Report on Phase 1 Planning Meeting of the Paddy Rice Production Component CCAC Agriculture Initiative

24-25 October 2014
S31 Hotel, Bangkok, Thailand

Prepared by Dr. Bjoern Ole Sander and Bernadette P. Joven

SUMMARY

TITLE OF INITIATIVE: Climate and Clean Air Coalition (CCAC) Agriculture Initiative

TITLE OF ACTIVITIES TO BE FUNDED: Mitigation Options to Reduce Methane Emissions in Paddy Rice

INITIATIVE LEAD PARTNER(S): Bangladesh, Canada, Colombia, European Commission, United States, World Bank

COMPONENT PARTNERS: Japan, Bangladesh, Canada, Colombia, International Center for Tropical Agriculture (CIAT), CGIAR Program on Climate Change, Agriculture and Food Security (CCAFS), Environmental Defense Fund (EDF), U.N. Food and Agriculture Organization (FAO), Global Research Alliance for Agricultural Greenhouse Gases (GRA), International Rice Research Institute (IRRI), Sustainable Rice Platform (SRP), and World Bank

ACTORS: Vietnam, Bangladesh, Colombia

IMPLEMENTERS THAT WILL RECEIVE FUNDING: IRRI, CIAT (for CCAFS Program)

TARGETED REGIONS/COUNTRIES: Southeast Asia (Vietnam), South Asia (Bangladesh), and Latin America (Colombia)

START DATE OF PHASE I: 12/1/2014

END DATE OF PHASE I: 5/31/2015

CONTACT PERSON: Dr. Bjoern Ole Sander at b.sander@irri.org

Background of the Project

The goals of the Climate and Clean Air (CCAC) Agriculture Initiative are to disseminate best practices for minimizing emissions of short-lived climate pollutants (SLCPs) from agriculture while also enhancing food security and livelihoods and meeting cross-sectoral climate change objectives.

The purpose of the paddy rice component of the CCAC Agriculture Initiative is to produce technical and policy guidance for national governments to implement SLCP and other greenhouse gas (GHG) mitigation options at large scales in paddy rice systems while maintaining or improving rice yields.

The paddy rice program will target one country as a regional hub in each of Southeast Asia (Vietnam), South Asia (Bangladesh), and Latin America (Colombia) to develop initiatives for up-scaling mitigation at the national level. Up-scaling may entail engaging the private sector and government technical support programs as well as conducting outreach and public awareness campaigns with nongovernmental organizations (NGOs) that work primarily with farmers.

A central web-based information platform or "kiosk" will be developed at IRRI to support activities throughout the life of the program. The program will address major constraints to mitigation in paddy rice, specifically the need to identify: (1) best management practices that achieve mitigation and food security and (2) incentives, technical support mechanisms, and enabling conditions to overcome the barriers that men and women farmers face in using the new practices. Component partners will help link research to policy development to address these constraints and support learning by agricultural development organizations to enable significant numbers

of farmers to mitigate emissions in paddy rice. Other countries in the regions will be engaged as associate program participants to facilitate regional outreach.

The program will focus on alternate wetting and drying (AWD) in irrigated rice, the well-developed technology for mitigating GHG emissions in rice systems. The program will potentially assess direct seeding, groundcover management, nutrient management (including biochar and other amendments), nitrogen use efficiency, and rice straw management to avoid open burning as elements of an AWD technical package that we refer to as AWD+. We envisage that at the end of Phase II, the program will have (1) reduced methane emissions intensities (CO_2e/kg rice) from eligible rice systems by up to 30%; (2) improved rice yields and efficiency of nitrogen fertilizer use; and (3) reduced production costs, water use, and fuel required to pump water.

Phase I will be 18 months. In Phase I, program implementers IRRI and CIAT will compile available information in each region to assess opportunities and barriers to large-scale implementation. Information will include current rice management practices, data on AWD biophysical and socioeconomic suitability, and current policy actions for each region in a web-based information platform accessible to the public. IRRI and CIAT will also facilitate national lead partners to form policy working groups in Vietnam, Bangladesh, and Colombia to identify areas with high mitigation potential and design agricultural development interventions for the up-scaling of mitigation practices in those areas. The major outputs of Phase I will be a central information kiosk housed at IRRI and three country-led proposals for Phase II, with a clearly articulated action plan and deliverables.

Objectives of the Planning Workshop

1. To present the project proposal to important partners and acquire feedback on implementation.
2. To develop detailed implementation plans for project coordination and target countries.
3. To harmonize activities in 3 target countries and establish close links with other relevant activities.
4. To define project management structure and to outline general modes of monitoring and reporting.
5. To establish a timetable of project meetings and activities.
6. Discuss the vision and timeline for Phase 2 of the Paddy Rice Component

Expected Results

The overall program will produce technical and policy guidance for implementing scalable mitigation options in paddy rice in Southeast Asia, South Asia, and Latin America.
Phase I will produce:

1. Improved information for decision-making. National decision makers will have comprehensive, high-quality information and consistent metrics on rice management practices, their GHG mitigation and food security impacts, and opportunities and barriers to implementation at a central kiosk at IRRI. GIS maps will be constructed in each country to show the biophysical and socioeconomic suitability of different paddy rice locations for mitigation and prioritize locations for AWD+.

