SUMMARY OF PROGRESS AGAINST THE DESIGN AND MONITORING FRAMEWORK

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
IMPACT: IMPROVED USE OF BIOMASS IN CAMBODIA, LAO PDR AND VIET NAM By 2020: - 5% increase in production of clean bioenergy from biomass (2011 baseline: 0.1%) - 5% increase in use of by-products of bioenergy systems (bio-slurry and biochar) (2011 baseline: 0%)	Achievement of the impact (and measuring of performance) is outside the scope of the project. However, it is clear that the impact is still relevant and that the project outcome and outputs will contribute to the impact, particularly increase in the use of by-products of bioenergy systems (bio-slurry and biochar).	
OUTCOME: EFFICIENTLY OPERATING PILOT PROJECTS IN BIOMASS USE By 2014: At least two investment modalities for biogas and bioslurry (Cambodia and the Lao PDR); three for biochar (Cambodia, the Lao PDR, and Viet Nam); two for improved cookstoves (the Lao PDR and Viet Nam); and three for inclusive supply chain of certified biofuel and organic crops in (Cambodia, the Lao PDR, and Viet Nam)	The pilot projects will be assessed and used as a basis for preparing proposals for future investment modalities (to be funded through a future ADB loan or other potential investors). Early discussions with the government and ADB however resulted in the project dropping research into investment modalities for certified biofuel. Pilots, for which investment modalities will be prepared, cover the following: - Biogas and bioslurry (OVI – two in Cambodia and Lao PDR; Pilot Projects – two in Laos PDR and Vietnam) - Biochar (OVI – three in Cambodia, Lao PDR, and Viet Nam; Pilot Projects - three in Cambodia, Lao PDR, and Viet Nam) - Improvedcookstoves (OVI – two in Lao PDR and Vietnam; Pilot Projects – three in Laos, Cambodia and Vietnam) - Organic crops (OVI – three in Cambodia, Lao PDR, and Viet Nam; Pilot Projects – four in Cambodia, Laos PDR and Vietnam) All projects are progressing well. Those in Vietnam are nearing completion. E.g. EPRO has delivered its draft final report. The NCG pilot in Laos should be finished by March 2015 as planned. The MTT pilot in Cambodia should be finished by early next year, while the CelAgrid and CARDI pilots will require slightly longer till mid-March, but will have results ready to present at the final conference.	Continue pilot projects and prepare final reports. National workshops planned for mid-late March to disseminate results and lessons learned.
OUTPUT 1: ENHANCED REGIONAL	See below. Work undertaken on 3 standards, and recommendations	See below

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
COOPERATION IN BIOENERGY DEVELOPMENT TO FOSTER AND SAFEGUARD FOOD SECURITY Mechanism tested for harmonizing at least three bioenergy standards[1] and certification systems, and a common method of assessing greenhouse gases	for one other. Work not undertaken on a common method for assessing greenhouse gases as methodologies are already present and it depends on the technology used. Plus there is no regional laboratory that can do the analysis. However, carbon pathways will be examined through life cycle analysis work that will also be linked to the work of Janis Trebecis (direct hire carbon financing consultant) and his carbon financing in agriculture program including the work being supported on carbon accounting.	
1.0 Holding of regional forums to facilitate high-level dialogue within the region on bioenergy and food-security policy issues	Harmonization Roadmap devised and agreed at 1st GMS Forum in Nanning, China, in July 2012, as initial mechanism for facilitating dialogue and ultimate adoption of common standards. See p12 of '***Report on Proceedings'.*** While benefits of harmonization agreed, priority on developing national level regulatory framework. 3 National policy forums (May 2013) - one in each country, which involved a more intensive mechanism for national-level dialogue for wider harmonization. The forums provided a venue for policymakers and public officials to discuss policies and opportunities relevant to their country, and engage with other stakeholders and experts. Reports on the 3 national policy forums submitted. Following these forums, TORs prepared and agreed for policy working groups in each country to prepare policy road maps for standards, certification and labeling for biomass related technologies and climate friendly agriculture based on the national forums. WGs formed. 3 WG meetings held in Laos and Cambodia. See 1.1. The following priorities were identified in the first WGs on a demand-led basis: • Cambodia – standards for organic rice and biodigesters; • Laos PDR – standards for organic rice and biofertilizer; In Cambodia a draft standard for organic rice and biodigesters has	Regional workshop (forum) between NPIs/TFPs/NFPs from each country from 28th-30th January in Cambodia in order to discuss standard development progress in each country, prepare a roadmap for the roll-out of each standard (certification, labelling, traceability, inspection), and discuss possibilities for harmonization. Results of discussions to be presented at the final conference in Laos in March.

