)
Philippines	*Unable to attend*
Republic of Korea	*Unable to attend*
Spain	Lorena Marquez: Climate Change Program, Spanish Embassy (otc@aecid.org.uy)
Sweden	*Unable to attend*
Switzerland	Dominique Kohli: Federal Office for Agriculture (dominique.kohli@blw.admin.ch)
Thailand	Jirapa Trochim: Office of Agricultural Economics (Jirapa.trochim@gmail.com)
UK	*Unable to attend*
	Walter Oyhantacabal: Ministry of Livestock, Agriculture and Fisheries (woyhantcabal@mgap.gub.uy)

Uruguay	Gonzalo Becoña: Plan Agropecuario (gonbec@gmail.com) Alvaro Roel: INIA Uruguay (aroel@inia.org.uy)
USA	Willaim Hohenstein: USDA/OCE (whohenst@oce.usda.gov) Alan Franzluebbers: USDA-ARS (alan.franzluebbers@ars.usda.gov)
Viet Nam	Quang Ha Pham: Institute for Agricultural Environment (Pqha-nisf@hn.vnn.vn)
Other Participants	
Mr Paul Roccatagliata: WFO (rroccatagliata@sra.org.ar) Mr Vicente Plata: FAO (vicente.plata@fao.org) Mr Emilio Ruz: IICA / PROCISUR (Emilio.ruz@procisur.org.uy) Mr Jose A. Terra: INIA Uruguay (terra@inia.org.uy) Ms Veronica Musselli: INIA Uruguay (vmusselli@inia.org.uy)	
Secretariat: Hayden Montgomery (hayden.montgomery@mfat.govt.nz), Deborah Knox (deborah.knox@mpi.govt.nz)	

APPENDIX 2: Letters from Canada as the outgoing Chair.

APPENDIX 3: Complete Country reports (Indonesia, Japan and Vietnam)

Indonesia Country report

1. The past year activities that directly support and are strongly aligned with the goal of the GRA in Indonesia:

   a) Policy decisions

   - Synergize adaptation with mitigation in agricultural sector through inceasing water and nutrient efficiencies, recycling of organic matter, and rehabilitation of idle, low carbon stock land.
   - Development of measurement the capability of green house gas emmision on farming systems
   - Development and application of adaptive technology to climate stress, especially through the use of genetic engineering, and technology which is environmentally friendly
   - Development and optimization of land and genetic resources with minimum environmental risk
   - Identification of the indigenous technology and adaptive local knowledge of climate change
   - Develop the planting calendar system in the context of supporting research and assessment National and Regional Action Plan on the reduction of green house gas emmision (synergize adaptation with mitigation)
   - Develop of Carbon Efficient Agriculture Systems (Indonesian Carbon Efficient Farming/ICEF, or Low Carbon Farming/ LCF) such as Good Agricultural Practices; Crop-Livestock Integration Systems; Integrated Crop and Resource Management (ICM); Dryland Farming Systems Integrated Dry Climate; System Rice Intensification; Model Regional Sustainable Food House
   - Updating the data inventory system for livestock and feeding management to improve the estimation of methane emission from livestock
   - Build some facilities for enteric methane measurement in laboratory scale to support the activities

   b) Funding

   Recent development and opportunities in our domestic funding system that could enable better coordination of research project:

   - The Ministry of Agriculture through Indonesian Agency for Agricultural Research and Development support for funding of some projects developed in some Research Institutes as well as some international collaboration research
   - The Ministry of Research and Technology support for funding of some projects developed in some University and Research Institutes

2. Capacity Building

   - Attending the International Seminar on Increased Agricultural Nitrogen Circulation in Asia: Technological Challenge to Mitigate Agricultural Nitrogen Emissions in Taiwan (funded by Food and Fertilizer Training Center)
   - Organize the International Workshop on Inventory Data for Green House Gasses from Livestock held in Jakarta, Indonesia (funded by the Indonesian Agency for Agricultural Research and Development/IAARD, New Zealand Government)
   - Join the training on measurement technique of methane from livestock in Thailand (funded by IAARD, New Zealand Government)
   - Join the training on measurement of gas flux with the use of chamber and CQESTER model in USA (funded by GRA)