2. National networks and capacity. National policy networks in three countries will be established to raise awareness of paddy rice mitigation options, identify mitigation priorities, and design initiatives. IRRI, CIAT, and regional resource people will work with policy makers to build needed capacity.

3. Country-specific proposals for national initiatives. Multi-stakeholder working groups in each country will use information to design agricultural development programs that scale up mitigation in paddy rice systems while also maintaining or improving food security and farmers' livelihoods.

Phase II will continue work in the three initial countries to produce:

1. Demonstration of initiatives that scale up AWD+. National initiatives in each country will test approaches for up-scaling AWD+ in high mitigation potential areas through technology demonstrations, training, and facilitating enabling conditions with local and national intermediaries (e.g., water/irrigation organizations).Lessons will be shared regionally for subsequent larger scale investment through (1) monitoring of impacts and adjustment of AWD+ practices for multiple benefits in specific locations;(2) analysis of the business case for AWD+ and constraints or opportunities that need to be addressed to achieve scale; and (3) building of partnerships for investment in subsequent up-scaling.

2. Technical and policy guidance and standards for reducing methane emission intensities by up to 30% in eligible paddy rice systems. National and regional partners will synthesize information and lessons learned from national initiatives to provide environmental standards and guidance for decision makers to implement mitigation at large scales. Communications and public outreach campaigns and strong partnerships will ensure broad awareness and ownership of material.

Added Value

A number of countries have promoted AWD-like practices at small scales for their water-saving effects. The proposed work will add value by enhancing these practices to also deliver optimal SLCP reductions and by supporting national institutions to build larger scale, targeted programs for multiple benefits. Consistent metrics and research conducted at international standards will provide policy makers with field-based evidence to inform activities for promoting technical packages most relevant to areas with high mitigation potentials.

Workshop Proper

Day 1, 24 October 2014

Setting the stage, prospects of AWD implementation in the three target countries: Vietnam, Bangladesh and Colombia

This session was chaired by Dr. Bjoern Ole Sander. Dr. Reiner Wassmann and Sunny Uppal gave the welcome remarks, and later, Andrew Eil, Sunny Uppal amd Lini Wollenberg introduced the CCAC, its Agriculture Initiative and the Paddy Rice Component proposal, respectively.

A. Overview of CCAC and agriculture initiative: Andrew Eil – CCAC Secretariat

CCAC is the organizing entity and donor of this initiative. It builds on existing efforts developed and led by partners. All initiatives to stem from this component should be coherent and well-coordinated and be built upon scientific assessments. Its theory of change can be measured in terms of magnitude of associated potential short-lived climate pollutants (SLCP) reductions, ability of the initiative to complement, scale-up and accelerate existing efforts to address SLCP emissions, ability to catalyze new actions to address SLCP emissions, and the comparative advantage of the CCAC in supporting these efforts.

The main SLCPs are black carbon or soot, methane (CH4), tropospheric ozone (O_3) and some hydrofluorocarbons (HFCs), which have more pronounced and impact on the atmosphere, though short-term unlike CO_2. SLCPs are responsible for ~ 20% of global warming and ~40% of current warming influence. Aggressive action to reduce emissions of SLCPs could avoid up to 0.6^{o}C by 2050, as well as 2 M premature deaths annually.

SLCPs also impact crop productivity. Agriculture and land use account for 35-40% of black carbon and 50% of methane globally. Agriculture, a key sector, is the largest source of anthropogenic CH_4 emissions. Rice cultivation contributes 10% of global methane emission.

CCAC seeks to address these important global issues. CCAC is a high level assembly, hosted by the United Nations Environment Programme (UNEP) based in Paris. Its Agriculture Initiative aims to reduce methane and black carbon emissions from agricultural processes while promoting greater food security, agricultural productivity and livelihoods, environmental sustainability and broader climate objectives. Among its cross-cutting initiatives and activities include national action plans, financing, regional assessments, urban health and outreach and awareness raising activities.

Sunny Uppal – CCAC, Canada

The Initiative was consensus-driven and lead partners are present and engaged in the work, thus, yielding good performance. The objective of the Initiative is to share and implement best practices for minimizing emissions of short-lived climate pollutants (SLCPs) from agriculture, including CH_4 and black carbon (BC) in a manner that is consistent with broader climate change objectives and that also enhances food security and livelihoods. It builds on existing research to accelerate and scale-up work through awareness raising and resource mobilization and underpinning high-level political will.

CCAC Canada focuses on Initiative-level coordination, communications and outreach, liaising with the Secretariat, Steering Committee and Working Group.

CCAC Agriculture Initiative comprises of three Components, namely: (1) Livestock and manure management; (2) Open agricultural burning; and (3) Paddy Rice Production. The Paddy Rice Production Component had a design meeting in January 2014 participated by experts from Bangladesh, Vietnam, GRA, CGIAR, CIAT and IRRI. The proposal was approved in March 2014 with funding of US$777K for Phase 1, and was launched in October 2014.

The Components make sure activities are replicable which is important for scaling-up following the embedded "theory of change". For the Paddy Rice component, the aim is to reduce methane emission intensities by up to 30% from eligible paddy rice systems, in addition to improved rice yields and efficiency of nitrogen fertilizer use; and reduced production costs, water use and fuel required to pump water.