[1] *Including standards set by such organizations as the Global Alliance on Clean Cookstoves and the Roundtable on Sustainable Biofuels, along with quality assurance from regional quality assurance centers to be established for biogas, improved cookstoves, bio-char, etc.*

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
	been developed and is going through the final stages (see work plan). The organic rice standard in Laos is at a similar stage and should be ready by end January. Constraints have been identified in the development of a biofertiliser standard in Laos so a report on constraints and recommendations will be prepared instead. Key issues for constraints include (i) the need to finalize and ratify the organic produce standard, (ii) ensure ASAEN requirements are fully incorporated, (iii) assess the compliance requirement for biofertilizers as this standard will operate under the fertilizer regulations requiring annual registrations and testing (true to type) – International biofertilizier standards would currently be unable to be supported through existing analytical capability effectively prohibiting all local biofertilizers from commercial sale. Work in Vietnam stopped due to lack of agreement on achievable activities and the progression of an existing draft biofertilizer standard through the existing Government process.	
1.1 Testing of mechanisms to facilitate adoption of common set of sustainable indicators, bioenergy and trade standards, certification systems an eco-labeling	To date a draft standard for organic agricultural produce and organic rice standard in Cambodia has been developed. In Laos the organic produce and rice standard is currently in the last step of independent government review. The first draft of a standard for biodigesters in Cambodia has been completed and the initial consultation completed The scope of a draft standard for biofertilizers in Laos was presented and discussed in Laos and used to define the scope of biofertilizer formulations in the Laos pilot program. As a result of the work on a standard in Laos, rice husks biochar and mixed biomass converted into biochar adopted in Laos PP; and 4 Formulations of Biochar Organic Fertilizers designed for practicing at LPP testing and demo.	Finalise standard approval process in Cambodia and Laos as per the work plan. Regional workshop (forum) between NPIs/TFPs/NFPs from each country from 28th-30th January in Cambodia in order to discuss standard development progress in each country, prepare a roadmap for the roll-out of each standard (certification, labelling, traceability, inspection), and discuss possibilities for harmonization. Results of discussions to be presented at the final conference in Laos in March.
1.2 Holding of annual international workshop on household bioenergy and food security to foster exchange	Regional Conference held in Hanoi in Dec 2013.	2nd Regional conference planned to be held in Laos on 5th and 6th March

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
of information, particularly between more advanced Greater Mekong Subregion countries and Cambodia, theLao PDR, and Viet Nam		
OUTPUT 2: PILOT TESTED CLIMATE FRIENDLY BIOMASS INVESTMENT PROJECTS FOR WIDER IMPLEMENTATION Construction of at least 500 bio-digesters, 600 biochar kilns, 75,000 improved cookstoves; and introduction of at least 300 farmers to sustainable certification standards	While climate-friendly biomass investment projects will be pilot-tested for wider implementation, the OVIs will not be achieved as stated. This is because the project is testing business models for future scale-up, not to construct a specific number of bio-digesters, biochar kilns, or improved cookstoves, or to test these particular technologies. Thus the indicators are not realistic, or in line with what the project is trying to achieve. Additional remarks on these indicators is as follows: <u>Bio-digesters:</u> 500 biodigesters is optimistic given that the ADB has existing lending products in place for biodigesters in Viet Nam and the assessment of biodigesters in Cambodia and Laos is negative <u>Biochar</u> Biochar and bioslurry technologies are assessed to be too immature and as such the targets for their adoption in the DMF are considered too optimistic. Pilot projects will focus on demonstrating production and management of the more immature technologies and how these products can be integrated into greener value chains. i.e. there is a need for both biochar and bioslurry is to shift the focus from which technology to product development and formulation linked to fertilizer supply chains. 600 biochar kilns is simply unsupportable – there is no local production of kilns that has a commercial basis. Kiln technology and feed stocks are not well known and the benefits of biochar may not warrant the investment of resources. Further, the international experience with biochar is to move away from high volume soil amendments to incorporation of biochar into nutrient products where the biochar changes the characteristics of the biochar through reduced volatilization and provides potential water and nutrient release benefits lowering overall demand for nutrients. The preference for household-level technology, while appropriate for ICS, may be inappropriate for biochar and to a lesser extent bioslurry. The financial viability of such technologies will determine the extent of their adoption. However TA findings and expert opinion currently suggests that the viability of small-scale technology that has adequate safeguards may be insufficient to generate viability and attract investment and adoption. Experience in Thailand and China suggest that the biochar and bioslurry sectors emerge from a demand for biofertilizer from specialist agents that collect from product catchment areas. The focus should maybe move away	

