

**MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
LOW CARBON AGRICULTURAL SUPPORT PROJECT**

**AIDE MEMOIRE OF REVIEW MISSION
LOW CARBON AGRICULTURAL SUPPORT PROJECT**

14 – 26 September 2018

Hà Nội, September 2018

Loan 2968-VIE: Low Carbon Agriculture Support Project

Aide Mémoire of the Review Mission

(14 – 26 September 2018)

I. INTRODUCTION

1. On 12 December 2012, the Asian Development Bank (ADB) approved the provision of a loan in the amount equivalent to SDR48,170,000 (US\$74 million equivalent) to the Socialist Republic of Viet Nam for the Low Carbon Agriculture Support Project (the Project). The Loan Agreement was signed on 7 March 2013 and became effective on 5 June 2013 with the closing date of 30 June 2019.

2. The expected impact of the Project is less agriculture-related pollution, as measured by better water quality due to reduced presence of livestock waste effluence. The expected outcome is greater uptake of climate-smart agricultural waste management practices (CSAWMP), as measured by increased use of clean biogas energy and organic bio-slurry fertilizers. To attain this outcome, the Project's original outputs are (i) expanded use of livestock waste management infrastructure; (ii) credit lines for biogas value chains (BVC); (iii) enhanced CSAWMP technology transfer and (iv) effective project management.

3. Implementation of the various components and sub-components is being done through the executing agency (EA) - the Ministry of Agriculture and Rural Development (MARD) that is represented by the Central Project Management Unit (CPMU) of the Agricultural Projects Management Board (APMB) and 12 implementing agencies (IAs) including provincial people's committees of the 10 participating provinces (Bac Giang, Ben Tre, Binh Dinh, Ha Tinh, Lao Cai, Nam Dinh, Phu Tho, Soc Trang, Son La, and Tien Giang) and 2 financial intermediaries (FIs) that are Vietnam Bank for Agriculture and Rural Development (VBARD) and Co-operative of Vietnam (Co-opBank).

4. ADB conducted a review mission (the Mission)¹ between 14 and 26 September 2018. After the kick-off meeting in Ha Noi on 14 September 2018, the Mission visited Ha Tinh, Phu Tho and Tien Giang provinces from 17 to 21 September 2018. The Mission met the representatives of EA and 12 IAs to (i) review overall project implementation progress; (ii) review implementation status of 38 follow-up actions agreed by the last review mission in March 2018; (iii) review implementation progress by project component; (iv) review project procurement; (v) review project monitoring, evaluation and reporting; (vi) review project costs and financing; (vii) review compliance with loan covenants; (viii) review environment management; (ix) review implementation of social safeguards; (x) review implementation of gender action plan; (xi) resolve the outstanding issues; and (xii) carry out field visits to building site of the selected farms and demonstrations.

5. This Aide Mémoire summarizes the findings of the Mission and agreements reached for the project implementation, which were discussed at the wrap-up meeting held on 26 September 2018 in Ha Noi. The agreements recorded in this Aide Mémoire are subject to the approval of higher authorities of ADB and the Government. The list of key persons met is given as Appendix 1.

¹ The Mission comprised Ho Le Phong, Senior Project Officer (Natural Resources and Agriculture)/Mission Leader; Truong Thi Minh Hue, Associate Project Analyst; Dinh Kieu Oanh, Associate Social Development Officer (Resettlement); Pham Quang Phuc, Senior Environment Officer participated in the field visits from 20 September 2018; Do Thi Huyen, Environmental Specialist (Staff Consultant) participated in the field visits from 17 to 19 September 2018; and Tran Thuy Hai, Gender Specialist (Staff Consultant).

II. MAIN FINDINGS AND ISSUES

A. Overall Project Implementation Progress

6. The project is being rated “potential problem”. As of 31 August 2018, overall project implementation progress is estimated to be 55.3% based on weighted progress of project components (details are given in Appendix 2) against the ADB elapsed loan period of 87%. The overall cumulative spending of the project funds (including the ADB loan and counterpart funds) was \$21.332 million, which is equivalent to 55% of the total project funding requirements of \$39.045 million (details are given in Appendix 3).

7. For the ADB loan, the cumulative contract awards and disbursements were \$24.874 million and \$23.222 million, respectively, which are equivalent to 36.7% and 34.3% of the net loan amount of \$67.75 million. For 2018, the Project has awarded \$5.442 million and disbursed \$4.486 million against the annual projections of \$17.08 million and \$21.8 million for contract awards and disbursements, respectively.

8. For the counterpart funds, the cumulative disbursement of counterpart funds was \$2.081 million (equivalent to 56% of the total requirements of \$3.657 million).

B. Implementation Status of Agreed Follow-up Actions

9. There are 38 follow-up actions agreed by the last review mission in March 2018. At present, 18 actions were implemented, three (3) actions were partly implemented, eight (8) actions are being implemented and nine (9) actions are not yet implemented (details are given in Appendix 4).

C. Implementation Progress by Project Component

Output 1: Expanded Use of Livestock Waste Management Infrastructure

10. **Revised Targets after MTR.** The key performance indicators for this component are: (i) 65,000 SBPs, 40 MBPs and 2 LBPs and associated value chain infrastructure constructed and operating by June 2019. At least 5% of total SBPs will be constructed for ethnic minorities in project provinces; (ii) the incentive for carbon market development (ICMD) funds are fully channeled into at least 65,042 accounts of beneficiaries by June 2019; (iii) 65,000 SBP operators, 500 masons, 500 technicians, 28 engineers and 10 contractors trained by June 2019. At least 50% of trainees on biogas use will be women; 7% of trainees on SBP construction, and 20% of those trained on biogas management and technical issues will be women; and (iv) single national biogas plant database managed effectively by 2017, including registration of both husband's and wife's names.

11. **Progress.** As of 31 August 2018, the achievement are as follows: (i) 55,122 SBPs, 37 MBPs² and 2 LBPs³ were constructed of which 4,747 (8.6%) biogas plants were constructed for ethnic minorities households; (ii) the ICMD funds were channeled to 51,314 accounts of beneficiaries. The progress on construction of biogas plants by the project province is given in Appendix 5; (iii) 102,806 SBP operators (including 51,697 or 50.3% are women), 588 masons (including 34 or 5.8% are women), 1,290 technicians (including 297 or 23% are women), 28 engineers (including 4 or 14.3% are women) and 18 contractors. In total the Project has delivered 2,066 training courses. Details of the biogas plant training implemented by CPMU and PPMUs are given in Appendix 6; and (iv) 41,849 biogas plants financed under the Project have been recorded in the single national biogas plant database.

² MBP have a capacity of 51 – 499 cubic meters.

³ LBP have a capacity of above 499 cubic meters.

12. The Mission visited many beneficiary households in Ha Tinh, Phu Tho and Tien Giang provinces and noted that the biogas plants and demonstrations constructed have a positive impact on these households' bio-physical environment as well as their socio-economic conditions. The profiles of visited biogas plants and demonstrations are given in Appendix 7.

Output 2: Credit Lines for BVCs and other climate smart agriculture waste management investments

13. **Revised Targets after MTR.** The key performance indicators for this component are: (i) 50% of credit lines will be under joint accounts and/or on behalf of women by June 2019; and (ii) At least 15,000 households raising livestock have accessed credits for BVC and other climate smart agriculture waste management investments from the participating Financial Intermediaries by June 2019.

14. **Progress.** Both FIs, VBARD and Co-opbank, continue to experience difficulties in making sub-loans to livestock farms. The main challenges are the lack of demand for this credit line due to its restrictive nature (i.e. only for the construction of biogas plants) and the requirement for collateral of the FIs. 522 sub-loans have been provided until now, and all these are under joint accounts as required by FIs. Of \$33.6 million allocated for this component, \$3.2 million was transferred to the advance accounts of FIs. However, they have used only \$0.73 million as of 31 August 2018, and plan to use only \$0.18 million more until the end of the Project. Implementation status of the credit lines is given in Appendix 8.

15. **Cancellation of \$30 million allocated for Output 2.** As agreed by the last review mission, MARD sent the cancellation request to the Ministry of Planning and Investment (MPI) and the State Bank of Vietnam on 29 June 2018. MPI submitted a proposal of the cancellation to the Office of the Government on 04 September 2018 for approval of the Prime Minister. However, the Government's official request for this cancellation is not yet sent to ADB. The Project cannot be rated "on track" until the cancellation has been done.

Output 3: Enhanced CSAWMP technology transfer

16. **Revised Targets after MTR.** The key performance indicators for this component are: (i) CSAWMP research strategy developed and adaptive research on at least 6 CSAWMP topics conducted by June 2019. At least 2 research topics will include gender issues; (ii) at least 7 CSAWMP demonstrations are successfully implemented and disseminated in 10 participating provinces by June 2019; and (iii) at least 7,000 farmers, 700 extension staff, and 200 researchers trained on CSAMWPs by June 2019. At least 50% of farmers and 30% of extension staff trained are women.

17. **CSAWMP Researches.** Contracts have been awarded and consultants mobilized for five packages (25 – 29). Procurement of the two remaining packages (42 and 43) is being postponed, as there is not adequate time for their implementation due to long delay in processing their procurement. This procurement can be resumed if MARD guarantees to finance their works, which will be implemented after the loan closing date, by the counterpart funds. Procurement/implementation status of each CSAWMP research package is given in Appendix 9.

18. The research packages' results are expected to be applied for improving agriculture solid waste management, as they address the current limitations of livestock waste treatment technologies and provide the new opportunities to private sector to gain profits if investing in agriculture with the new environmental technologies. Therefore, adequate extension time is needed to allow application of the research packages' results after their completion.

19. **CSAWMP Demonstrations.** The Mission found that the demonstration activities were making good progress with all seven packages (32 – 38) were awarded and providing useful CSAWM solutions. The implementation status of each CSAWMP demonstration package is given in Appendix 10.

20. **CSAWMP Information System.** On 10 August 2017, contract was awarded for Package 23 (design, monitoring, installation and technological transferring to e-library system). The consultant has finalized the second out of five outputs on design and equipment's specification of the e-library system. Procurement of the equipment package for the information system is being processed and expected to be awarded in September 2018.

21. **Capacity building on CSAWMP.** The Project has supported 5 farmer vocational training programs (i.e. prepared syllabuses for farmer vocational training conducted by Department of Cooperatives and Rural Development of MARD) on the following topics: (i) production of biological fertilizer from cattle manure and sugarcane waste; (ii) techniques for repairing and maintaining biogas equipment; (iii) raising red worms at small scale from cattle and chicken manure; (iv) producing biological organic fertilizer from crop residue; and (v) production of organic fertilizer from pig manure. The project has also supported the Department of Cooperatives and Rural Development of MARD to produce 3 more vocational training programs on the subjects of: (i) producing biological bedding for livestock; (ii) producing animal feed from crop residue; and (iii) producing biochar from crop residue. In total, the Project has trained 17,232 farmers (of which 8,651 or 50.2% are women), and 1,698 extension staff (of which 511 or 30.1% are women). Details of the CSAWMP training implemented by CPMU and provinces are given in Appendix 11.

Output 4: Effective Project Management

22. **Revised Targets after MTR.** The key performance indicators for this component are: (i) A CPMU and 10 PPMUs established and operational with adequately skilled staff and facilities in MARD by first quarter of 2013. At least 30% of staff are women and a gender focal point will be appointed by 2014; and (ii) PPMS with sex-disaggregated and ethnicity data collected and reported operating effectively in 10 provinces by 2015.

23. **Progress.** CPMU and 10 PPMUs were established in second quarter of 2013 and are fully staffed. As of September 2018, 58 out of 127 staffs (equivalent to 45.7%) of the CPMU and PPMUs are women. The gender focal point was appointed since July 2016. PPMS with sex-disaggregated and ethnicity data collected and reported is operating effectively in 10 provinces.

D. Project Procurement

24. **Progress.** In total, the Project comprises 19 consulting services (including seven research packages) and 21 procurement of goods packages, of which 17 consulting services packages and 17 procurement of goods packages were awarded. The Mission found that long delay occurred to procurement and implementation of all seven research packages due to inadequate disbursement ceiling approved by the Government for the Project in 2017 (only VND7.7 billion against the need of VND90 billion), therefore, an extension of one year is required for their completion.

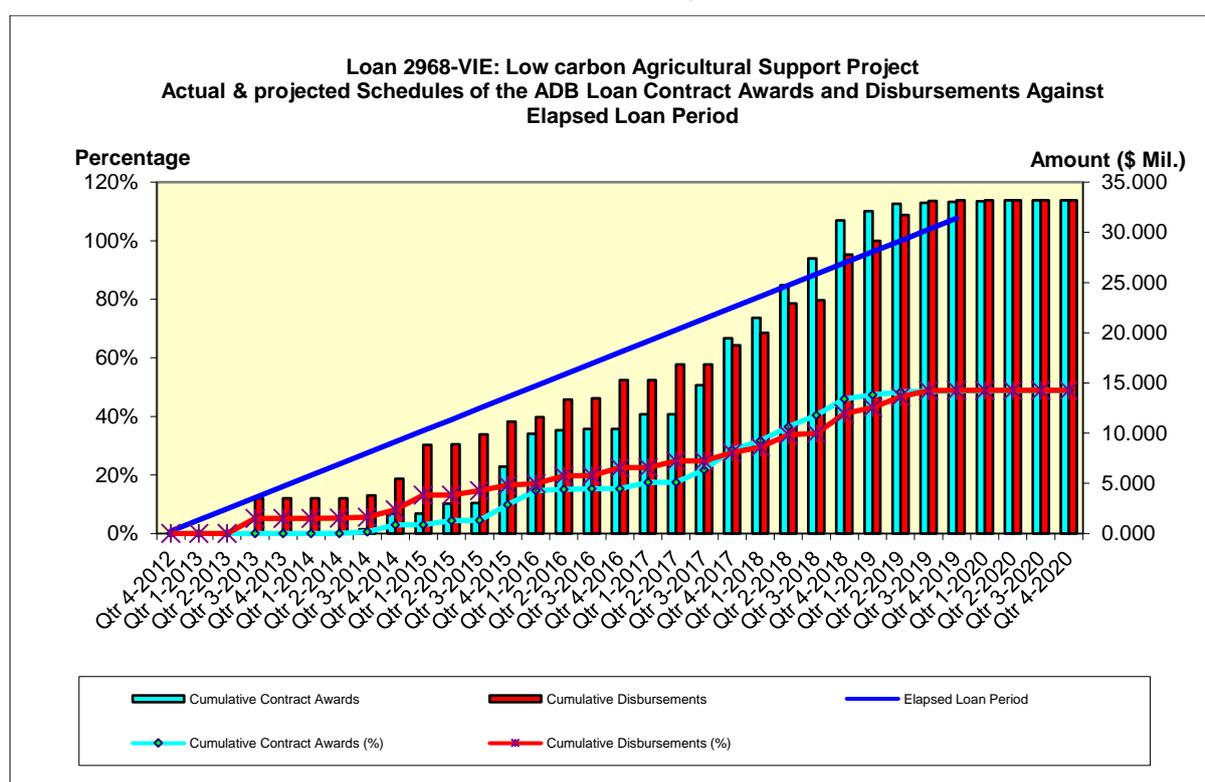
E. Project Monitoring and Evaluation and Reporting

25. The reports prepared by PPMUs for the mission were not used the same format and lack a lot information and data. Furthermore, inconsistencies of data in reports prepared by CPMU and PPMUs reflect a failure in the system for recording data in the information system.