B. Proposal overview: Lini Wollenberg

Less than a year ago, Keiichi Sugita from the Government of Japan and Kaz Yagi from the GRA Paddy Rice Group contacted CCAFS. Six weeks later, the proposal workshop was held and the paddy rice project emerged. It was exactly Oct 25, 2013 when the proposal begun with the long-term objective of providing technical and policy guidance for national governments to implement GHG mitigation at large scales in paddy rice systems by catalyzing up to a 30% reduction in GHG and reducing emissions for eligible production systems, while maintaining or improving rice yields.

Some mitigation options are the alternate wetting and drying (AWD), amount, timing and composition of organic inputs like rice straw, manure, or compost, groundcover management; and nitrogen fertilizer efficiency. Other means include direct seeding, open burning, biochar etc.

The AWD technology is the most promising option but scaling-up is constrained by lack of information for policymakers for informed decisions and policy recommendation. Farmers, on the other hand, need information about its benefits and practice.

The guiding principles of the proposal are for options to build on existing farmer aspirations and national policy and institutions; efficiency gains as incentives; AWD+ as technical package (interested not only in methane but also in nitrous oxide emission etc.; not all areas/countries would be suitable for AWD; and regional contexts matter.

The CCAC Paddy Rice Component is a 3-5 year initiative with two phases. For Phase 1 (18 months) or Planning Phase, major activities would be the development of information kiosk (baseline, GHG impacts, delivery of high quality information and consistent metrics, and conduct of suitability mapping (where AWD would be suitable). Phase 2 (2-3 years) would involve refinement and test implementation and the development of country-level plans.

Planned activities and deliverables will center on:

- Setting up of central information kiosk to contain baseline data, GHG impacts and potential mitigation options etc.
- Development of three country-led proposal for Vietnam, Bangladesh and Colombia for Phase 2
- Building up of national network and capabilities
- Establishment of GIS maps in each country to determine biophysical and socioeconomic suitability of mitigation options, and identify and prioritize locations for AWD+

Comments and Questions

- Sunny Uppal: In scaling-up with partners, it would be best to look at co-financing also and other potential resources that we could leverage to ensure that objectives are met.
- James: We want to work in existing policy environment that has not been successful so this is a concern. (Ans.) In Vietnam, we have good opportunities through the green growth program.
- Ruben: AWD has limitations and may not suitable in some conditions. Maybe there should also be other water management options that would be suitable where AWD+ is not. (Ans.) The work is intentionally focused on AWD being a mature technology…There are other water management technologies (mid-season etc) which is relatively easy to use and has good mitigation potential, so we would also consider these in mind. We will focus on irrigated system at least for now and we'll see how far we can take the system in the Phase 2.
- Wyn: It is important for Columbia to have different representatives (in the framework of sustainability) to make this happen. (Ans.) Nigeria has a good experience on how to bring many things around this CCAC initiative. Every country situation is unique.
- Ruben: AWD is often viewed as farmer-level water-saving technology. But this should also be looked at in a systems level. As input to discussion, consider the issue of involving the whole irrigation system. There's no adoption if there is no buy-in from higher levels that are in-charge of water resource allocation.

COUNTRY PRESENTATIONS

The country presentations set the scenario of the prevailing rice production system in Vietnam, Bangladesh and Colombia. Against this backdrop, experiences and outlook for AWD up-scaling were established. Institutional settings, stakeholders, relevant national activities, case studies and opportunities and threats provided a clearer understanding of the enabling and possible disenabling environment for AWD uptake across levels and scenarios. A 30-minute general discussion followed.

A. Rice production and AWD in Vietnam: MV Trinh , Institute for Agriculture and Environment

Vietnam is the 2nd largest rice exporter worldwide. Paddy rice spans 7.65 million ha across Vietnam. The government aims to increase rice yield around 30% during the last decade by using high yielding varieties, better crop nutrient management, better pest and disease management (IPM) and improved irrigation system. But rice production faces a number of challenges like salt water intrusion, salinity, drought, extreme events and increased incidence of pests and diseases.

The practice of AWD in Vietnam is applied through programs like SRI, 3-reduction-3 increasing, 1 must-5 reduction and 1 must-6 reduction. Data from the Directorate of water resources indicate that 156,000 ha of rice fields are implementing partial AWD and 37,000 ha under full AWD in the Red River Delta.

Farmers acknowledge the benefits in using the AWD technology as it saves water, reduces pest and disease and ease of mechanical harvest due to drier soil. The government, through MARD, encourage up-scaling of SRI and 1 must-6 reduction where AWD is a component.

Currently, research interest on AWD and its methane reduction potential is high with the government and NGOs investing money for more research and up-scaling. However, the challenge lies on how to change farmers' behavior to encourage adoption and limited irrigation infrastructure, among others. On the policy level, it is recommended to have better coordination among local governments; have stronger collaboration among government officers, scientists, extensionists, farmers and interest groups; conduct capacity building activities to empower stakeholders and farmers; prioritize infrastructure building; and introduce new technologies and innovations.

B. Rice production and alternate wetting and drying (AWD) pilot initiatives in Bangladesh by Sultan Ahmed, Department of Environment, Bangladesh

Rice production in Bangladesh covers an area of about 157,570 km^2. In 2012-2013, 37.27 million metric tons of rice was produced. The traditional irrigation or flooded system is being practiced in 9.9 million ha across the country.