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
	from technology of production to how to build supply chains – a key finding from the assessment of climate friendly value chains in GMS <u>ICS</u> A program target to upscale 75,000 cook stoves in the three countries far exceeds both the resources available and the likely uptake rate – further it would exceed the ICS stove producer capacity. The ICS sector has a range of players many of whom offer subsidies and grants for the adoption of ICS technologies. The continued investment from the WB, EU and other ADB TAs that offer more concessional investment makes a purely commercial value chain less likely. The TA is focusing its ICS pilots on stove producer risk reduction through skill development, and demand aggregation through women's unions. ICS technology in GMS is highly visible, however the gains from the technology are relatively small and with most improved stoves failing to address the durability of stoves it is questionable if significant gains are being achieved. The target of introducing at least 300 farmers to sustainable certification standards is unrealistic since the process of agreeing and ratifying a standard and then setting up the certification systems to support this is beyond the timescale of the TA. Instead the TA will develop standards and then a roadmap for their uptake. See output 1 above.	
2.0 Conduct biomass assessment and development of criteria for selection of pilot project areas by 2012	Regional biomass resource assessment submitted. Options for integrating this within a multi-criteria decision support tool linked to life cycle analysis have been developed and are being reviewed.	None. Activity completed.
2.1 Implementation of pilot projects in lower cost biogas technologies as investment options involving use bioslurry for high vale crop production	- Priority topics by country agreed - Terms of reference for feasibility studies prepared and approved by ADB and IAs. - Expression of interest for feasibility studies in Viet Nam and Cambodia received and evaluated. Laos PDR had no national EOI despite a second round of advertisement although an EOI was received from a Viet Namese contractor for Bioslurry and Biochar work but was not approved by government - WB, AUSAID and GERES/EU have completed reviews of ICS sector for the purpose of undertaking pilot upscaling investments – raises the need for FS and or pilot in ICS for Laos - FS in Cambodia and Viet Nam contracted and final reports accepted - Rapid appraisal of options undertaken in Laos	- Continue implementation and monitoring of pilot projects. - Pilot project final reports

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
	- Value chain business models for potential upscaling case studies identified - Procurement using a shopping and RFP modality approved by ADB - TORs approved for proposed pilots - All pilot projects contracted and underway - Baseline data collected - 1st draft final report received	
2.2 Conduct of reviews to identify appropriate biochar, ICS and biofuel investment modalities by 2012 and implementation of pilot project by 2014	- Summary reviews of ICS, Biochar, the private sector, financing modalities, and the institutional frameworks in CLV completed. - Technology commercialization status assessment based on NASA's Technology Readiness Levels (TRL) completed and included in inception report – highlighting the immature nature of biochar and bioslurry technologies for widespread up-scaling. - Biofuel technology has been dropped based on TA team findings and CLV Government skepticism. - Biochar testing and analysis report (including risk analysis) submitted - Financing modalities report finalized - Further dialogue on the design of rice straw kilns for turning surplus straw to biochar in the field immediately after harvesting has proposed alternate designs for inclusion in pilot program	- Once pilot projects finished and assessed, recommendations for future ADB investment for scale-up included in final report - The draft final report from ICS Viet Nam has just been received. And we are waiting for the response to comments. The findings are mostly positive and the women's Union has already extended its program into new districts and also continued to order stoves beyond the life to pilot contract. The farmers union modality simply did not work as well and will not continue. - Progress on biofertilsier in Cambodia is good with the rice harvest scheduled for mid December. Field inspection of demonstration plots and farmer interviews indicate strong interest in the use of the formulations with significant gains over farmer practice plots and control farm performance. - Laos progress as reported is somewhat more advanced with harvesting near completion – results are mixed but positive.. Vegetable crop – second growth cycle is