F. Project Costs and Financing

26. **ADB Loan.** CPMU and PPMUs have updated their projected schedules for contract awards and disbursements of the ADB loan. Details are given in Appendices 12 and 13. The major findings of this exercise are as follows:

- (i) Per updated cost estimates of CPMU and PPMUs, the ADB loan requirements are \$35.388 million (including \$2.195 million for the interest charge during implementation). The ADB loan un-used amount (not including \$30 million of the credit component that will be cancelled) is \$2.362 million;
- (ii) For 2018, CPMU, FIs and PPMUs plan to award \$10.347 million and disburse \$11.391 million, which are much lower than the annual projections of \$17.08 million and \$21.8 million for contract awards and disbursements, respectively; and
- (iii) Actual and projected schedules of the ADB loan contract awards and disbursements are presented on the graph below:



27. **Counterpart Funds.** For 2018, the counterpart funding requirement is VND10.76 billion. As of 31 August 2018, VND5.284 billion was disbursed (equivalent to 49% of the requirement). At present, Ben Tre and Soc Trang PPCs have not yet allocated adequate counterpart funds for 2018 but total shortage is only VND202 million. Details are given in Appendix 14.

G. Compliance with Loan Covenants

28. The Mission found 46 of 47 loan covenants to be complied with or being complied with. Only one loan covenant regarding implementation of the gender action plan (GAP) is being partially complied with due to the percentages of women participated in the project training and dissemination events and consultations for women-only groups are still lower than the targets. Details for the status of compliance with all loan covenants are given in Appendix 15.

H. Implementation of Environment Management

29. **Original Targets.** The project objective is to reduce pollution from agricultural waste by using CSAWMP. The project aims to support processing agricultural and rural household waste into clean energy and organic fertilizer from bio-slurry, and disseminate, strengthen, and diversify the knowledge base for the application of CSAWMP. The project aims to target environmental monitoring of at least 5% of SBPs.

30. **Progress.** The Project generally has contributed to positive impacts on the environment through improving livestock waste management practices at household and community level. Up to the mission time, 55,122 SBPs out of 65,000 target, 37 MBPs and 2 LBPs has been constructed contributing to reduction of manure. The Mission noted that the preparation of environment assessment and semi-annual environment monitoring report (SEMR) has been improved. The first half SEMR of 2018 was submitted and uploaded on ADB's website. The rapid environment assessments for additional 65 MBPs have been prepared.

31. **Issues.** During site visits to the pig and cattle farms in Phu Tho, Ha Tinh and Tien Giang provinces, the Mission found that some outstanding environmental issues, which were identified by the previous review missions, have not been resolved, such as (i) using of untreated bio-slurry without composting process, and overuse of this fertilizer have caused bad smell and insanitation in Phu Tho and Ha Tinh provinces; and (ii) overload pollutants from SBPs caused fresh manure washing out after biogas plants and pollution. The Mission also found that overcapacity of electric generator, which is installed in a household in Tien Giang province under the demonstration of electricity production using biogas, has caused noise and air pollution.

32. **Needed Actions.** The Mission proposed seven follow-up actions in para. 43 to secure environmental safeguard compliance and achieve the project objectives of reducing pollution from agricultural waste by using CSAWMP.

I. Implementation of Social Safeguards

33. **Original Targets.** The target of construction of SBPs for EMs with at least 5% of SBP constructed in DMF.

34. **Progress.** Implementation of the ethnic minority development plan (EMDP) is in progress. Some activities of EMDP are implementing by CPMU and PPMUs, such as (i) encouraging the ethnic minorities (EMs) to participate in the EMDP activities; (ii) increasing number of SBPs constructed for EMs to meet the target of the Project; (iii) providing supplement training to EM households with SBPs already built; and (iv) strengthening communication activities including project information dissemination at village and commune levels in all provinces with EM beneficiaries. The Mission learned that there are difficulties in accessing of EM households to sub-loans provided by FIs due to procedure for sub-loan process and requirement of guarantee for borrowing the sub-loans. The achievements of EMDP implementation are summarized in Appendix 16.

35. Among 10 project provinces, 7 provinces have EM beneficiaries (including Bac Giang, Son La, Soc Trang, Lao Cai, Phu Tho, Binh Dinh and Ben Tre). EMDP was prepared and approved for 3 provinces (Bac Giang, Son La, and Soc Trang) at the project preparation stage. At time of project implementation, 4 other project provinces including Lao Cai, Phu Tho, Binh Dinh and Ben Tre provinces also have EM beneficiaries. Though number of EM beneficiaries and communes were firmly identified in 7 project provinces, EMDP has not been updated and sent to ADB for endorsement and upload. The Mission requested CPMU and PPMUs to implement five follow-up actions given in para. 43.

J. Implementation of GAP

36. **Revised Targets after MTR:** The key gender action plan's targets (in covenant) include (i) at least 20% of those who are trained in biogas management and technical issues are women; (ii) at least 7% of those who are trained and certified as masons for the construction of small Biogas Plants are women (iii) at least 50% of those trained on utilization of biogas technology and operation and maintenance are women; (iv) at least 50% of those who are trained on farm management and waste management on farms are women; (v) at least 15% of employees trained in medium Biogas Plants and large Biogas Plants are women; (vi) at least 50% of recipients of Sub-loans from FIs will be registered under husband-wife joint accounts or on behalf of women; (vii) at least 50% of official registration of all purchased biogas units and plants under the Project will be under husband-wife joint accounts or on behalf of women; (viii) 30% of research topics related to gender issues associated with Biogas Plants; (ix) at least 30% of those selected as champions of smart-agriculture in research and dissemination of CSAWMP technology are women; (x) training materials of CSAWMP technology and methodology of dissemination will be women-friendly and at least 30% of dissemination events and consultations will involve women-only groups; (xi) a sex-disaggregated and ethnic minority data base is established as part of the Project's project performance and monitoring system established by the CPMU; (xii) 30% of staff in the CPMU and PPMUs are women and that the CPMU and each PPMU has a gender focal point; and (xiii) gender indicators are included in the overall monitoring and evaluation framework for the Project.

37. **Overall implementation:** The project GAP implementation is on track. Of 6 activities, 5 activities (83.3%) are either completed or on track and only one (1) activity (16.7%) is partially achieved (activity 5). Of 12 targets, 9 targets (75%) are either achieved or on track, and 3 targets (25%) are either under achieved (targets 4 and 7) or more data needed for the assessment of actual status of implementation (target 11). The updated GAP monitoring table is given as Appendix 17.

38. **Output 1:** (i) 297 female participants out of 1,290 participants participated in training courses on biogas management and technical issues for technical workers (23.0%, higher than target of 20%); (ii) 51,697 women among 102,806 participants received training on utilization of biogas technology and operation and maintenance (50.3%, higher than target of 50%); (iii) 31 female participants out of 462 participants were trained on SBP construction (7%, achieved target of 7%); (iv) 7 women out of 172 participants were trained on MBPs and LBPs for engineers, contractors and workers (4.1%, lower than target of 15%).

39. **Output 2:** All 522 households received credit of sub-loans under the joint accounts of husband-wife.

40. **Output 3:** (i) 8,651 women out of 17,232 farmers participated in the training courses on farm management and waste management on farms (50.2% higher than the target of 50%); (ii) 511 women out of 1,698 researchers, extension staff participated in the training courses on CSAWMP technology (30.1%, achieved the target of 30%); (iii) 675 dissemination meetings and workshops were organized with 30,712 participants including 12,154 women (39.6%), of which 22 dissemination events and consultant involved women-only groups (3.26%, lower than target of 30%).

41. **Output 4:** (i) CPMU and PPMUs have appointed gender focal points to be responsible for GAP implementation and reporting; (ii) 58 of 127 staff of the CPMU and PPMUs are female (45.7% higher than the target of 30%); and (iii) 6 gender sensitivity workshops were carried out for gender focal points of PPMUs, technical staff and stakeholders with 253 participants,

of which 149 are female (59%), only half of the CPMU and PPMUs staff participated in the gender trainings.

42. **Issues:** The following issues were identified by the Mission: (i) the rate of female participation in the training courses on construction of MBPs and LBPs for contractors, engineers and workers (4.1%) is lower than project target (15%) because the availability of female engineers, contractors' representatives and workers is small, therefore it is difficult to meet the project training target for the women participation; (ii) only 3.26% of dissemination and consultation events took place involving women-only groups (22 of 675 events) while the target is 30%; (iii) only 60 of 127 staff of the CPMU and PPMUs participated in the gender trainings (lower than the target of all project staff); and (iv) the data on participants in the training courses on O&M of research equipment is not available yet. The Mission recommended four follow-up actions for these issues in para. 43 below.

III. FOLLOW-UP ACTIONS

43. The agreed follow-up actions are as follows:

- The Government to send official request for the cancellation of \$30 million to ADB as soon as possible, so ADB can process this cancellation within 2018;
- MARD to obtain approval of the Government for the project extension of one year as soon as possible, and ADB to process a loan extension after receiving official request of the Government;
- MARD to send an official letter to ADB to commit that MARD will finance the works of research packages 42 and 43, which will be implemented after the loan closing date, by the counterpart funds;
- CPMU to immediately update template of the project implementation progress with the appendices of this review mission Aide Memoire and issue it for use of PPMUs. CPMU and PPMUs to prepare the quarterly reports and reports for the subsequent review missions following the updated format;
- Ben Tre and Soc Trang PPCs to allocated adequate counterpart funds for 2018 as soon as possible but not later than 30 November 2018;
- MARD through the Ministry of Finance to request VBARD and Co-opbank to (i) submit withdrawal applications to liquidate the used amounts of the ADB advance loan funds; and (ii) refund un-used amounts of the advance loan funds to ADB if they have no plan to use them;
- After FIs have refunded the un-used ADB loan advance amounts, they can be used to replicate the CSAWMP demonstrations, which were successfully implemented and are economically effective, in the provinces that did not have them yet. CPMU to submit request of the replications for no-objection of ADB as soon as possible to allow adequate time for their implementation;
- Regarding implementation of the environment management: (i) CPMU with the support from LIC to prepare and approve IEEs for the additional MBPs to ensure the mitigation measures implemented complying with the project's EARF, and integrate EMPs in the bidding documents of these construction packages; (ii) CPMU to work with the environment consultant of LIC to provide guidance on using bio-slurry and composting manure as fertilizers, avoiding overuse of untreated manure by October 2018; (iii) CPMU to work with the environment consultant of LIC to guide and plan of using biogas produced by MBPs/LBPs, avoiding release gas into the atmosphere by November 2018; (iv) CPMU to work with PPMUs to improve documentation in the biogas database, and provide technical assistance for the project beneficiary households in operating SBPs and improving sanitation and safety operation of biogas plants; (v) CPMU to support PPMUs in solving the overloading issue of SBPs by November 2018; (vi) CPMU with support from the environment consultant of LIC to support PPMUs to

use environment equipment and implement sampling program, which might be integrated with biogas inspection and in the next SEMRs from September 2018; and (vii) CPMU and CSAWMP researchers to study on proper use of power generator for LBPs/MBPs by June 2019;

- Regarding implementation of the social safeguards: (i) CPMU to update the EMDP for 7 EM project provinces with actual number of EM beneficiaries of each province and budget for implementation as well. The updated EMDP should be submitted to ADB for review and approval no later than 15 Oct 2018, then submitted to the PPCs for approval and disclosure to EM communities and upload on ADB website no later than 30 Oct 2018; (ii) CPMU and PPMUs to implement all activities regulated in the updated EMDP for all 7 EM project provinces; (iii) CPMU to submit the revised internal monitoring report on implementation of EMDP covering period from January to June 2018 to ADB by 15 October 2018; (iv) from now to the project completion, CPMU and PPMUs with support of the loan implementation consultants (LIC) to conduct internally monitoring implementation of the updated EMDP activities and recommend measures to speed up its implementation; and (v) CPMU to extend contract of the LIC social consultant (if needed) until all activities of the updated EMDP have been substantially completed;
- Regarding implementation of GAP: (i) CPMU and PPMUs to actively outreach female participation in training courses on construction of MBPs and LBPs, especially female workers to achieved the GAP targets; (ii) PPMUs to cooperate with women union (WU) to conduct dissemination events with women only group, or through the WU meetings to inform the project activities as implemented by Tien Giang PPMU⁴; (iii) CPMU to conduct more training courses on gender for the remaining CPMU and PPMUs staff and introduces project GAP to new stakeholders (contractors, agricultural extension staff, etc.); and (iv) CPMU to collect sex-disaggregated data on O&M research equipment trainings and monitor the contractors to follow the GAP target (30% of staff in participating institutions trained are women); and
- The next review mission of ADB to be fielded in March or April 2019

IV. ACKNOWLEDGMENT

44. The Mission expresses its appreciation to MARD and all staff and representatives of the organizations who provided their time and cooperation to the Mission.