Initially, AWD is conceptualized as a water-saving and energy-saving technology and is being practiced along with pesticide and nutrient management. In terms of suitability, Bangladesh is 80% suitable for the AWD technology. The method is now being employed as this model has been validated to reduce water use by 40%, energy use by 30% and with less methane emission, thus, the need for up-scaling.

The Bangladesh Agricultural Research council (BARC) coordinated a 3-year AWD Program with some government line agencies. The program aimed to save irrigation water to about 1,000 – 1,500 litres/kg of paddy, fuel cost of about US$ 20-30/ha, increase crop production and provide other benefits like reduction of methane emission and improved environment. To achieve these objectives, the following activities were conducted: (1) establishment of 1,632 exhibition farms (0.5 ha each); (2) conducted 346 field days at 83 centers; (3) research on weed control, fertilizer management, application of bead/granular urea etc; (4) farmers' trainings (330 batches); and (5) monitoring and evaluation workshops.

Implementation of the AWD program was not without challenges. A major hurdle was the (1) unreliable water supply and/or energy which discouraged farmers from adopting as the technology requires well-tuned irrigation intervals and measures. Also, in the irrigated system, (2) payment was based on fixed rates that are agreed on prior to a season. Thus, farmers do not receive any benefit from cost savings. Conflict also arise as (3) pump owners, operators or 'bigger' farmers dominated the decision-making among organized groups of block or schemes of minor irrigation systems. During period of draining, (4) weed infestation was a concern and so was the high cost of weed control.

Comments and Questions:

Ruben: AWD is quite popular in Bangladesh as 70-80% of rice areas are under pump irrigation, hence, the direct savings in fuel cost. But water comes from 'water lords' so there's also social conflict and benefit is not optimized. Working with NGOs and private sectors may help. A case in point is Syngenta where it takes up AWD to help farmers.

Dr. Bappa: AWD is common in Bangladesh especially among smallholder farmers with 1-5 ha. In establishing connection with ministries to address the objectives of CCAC, the experience was to organize forums with MoA to introduce AWD, get their cooperation, visit all relevant organizations and had them into a CCAC stakeholder's forum and this happens quarterly. This helped in minimizing problem in the implementation of CCAC programs. Communication between and among stakeholders really works.

C. Rice production and AWD in Colombia by Juan Fernando Gallego Beltran

Colombia has a highly mechanized agriculture system that spans to about 22 million hectares. Of this, 456,000 hectares is devoted to rice production. Sixty-five percent (65%) of the rice fields are under the irrigated system and it contributes 70% to the total rice production of the country.

Through IRRI's partnership with CIAT, the AWD technology is being promoted for a more efficient rice sector by reducing production costs and increasing productivity. CIAT is currently analyzing paddy rice emissions in collaboration with the primary producer organization, the National Federation of Rice Farmers (Fedearroz). CIAT has well-established channels for sharing and scaling-up of rice technologies with national partners in Latin America, where it has recently launched a project that will include AWD practices.

Colombia is an active member country in the CCAC network, and correspondingly, it is participating in the CCAC Agriculture Initiative and National Action Planning Initiative. It has a comprehensive national low-emissions development (LED) strategy. AWD is considered to be a good fit because of increasing water scarcity and rising costs of irrigation.

Relevant activities of international institutions

A. Adaptation of irrigated rice to increasing water scarcity by Ruben Lampayan, IRRI

Irrigated rice is the biggest recipient of developed water resources (30-40%). In Asia, about 50% of irrigation water is for rice. Rice is very sensitive to soil drying and it takes in 2-10 times of water input compared with other crops.

But in recent years, water scarcity has been compromising the rice production system case being that irrigation water is being diverted to cities for various domestic needs, and this has been exacerbated by the impacts of climate change. This places the farmers, especially those in the lower reaches of the irrigation system, in an unstable position with less reliable and inadequate water supply.

Given this scenario, the International Rice Research Institute (IRRI) endeavors to help farmers use water more productively and cope with water scarcity there this occur. IRRI's strategic directions in water science are technology development, development of tools to evaluate technologies, and eventually, adoption. Along this

line, IRRI develops technologies that would make use of available water profitably without compromising the ecosystem of rice systems and the environment. Wide-scale technological adoption by farmers, with the help of partners like NARES and other centers, is in the priority agenda

To address the issue of water scarcity in rice production, IRRI's research interest focuses on safe alternate wetting and drying (AWD) being a promising technology that could potentially reduce water consumption. AWD is considered as a mature technology that is ripe for dissemination especially as research has shown that irrigation water needed has been reduced from 10 to 40%, while maintaining yield. This technology has also been proven to promote higher zinc availability on soil and on the grains, reduce methane emissions in rice production system and establish better root anchorage to reduce lodging. IRRI has been working with eight countries since 2001 for the dissemination of AWD, with large-scale projects in the Philippines, Vietnam and Bangladesh).