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
		currently underway.. - Viet Nam results will be provided in the next 3 weeks the gains in Viet Nam are somewhat smaller
OUTPUT 3: ENHANCED CAPACITY FOR EFFICIENT USE OF BIOMASS Increased capacity for gender-sensitive investment among at least 500 government officials, 400 service providers, and 3,000 lead farmers (i.e., at least 55% of those to be trained will be women and at least 70% of those trained will have increased capacity)	To date, training initiatives have increased the capacity of 2883 trainees (74% of target) including 232 government officials (46% of target), 328 service providers (82% of target), and 2323 lead farmers (77% of target). Of the trainees 1593 have been women (55% which equals the target of 55%). Evaluation sheets show that the majority have been satisfied with the training received and expect it to increase their capacity.	Attempt to reach target through additional training as below.
3.0 Development of gender- sensitive training programs including distant learning activities, use of these for training local and central govt officials, farmers organization and womens groups (30% women by 2013)	Training programs undertaken. Biobriefs prepared.	- Continue dissemination of biobriefs - Finalise videos and disseminate
3.1 Conduct training in the implementation of the investment project by 2014	None	Training on ADB investment preparedness / project preparation in March 2015.
3.2 Conduct of training in the use of biomass to enhance food security and soil carbon sequestration by 2014	Training programs undertaken	- Continue dissemination of biobriefs - Finalise videos and disseminate
OUTPUT 4: DEVELOPMENT AND DISSEMINATION OF KNOWLEDGE PRODUCTS Methodology for assessing and prioritizing the use of biomass for bioenergy and food security Compendium of good practices in biomass use	See below	See below

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
Booklets on different models of improved cookstove, biochar kiln, and biodigesters		
4.0 Development of methodology for assessing and prioritizing the use of biomass for energy and food security by 2012 and dissemination of the methodology through regional forums, training, and capacity building by 2014	A biomass resource availability report has been prepared. Field work for life cycle analysis and least cost assessment, which will be used as a way to help prioritise the use of biomass, is being undertaken.	Finalise life cycle analysis and least cost assessment report. Prepare a biobrief on its use, and on the results, and disseminate. Present findings at the final conference.
4.1 Establishment of baseline information and monitoring and evaluation system for pilot projects by 2012	- Baseline requirements specified in the pilot feasibility study ToR - Baseline and on-going monitoring requirements specified in pilot project TORs - Baseline data collected	Continue monitoring of implementation of pilot projects
4.2 Conduct key studies such as life cycle assessments, least cost options, and eco-labeling by 2013	Lifecycle analysis and least cost assessments underway. Study on eco-labelling submitted (Oct 2013)	See 4.0 above.
4.3 Publication of compendium of good practices in biomass use and booklets containing information on different models of ICS biochar kilns and bio-digesters by 2014	A number of KPs have been produced and disseminated while others are planned. This list is provided, with those submitted highlighted in italics **The Context** - *Agriculture, Food Security and CC in GMS* - *Agricultural Biomass Resource Assessment in CAM, LAO and VIE* - Report on impact of CC on biomass resource availability in GMS **Biochar** - *Soils and Biomass Amendments* - Biochar (under review) - *Biochar testing and analysis report (including risk analysis)* - *Relevant Pilot Feasibility Study Reports* - Relevant Pilot Final Reports plus Exec Summary of Pilot Final Reports	Complete: - Report on impact of CC on biomass resource availability in GMS - Pilot Final Reports plus Exec Summary of Pilot Final Reports - Common sets of Sustainability Indicators - CFA value chains - Lifecycle analysis and least cost assessment report - Final Report Prepare introductory note for the compendium of KPs.

INTERVENTION LOGIC	PROGRESS TO DATE	PLANNED ACTIVITIES (– JUNE 2015)
	Biogas and bioslurry - Biogas / Bioslurry (under review) - *Relevant Pilot Feasibility Study Reports* - Relevant Pilot Final Reports plus Exec Summary of Pilot Final Reports **ICS** - ICS (under review) - *Relevant Pilot Feasibility Study Reports* - Relevant Pilot Final Reports plus Exec Summary of Pilot Final Reports **The Regulatory and Enabling Framework** - *An overview of international standards and certification systems on bioenergy and climate-friendly agriculture* - Review of relevant national laws, regulations, policies and plans (under review) **Scaling-Up** - *Business Models for the Scaling-Up of CFA VCs in GMS* - Common sets of Sustainability Indicators - CFA value chains - Lifecycle analysis and least cost assessment report (field work underway) - Final Report We propose that the above KPs are included (together with the bio-briefs) as a compendium on the WGA site (and packaged in CDs for distribution with some hard copies for the IAs). Introductory text will provide an intro to each section / report.	
4.4 Analysis of potential climate change scenarios and their likely impact on the availability of different type of biomass and assessment of need for the development of alternative biomass sources by 2013	None	Prepare a report which estimates how climate change scenarios (based on UNFCC forecasts) will impact on the biomass availability (e.g. in the rice sector) as identified in the 'Agricultural Biomass Availability in the GMS' report.