Signed in Ha Noi, 26 September 2018 by:



HO LE PHONG
Mission Leader, VRM
Asian Development Bank

⁴ Tien Giang PPMU has cooperated with WUs at district and commune levels to organize dissemination events on project activities for WU leaders who after these training re-introduced to their members. This is a good way attracting women participation in training courses as well as disseminating the benefits of using biogas and CSAWMP.

List of Key Persons Met

Name	Position	Email Account	Tel. No
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Lê Như Kiều	Consultant, package 28		
Lê Hùng Tuấn	Consultant, package 27		
Nguyễn Khắc Ánh	Consultant, package 25		
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Ben Tre province			
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Nguyễn Hải Đăng	Technical Officer, PPMU	nhdang711@gmail.com	01677198690
Soc Trang province			
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Cao Tấn Đạt	Officer, PPMU	caotandat1987@gmail.com	0914614887
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Binh Dinh province			
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Nam Dinh Province			
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Lao Cai province			
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Hoàng Mạnh Thông	Project Officer, PPMU	hoangmanhthong1984@gmail.com	0385627899

Son La Province			
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Cầm Ngọc Vinh	Project Officer, PPMU	camngocvinh94@gmail.com	0972653288
Phu Tho province			
Từ Anh Sơn	Deputy Director of DARD cum Project Director of PPMU	tusonpt@gmail.com	0989149457
Lê Toàn	Project Officer, PPMU	toanknpt@gmail.com	0941487888
Ha Tinh province			
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Nguyễn Xuân Liêm	Chief Accountant, PPMU	liemhoi@gmail.com	0913350842
Phan Thị Lệ Thủy	Accountant		
Đặng Danh Khánh	Technical Staff		
Đình Ngọc Đức	Technical Staff		
Nguyễn Hữu Mến	Technical Staff		
Nguyễn Thị Hoài Thu	Technical Staff		
Lê Thị Hương Thảo	Accountant		
Nguyễn Thị Hải Yến	Technical Staff		
Bac Giang province			
Nguyễn Trung Kiên	Project Director, PPMU	kienqseapbg@gmail.com	0949140737
Dương Thế Khoa	Technical Officer, PPMU	thekhoabg@gmail.com	0985588750

Overall Project Physical Progress

(As of 31/08/2018)

No.	Components/Activities	Funds Required (VND mil.)	Weight	Disbursed Amount (VND mil.)	Rated Progress (0 - 100)	Weighted Progress
Component 1: Expanded Use of Livestock Waste Management Infrastructure						
1	Standardizing and disseminating a design package for BVC infrastructure	50.000	6,0%	37.820	76	4,5%
2	Strengthening the monitoring capacity of relevant agencies to hand over and monitor the constructed biogas plant	19.180	2,3%	9.466	49	1,1%
3	Monitoring the disbursement of funds paid to Eligible Beneficiaries as a financial incentive to carry out Eligible Subprojects	225.200	27,0%	159.823	71	19,2%
4	Capacity building in designing, constructing, operating and monitoring biogas plants	43.500	5,2%	32.525	75	3,9%
5	Strengthening the capacity and providing equipment for relevant agencies to manage national biogas database	1.830	0,2%	1.830	100	0,2%
Component 2: Credit Lines for Biogas Value Chains						
6	FIs to provide credit lines to Eligible Beneficiaries to finance Biogas Value Chain Infrastructure and other climate smart agriculture waste management investments which satisfy the Subproject Eligibility Criteria	22.798	2,7%	18.282	80,19	2,2%
Component 3: Enhanced CSAWMP technology transfer						
7	Utilizing farmer-based research including using biochar and other agricultural wastes as organic fertilizers; applying other efficient low greenhouse gas emission agricultural practices which generate bioenergy; managing waste treatments in aquaculture and other CSAWMP	110.002	13,2%	12.447	11,32	1,5%
8	Developing livestock waste management models for agricultural production and greenhouse gas emission reductions	114.013	13,7%	39.583	35	4,7%
9	Capacity building of researchers, extension staff and farmers including vocational training program, training packages and study tours on CSAWMP	26.780	3,2%	21.780	81	2,6%
10	Establish an information system (e-library, map sets on agro-ecological zones and distance learning system) to disseminate awareness and knowledge CSAWMP	7.397	0,9%	3.617	49	0,4%

11	Package 46: Supply of laboratory system for testing the quality of organic fertilizer materials and products	35.730	4,3%		-	0,0%
Component 4: Effective project management						
12	Establish CPMU and PPMUs to be operational; Conduct a gender awareness raising workshop for PMUs, IDC	124.298	14,9%	85.169	69	10,2%
13	Engage consultants for start-up and auditing, and to develop the PPMS, with sex- and ethnicity-disaggregated data and including gender action plan monitoring; Undertake baseline surveys in all project provinces with collection and analysis of sex- and ethnicity-disaggregated data; Prepare progress reports and submit to ADB on a regular basis	53.538	6,4%	39.168	73	4,7%
Total		834.266	100%	461.510	769	55,3%

Overall Disbursement Ratios

(As of 31/08/2018)

No.	CPMU/ Province	Project Funds Required (VND mil.)			Actual Disbursements (VND mil.)			
		ADB Loan	Counterpart Funds	Total	ADB Loan	Counterpart Funds	Total	%
*	CPMU	298.322	28.807	327.129	103.338	19.229	122.567	37%
1	Binh Dinh	57.359	6.005	63.364	44.478	2.960	47.438	75%
2	Bac Giang	56.257	4.781	61.038	44.694	2.108	46.802	77%
3	Ben Tre	32.158	3.965	36.123	26.181	1.495	27.676	77%
4	Ha Tinh	39.490	6.626	46.116	27.259	3.891	31.149	68%
5	Lao Cai	34.673	4.435	39.108	21.781	2.784	24.565	63%
6	Nam Dinh	53.775	5.858	59.633	31.183	2.129	33.312	56%
7	Phu Tho	73.394	5.695	79.089	48.208	2.793	51.000	64%
8	Soc Trang	32.283	3.939	36.222	17.926	2.229	20.155	56%
9	Son La	25.295	5.978	31.273	16.538	2.446	18.984	61%
10	Tien Giang	28.953	3.422	32.375	18.221	1.358	19.580	60%
11	VBARD	6.337	1.118	7.455	5.998	1.058	7.056	95%
12	Co-opbank	13.041	2.302	15.343	9.541	1.685	11.226	73%
*	IDC	51.115	-	51.115	11.629	-	11.629	23%
Total in VND mil.		802.452	82.929	885.381	426.974	46.165	473.139	53%
Total in USD mil.		35,388	3,657	39,045	19,251	2,081	21,332	55%

Implementation Status of the Agreed Follow-up Actions

(As of September 2018)

No	Agreed Actions	Implementation Status
Output 1: Expanded Use of Livestock Waste Management Infrastructure		
1	CPMU and each PPMU should review the targets for providing ICMD funds of VND3 million and of VND5 million and determine whether the targets of 51,000 and 14,000 respectively can be achieved (continuously implementing up to end of project).	Implemented. Targets were revised with no-objection provided by ADB.
2	PPMUs in provinces with remote areas should expand the outreach by conducting more awareness programs (continuously implementing up to end of project).	Being implemented by PPMUs.
Output 2: Credit Lines for Biogas Value Chains and other climate smart agriculture waste management investments		
3	VBARD and Coop Bank will submit liquidation applications for the amounts already disbursed (by 30 April 2018).	Not yet implemented, as no liquidation application was submitted to ADB until today.
4	VBARD will retain 750 million VND for disbursement in 2018-2019 and refund the balance of the initial advance to ADB (by 30 April 2018).	Not yet implemented, as no refund is implemented by VBARD until today.
5	Co-opbank will retain 3.5 billion VND for disbursement in 2018-2019 and refund the balance from the initial advance to ADB (by 30 April 2018).	Not yet implemented, as no refund is implemented by Co-opbank until today.
Output 3: Enhanced Climate Smart Agricultural Waste Management Practices Technology Transfer		
6	Contract award to research packages 27-29 and 42-43 (in May 2018).	Partially implemented, as contracts of packages 42 & 43 weren't awarded.
7	Contract award to demonstration 34, 36 and 38 (in May 2018).	Implemented.
8	Approval of Inception Reports of research packages 25 and 26, including detail research outlines to be allowed enough time for dissemination of the results (in April 2018).	Implemented.
Procurement		
9	CPMU to prepare the procurement schedule for 11 pending packages (by 31 March 2018).	Implemented.
10	CPMU to closely monitor the procurement plan to ensure the contract award of these packages by 31 May 2018. If not, they will be cancelled (by 31 May 2018).	Implemented.
11	CPMU to send ADB the updated procurement plan (by 30 April 2018).	Implemented.
Disbursement		
12	CPMU to send request for Project Contract	Being implemented.

No	Agreed Actions	Implementation Status
	Summary Sheet (PCSS) issuance and the Withdrawal Applications in a more regular basis to narrow the data difference between ADB and CPMU and to increase the turnover ratio (continuously implementing up to end of project).	
13	CPMU to submit withdrawal applications to liquidate/reimburse the advances it has received so far (by 31 March 2018).	Implemented.
14	ADB will provide additional capacity building to CPMU and PPMU financial management staff on ADB's financial management procedures (upon CPMU's request).	Not yet implemented , as CPMU has not requested ADB because MARD did not approved the budget of training proposed by CPMU.
15	CPMU and PPMUs are requested to strictly follow the disbursement timeline to speed up the disbursement (continuously implementing up to end of project).	Being implemented.
16	CPMU and PPMUs are requested to report to ADB the contract awards and disbursements monthly.	Being implemented.
ODA and counterpart fund allocation		
17	Phu Tho PPC to issue the ODA allocation decision to Phu Tho PPMU so that this PPMU can process their Withdrawal Applications (as soon as possible).	Implemented.
18	CPMU to provide comments to detailed workplans for ODA funds of Ben Tre, Nam Dinh and Bac Giang immediately (as soon as possible).	Implemented.
19	Son La, Lao Cai, Ha Tinh, Binh Dinh, Tien Giang and Soc Trang PPCs to approve the detailed workplans for ODA funds of their respective PPMUs (as soon as possible).	Implemented.
20	Phu Tho, Nam Dinh and Ha Tinh PPCs to allocate counterpart funds to their respective PPMUs (as soon as possible).	Implemented.
Environmental Safeguard Recommendations		
21	Provide guidance and training for application of water saving to livestock (in July 2018).	Implemented.
22	Review and revise the existing designs of sedimentation tank and lagoons to make them more effective treatment of bio-slurry (between April-July 2018).	Implemented.
23	Support PPMU in solving the overloading issue of SBPs (between April-July 2018).	Not yet Implemented.
24	With the support from environment safeguard consultant, mobilize environment equipment and implement sampling program which might be integrated with biogas inspection (continuously	Not yet implemented

No	Agreed Actions	Implementation Status
	from May 2018).	
25	using environment sampling results for analysis of environment quality and intergrade it in semiannual monitoring report, Jul- Dec 2018 (continuously from June 2018).	Not yet implemented.
EM Recommendations		
26	Encourage the EMs to participate in IPDP activities, especially increase of number of SBPs constructed for EMs to meet the target up to end of project (continuously implementing up to end of project).	Being implemented.
27	PPMUs review list of EMs participating in training course on use, operating SBP and CSAWMP among the number of EM households with SBP already built to identify who have not received training yet then provide supplement training to such households (in May 2018).	Implemented.
28	Use proper training method and organize training course at suitable place based on consultation with EMs (continuously implementing up to end of project).	Being implemented.
29	Conduct consultation meeting with EMs before training to ensure the provision of information and training materials in a form of appropriate language (before trainings).	Being implemented.
30	Provide the capacity building to new social staffs of CPMU/PPMU to be able to implement and monitor activities in IPDP (in March 2018.)	Implemented.
31	Strengthen communication activities direct to EMs, including project information dissemination at village and commune levels in 6 provinces with EM present (continuously implementing up to end of project).	Being implemented.
32	Monitoring the implementation of IPDP as planned and submit to ADB the first internal monitoring on IPDP (in July 2018).	Implemented.
GAP recommendations		
33	CPMU and PPMUs actively target the female participants in the training courses on the construction of SBPs, MBPs and LBPs, biogas use for SBPs operators, CSAWMP technology for farmers (continuously implementing up to end of project).	Partially implemented , as the percentage of female participants in the training courses on the construction of MBPs and LBPs was only 4.1% much lower than target of 15%.
34	PPMUs need to conduct dissemination events, consultation to inform about the project and CSAWMP technology and to ensure 30% of dissemination events and consultation to be involved with women-only groups (continuously implementing up to end of project).	Partially implemented , as only 3.26% of dissemination events and consultation were involved with women-only groups much lower than target of 30%

No	Agreed Actions	Implementation Status
35	CPMU conduct more training courses on gender for remaining CPMU and PPMUs staff and introduce project GAP to new stakeholders (continuously implementing up to end of project).	Not yet implemented , as no any gender training was conducted from March 2018 to September 2018.
36	CPMU with the assistance of gender specialist to guide all PPMUs to review the targets in the GAP which are underachieved and take stronger measures to achieve these targets in order for GAP to be completed satisfactorily (in June 2018).	Implemented.
37	CPMU and gender specialist need to instruct and monitor the contractors to ensure that of 30% of personnel in participating institutions trained in O&M of research equipment are women (continuously implementing up to end of project).	Not yet implemented , as the data on participants in the training courses for O&M of research equipment are not available yet.
Review mission		
38	Next review mission in Q III 2018.	Implemented. ADB fielded a review mission between 14 and 26 September 2018.