But technology dissemination is not without challenges. Based on initial efforts to out-scale safe AWD, adoption can be low among farmers in Asia if and when they do not pay for the amount/energy used. Constraints to adoption also include: 1) no established benefit/incentive package (some areas farmers pay in terms of area and not volume); 2) fear for any yield penalty; 3) risk of lower yield; 4) perception that the technology is labor intensive. Safe AWD is seen to capture the interest of farmers if they (1) pay the amount of water (or energy) they use and (2) can get water exactly when they need it. Furthermore, these enabling factors can potentially improve adoption: (1) investment in improving canal irrigation infrastructure, maintenance and operation; (2) provision of training of irrigation scheme managers and farmers; and (3) policy support.

B. FAO initiative in mitigation of the effects of rice production on CC: A regional rice strategy for sustainable food security in Asia and the Pacific by B.B. Bong, FAO

FAO's strategic objectives in support of rice production are to: 1) increase productivity and nutrition value of rice sustainably; 2) improve mitigation potential; and 3) minimize the environmental footprint. To meet these objectives, the focus is on key themes of sustainable intensification of rice production and climate change adaptation and mitigation. Sustainable intensification of rice production entails saving/reducing chemical inputs, water, energy and labor. Climate change adaptation and mitigation cover water control to mitigate methane emissions/change of cultivation systems, management of fertilizer (N) application to mitigate nitrous oxide emissions, among others.

FAO's regional rice initiative focuses on the importance of goods/services produced by and available rom rice ecosystems. They advocate the principle of "Save and Grow" and "Climate-Smart Agriculture". AWD is seen as best done in large-scale. In increasing rice productivity, exploitation of resources is not an option as underscored many literatures and practice. Sustainability translates to ensuring that farmers get more rice while environment gets better.

C. Sustainable Rice Platform: A global, multi-stakeholder partnership by Wyn Ellis

There is a rising demand for rice but falling productivity due to multiple factors like slow production growth, water scarcity, diminishing agricultural lands, rising cost of energy and fertilizer, competitions for production

and diminishing marginal returns to inputs. Rice production is also forecasted to decline by up to 20% in 2050 due to climate change.

Rice sustainability is also threatened by major challenges: (1) resource use efficiency and (2) environment, biodiversity and climate change.

Some key facts:

- Rice uses 34-43% of the world's irrigation water.
- Rice is responsible for 5-10% of global CH4 emissions.
- Use of pesticides impact on the ecosystem, and fertilizers and pesticides cause water contamination.
- There is an increasing localized water scarcity.

The SRP upholds the mission to promote resource efficiency and sustainability in the global rice sector through an alliance that links research, production, policymaking, trade and consumption.

SRP is a global, multi-stakeholder and membership-based initiative. It is co-convened by UNEP and IRRI to build a robust and credible framework to facilitate large-scale adoption of sustainable best practice in rice value chains.

Currently, SRP has drafted standards on sustainable rice cultivation, developed incentive mechanisms, conducted outreach and up-scaling activities. The program can contribute to CCAC by way of TA, network membership, research coordination, learning alliance, farmer outreach and policy linkages.

D. World Bank Rice Projects in Africa by Ijeoma Emenanjo

Currently, the World Bank has a total "rice portfolio" of approximately US$2.5B with 31 projects in the African region. One project presented was the US$80 million project on "Senegal Sustainable and Inclusive Agribusiness." The project provides TA and investments among stakeholders in critical irrigation infrastructure. It will enable the sustainable and inclusive exploitation of 10,000 ha or irrigated land in the Senegal River Valley.

Another project is on the "Improvement of Rice Productivity for Irrigation Schemes of the Valley of Senegal (PAPRIZ 2) which aims to provide TA to all rice value chain from irrigation schemes to marketing with the end goal of improving rice productivity and profitability in the Senegal River Valley. Specifically, it seeks to increase 15% in the production of paddy per hectare, 20% increase in farmers' income, and 15% production increase in Dagana and Podor.

The West Africa Agricultural Productivity Program (WAAPP) is an initiative of the Economic Community of West African States (ECOWAS) that supports regional cooperation in the agriculture sector through research and extension.

Other projects support areas such as seed certification, infrastructure improvement and capacity building.

E. Opportunities for Partnership with GIZ by Suriyan Vichitlekarn, Better Rice Initiative Asia (BRIA)

GIZ's agriculture initiatives aim to develop sustainable agri-food value chain for food security and rural development. Central to their initiatives are capacity development, partnership (PPP), knowledge sharing, market-based approaches and agri-business models.

Relevant projects/initiatives include:

- BRIA
- German-ASEAN Programme on Climate Change (GAP-CC)
- ASEAN Sustainable Agri-food Systems (SAS)
- Remote Sensing-based Information and Insurance for Crops in Emerging Economies (RIICE)
- Integrated Coastal Zone Management in Mekong Delta (ICMP/CCCEP)

A project in Vietnam focuses on the sustainable rice production through increasing farmers' income and addressing environmental concerns in Mekong Delta (BRIA VN). Input minimization, SRI and AWD are the management systems being employed.

The SAS Vietnam is set out to establish trials and demonstrations that make use of biocontrol agents and soil and nutrient management. Practices will be up-scaled to national policy and strategy.

The ICMP/CCCEP builds on multi-sectoral synergies, networking and collaboration in the Mekong Delta and primary activities include awareness raising and advocacy.