- Organize the International Conference on Climate Change, Biodiversity and Food Security and it will be held on 1-4 July 2013 in Bandung, Indonesia (funded by IAARD)
- A couple of research results are under peer review for publication

3. Specific opportunities and proposals for research that would benefit strongly from international collaboration
    - One preliminary project proposal on the inventory data of livestock system system to estimate contribution of methane from livestock in Indonesia has been approved by New Zealand Government for the year 2013
    - One project proposal on selecting and identifying rumen microbes that can reduce methane production in the rumen of animals fed by the by product of palm oil industry has been approved by Indonesian Government and funding by Indonesian Agency for Agricultural Research and Development
    - One project proposal on identified characteristics of some feed sources related to their nutrient content, digestibility, animal response and methane production is still in processed to find some sponsor for funding
    - Propose the project activities on the implementation of measurement gas flux with the use of chamber and CQESTER model on farming system (as the action plan from the join training in USA). The funding could be found from join funding between the collaboration international research project under the Indonesian Agency for Agricultural Research and Development and the International Organization/Institution
4. The future decisions to support the Alliance
    - Develop Model for Acceleration of Sustainable Development of Agricultural Research which is environmentally friendly and economically feasible in the aspect of improved productivity, lower emissions of greenhouse gases, adaptive to climate change, implementation of integrated pest management and site-specific nutrient management, low heavy metal contamination, zero waste, utilization of local resources, and the preservation of biodiversity. The funding could be found whether from the Indonesian Government through the Ministry of Agriculture/Indonesian Agency for Agricultural Research and Development or the International Organization/Institution or from join funding from both parties/organization.
    - Prepare guidelines for National Action Plan as well as Regional Action Plan for green house gas (synergize adaptation with mitigation). Area/target reduction of greenhouse gas emissions in agriculture sector are the crop-sub sector, especially wetland (soil, water and fertilizer management, the use of varieties); livestock sub sector (utilization of waste, biogas, type and formula feed); cross-cutting multi sub sector. This activity is funded by the Indonesian Government.

- Indonesian Agency for Agricultural Research and Development

Japan Country report

Thank you Mr. Chairman.

I would like to express my gratitude for the kind hospitality of Uruguay, which also acts as co-chair of the Paddy Rice Research Group together with Japan. I also would like to thank the outgoing presidency of Canada for its precious efforts and to the NZ secretariat for its relentless contribution to the activities of GRA.

The Ministry of Agriculture, Forestry and Fisheries of Japan shares the aim and has been supporting the activities of GRA. To make our contribution more substantial, in the period since the last Council in Canada, we started new activities related to GRA.

Firstly, let me illustrate 2 projects for research and technology development. In Dr. Yagi's presentation, it sounded only one, but exactly speaking, we have 2. One is MIRSA, led by IRRI and implemented through GRA network. Its budget is about 130 thousand USD. Another research project is MIRSA2, to be led by Dr. Yagi, and to be conducted in cooperation with GRA-member countries' research institutes, which are Vietnam, Philippines, Thailand, Indonesia and Japan. Its budget is about 366 thousand USD per year and the project is expected to continue for five years.

Secondly, we have, since 2011, a project for the capacity building of young agricultural scientists in developing countries, which is entitled "On-the-Job Research Capacity Building for Sustainable Agriculture in Developing Countries". It is conducted through the United Nations University. For this fiscal year, in support of the activities of GRA, we have arranged the project so that priority would be given to those capacity building projects which relate to climate change mitigation. The call for application for this year has been just opened to the public in the last week and due until August 10. It would be helpful if you could disseminate this information to your friends and those interested. Its budget is about 410 thousand USD.

Lastly, we have opened a webpage about GRA in both English and Japanese, on the homepage of the Ministry of Agriculture, Forestry and Fisheries. As to the English pages, we are going to upload information on Japan-led activities related to GRA as well as on the activities of GRA and its various research groups, in particular, Paddy Rice Group. As to the pages in Japanese, our main objective is to diffuse GRA activities to the Japanese research community.

We will continue those activities to support GRA.