Biogas Construction by Province

(As of 31 August 2018)

No	Provinces	Biogas Plants Constructed									
		Small		Medium		Large	Total	%	Ethnic Minority	%	ICMD Funds Transferred
		3 mil	5 mil	10 mil	50 mil						
1	Lao Cai	2.435	668		5		3.108	5,63%	1.500	2,7%	2.859
2	Son La	2.057	445		0		2.502	4,54%	1.169	2,1%	2.330
3	Phu Tho	10.435	358	4			10.797	19,57%	322	0,6%	9.010
4	Bac Giang	7.245	1020		9		8.274	15,00%	718	1,3%	7.857
5	Nam Dinh	5.116	259		1	2	5.378	9,75%		0,0%	5.019
6	Ha Tinh	5.121	0	4	2		5.127	9,29%		0,0%	4.970
7	Binh Dinh	7.855	368		5		8.228	14,92%	2	0,0%	7.969
8	Tien Giang	2.783	471		2		3.256	5,90%		0,0%	3.168
9	Ben Tre	5.263	139		3		5.405	9,80%	1	0,0%	5.184
10	Soc Trang	2.816	268		2		3.086	5,59%	1.035	1,9%	3.008
	Total	51.126	3.996	8	29	2	55.161	100%	4.747	8,6%	51.374

Biogas Plant Training

(As of 31 August 2018)

No	Provinces	Biogas Plant Training to Operators, Masons, Technicians, Engineers and Contractors								
		Operators		Masons		Technician		Engineer		Contractor
		Total	Women	Total	Women	Total	Women	Total	Women	
*	CPMU			126	3	710	182	28	4	18
1	Lao Cai	7.432	3.676	49	4	27	7			
2	Son La	2.711	887	29	0	75	11			
3	Phu Tho	18.212	10.025	70	12	127	45			
4	Bac Giang	15.740	7.962	19	1	43	11			
5	Nam Dinh	10.382	5.791			70	13			
6	Ha Tinh	12.818	7.993	126	3	56	14			
7	Binh Dinh	8.444	3.884	50	5	62	8			
8	Tien Giang	6.488	4.120	34	0	25	4			
9	Ben Tre	14.265	5.045	28	5	22	1			
10	Soc Trang	6.314	2.314	57	1	73	1			
Total		102.806	51.697	588	34	1.290	297	28	4	18
Percentage			50,3%		5,8%		23,0%		14,3%	

Profiles of Visited Biogas Plants and Demonstrations

I. Biogas plants and demonstrations visited in Phu Tho province

1. Biogas plants and demonstration of Mr. Le Van Thuc

* Address: Area 15, Ha Thach Commune, Phu Tho Town, Phu Tho Province

* Description of farm activities:

- Type of cattle: 1500 pigs
- Type of plant: grapefruit, guava.
- The total area of 4 ha
- Biogas plant: 2000 m³.
- Other economic activities: None
- Estimated value of farm products: Pig farm 01 year 02 batch. Each batch of 1500 pigs. A total of 3000 pigs/ year. The average weight of livestock is 110 kg / head.
- * Support from the LCASP project: fertilizer separator and biogas slurry irrigation system.
- * Impact of project support on farm activities
 - Fertilizer separator: Runs twice a week, 20 - 25 bags (360 - 450 kg) each, and about 3000 - 3500 kg per month.
 - Frequency of operation depends on the weather, average irrigation 2-3 times / week.
 - The efficiency of the separator and the irrigation system: solid and liquid organic fertilizer is used by the farm to fertilize and irrigate the farm's crops.
 - Thanks to the investment of the LCASP project through the support of the separator system and the biogas slurry irrigation system, it has reduced the level of environmental pollution, limited overload of biogas plants, reduced excess gas and biogas slurry is used quite thoroughly.





2. Small scale biogas plants owned by women

a) Information on biogas plant 1:

- * Owner: Nguyen Thi Thi, ID No. 130757059, issued by Phu Tho Provincial People's Committee on 8/9/2014.
- * Address: Zone 9, Phong Chau Town, Phu Ninh District, Phu Tho Province.
- * Scale of farming: household (5 pigs).
- * Completion date of biogas works: 21/2/2017.
- * Date of Fund Transfer: August 2015.
- * Biogas volume KT1: 12.1 m³.
- * The builder: Hoang Van Tam. Builder Code 07.
- * KTV acceptance test: Bui Quang Ngan.
- * Status of works.
 - Full items of SBP according to KT1 specifications.
 - Works well.

b) Information on biogas plant 2:

- * Owner: Nguyen Thi Huu, ID No. 132056609 issued by Phu Tho Provincial People's Committee on June 24, 2007.
- * Address: Zone 9, Phong Chau Town, Phu Ninh District, Phu Tho Province.
- * Scale of farming: household (3 pigs).
- * Completion date of biogas works: 26/2/2017.
- * Date of Fund Transfer: August 2015.
- * Biogas volume KT1: 12.1 m³.
- * The builder: Hoang Van Tam. Builder Code 07.
- * KTV acceptance test: Bui Quang Ngan.
- * Status of works.
 - Full items of SBP according to KT1 specifications.
 - Works well.



II. Biogas plants and demonstrations visited in Ha Tinh province

1. Biogas plant and demonstration of Mr. Tran Nghe Tinh

* Address: Hamlet 3, Cam Thang Commune, Cam Xuyen District; Telephone: 0983024959

* Description of farm activities:

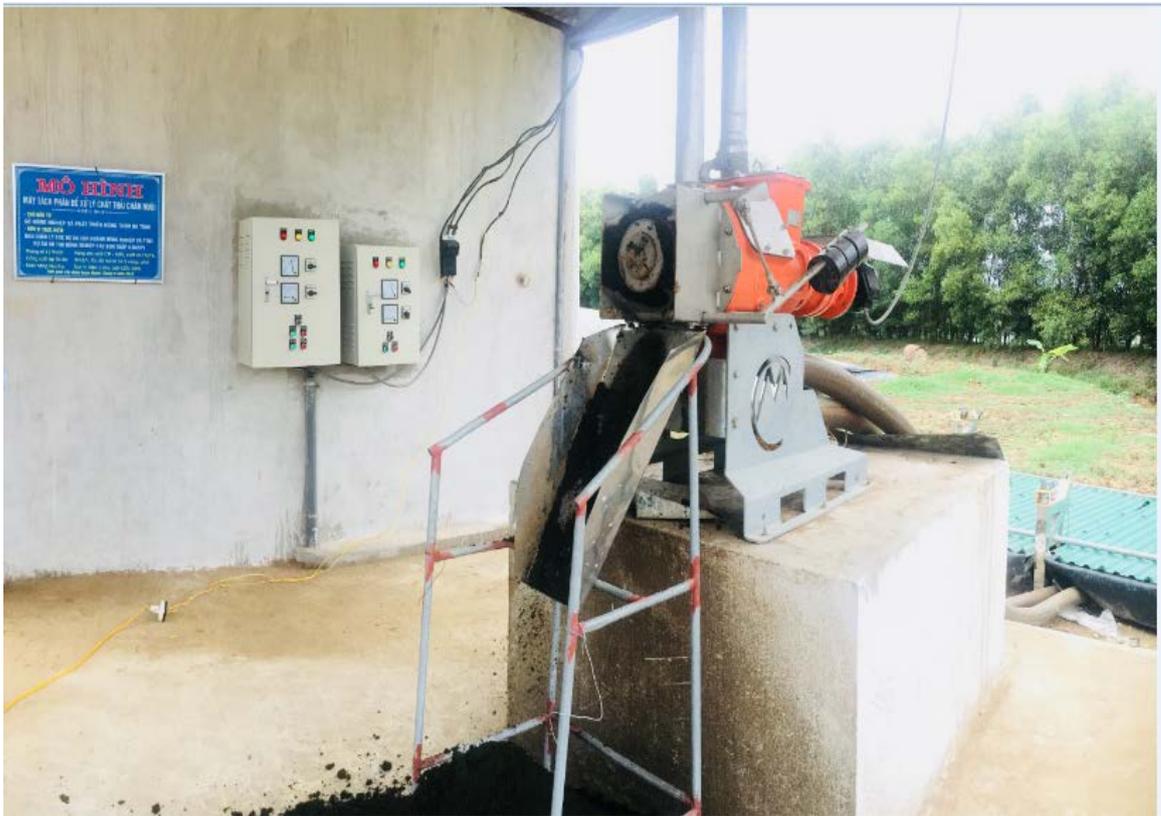
- Type of cattle: 4,500 meat pigs
- Type of plant: None
- The total area of the farm is 4,800 m²
- Other economic activities: None
- Estimated value of farm products: Pig farm 01 year 02 batch. Each batch of 4500 pigs. A total of about 9000 meat pigs a year. The average weight of livestock is 120 kg / head.

* Support from LCASP Project: Separation System

* Impact of Project Support to Farm Activity

- Contribute to solving the problem of environmental pollution, increase the income from the sale of products after separation in the near future, expected to sell 50,000 VND / bag; recently, organic fertilizer is given to other households for using.

- Thanks to the investment of the LCASP project for the separation separator farm, it has reduced the pressure of the waste into the environment such as: gas consumed without burning, air pollution





2. Biogas plant of Mr. Thai Van Thien

* Mr. Thai Van Thien farm

* Address: Hamlet 4, Cam Phuc Commune, Cam Xuyen District, Ha Tinh Province.

* Phone number: 0941.968.535

* Description of farm activities:

- Type of cattle: Pigs 100 - 150.

- Type of plant: None

- The total area of the farm is 0.5 ha

- Other economic activities: None

- Estimate the value of the farm products: Farm roll breeding projector. The average weight is 100 kg / unit.

* Support from LCASP project: 52m³ medium biogas plant

* Impact of project support on farm activities

- Dealing with post-production waste, having gas for use in the farm, and sharing gas for surrounding households to ensure the use of gas.

- Minimize bad smell, improve environmental pollution.



III. Biogas plants and demonstrations visited in Tien Giang province

1. Biogas plant and demonstration of Mr. Nguyen Ngoc Luc

- * Address: Tan Ninh Hamlet - Xuan Dong Commune - Cho Gao District - Tien Giang Province
- * Description of farm activities:
 - Type of cattle: pigs 1,800
 - Type of plant: Coconut, Green Grapefruit
 - The total area of the farm is 1.2 ha
 - Other economic activities: None
 - Estimated value of farm products: Pig farms 01 year 02 batch. Each batch of 1.800 - 2.000 heo. A total of 3,600-4,000 pigs a year. The average weight is 100-110 kg / head.
- * Support from the LCASP project: 40KW generator
- * Impact of project support on farm activities
 - Contribute to reducing environmental pollution in livestock, using gas for generator used in domestic activities and animal husbandry, saving 1.5 million VND per month.
 - Thanks to the investment of the LCASP project for the generator farm, it has reduced the pressure of the waste into the environment such as: gas consumed without burning, limited air pollution



2. Biogas plant and demonstration of Mr. Le Hong Thanh

* Address: Binh Phan Commune - Cho Gao District - Tien Giang Province

* Description of farm activities:

- Type of cattle: 1,000 closed pork
- Type of crop: grass.
- Total area of 1 ha
- Other economic activities: None

- Estimated value of farm products: Pig farms 01 year 02 batch. Each batch of 1,000 pigs. A total of 2,000 pigs a year. The average weight is 100-110 kg / head.
- * Support from LCASP project: separation system
- * Impact of project support on farm activities
 - Contribute to increased income from fertilizer; Newly installed system, not yet selling the product. Previously, every year the farm uses dry manure mixed with chicken manure about 13 tons with the average price of 800 - 1000 VND / kg. Income of 10 million. In the coming time, the machine system will increase the income from selling fertilizer.
 - Thanks to the investment of the LCASP project, the separation system has supported to reduction of the pressure of the waste into the environment such as gas exhausted without burning, limiting air pollution, environmental pollution in livestock.





Implementation Status of Credit Lines

(As of 31 August 2018)

No	Provinces	Credit Lines Number of Sub-loans						
		VBARD		Coopbank		Total		
		No. of Sub-loans	Joint Accounts	No. of Sub-loans	Joint Accounts	No. of Sub-loans	Joint Accounts	Women %
1	Lao Cai	127	127			127	127	100%
2	Son La					0	0	
3	Phu Tho	8	8			8	8	100%
4	Bac Giang	69	69	174	174	243	243	100%
5	Nam Dinh					0	0	
6	Ha Tinh					0	0	
7	Binh Dinh	16	16	110	110	126	126	100%
8	Tien Giang	18	18			18	18	100%
9	Ben Tre					0	0	
10	Soc Trang					0	0	
	Total	238	238	284	284	522	522	100%

CSAWMP Researches
(As of 31 August 2018)

Package No.	Package name	Cost (VND mil.)	Procurement/Implementation Status
25	Research on organic fertilizer production from livestock waste and bio slurry by value chain	26,787	Contract signed, Consultants were mobilized. Inception report submitted and approved; Technology review reports were submitted and being commented.
26	Research on biogas technology improvement and effective biogas utilization by value chain	22,097	Contract signed, Consultants were mobilized. Inception report submitted and approved; Technology review reports were submitted and being commented.
27	Research on the water-saving pig farming technology	13,326	Contract signed, Consultants were mobilized. Inception report submitted and being commented; Technology review reports have not yet submitted
28	Research on effective utilization of crop waste by value chain	22,800	Contract signed, Consultants were mobilized. Inception report submitted and being commented; Technology review reports have not yet submitted
29	Research on the treatment of sludge sediment in shrimp farming	15,314	Contract signed, Consultants were mobilized. Inception report submitted and being commented; Technology review reports have not yet submitted
42	Piloting technology for special designed organo-mineral fertilizers production from livestock waste and Bio-slurry for key crops in Vietnam	4,514	Being postponed as there is not adequate time for implementation due to long delay in processing procurement.
43	Establishing comprehensive system of production and supply of microbial product for organic fertilizer production from agricultural waste and bio-slurry	4,514	Being postponed as there is not adequate time for implementation due to long delay in processing procurement.