RIICE utilizes GIS-based information beyond rice paddy areas and disaster impact assessment, and best practices for eligibility for crop insurance scheme.
GIZ has a number of collaborative activities/projects with ASEAN which encompasses important areas of food security, sustainable agriculture and climate change.

Comments and Questions

Comment: In forging collaborative activities, important points to consider are interlinkages of initiatives, synergies, and good initiatives that will really make an impact, and establish a case among policymakers.

Reiner: We're working closely with GTZ/GIZ projects that worked very well. There's also a new colleague who will be in-charge on communication and extension among farmers to focus on Vietnam. This hopefully would give us new perspective on how to communicate more effectively with farmers.

GIZ: To be discussed also is GIZ-IRRI strengthened collaboration. Also, we both are working with ASEAN and policymakers to build a stronger case in ASEAN and among policymakers.

F. Opportunities for Partnership for GRA by Kazuyuki Yagi, National institute for Agro-Environmental Sciences (NIAES)

The Global Research Alliance (GRA) on Agricultural Greenhouse Gases is an international network that brings together 42 member countries to find ways to grow more food with less GHG emissions. It has three research groups: livestock, croplands and paddy rice. Under paddy rice, there are 25 country members that work on the following action plans:

- Standardize measurement techniques – country comparison of measurement protocols; analysis of automated measurement data
- Database of publications and experts – compiles metadata from experimental sites worldwide where GHG fluxes are monitored
- Increase country participation – collaborate with international networks (e.g. MARCO, PROCISUR, FluxNet) and partners (e.g. IRRI, CIAT, CCAFS); recently, collaborates with CCAC to their new agricultural component
- Pilot multi-country experiment – research projects like the Greenhouse Gas Mitigation in Irrigated Rice Paddies in Southeast Asia (MIRSA) with IRRI
- Network for mitigation and adaptation synergies

G. USAID Activities by Orestes Anastasia, Senior Regional Climate Change Advisor, USAID Regional Development mission for Asia

The Low Emissions Asian Development (LEAD) Program of USAID promotes low emissions development strategies (LEDS) through improved analytical and modeling capabilities, GHG inventories and regional cooperation. Activities along this line include:

1. Capacity building on LEDS modeling, analytics, and GHG inventories and accounting
2. Direct support to Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) partnership – US Government agency Program Integrator
3. Direct support Asia LEDS Partnership platform for regional capacity building and knowledge-sharing

The LEAD Program operates in Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Nepal, Papua New Guinea, Philippines, Thailand, and Vietnam, with strong partnership with ICF (prime), AIT, GHG Management Institute, Engility, Nexant, TCR, ISC, ASE, SEI, USEPA, USDOE, USDA/FS, among others.

The LEAD program Task 5 aims to improve GHG inventories and accounting systems by building capacity to better select and develop emission factors (EFs) through technical assistance and trainings.

In 2014, the LEAD program yielded the following activities/outputs: (1) curriculums on EFs for on-road transport and coal/natural combustion have been developed; (2) regional workshops; and (3) advanced national training for Philippines officials on mobile sources and stationary combustion for regional workshop.

Preparations for more curriculum development and conduct of regional workshops on emission factors for methane from rice cultivation are underway, and identification of relevant partners is of prime importance.

A 5-day regional workshop on emission factors for methane from rice cultivation is scheduled in July 2015 in the Philippines.

H. Vietnam Low Carbon Rice Project (VLCRP) by T.T. HA

In 2010, the Vietnam Low Carbon Rice Project (VLCRP) has been piloted in two areas and so far, there has been observed increase in farmers' yield and decrease in input cost leading to an increase in net benefit and reduction on GHG emissions. The project share common objectives with CCAC and IRRI which are to help rice farmers mitigate GHG emissions while increasing the economic livelihood outcome and addressing food security and environmental benefits.

Major impacts of the project:

a. It directly responds to the government's development priorities and the emerging needs for livelihood improvement for rice farmers at grassroots level in the context of climate change impacts.
b. It demonstrates the feasibility of the community-based livelihood improvement model with focus on smallholder rice farmers.
c. It develops and refines the low carbon rice farming protocol and the on-farm GHG emissions measurement; make recommendations for solutions and policy for the replication and scale-up this advanced technique in line with the rice production mandate in the Mekong Delta.

Day 2, 25 October 2014

Project Planning

On the second day, O. Sander gave an introductory presentation on the five activities under the Paddy Rice Component as well as on the time frame of each deliverable. He explained the approach for activity 3 (AWD suitability assessment) and highlighted the importance of the national roundtable meetings. O. Sander explained the timeframe and the necessity to develop county-specific work plans that contribute to achieving the component deliverables. Afterward, the participants were divided into country groups and discussions focused on the following points:

- Specify list of activities with time table
- Identification of country activities and persons in charge
- Required inputs (Ole to ask country focal persons)
- Concrete information to feed to the work plan
- Scalability; multi-stakeholder forum (Sunny)
- Establish network of networks (consortium)

Workshop results are summarized in the matrix below. Each country group presented to the plenary their draft plan and target deliverables after which Sunny took over to summarize and finalize the deliverables.

Other presentations in the afternoon were about the information kiosk which is a major output for Phase 1. Ms Aektasaeng in particular gave a summary on her experience regarding involvement in setting up an information

kiosk for the CCAC Livestock and Manure Management Component. Catalina gave clarity on the interaction with CCAC leadership, reporting procedures, requirement and some protocols.