Thank you.

Yasukazu HOSEN
Deputy Director, International Research Division,
Agriculture, Forestry and Fisheries Research Council Secretariat,
Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF)

Vietnam Country report

Important Policy Decisions

- Vietnam National Target Program (N. 158 Dec 02, 2008) of the PM = > Three pillar (Scenarios, Adaptation and Mitigation)
- Ministry of Agriculture and Rural Development-MARD (N. 543, Nov 23, 2011)=> action plan to respond to climate change in MARD sectors (increase production 20%; reduce 20% GHG; poverty reduction 20% every 10 years)
- Decision of MARD No: 3119, Dec. 16 2011 on GHG Reduction (20% per unit product in 2020 comparison with 2005)
- National Scientific Program on CC (BDKH 2011-2015 and 2016-2010)
- DECISION of THE PRIME MINISTER OF VIETNAM/ N. 1775/QD-TTg November 21, 2012. APPROVAL OF PROJECTS ON GREENHOUSE GAS EMISSION MANAGEMENT; MANAGEMENT OF CARBON CREDIT BUSINESS ACTIVITIES TO THE WORLD MARKET
- DECSION of THE PRIME MINISTER OF VIETNAM/ THE PRIME MINISTER No.: 1775/QD-TTg Ha Noi, November 21, 2012

APPROVAL OF PROJECTS OF GREENHOUSE GAS EMISSION MANAGEMENT; MANAGEMENT OF CARBON CREDIT BUSINESS ACTIVITIES TO THE WORLD MARKET

Management of greenhouse gas emission is done with focus, priority, concentrating on each stage of the major sources of greenhouse gas emission in the areas of energy, agriculture, and land use, land use change and forestry (LULUCF) and waste.

Target of reducing greenhouse gas emission to 2020 in comparison with 2005 (per unit of product)

- Energy and Transportation 8%
- Agriculture 20%
- Waste Management 5%

Agriculture sectors

- Applying advanced measures of rice cultivation in the direction of saving water and reducing input costs (AWD, SRI modified, crop pattern changes, rice based cropping systems)
- Applying technical measures to improve the efficiency of fertilizer use, reduce N2O emissions in rice cultivation (FYM, Agri. Precision.., Leaf Coulor Chart ; Rice-Modelers…)
- Applying solutions to save energy and fuel in soil preparation, watering industrial plants, developing and applying minimum cultivation measures to reduce greenhouse gas emission (CA; agro-ecology, Minimum tillage..);
- Collecting, recycling, re-using agricultural by-products. Developing and applying organic waste treatment technology in the cultivation of vegetables, sugar cane, short and long-term industrial crops; (Bio-treatments..)
- Changing the diet in livestock and poultry raising. Providing nutrition MUB cake for dairy cows;
- Applying process of good agricultural practices in Vietnam (VIETGAP) in animal husbandry;
- Using antibiotics from bacteria, the intestinal bacteria to reduce level of greenhouse gas emissions from livestock;
- Developing biogas technology and system of collection, storage and handling of manure in livestock and poultry breeding.
- Forest protection;
- Boosting reforestation, natural regeneration;
- Reducing greenhouse gas emission through efforts to limit deforestation and forest degradation, sustainably managing forest resources, conserving and enhancing forest carbon stocks (REDD +); VAC (Garden, Pond, Stables)

Vietnam: NAMAS and MRV

- System of measurement, reporting and verification (MRV), including national and sectoral level set in the early stages of the Projects in order to serve the requirements related to national greenhouse gas inventory, management of greenhouse gas emission, including the development of emission coefficients for the country. In the next stages, this system shall be extended to monitor the activities causing more greenhouse gas emissions by the sectors and areas and meeting the requirements to provide data for periodic examination and reports as prescribed by the UNFCCC; while creating favorable conditions for the NAMA activities.
- Biogas and Cements are indicated as pilots projects
- Rice production relative with Food security and mitigation GHG, farmers incomes
- Sampling Monitoring networks establishments
- Ministerial and national projects on mitigation

- Extensions works in promising technical options in agriculture sectors

Vietnam Academy of Agricultural Sciences (IAE/VAAS)