CSAWMP Demonstrations

(As of 31 August 2018)

Package No.	Package name	Provinces	Cost (VND mil.)	Procurement/Implementation Status
32	Supply of manure separating systems to treat livestock waste to produce material for organic fertilizer demonstration	Bac Giang, Ben Tre, Binh Dinh, and Phu Tho	27,492	Contract signed, 8/8 separator systems were installed and in good operation in Bac Giang; the sum-up workshop was completed; 4/5 systems in Ben Tre; 4/4 systems in Binh Dinh are in good operation; and 9/13 in Phu Tho are in good operation (04 systems are being installed).
33	Supply of manure separating system to treat livestock waste to produce material for organic fertilizer demonstration	Ha Tinh, Nam Dinh, Soc Trang, Son La, and Tien Giang	19,760	Contract signed, 02/02 separator systems were installed and in good operation in Ha Tinh; 07/07 separator systems were installed and in operation in Nam Dinh; and 01/01 systems are being installed in Soc Trang; 05/05 separator systems were installed and in operation in Son La; and 5/5 systems are being installed in Tien Giang.
34	Supply of biogas generator and manure separating system for comprehensive management of livestock waste demonstration	Binh Dinh, Ha Tinh, Nam Dinh and Soc Trang	10,248	Contract signed, 01/01 systems are being installed in Binh Dinh; 01/01 systems are being installed in Ha Tinh; 02/02 systems are being installed in Nam Dinh; 01/01 systems are being installed in Soc Trang;
35	Supply of mobile manure separating system to treat livestock waste to produce material for organic fertilizer demonstration at household scale	Bac Giang, Ben Tre, Binh Dinh and Lao Cai	4,413	Contract signed, Bac Giang is conducting survey and design of tanks for household groups.(02 system) Binh Dinh is conducting survey and design of tanks for household groups.(02 system)
36	Supply of biogas generator system for demonstration	Binh Dinh, Ha Tinh, Lao Cai, Soc Trang and Tien Giang	6,272	Contract signed, 01/01 system was installed and in operation in Binh Dinh; 21/21 systems were installed and in operation in Lao Cai; 01/01 system was installed and in operation in Soc Trang; 02/02 systems were installed and in operation in Tien Giang

Package No.	Package name	Provinces	Cost (VND mil.)	Procurement/Implementation Status
37	Supply of utilization system for treatment of biogas digested effluent demonstration as the fertilizer of the crops	Soc Trang and Binh Dinh	4,124	Contract signed, 71/71households were installed and in operation in Binh Dinh; 25/25households were installed with equipment in Soc Trang
38	Supply of utilization system for treatment of cattle dung as the feedstock for red worm raising demonstration	Soc Trang	334	Contract signed, Planning and conducting survey in Soc Trang

CSAWMP Training
(As of 31 August 2018)

No	Provinces	Number of People Trained on CSAWMP			
		Farmers		Extension Staff	
		Total	Women	Total	Women
0	CPMU			274	82
1	Lao Cai	780	302	26	9
2	Son La	784	526	212	77
3	Phu Tho	3.449	1.861	0	0
4	Bac Giang	3.630	2.011	67	31
5	Nam Dinh	2.715	1.374	100	50
6	Ha Tinh	792	539	310	120
7	Binh Dinh	1.401	472	387	82
8	Tien Giang	2.754	1.176	0	0
9	Ben Tre	385	83	322	60
10	Soc Trang	542	307	0	0
Total		17.232	8.651	1.698	511
Percentage			50,2%		30,1%

Overall Projected Contract Award Schedule for ADB Loan

No.	CPMU/ Province	ADB Loan Required (VND mil.)	Cum. Con. Awards as of 31/08/2018	Contract Award (VND mil.)										Ratio %
				2018		2019				2020				
				Sep.	Q IV	Q I	Q II	Q III	Q IV	Q I	Q II	Q III	Q IV	
*	CPMU	298.322	240.928	2.000	43.500	2.000	2.000	2.000	2.000	2.000	1.894			81%
1	Binh Dinh	57.359	50.235	1.141	2.183	900	2.900							88%
2	Bac Giang	56.257	47.515	1.491	5.122	1.000	1.129							84%
3	Ben Tre	32.158	27.564	770	942	1.476	1.407							86%
4	Ha Tinh	39.490	29.374	3.877	2.878	1.400	1.961							74%
5	Lao Cai	34.673	24.022	1.551	5.912	1.500	1.688							69%
6	Nam Dinh	53.775	35.937	5.100	7.001	3.338	2.399							67%
7	Phu Tho	73.394	56.689	3.145	10.119	3.141	300							77%
8	Soc Trang	32.283	21.683	3.247	4.847	2.334	172							67%
9	Son La	25.295	19.716	1.624	2.342	1.423	190							78%
10	Tien Giang	28.953	21.577	1.765	2.002	1.937	1.671							75%
11	VBARD	6.337	5.998	34	102	102	102							95%
12	Co-opbank	13.041	9.541	350	1.050	1.050	1.050							73%
Total in VND mil.		751.337	590.777	26.095	88.000	21.601	16.970	2.000	2.000	2.000	1.894	0	0	79%
Total in USD mil.		33,193	26,284	1,122	3,783	0,932	0,733	0,086	0,086	0,086	0,081	0,000	0,000	79%

Overall Projected Disbursement Schedule for ADB Loan

No.	PMU/Provin	ADB Loan Required (VND mil.)	Cumulative Disburs. As of 31/08/2018	Disbursement (VND mil.)										Ratio %
				2018		2019				2020				
				Sep.	Q IV	Q I	Q II	Q III	Q IV	Q I	Q II	Q III	Q IV	
*	CPMU	298.322	103.338	20.650	41.422	14.900	41.964	24.847	15.850	15.850	17.671	1.830		35%
1	Binh Dinh	57.359	44.478	4.950	3.809	1.222	2.000	900						78%
2	Bac Giang	56.257	44.694	3.036	6.398	100	1.000	1.029						79%
3	Ben Tre	32.158	26.181	770	2.127	1.674	1.000	406						81%
4	Ha Tinh	39.490	27.259	2.598	3.878	2.769	2.000	986						69%
5	Lao Cai	34.673	21.781	2.559	3.645	3.000	2.689	999						63%
6	Nam Dinh	53.775	31.183	7.100	9.755	2.338	2.399	1.000						58%
7	Phu Tho	73.394	48.208	3.146	18.600	1.140	1.200	1.100						66%
8	Soc Trang	32.283	17.926	4.572	7.279	1.334	872	300						56%
9	Son La	25.295	16.538	3.624	3.520	423	900	290						65%
10	Tien Giang	28.953	18.221	1.028	4.666	1.857	2.180	1.000						63%
11	VBARD	6.337	5.998	34	102	102	102							95%
12	Co-opbank	13.041	9.541	350	1.050	1.050	1.050							73%
Total in VND mil.		751.337	415.345	54.417	106.251	31.909	59.356	32.859	15.850	15.850	17.671	1.830	0	55%
Total in USD mil.		33,193	18,751	2,338	4,567	1,375	2,553	1,411	0,681	0,681	0,759	0,079	0,000	56%

Overall Provision and Projection of Counterpart Funds

No	CPMU/ Province	Total CF Required (VND mil.)	Cumulative Disburs. as of 31/12/2017	Counterpart Funds											Disbursed Ratio %	
				2018			2019				2020					
				Jan-Aug	Sep.	Q IV	Q I	Q II	Q III	Q IV	Q I	Q II	Q III	Q IV		
*	CPMU	28.807	17.529	1.700	900	900	1.478	900	900	900	900	900	900	900	67%	
1	Binh Dinh	6.005	2.394	566	67	202	500	500	800	976					49%	
2	Bac Giang	4.781	1.749	359	60	250	500	500	500	863					44%	
3	Ben Tre	3.965	1.077	418	50	131	500	500	500	789					38%	
4	Ha Tinh	6.626	3.450	441	200	260	500	500	500	775					59%	
5	Lao Cai	4.435	2.446	338	41	123	300	300	300	587					63%	
6	Nam Dinh	5.858	2.129		400	400	700	700	800	729					36%	
7	Phu Tho	5.695	2.493	300	100	300	500	500	500	1.002					49%	
8	Soc Trang	3.939	1.936	293	124	124	300	300	300	561					57%	
9	Son La	5.978	2.011	435	200	230	700	700	900	802					41%	
10	Tien Giang	3.422	1.132	226	44	100	500	500	500	420					40%	
11	VBARD	1.118	986	73	6	18	18	18							95%	
12	Co-opbank	2.302	1.550	135	62	185	185	185							73%	
Total		82.929	40.882	5.284	2.254	3.223	6.681	6.103	6.500	8.403	900	900	900	900	56%	
Total C.F Requirements for 2018				10.760												
Total Shortage of counterpart funds				202												

Compliance of Loan Covenants

No.	Schedule	Description	Remarks/Issues	Type
1	Article 4	(a) The Borrower shall cause the FIs to carry out the Project with due diligence and efficiency and in conformity with sound applicable technical, financial, business and development practices.	Being complied with	Financials
2	Article 4	(b) In the carrying out of the Project and operation of the Project facilities, the Borrower shall perform, or cause to be performed, all the obligations set forth in Schedule 5 to this Loan Agreement and the Project Agreement.	Being complied with.	Others
3	Schedule 5	The Borrower shall ensure that the Project is implemented in accordance with the detailed arrangements set forth in the PAM. Any subsequent change to the PAM shall become effective only after approval of such change by the Borrower and ADB. In the event of any discrepancy between the PAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.	Being complied with.	Others
4	Article 3	The Borrower shall cause the proceeds of the Loan to be applied to the financing of expenditures on the Project in accordance with the provisions of this Loan Agreement and the Project Agreement.	Being complied with.	Financials
5	Article 3	The Borrower shall enter into a Subsidiary Loan Agreement with each FI, providing inter alia for the relending of part of the proceeds of the Loan not exceeding twenty-three million two hundred and thirty-nine thousand Special Drawing Rights (SDR23,239,000) in aggregate to all FIs, the carrying out by the FIs of the Project activities described in Part 2 of paragraph 2 of Schedule 1 to the Loan Agreement, and the rights of the Borrower and ADB with respect thereto. Such Subsidiary Loan Agreements shall contain terms and conditions acceptable to ADS, and shall be without prejudice to, and without limitation on, the obligations of the Borrower under the Loan Agreement.	Complied with.	Financials
6	Article 4	(a) The Borrower shall (i) maintain separate accounts and records for the Project; (ii) prepare annual financial statements for the Project in accordance with accounting principles acceptable to ADB; (iii) have such financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB; (iv) as part of each such audit, have the auditors prepare a report (which includes the auditors' opinion on the use of the Loan proceeds and compliance with the financial covenants of this Loan Agreement as well as on the use of the procedures for the imprest fund and statement of expenditures) and a management letter (which sets out the deficiencies in the internal control of the Project that were identified in the course of the audit, if any); and (v) furnish to ADB, no later than 6 months after the end of each related fiscal year, copies of such audited financial statements, audit report and management letter, all in the English language, and such other information concerning these documents and the audit thereof as ADS shall from time to time reasonably request.	Being complied with	Financials

7	Article 4	(b) ADB shall disclose the annual audited financial statements for the Project within 30 days of the date of their receipt by posting them on ADB's website.	Being complied with	Financials
8	Article 4	(c) The Borrower shall enable ADB, upon ADB's request, to discuss the financial statements for the Project and the Borrower's financial affairs where they relate to the Project with the auditors appointed pursuant to subsection (a)(iii) hereinabove and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB. This is provided that such discussions shall be conducted only in the presence of an authorized officer of the Borrower, unless the Borrower shall otherwise agree.	Being complied with.	Financials
9	Schedule 5	(a) Within 12 months of the date of effectiveness of the Loan Agreement, the Borrower shall submit written evidence satisfactory to ADB showing that a TSU has been established under the CPMU to undertake Project-advisory activities as described in the PAM.	Complied with	Others
10	Schedule 5	(b) The evidence to be delivered under paragraph (a) above shall: (i) provide the names of counterpart staff from the government agencies specified in the PAM who together will comprise the TSU; and (ii) provide the name of the head of the TSU, who shall be determined during Project implementation.	Complied with	Others
11	Schedule 5	(c) The Borrower shall ensure or cause CPMU to ensure that no amount is deposited into the TSU's sub-account unless and until the Borrower has complied with paragraphs (a) and (b) above and the terms of reference for each member of the TSU have been agreed with ADB. Such terms of reference shall reflect the purely technical and advisory role of the TSU and shall not include any activities related to Project management or implementation, which shall be undertaken by the Project Executing Agency and IAs only.	Complied with.	Others
12	Schedule 5	The Borrower shall ensure that each Subsidiary Loan, unless otherwise agreed by ADB: (i) is denominated in Dong; (ii) has a maturity, grace period and interest rate to be determined by the Borrower in accordance with the Borrower's lending practices applicable to the onlending of funds externally borrowed by the Borrower; and (iii) is made under such other terms and conditions acceptable to ADB.	Complied with.	Financials
13	Article 3	The Borrower shall cause the FIs to onlend the proceeds of the Subsidiary Loans to Eligible Beneficiaries under Subloan Agreements, under Part 2 of paragraph 2 of Schedule 1 to the Loan Agreement and in accordance with the provisions of the Loan Agreement.	Being complied with	Financials
14	Article 4	In addition to the reports and information set forth in Section 6.05 of the Loan Regulations, the Borrower shall furnish, or cause to be furnished, to ADB all such reports and information as ADB shall reasonably request concerning (a) the Eligible Beneficiaries, the Eligible Subprojects and the Subloans; and (b) the administration, operations and financial condition of each FI.	Being complied with	Financials