Finally, the workshop was put to a close with some words from Sunny and Ole.

WORKSHOP OUTPUTS

GUIDE QUESTIONS	VIETNAM	BANGLADESH	COLUMBIA
Question(1a). What other existing programs could support AWD uptake? (1b) How can we capitalize on previous AWD programs (at field level) in the country as demonstration trials?	(1a) • Decision 3.1.1.9 - 2020 ↓ 20% total amount of GHG in Agriculture Act • SRI - started 2003 • Framework - AWD - Crop residue management - Biochar • Green Growth - 2012 - Crop management ↓ GHG in rice (1b) Previous AWD program: • large-scale field model (on-going) • EDF: Field study AWD in AnGiang, KienGiang (2010) • WB → • CTW • IAE - Hanoi + Thai Binh + Quang Binh + Binh Dinh (SNV) • IRRI (CLUES): 4 provinces: AnGiang, CT, HG, BL (2011-2015)	(1a) Program supported AWD: BRRI started to use AWD • NAP-13 • NAP-14 AWD as smart agricultural technology • Strategy document of the government also supported AWD • Agricultural minister agrees to accept AWD • NATE funded by WB and USAID 1. NDA 2. Drought assessment project: BARC, BARI, BRRI (success/failure?) 3. Mobile technological infrastructure 4. N. Water Act 2013 5. DAE 3 years pilot program (success/failure?) 6. BRRI & IRRI 7. NATP ~ BARC (1b) Proceedings of national workshop on AWD Drought assessment project – DAE 3 years program	AMTREC (Fedearroz) SATREPS

Question 2: What are the three most important changes that your country has to accomplish for AWD uptake?	1. Network cooperation (CLUES – technical, research and GIZ – development) • Support local government + farmers = project • Policymakers need to be involved; linkage between province and national government • Specific plan for dissemination of AWD 2. Irrigation infrastructure 3. Budget for dissemination of AWD • surveys, trainings, demonstration trials	1. Incentive mechanisms to the farmers 2. Reliability of irrigation water availability in their field (canal, equipment and energy) 3. Guidelines for implementation through government organization (AWD) or institutionalization	1. To get real engagement of stakeholders (motivation) 2. To set up real mechanism of extension (adoption of AWD) 3. To help government to include AWD as policy
Question 3. Who are the key stakeholders in your country? How can they best be involved?	• Policymakers – national (MARD), provincial (DARD), district (Sub-DARD), commune • Farmers • Researchers • Extensionists • Companies • Donors (WB, ADB, GO, GIZ) • NGOs • Irrigation company • Cooperative	(3a) • Government - Ministry of Agriculture, DAE, BADC, BRRI, BAU, BARI, BWDB • Research organization • NGIS (BRAC, BPRS, NGO Forum) • Farmers/Farmers' group • Private sectors (input providers) • IDE • Extension (3b) Engagement	• Producers – Fedearroz and others • Millers • Government (MADR- MICT-MADS-DNP) DNP (National Development Plan 2014-2018) Local: D, M • MGO (TNC) • FLAR – CORPOICA • International organizations: WB, IDB, UNEP, FAO • Consumers and commerce
Question 4. How can we ensure that the	*1. Results from Phase 1 to Phase 2*	Information kiosk based on Phase 1 will	AWD roundtable (all key stakeholders)

results of Phase 1 will provide evidence for supporting a 'Phase 2' proposal? How could we coordinate the planning to prepare the proposal of Phase 2?	• Data on GHGs reduction to feed to the information kiosk: fertilizer, labor, water • Consolidate lessons learned • GIS mapping (AWD suitability map) • Potential mitigation assessment • Environmental benefit 2. *How to coordinate the planning for Phase 2 proposal* Meeting • Frequency: 4 times • When: ? • Who: IRRI, IAE, IPSARD, EDF, Directorate of Water, DARD • Lead: DARD	be transferred in Phase 2. • Stakeholders' views for using or application of AWD • Effective implementation plan throughout the country • Focal point (government, DE, DAE, RO) • Pilot project/farmers' field • Lesson learnt • Synthesis of information • Strong arguments • Limitations *National documentation will be deliverable. *Multi-country participation	↓ Acting committee ('the key people') ↓ Proposal (Phase 2) 'The key people': • Fedearroz (AMTEC) Patricia • SATREPS (Manabu) • MADR – DIDTSP (Nestor H.) • MADS – Tatiana • FLAR – Eduardo • CIAT – Eduardo, Andi, Ana Maria A monthly basis meeting

List of Participants

CCAC Paddy Rice Component Planning Workshop

24-25 October 2014, Bangkok, Thailand

	NAME	AFFILIATION	E-MAIL
1	Amornwan Resanond	ICF International	Amornwan.Resanond@icfi.com
2	Andrew Eil	CCAC	andrew.eil.02@gmail.com
3	Bala Bappa	Consultant to Government of Nigeria	balabappa@yahoo.com
4	Bernadette Joven	IRRI communications	b.joven@irri.org
5	Bjoern Ole Sander	IRRI - CCAFS	b.sander@irri.org
6	Bui Ba Bong	FAO	Bong.Bui@fao.org
7	Catalina Etcheverry	CCAC Secretariat	catalina.etcheverry.affiliate@unep.org
8	Ijeoma Emenanjo	World Bank	iemenanjo@worldbank.org
9	James Lomax	Sustainable Rice Platform	James.Lomax@unep.org
10	Jangmaw Seng Ja	Regional Resource Center for Asia and the Pacific	Sengja.Jangmaw@rrcap.ait.asia
11	Juan Gallego	Consultant to CIAT	agricultancy@gmail.com
12	Kazuyuki Yagi	Global Research Alliance on Agric. GHG Emissions	kyagi@affrc.go.jp
13	Keiichi Sugita	Government of Japan	keiichi_sugita@nm.maff.go.jp
14	Le Van Chinh	Vietnam, MARD - Directorate for Water Resources	levan_chinh@yahoo.com
15	Lini Wollenberg	CCAFS	Lini.wollenberg@uvm.edu
16	Mai Van Trinh	Vietnam, VAAS - Institute of Agricultural Environment	maivantrinh@gmail.com
17	Manabu Ishitani	CIAT	M.ISHITANI@CGIAR.ORG
18	Md. Abdul Ghani	Bangladesh Rice Research Institute, ret.	ghani.abdul.m@gmail.com
19	Ngamnet Aektasaeng	Stockholm Environment Institute	ngamnet.aektasaeng@sei-international.org
20	Ngo Dang Phong	IRRI - Vietnam	n.phong@irri.org
21	Orestes Anastasia	USAID	oanastasia@usaid.gov
22	Ramlal Verma	Regional Resource Center for Asia and the Pacific	Ramlal.Verma@rrcap.ait.asia
23	Reiner Wassman	IRRI - CCAFS	r.wassmann@irri.org
24	Ruben Lampayan	IRRI - Water Management	r.lampayan@irri.org
25	Saidur Rahman	Bangladesh Agricultural University	saidurbau@yahoo.com
26	Sultan Ahmed	Ministry of Environment, Bangladesh	sulbul2002@yahoo.com
27	Sunny Uppal	CCAC - Canada	Sunny.Uppal@ec.gc.ca

28	Suriyan Vichitlekarn	GIZ	suriyan.vichitlekarn@giz.de
29	Suwimol Wattanawiroon	Regional Resource Center for Asia and the Pacific	suwimol.wattanawiroon@rrcap.ait.asia
30	Tran Dai Nghia	Vietnam, IPSARD	tran.nghiadai99@gmail.com
31	Tran Thu Ha	Environmental Defense Fund, Vietnam	ha668888@gmail.com
32	Vu Duong Quynh	Vietnam, VAAS - Institute of Agricultural Environment	vuduongquynh2006@yahoo.com
33	Wyn Ellis	Sustainable Rice Platform	ellisw@un.org

Workshop program

Day 1: Friday, 24th October:

Setting the stage: Overview and target countries		**Chair: O. Sander**
		Presenters
08:00-08:30	*Registration*	
08:30-08:45	Welcome remarks	R. Wassmann, S. Uppal
08:45-09:00	Short self introduction including implementation team	All participants
09:00-09:30	Overview of CCAC and agriculture initiative	A. Eil, S. Uppal
09:30-10:00	Objectives of the proposal	L. Wollenberg
10:00-10:30	*Coffee break*	
10:30-10:55	Overview Vietnam	M.V. Trinh
10:55-11:20	Overview Bangladesh	S. Ahmed
11:20-11:45	Overview Colombia	J. Gallego
11:45-12:00	Discussion	(Chair)
12:00-13:00	*Lunch*	
Potential partner institutions with relevant activities		**Chair: L. Wollenberg**
		Presenters
13:15-13:45	IRRI water management group (incl. AWD principles)	R. Lampayan
13:45-14:00	Sustainable Rice Platform	W. Ellis
14:00-14:15	FAO	B. B. Bong
14:15-14:30	World Bank	J. Emenanjo
14:30-14:45	GIZ	S. Vichitlekarn
14:45-15:00	GRA	K. Yagi
15:00-15:30	*Coffee break*	
15:30-15:45	USAID	O. Anastasia/ A. Resanond
15:45-16:00	EDF	T. T. Ha
16:00-17:15	Discussion on interaction	(Chair)
18:00	*Dinner*	

Day 2: Saturday, 25th October

Workplan Development		**Chair: S. Uppal**
		Presenters
08:30-09:15	Activities and time table	B. Sander
09:15-09:45	Brainstorming: Information kiosk and policy formulation	(Chair)
10:15-12:00	Parallel Group I: Vietnam	Moderator: N.D. Phong Rapporteur: V.D. Quynh
	Parallel Group II: Bangladesh	Moderator: S. Ahmed Rapporteur: S. Rahman
	Parallel Group III: Colombia	Moderator: J. Gallego Rapporteur: M. Ishitani
12:00-13:15	*Lunch Break*	
Deliverables, Reporting, Governance		**Chair: R. Wassmann**
13:15-13:45	Reporting of country group sessions	Rapporteurs
13:45-14:30	Finalizing deliverables	S. Uppal
14:30-15:15	Project reporting and governance (CCAC linkages)	C. Etcheverry
15:15-16:00	Discussion: Miscellaneous and wrap-up	(Chair)