15	Article 4	The Borrower shall enable ADB's representatives to inspect the Project, the Goods and Works, any Eligible Beneficiary, any Eligible Subproject, and any relevant records and documents.	Being complied with.	Others
16	Article 3	The proceeds of the Loan shall be allocated and withdrawn in accordance with the provisions of Schedule 3 to the Loan Agreement, as such Schedule may be amended from time to time by agreement between the Borrower and ADB.	Being complied with.	Financials
17	Schedule 5	For each Biogas Value Chain Infrastructure construction project to be financed by a Subloan under Part 2 of paragraph 2 of Schedule 1 to the Loan Agreement, the Borrower shall cause the relevant FI to ensure that: (i) such Subloan is made only to Eligible Beneficiaries for Eligible Subprojects; (ii) the Biogas Plant is constructed by certified masons or contractors who will certify compliance with the relevant technical and environmental standards specified in the Subproject Eligibility Criteria; and (iii) the Subproject Eligibility Criteria is incorporated into each FI's standard loan eligibility criteria to ensure the targeted clients under the Project is reached and the Project objectives are achieved.	Being complied with	Financials
18	Article 3	Except as ADB may otherwise agree, the proceeds of the Subsidiary Loans shall be used only for making Subloans to Eligible Beneficiaries for Eligible Subprojects and shall be applied exclusively to the cost of Goods and Works and other items of expenditure required to carry out such Eligible Subprojects.	Being complied with.	Financials
19	Article 4	The Borrower shall promptly take all action, including the provision of funds, facilities, services and other resources, which shall be necessary on its part to enable the FIs to perform their respective obligations under the Project Agreement, and shall not take or permit any action which would interfere with the performance of such obligations.	Being complied with.	Financials
20	Schedule 5	For each medium and each large Biogas Value Chain Infrastructure construction project to be financed by a Subloan under Part 2 of paragraph 2 of Schedule 1 to the Loan Agreement, the Borrower shall prioritize construction of such plant in a CLZ (if any).	Complied with	Others
21	Schedule 5	The Borrower shall ensure that: (i) the FIs together provide counterpart financing in an amount not less than \$6,300,000 in aggregate to finance the Project activities described in Part 2 of paragraph 2 of Schedule 1 to the Loan Agreement; (ii) for each Subloan, a maximum of 85% of the original principal amount of that Subloan is financed from a Subsidiary Loan, a minimum of 15% is financed from the relevant FI's own funds and the recipient borrower of the Subloan shall be contributed in-kind including by providing available local materials and/or labor of equivalent value; (iii) each Subloan has an interest rate as agreed by MOF and the FI concerned as set out in the relevant Subsidiary Loan Agreement; (iv) the interest rate for each Subloan is determined based on market interest rates; and (v) each Subloan has such other terms and conditions as required in the Guidelines for Biogas Value Chains and any other terms and conditions as the relevant FI may have in extending loans to customers from time to time in the ordinary course of its business. In determining the applicable interest rate and other terms and conditions for a Subloan, the Borrower and the FIs shall take into consideration, and hence ensure, that	Being complied with.	Financials

		Eligible Beneficiaries have access to affordable financial sources for construction of Biogas Plants and the Borrower shall ensure or cause the FIs to ensure that no amendments, waivers, supplements or other modifications are made to the terms and conditions of any Subloan which would jeopardize this principle.		
22	Article 3	Except as ADB may otherwise agree, the Borrower shall procure, or cause to be procured, the items of expenditure to be financed out of the proceeds of the Loan in accordance with the provisions of Schedule 4 to the Loan Agreement.	Being complied with.	Others
23	Article 4	(a) The Borrower shall exercise its rights under the Subsidiary Loan Agreements in such a manner as to protect the interests of the Borrower and ADB and to accomplish the purposes of the Loan.	Being complied with.	Financials
24	Article 4	(b) No rights or obligations under the Subsidiary Loan Agreements shall be assigned, amended, abrogated or waived without the prior concurrence of ADB.	Being complied with.	Financials
25	Article 3	Withdrawals from the Loan Account in respect of Goods, Works and Consulting Services shall be made only on account of expenditures relating to:		Others
		(a) Goods which are produced in and supplied from, and Works and Consulting Services which are supplied from such member countries of ADB as shall have been specified by ADS from time to time as eligible sources for procurement; and	Being complied with.	
		(b) Goods, Works and Consulting Services which meet such other eligibility requirements as shall have been specified by ADB from time to time.	Being complied with.	
26	Schedule 5	The Borrower shall allocate a fund to Eligible Beneficiaries as a financial incentive to carry out Eligible Subprojects and supporting carbon market development. Such allocation shall be done in accordance with the PAM.	Being complied with.	Others
27	Schedule 5	In respect of an Eligible Subproject, the Borrower shall ensure or cause the CPMU, PPMUs and FIs to ensure that allocated funds are not credited to the accounts of the relevant Eligible Beneficiaries until the PPMU associated with that Eligible Subproject has confirmed to the relevant FI and ADB following due investigation and physical inspection and such certifications as required under paragraph 4(ii) above, that such Eligible Subproject and certification has complied with all technical, engineering, construction, environmental and other requirements and safeguards set out in the Subproject Eligibility Criteria.	Being complied with.	Others
28	Schedule 5	The Borrower shall ensure or cause the CPMU, PPMUs and FIs to ensure that the Subproject Eligibility Criteria is not amended, supplemented, waived, deferred or otherwise modified in any way without the prior consent of ADB.	Being complied with.	Others
29	Schedule 5	The Borrower shall ensure that the portfolio of Subloans shall be accounted for and reported separately by the FIs in such form and at such frequency as may be required by	Being complied with.	Financials
30	Schedule 5	The Borrower shall immediately notify ADB if at any time it receives information from an FI that: (i) the percentage of non-performing Subloans financed by that FI is likely to exceed 5% of the aggregate outstanding amount of all Subloans financed by that FI at that time; and (ii) the percentage of non-performing Subloans financed by that FI is likely to exceed 10% of the aggregate outstanding amount of all Subloans financed by that FI at that time (the "NPL Limit"). If, at any time, it receives information from an FI that the NPL Limit has	Being complied with.	Financials

		been exceeded, until further notice given by ADB, the Borrower shall immediately cease processing any current or pending withdrawal applications for Subsidiary Loans to that FI and shall temporarily suspend all further disbursements under Subsidiary Loans to that FI		
31	Schedule 5	The Borrower shall ensure or cause the FIs to ensure that none of the Subprojects involve any environmental, involuntary resettlement impacts or impacts on indigenous peoples or ethnic minority groups which can be categorized as Category A, all within the meaning of the Safeguard Policy Statement.	Being complied with.	Safeguards
32	Schedule 5	The Borrower shall ensure that: (i) the Project does not have any involuntary resettlement impacts within the meaning of the Safeguard Policy Statement; and (ii) the site selected for any Subproject shall be situated on land already owned by the Eligible Beneficiary thereby ensuring that the Subproject will not entail any land acquisition. In the event that the Project does have any such involuntary resettlement impacts, the Borrower shall take all steps required to ensure that the Project complies with the applicable laws and regulations of the Borrower and with the Safeguard Policy Statement.	Being complied with.	Safeguards
33	Schedule 5	The Borrower shall ensure or cause the FIs to ensure that the preparation, design, construction, implementation, operation and decommissioning of each Eligible Subproject and all Project facilities comply with: (i) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (ii) the Environmental Safeguards; (iii) the EARF; and (iv) all measures and requirements set forth in the respective IEE and EMP and any corrective or preventative actions set forth in a Environmental Monitoring Report.	Being complied with.	Safeguards
34	Schedule 5	The Borrower shall ensure or cause the FIs to ensure that the preparation, design, construction, implementation and operation of each Eligible Subproject complies with (i) all applicable laws and regulations of the Borrower relating to ethnic minorities; (ii) the Indigenous Peoples Safeguards; and (iii) all measures and requirements set forth in the EMDP, and any corrective or preventative actions set forth in an Environmental Monitoring Report.	Being complied with.	Safeguards
35	Schedule 5	The Borrower shall ensure that the EMDP prepared for the Project and agreed with ADB is updated and fully implemented in a timely manner, and that adequate resources are allocated for this purpose.	Being complied with.	Safeguards
36	Schedule 5	The Borrower shall do the following or cause the FIs to do the following:		Safeguards
		(a) submit semi-annual Environmental Monitoring Reports to ADB;	Being complied with.	
		(b) if any unanticipated environmental and/or social risks and impacts arise during Eligible Subproject implementation promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and	Being complied with.	
		(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EARF and any EMP or EMDP promptly after becoming aware of the breach.	Being complied with.	

37	Schedule 5	The Borrower shall cause the Project Executing Agency to ensure that: (i) the contracts for relevant Works contain provisions prohibiting use of child: labor and differentiation in wages between male and female workers for work of equal value, in accordance with the relevant laws and regulations of the Borrower; (ii) such contracts also include mandatory provisions on health, sanitation and appropriate working conditions; and (iii) contractors and their workers observe local protocols concerning acceptable behavior towards the local population.	Being complied with.	Social
38	Schedule 5 and revised by the MTR	The Borrower shall ensure that the gender action plan prepared for the Project and agreed with ADB is fully implemented in a timely manner and that adequate resources are allocated for this purpose. The gender action plan for the Project ensures that (i) at least 20% of those who are trained in biogas management and technical issues are women; (ii) at least 7% of those who are trained and certified as masons for the construction of small Biogas Plants are women and at least 80% of these women shall find employment; (iii) at least 50% of those trained on utilization of biogas technology and operation and maintenance are women; (iv) at least 50% of those who are trained on farm management and waste management on farms are women; (v) at least 15% of employees trained in medium Biogas Plants and large Biogas Plants are women; (vi) at least 50% of recipients of Subloans from FIs will be registered under husband-wife joint accounts or on behalf of women; (vii) at least 50% of official registration of all purchased biogas units and plants under the Project will be under husband-wife joint accounts or on behalf of women; (viii) 30% of research topics undertaken under Part 3 of paragraph 2 of Schedule 1 to the Loan Agreement relate to gender issues associated with Biogas Plants; (ix) at least 30% of those selected as champions of smart-agriculture in research and dissemination of CSAWMP technology are women; (x) training materials of CSAWMP technology and methodology of dissemination will be women-friendly and at least 50% of dissemination events and consultations will involve women-only groups; (xi) a sex-disaggregated and ethnic minority data base is established as part of the Project's project performance and monitoring system established by the CPMU; (xii) 30% of staff in the CPMU and PPMUs are women and that the CPMU and each PPMU has a gender focal point; and (xiii) gender indicators are included in the overall monitoring and evaluation framework for the Project.	<p>(i) Being complied with (ii) Being complied with (iii) Being complied with (iv) Being complied with (v) Partially complied with with (vi) Complied with (vii) Complied with (viii) Being complied (ix) Being complied with (x) Partially complied with with (xi) Complied with (xii) Complied with (xiii) Complied with</p>	Social
39	Schedule 5	The Borrower shall ensure that in all Project Provinces, information dissemination, education and mass -communication activities are carried out in a timely manner to promote the replication of biogas technology application and utilization.	Being complied with.	Social
40	Schedule 5	The Borrower shall ensure or cause the FIs to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the Safeguard Policy Statement.	Being complied with.	Others

41	Schedule 5	The Borrower shall comply with, and shall cause the Project Executing Agency, the TSU and each IA to comply with ADB's Anticorruption Policy (1998, as amended to date). The Borrower: (i) acknowledges that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project; and (ii) agrees to cooperate with, and to cause the Project Executing Agency, the TSU and each IA to cooperate fully with any such investigation and extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for satisfactory completion of such investigation and shall allow, and cause the Project Executing Agency, the TSU and each IA to allow, ADB to investigate any violation or potential violation of these undertakings.	Being complied with.	Others
42	Schedule 5	Without limiting the generality of the preceding paragraphs, the Borrower shall: (i) ensure that the Project Executing Agency and each IA conduct periodic inspections on the contractors' activities related to fund withdrawals and settlements; and (ii) ensure and cause the Project Executing Agency and each IA to ensure that all bidding documents and contracts financed by ADB in connection with the Project include anticorruption provisions acceptable to ADB including provisions specifying the right of ADB to audit and examine the records and accounts of the contractors, suppliers, consultants, and other service providers as they relate to the Project.	Being complied with.	Others
43	Schedule 5	If the Borrower or ADB is or becomes aware or has a reasonable suspicion that any member of the Project Executing Agency, TSU or any IA has engaged in corrupt or fraudulent practices (as defined in ADB's Anticorruption Policy (1998 as amended to date)) under or in connection with the Project or the Loan, the Borrower shall take such timely and appropriate action satisfactory to ADB to investigate and/or remedy the situation, including in the case of corrupt or fraudulent practices of an FI, demanding immediate repayment or otherwise recovering any portion of the relevant Subsidiary Loan, with such repayment or recovery to be promptly paid to ADB in prepayment of the Loan. If the Borrower does not undertake investigative and/or remedial action to the satisfaction of ADB, without prejudice to any other rights contained in this Loan Agreement, ADB may declare the relevant FI ineligible, either indefinitely or for a stated period, to be considered as a provider of financial intermediary loans or any other financial instruments for future ADB projects.	Being complied with.	Others
44	Schedule 5	In addition to these requirements, to deter corruption and increase transparency, the Borrower shall create a Project website within 5 months of the Effective Date, accessible by the general public, to disclose various information concerning the Project including general information about the Project, public procurements related to the Project, Project progress and contact details in English and Vietnamese languages. The website shall also provide a link to ADB's Integrity Unit (http://www.adb.org/Integrity/complaint.asp) for reporting to ADB any grievances or allegations of corrupt practices arising out of the Project and Project activities. For each contract, the website shall include information on, among others, the list of participating bidders, name of the winning bidder, basic details on bidding procedures adopted, amount of contract awarded, and the list of goods/services,	Being complied with.	Others

		including consulting services, procured. The Borrower shall cause the Project Executing Agency to permit any bidder to request an explanation as to why a bid was unsuccessful and either the Project Executing Agency shall respond within 20 working days. The website will be updated promptly and regularly after each award of contract, (ii) each submission of the semi-annual Environmental Monitoring Report to ADB. In addition to the web-based disclosure, stakeholders, which include civil society and non-governmental organizations, shall be provided by the Borrower with detailed information on procurement on public notice boards in their respective areas.		
45	Schedule 5	The Borrower shall and shall ensure that the Project Executing Agency and each IA complies with: (i) ADB's policy relating to Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism (2003); and (ii) applicable laws and regulations of the Borrower on combating money laundering and financing of terrorism and that Loan proceeds are not used, directly or indirectly, in money laundering or financing of terrorism.	Being complied with.	Others
46	Schedule 5	The Borrower shall ensure that each FI formulates and implements internal control procedures, including customer due diligence procedures, to prevent violation of paragraph 26 above.	Being complied with.	Others
47	Schedule 5	The Borrower shall and shall ensure that each FI promptly informs the Borrower and ADB if there is any violation or potential violation of paragraph 26 above. In the event that ADB informs an FI of its concern that there has been such an alleged violation, that FI shall: (i) cooperate in good faith with ADB and its representatives so that ADB can determine whether such a violation has occurred; (ii) respond promptly and in reasonable detail to any query from ADB; and (iii) furnish documentary support for such response upon ADB's request.	Being complied with.	Others

Updated Ethnic Minority Development Plan

(As of 31 August 2018)

No.	Activities	Status	Achievements																
1	Livestock waste management																		
1.1	<i>Biogas plant value chain management</i>																		
1.1.1	Map EM statistic in sample provinces, their livelihoods and potential links to BP value chains.	On-going	<p><u>By end of 31 August 2018</u> the database for BPs under Package 13, with separated data for ethnic minorities, has been implemented and updated with 41,849 biogas plants of whole project. Of which 25,633 BPs are from 6 provinces with EM:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: center;">Provinces</th> <th style="text-align: center;">Number of EM</th> </tr> </thead> <tbody> <tr> <td>Lào Cai</td> <td style="text-align: right;">2,144</td> </tr> <tr> <td>Sơn La</td> <td style="text-align: right;">2,132</td> </tr> <tr> <td>Phủ Thọ</td> <td style="text-align: right;">8,822</td> </tr> <tr> <td>Bắc Giang</td> <td style="text-align: right;">4,600</td> </tr> <tr> <td>Bình Định</td> <td style="text-align: right;">5,283</td> </tr> <tr> <td>Sóc Trăng</td> <td style="text-align: right;">2,652</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">25,633</td> </tr> </tbody> </table>	Provinces	Number of EM	Lào Cai	2,144	Sơn La	2,132	Phủ Thọ	8,822	Bắc Giang	4,600	Bình Định	5,283	Sóc Trăng	2,652	Total	25,633
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Total	25,633																		
1.1.2	Assess resources and constraints for EMs to construct BPs	On-going	<p>Assessment during implementation phase has been initially done through the consultation with provinces in November 2016.</p> <p>Second assessment in May 2017: LIC has drafted assessment forms. CPMU has sent letters to EM provinces and received the feedbacks from some provinces.</p> <p>Assess resources and constraints for EMs to construct BPs has been conducted by LIC during the training course on Gender and EM in Thai Nguyen for staffs from 4 provinces.</p>																
1.1.3	Construction of SBPs for EMs	On-going	<p><u>By end of 31 August 2018:</u></p> <p>Considering the 6 provinces with EMs only, there are 35,970 small biogas plants constructed, of which 4,746 for ethnic minority households (accounting for 13.2% in 06 selected provinces).</p> <p>In the 10 provinces, Project has built 55,122 small biogas plants, including 4,747 plants for ethnic minority households (accounting for 8.6% of total number of small biogas plants in 10 project provinces (Ben Tre has 01 ethnic household).</p>																

No.	Activities	Status	Achievements
1.1.4	Organize to potentially share BP value chain benefits from BP owners to EMs	On-going	<p>The project has organized various communication activities to disseminate information about the project including the proposals for sharing Biogas Value Chain (BVC) benefits (energy and organic fertilizer) from BP owners.</p> <p><u>Up to 31 August 2018</u>, the information dissemination has been done in 6 ethnic minority provinces including:</p> <ul style="list-style-type: none"> - 473 information dissemination meetings and workshops - 129 articles broadcast on TV - 1,663 articles broadcast on radio - 121 articles on newspapers - 8,678 bulletin boards - 15,500 posters - 89,000 leaflets - 38 video clips
1.1.5	Monitor BP value chain management within EMs	On-going	<p><u>Up to 31 August 2018</u>: All the 10 provinces have constructed 55,122 SBPs, including 4,747 SBPs for EMs, receiving the supervision and technical assistance from the project in terms of BVC management.</p>
1.2 Carbon market access			
1.2.1	Assess EM driven investments that may link carbon emission	On-going	<p>All data on biogas plants of ethnic minorities will be provided to the National Biogas Program to support carbon credit program</p> <p><u>Cumulative data as of 31 August 2018</u>, The Project has provided 55,122 SBPs, of which 4,747 SBPs are provided for ethnic minorities (Accounting for 8.6% of the total number of SBPs in 10 project provinces).</p>
1.2.2	Train EMs on CSAWMP linked to carbon markets	On-going	<p><u>Cumulative data as of 31 August-2018</u>: 17,232 people from the 10 project provinces have been trained on CSAWMP, of which 1,998 are ethnic minorities, accounting for 11.6%</p> <p><i>Considering the 6 provinces with EMs only, the number of trained EM accounts for 18.87% (1,998/10,586)</i></p>
1.2.3	Assess FIs which are suitable for EM to access the credit		Social policy bank was proposed as an additional FI for project however the negotiation process has not been achieved yet.
1.3	<i>Biogas value chains sustainability</i>		

No.	Activities	Status	Achievements
1.3.1	Train EMs to manage their livestock and wastes	On-going	The project has provided training courses on O&M of biogas plants and CSAWMP for participants to manage livestock and wastes
1.3.1(a)	Training on CSAWMP:	On-going	<u>Cumulative data as of 31 August 2018:</u> 17,232 people of the 10 provinces have been trained on CSAWMP, of which 1,998 are ethnic minorities, accounting for 11.6%. <u>Considering the 6 provinces with EMs only (Son La, Lao Cai, Bac Giang, Phu Tho, Binh Dinh and Soc Trang),</u> the number of trained EM accounts for 18.87% (1,998/10,586)
1.3.2(b)	Ethnic minority people trained on the use of small biogas plants	On-going	<u>As of 31 August 2018,</u> among 34,795 trained people in 06 provinces with ethnic minorities and among 57,962 of all project trainees, 4,475 ethnic minority people have been trained on the use of small biogas plants, accounting for 12.86% and 7.72% respectively.
1.3.2(c)	Ethnic minority people trained on the operation at home (during the inspection and acceptance visits by technical staff)	On-going	<u>As of 31 August 2018,</u> among 34,795 trained people in 06 provinces with ethnic minorities and among 57,962 of all project trainees, 4,475 ethnic minority people have been trained on the operation of small biogas plants, accounting for 12.86% and 7.72% respectively.
1.3.3	Facilitate EM access to FIs	On-going	As of 31 August 2018, cumulative number of households who have access to credit is 520, including 92 EM households accounting for 17.7 %. The reason of big change in data has been clarified by Consultant is the figures in previous mission are target not actual implementation.
2	CSAWMP Technology Transfer		
2.1	CSAWMP Promotion		
2.1.1	Ensure EM areas included in agro-climatic mapping system	On-going	Ethnic minority areas are being input to the Project detailed agricultural climate map Currently, the map is being prepared under the Package 19 and the contract was signed on 11th April 2016. 6 provinces with EM have been updated to the map
2.1.2	Disseminate CSAWMP knowledge explored from E-libraries to improve EM skill and knowledge.	On-going	The package was awarded on 11 April 2017. The contractor is working with the stakeholders in accordance with the TOR. The equipment will be procured after the design is completed.
2.1.3	Ensure organic fertilizers are used in EM areas	On-going	All participating EMs are equipped a know-how of organic fertilizer production from bio-slurry and organic fertilizer use. Besides, the use of organic fertilize in EM area will be integrated in the demonstrations or researches packages relating to organic fertilizer production Ethnic minority people have attended training courses on livestock waste

No.	Activities	Status	Achievements
			management held by CPMU and PPMUs, Ethnic minorities will be also taken to visit the project demonstration and research models. In December 2017, 2 demonstrations on manure separator have been implemented in 9 out of 10 provinces (excluding Lào Cai). 1 package on power generator has been implemented in Lào Cai, Bến Tre, Tiền Giang and Sóc Trăng. 1 package on using bio-slurry has been implemented in Bình Định and Sóc Trăng
2.1.4	Ensure EMs are included in livestock waste management	On-going	Up to 31 August 2018, EM people have attended in training courses on livestock waste management held by CPMU and PPMUs
2.1.5	Encourage at least 30% of CSAWMP promotion participants among EMs are women.	On-going	Project has provided training to 17,232 farmers on CASWMP, including 1,998 EM people (11.6%). As of 31 August 2018, Project has trained 1,698 agriculture extension staff on CSAWMP, including 343 ethnic minority people (20.2%). Among 343 trained ethnic minority extension staff, there are 124 women, accounting for 36,15%.
2.2	<i>CSAWMP Models/ Technology Development Transfer</i>		
2.2.1	Ensure that researchers and extension workers trained to properly monitor and document CSAWMP progress in EMs.	On-going	As of 31 August 2018, 6 provinces with EM have provided training for 692 extension staff, including 317 EM staff, (45.8%).
2.2.3	Disseminate CSAWMP skills and knowledge to EM, BP owners and other farmers in EM areas.	On-going	Project has provided training to 17,232 farmers on CASWMP, including 1,998 EM people (11.6%).
2.3	<i>Biogas plant value chain model</i>		
2.3.1	Assess surplus of gas, electricity, bio-slurry for Ems	On-going	Regular assessment has been done by the provinces on the use of surplus gas for biogas power generator and the use of bio-slurry for crops. Most of households with BPs installed have used surplus gas and bio-slurry. In addition, This activity will be conducted in research packages also.

No.	Activities	Status	Achievements
2.3.2	Manage gas, electricity and organic fertilizers for EMs	On-going	<p>100% participant EMs are trained and guided for making full use of gas, electricity, and organic fertilizers from BP. Based on the result of baseline survey in 2016 and field visits of Environment Consultant of LIC, the project participants use bio-slurry as organic fertilizer for their garden and farm; compost the bio-slurry with other waste and residue; or share with other households. In regards of gas management, gas is used for cooking, heating water, heating stables, or shared with neighbors. In case of gas surplus, the BP owners burn it instead of release directly into environment</p> <p><i>As of 31 August 2018</i>, among 34,795 trained people in 06 provinces with ethnic minorities and among 57,692 of all project trainees, 4,475 ethnic minority people have been trained on the operation of small biogas plants, accounting for 12.86% and 7.7% respectively.</p>
3	Project Management		
3.1	Establish indicators to target EMs in the province	Not yet due	Gender and Ethnic Minority Consultant will perform this task.
3.2	Ensure social safeguard staff include support for EMs in their work plan	On-going	<p>(i) The Gender and EM Specialist has conducted a training course for the gender focal point staff, and technicians on EM and gender mainstreaming and mobilisation of EM people in project activities in June 2017 in Thái Nguyên. From June to December 2017, 2 courses have been organised in Cần Thơ city and 1 course in Quy Nhơn city on Gender and EM issues. The trainers have instructed safeguards staff of the provinces with EM on how to prepare quarterly and annual plans to support EM people.</p> <p>(ii) Send EMDP to all provinces</p> <p>(iii) Review the activities in the EMDP and provide instructions to the provinces</p> <p>(iv) Develop assessment tool to assess challenges of EM in accessing biogas plants and credit</p> <p>6 provinces with EM have sent their reports to CPMU and LIC on the assessment of EMDP implementation as well as the gender and EM integrated plans. The outputs of the plans have been incorporated in the internal monitoring reports.</p>
3.3	Ensure FIs to support EMs	On-going	As of 31 August 2018, cumulative number of households who have access to credit is 522, including 92 EM households accounting for 17.7 %.

UPDATED GENDER ACTION PLAN (GAP) MONITORING TABLE

Project: Loan 2968-VIE: Low Carbon Agricultural Support Project

Date of update: 31 August 2018

Project Outputs	Proposed targets / Actions	Progress				Issues / Challenge
1. Expanded livestock waste management infrastructure	1. T1: At least 20% of those who are trained in biogas management and technical issues are women.	• On-going/Achieved: The project conducted training courses for technical staff in biogas management and technical issues. Among 1,290 participants, of which 297 female participants (23.0%).				- PPMUs are conscious and makes effort to train more female in technical workers in the future : Son La(SL), Nam Dinh (ND), Tien Giang (TG), Soc Trang (ST), Binh Dinh (BD) and Ben Tre (BT))
			Total	Women	% Women	
		CPMU	710	182	25.6	
		Lao Cai	27	7	25.9	
		Son La	75	11	14.7	
		Phu Tho	127	45	35.4	
		Bac Giang	43	11	25.6	
		Nam Dinh	70	13	18.6	
		Ha Tinh	56	14	25.0	
		Binh Dinh	62	8	12.9	
		Tien Giang	25	4	16.0	
		Ben Tre	22	1	4.5	
		Soc Trang	73	1	1.4	
Total	1,290	297	23.0			

Project Outputs	Proposed targets / Actions	Progress				Issues / Challenge
	<p>2• T2. At least 50% of trainees on biogas use will be women.</p>	<p>• On-going/Achieved: Total of participants is 102,806 including 51,697 female participants (50.3%)¹.</p>				<p>Son La, Soc Trang and Ben Tre provinces need to enhance the hands-on training activities at home for all members of the family, particularly for women members since they are mainly responsible for the operation and maintenance of biogas plants</p>
			Total	Women	% women	
		Lao Cai	7,432	3,676	49.5	
		Son La	2,711	887	32.7	
		Phu Tho	18,212	10,025	55.0	
		Bac Giang	15,740	7,962	50.6	
		Nam Dinh	10,382	5,791	55.8	
		Ha Tinh	12,818	7,993	62.4	
		Binh Dinh	8,444	3,884	46.0	
		Tien Giang	6,488	4,120	63.5	
		Ben Tre	14,265	5,045	35.4	
		Soc Trang	6,314	2,314	36.6	
		Total	102,806	51,697	50.3	

¹ Interview Mr Lam Soay, Ms. Trieu Thi Kum Mang and Ms. Trinh Thi Thu Van (Bo Lien 2 village, Thuan Hung commune, My Tu district, Soc Trang province), these households were supported 3 million VND to construct SBP and participated in the training on biogas use and waste management in the commune and at home. According to them, before the construction of biogas plants, the environment in this area is very polluted, because the wastes of cows directly discharged into the canals. But since the construction of this biogas plant, the environment in here is much better and they use gas for cooking and save money on gas purchase. Mrs. Kum Mang borrowed 9 million VND from Vietnam Bank for Social Policies and paid interest with 90,000 VND /month. Ms. Le Thi Yen, Duong Que village, Phuoc Trung commune, Go Cong Dong district, Tien Giang province, her household was supported 5 million to construct SBP (female headed household), she was trained on biogas use at home during the contractor installed SBP.

Project Outputs	Proposed targets / Actions	Progress	Issues / Challenge																																																				
	<p>3• T3. At least 20% of trainees on SBP construction issues will be women. (Adjusted 7% in MTR mission)</p> <p>4• T4. At least 30% of trained employees in MBPs and LBPs are women. (Adjusted 15% in MTR mission)</p>	<p>• On-going/ Achieved: CPMU and PPMUs conducted training courses on construction of small Biogas Plants with 462 participants including 31 women (6.7%).</p> <table border="1" data-bbox="741 411 1435 842"> <thead> <tr> <th>CPMU/ PPMU</th> <th>Total</th> <th>Women</th> <th>% Women</th> </tr> </thead> <tbody> <tr> <td>CPMU</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Lao Cai</td> <td>49</td> <td>4</td> <td>8.2</td> </tr> <tr> <td>Son La</td> <td>29</td> <td>0</td> <td>0.0</td> </tr> <tr> <td>Phu Tho</td> <td>70</td> <td>12</td> <td>17.1</td> </tr> <tr> <td>Bac Giang</td> <td>19</td> <td>1</td> <td>5.3</td> </tr> <tr> <td>Nam Dinh</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Ha Tinh</td> <td>126</td> <td>3</td> <td>2.4</td> </tr> <tr> <td>Binh Dinh</td> <td>50</td> <td>5</td> <td>10.0</td> </tr> <tr> <td>Tien Giang</td> <td>34</td> <td>0</td> <td>0</td> </tr> <tr> <td>Ben Tre</td> <td>28</td> <td>5</td> <td>17.9</td> </tr> <tr> <td>Soc Trang</td> <td>57</td> <td>1</td> <td>1.8</td> </tr> <tr> <td>Total</td> <td>462</td> <td>31</td> <td>7%</td> </tr> </tbody> </table> <p>• On-going/ Under achieved: CPMU conducted training courses on construction of MBPs and LBPs for 172 engineers, contractors and workers including 7 women (4.1%)</p>	CPMU/ PPMU	Total	Women	% Women	CPMU	0	0	0	Lao Cai	49	4	8.2	Son La	29	0	0.0	Phu Tho	70	12	17.1	Bac Giang	19	1	5.3	Nam Dinh	0	0	0	Ha Tinh	126	3	2.4	Binh Dinh	50	5	10.0	Tien Giang	34	0	0	Ben Tre	28	5	17.9	Soc Trang	57	1	1.8	Total	462	31	7%	<p>- Mason of Biogas Plants (BP) are usually professional and skillful masons and get further training on BPs, it is a high skilled job but not a full-time job, so it is difficult for women to get trained and become masons.</p> <p>- The female participants in the SL, BG, HT, TG and ST provinces was lower than the target -> PPMUs in province that managed to train female mason to recruit more actively and train more female masons .</p> <p>The number of female engineers, and contractors' representatives is small, and hence it is difficult to meet the project training target of the women participation</p>
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2.Credit lines for biogas value chains	5. T5. At least 50% of credit recipients will be registered under husband-wife joint accounts or on behalf of women.	<p>• On-going/achieved: There are 522 credit recipients and all of them are registered under husband-wife joint accounts or on behalf of women (100%).</p> <table border="1" data-bbox="741 376 1529 635"> <thead> <tr> <th>PPMU</th> <th>Total</th> <th>Husband-wife or women</th> <th>% Husband-wife or women</th> </tr> </thead> <tbody> <tr> <td>Lao Cai</td> <td>127</td> <td>127</td> <td>100</td> </tr> <tr> <td>Phu Thọ</td> <td>8</td> <td>8</td> <td>100</td> </tr> <tr> <td>Bac Giang</td> <td>243</td> <td>243</td> <td>100</td> </tr> <tr> <td>Binh Dinh</td> <td>126</td> <td>126</td> <td>100</td> </tr> <tr> <td>Tien Giang</td> <td>18</td> <td>18</td> <td>100</td> </tr> <tr> <td>Total</td> <td>522</td> <td>522</td> <td>100</td> </tr> </tbody> </table>				PPMU	Total	Husband-wife or women	% Husband-wife or women	Lao Cai	127	127	100	Phu Thọ	8	8	100	Bac Giang	243	243	100	Binh Dinh	126	126	100	Tien Giang	18	18	100	Total	522	522	100	The households have to obtain the authorized papers from their spouses and certified by the Commune People's Committees to register the accounts under their names.
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	6• T6. Official registration of all the purchased biogas units and plants under the project will be assisted. At least 50% of such will be under husband-wife joint accounts or on behalf of women	<p>• On-going/achieved: There are 522 credit recipients and all of them are registered under husband-wife joint accounts or on behalf of women (100%).</p> <table border="1" data-bbox="741 775 1529 1034"> <thead> <tr> <th>Province</th> <th>Total</th> <th>Husband-wife or Women</th> <th>% recipients under H-W or Women</th> </tr> </thead> <tbody> <tr> <td>Lao Cai</td> <td>127</td> <td>127</td> <td>100</td> </tr> <tr> <td>Phu Tho</td> <td>8</td> <td>8</td> <td>100</td> </tr> <tr> <td>B. Giang</td> <td>243</td> <td>243</td> <td>100</td> </tr> <tr> <td>B. Dinh</td> <td>126</td> <td>126</td> <td>100</td> </tr> <tr> <td>T. Giang</td> <td>18</td> <td>18</td> <td>100</td> </tr> <tr> <td>Total</td> <td>522</td> <td>522</td> <td>100</td> </tr> </tbody> </table>				Province	Total	Husband-wife or Women	% recipients under H-W or Women	Lao Cai	127	127	100	Phu Tho	8	8	100	B. Giang	243	243	100	B. Dinh	126	126	100	T. Giang	18	18	100	Total	522	522	100	
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Project Outputs	Proposed targets / Actions	Progress	Issues / Challenge
3.Enhanced CSAWMP technology transfer	7• A1. Gender sensitive research strategy prepared.	<ul style="list-style-type: none"> • Achieved: Research strategy to direct project research activities on CSAWMP was developed in 2015. This research strategy analyzed existing technologies on agricultural wastes and by-products for reducing environmental pollution and creating revenue to farmers in the 10 project provinces² and proposed value chains pilot and demonstration models for of agricultural wastes.³ 	
	8. A2. Training materials of CSAWMP technology and methodology of dissemination are women friendly (avoiding gender stereo types and using appropriate illustrations).	<ul style="list-style-type: none"> • Achieved: The Training materials of CSAWMP technology using pictures and appropriate illustrations, so women can easily understand and apply into practice⁴. 	

² Part 3.2.1. Rice husk briquette and Improved cook stove (page 11)

³ Part 5.1: Biogas technology related models: need to overcome the limitations in environmental treatment and 5.4: Utilization of fertilizer compressed machine for treating livestock environment and Collection of livestock waste for producing bio-organic fertilizer (page 18). Interview Ms. Nguyen Thi Anh – Head of Thuc Anh livestock farm – Ha Thanh commune, Phu Tho town, Phu Tho province. Her household participated in the package 32 on Supply of manure separating systems to treat livestock waste to produce material for organic fertilizer demonstration and project supported the automatic irrigation system. This model has saved time in getting water and protecting the environment as well as the health of her family and workers.

⁴ Ms. Le Thi Chung – Y Son commune (Ha Hoa district, Phu Tho province) attended 2 training courses (biogas use and farm management and waste management on farm) and Ms. Vu Thi Lien – Nghia Tan commune (Nghia Hung district, Nam Dinh province) attended training courses on biogas use, they said that training material was very well presentation and easy to follow.

Project Outputs	Proposed targets / Actions	Progress	Issues / Challenge
	<p>9• T7. At least 50% of dissemination events and consultation will involve women-only groups (e.g. event will be carried out through commune women union's meetings). Adjusted 30% in MTR mission</p>	<p>On-going/under achieved: 675 dissemination meetings and workshops have been organized with 30,712 participants including 12,154 women (40 %). Only 22 meetings and workshops are for women, accounting for 3.26%.</p>	<p>Consultation with women only group to be conducted=> PPMU conduct dissemination events and consultation meeting with women's only group through local women union' meeting to inform about the project and CSAWMP technology.</p>
	<p>10• T8. 30% of research project topics (21 project research topics) relate to gender issues/dimensions of biogas plants such as improved cooking stove, improved or household water heating system, women friendly post harvest processing tools/equipment that use biogas fuel</p>	<p>On-going/ likely achieved In the 5 CSAWMP researches have been awarded (Package 25-29, there are 3 researches related to gender issues. (Package 25, 26 and package 27). As 30 Aug. 2018, the researches submitted inception report, the implementation results of these researches will be reported in the next report, - Package 25 (Research on organic fertilizer production from livestock waste and bio slurry by value chain) - Package 26 (Research on biogas technology improvement and effective biogas utilization by value chain) - Package 27 (Research on the water-saving pig farming technology).</p>	<p>The gender specialist continues to work with contractors to integrate gender issues in research activities and monitor the implementation of these activities.</p>

Project Outputs	Proposed targets / Actions	Progress				Issues / Challenge																																															
	<p>11• T9. Women account for at least 50% of those who are trained on farm management and waste management on farms. (Moved from Output 1 to output 3)</p>	<p>•On-going/ Achieved: The project conducted training courses on CSAWMP for 17,232 farmers including 8,651 women (50.2%).</p>				<p>⇒ Some provinces, the rate of female participation in these training was not achieved (Lao Cai, Binh Dinh, Tien Giang and Ben Tre) →PPMUs of these provinces need to encourage the female participants through coordination with commune WU.</p>																																															
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	<p>12• T10. Select and train at least 40% women as champions of smart-agriculture in research and dissemination of CSAWMP technology. Adjusted 30% in MTR mission</p>	<p>On-going/Achieved: The Project conducted training courses (TOT) for 1,698 extension staff including 511 women (30.1%).</p> <table border="1" data-bbox="741 379 1473 847"> <thead> <tr> <th>PPMU</th> <th>Total of Participants</th> <th>Women</th> <th>% Women</th> </tr> </thead> <tbody> <tr> <td>CPMU</td> <td>274</td> <td>82</td> <td>29.9</td> </tr> <tr> <td>Lao Cai</td> <td>26</td> <td>9</td> <td>34.6</td> </tr> <tr> <td>Son La</td> <td>212</td> <td>77</td> <td>36.3</td> </tr> <tr> <td>Phu Tho</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>Bac Giang</td> <td>67</td> <td>31</td> <td>46.3</td> </tr> <tr> <td>Nam Dinh</td> <td>100</td> <td>50</td> <td>50.0</td> </tr> <tr> <td>Ha Tinh</td> <td>310</td> <td>120</td> <td>38.7</td> </tr> <tr> <td>Binh Dinh</td> <td>387</td> <td>82</td> <td>21.2</td> </tr> <tr> <td>Tien Giang</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>Ben Tre</td> <td>322</td> <td>60</td> <td>18.6</td> </tr> <tr> <td>Soc Trang</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>Total</td> <td>1,698</td> <td>511</td> <td>30.1</td> </tr> </tbody> </table>	PPMU	Total of Participants	Women	% Women	CPMU	274	82	29.9	Lao Cai	26	9	34.6	Son La	212	77	36.3	Phu Tho	-	-		Bac Giang	67	31	46.3	Nam Dinh	100	50	50.0	Ha Tinh	310	120	38.7	Binh Dinh	387	82	21.2	Tien Giang	-	-		Ben Tre	322	60	18.6	Soc Trang	-	-		Total	1,698	511	30.1	
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	<p>13• A3. Ensure legal (e.g., employment contract) and remuneration support for champions.</p>	<p>• On-going/Achieved: All extension staffs participated in ToT training courses have been supported per diem and delivered the certificate.</p>																																																					
	<p>14. T11. 30% of personnel in participating institutions trained in O&M of research equipment are women.</p>	<p>• On-going/ More data needed. Package 14 was awarded to contractor , the training courses on O&M of research equipment are implemented in 2018.</p>	<ul style="list-style-type: none"> - CPMU and gender specialist need to work with the contractors to ensure that of 30% of personnel in participating institutions trained in O&M of research equipment are women. - CPMU need to provide this data in the next quarterly report. 																																																				

Project Outputs	Proposed targets / Actions	Progress	Issues / Challenge
4.Effective project management	15. A4. Project management support CPMU and each PPMU will have a focal point/person for gender and ethnic minority issues.	<ul style="list-style-type: none"> • Achieved: CPMU and each PPMU assigned a focal point for gender and ethnic minority issues. The gender focal point was appointed in 2016. (11 focal point staff for gender : 01 staff of CPMU and 10 staff of 10 provinces) 	
	16. A5. Gender sensitivity workshops at provincial, district, and commune levels will be carried out for all project staff, contractors, agricultural extension and veterinary staff and participating association steering committee as part of the project orientation.	<ul style="list-style-type: none"> • On-going/Partially achieved: 6 training courses on raising gender awareness and ethnic minority were conducted in Can Tho, Binh Dinh and Thai Nguyen for project staff and stakeholders. Of a total 253 participants, 149 were females (59%). Only 60 among 127 staff from the CPMU and PPMUs participated in the Gender trainings. 	CPMU needs to conduct more training courses on gender for remaining CPMU and PPMUs staff and introduce project GAP to new stakeholders (contractors, agricultural extension, etc.).
	17• A6. Develop and update sex-disaggregated and ethnic minority data as part of project M&E and reporting system.	<ul style="list-style-type: none"> • Achieved: <ul style="list-style-type: none"> (i) M&E Consultant has developed the M&E system and templates for sex-disaggregated and ethnicity data collection. (ii) A database of biogas plants was transferred into a database monitoring software and will be updated as biogas construction progress with sex-disaggregated data. 	

Project Outputs	Proposed targets / Actions	Progress				Issues / Challenge
	18• T12. 30% of CPMU and PPMU staff are women.	<ul style="list-style-type: none"> • Achieved: A CPMU and 10 PPMUs established in second quarter of 2013. As of 30 Aug. 2018, 58 out of 127 staff are women (45.7%). 				
		Provinces	Total	Women	% women	
		CPMU	23	14	60.9	
		Son La	5	1	20.0	
		Lào Cai	11	4	36.0	
		Bac Giang	10	5	50.0	
		Phu Thọ	11	6	54.6	
		Nam Định	15	5	33.3	
		Ha Tinh	10	4	40.0	
		Binh Dinh	10	3	30.0	
		Ben Tre	11	6	54.6	
		Tien Giang	8	5	62.5	
		Soc Trang	13	5	38.5	
		Total	127	58	45.7	