Environmental and Social Monitoring Report

Completion Report

August 2021

Viet Nam: Water Sector Investment Program – Tranche 3

Subproject: Water Supply System for Tam Hiep and Dien Nam - Dien Ngoc Urban Area

Prepared by Quang Nam Water Supply and Drainage JSC for the Quang Nam Provincial People's Committee and the Asian Development Bank.

QUANG NAM WATER SUPPLY DRAINAGE JOINT STOCK COMPANY
MANAGEMENT UNIT OF INVESTMENT AND CONSTRUCTION PROJECTS

Final Social and Environment Monitoring Report

VIE: WATER SECTOR INVESTMENT PROGRAM – TRANCHE 3

Subproject: Water Supply System for Tam Hiep and Dien Nam - Dien Ngoc Urban Area

Representative of Joint Venture:
INTEC – SWS

Representative of Investor:

CURRENCY EQUIVALENTS
(As of March 2021)

Currency unit	–	USD ($)
$1.00	=	23,170VND

LIST OF ABBREVIATION AND ACRONYM

ADB	Asian Development Bank
CEMP	Construction Environmental Management Plan
CSC	Construction Supervision Consultant
DMS	Detail Measurement Survey
DONRE	Department of Natural Resources and Environment
EA	Executive Agency
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GoV	Government of Vietnam
HSE	Health, Safety and Environment
IEE	Initial Environmental Examination
LAR	Land Acquisition and Resettlement
MFF	Multi-tranche Financing Facility
MoLISA	Ministry of Labour, war Invalids and Social Affairs
PMU	Project Management Unit
PPTA	Project Preparation Technical Assistance
PFR	Periodic Funding Request
QNWDS.JSC	Quang Nam water drainage and supply joint stock company
RoW	Right of Way
RP	Resettlement Plan
SPS	Safeguard Policy Statement
WTP	Water Treatment Plant

NOTE

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I. GENERAL INFORMATION

A. Overview

1. The ADB Board of Directors approved a multi-tranche financing facility (MFF) on 22 February 2011 for $1,000 million from the Ordinary Capital Resources (OCR) for the first time in Viet Nam for the water sector. In the last two decades, the water sector in Viet Nam has achieved significant improvements in coverage for water supply to urban and rural areas throughout the country. To provide longer-term support for Viet Nam's continued success in water supply development, improve the level of service delivery, and meet the increasing demands for the water of the expanding population and economy of the country. The government of Viet Nam requested ADB assistance to develop a series of water supply projects.

2. Dien Nam - Dien Ngoc and Tam Hiep - Quang Nam province urban water supply project is a part of the seven water supply subprojects that formed the third Periodic Funding Request (PFR-3) of the Multi-tranche Financing Facility (MFF0054-VIE) for Support of the Water Sector in Viet Nam.

3. The project, classified as Environment Category B, is judged to have some potential adverse environmental impacts, particularly in relation to pipeline construction activities and, to a lesser significance, the disposal of sludge from the water treatment process. The project is classified as B for resettlement impact due to land acquisition. However, the project is classified as C for Indigenous People's impact, as no impact was identified at the time.

B. Objectives of Water Supply System for Tam Hiep and Dien Nam - Dien Ngoc Urban Area Subproject

4. The overall objective of the Quang Nam Water Supply Project is to improve the living conditions and health of the population in urban and peri-urban areas by expanding and improving the clean water production capacity and the distribution network coverage within the town.

5. The Project is expected to contribute to sustainable economic growth and improve the urban quality of life through the provision of accessible, equitable, and sustained water supply services. The expected outcomes are (i) to improve and expanded access to safe and sustainable water supply services; (ii) increase public awareness on the importance of using safe water and reduce risk to public health; and (iii) sustain services provision through adequate tariffs and cost recovery, and strengthened sector regulation.

C. Summary of Packages in Quang Nam

6. The project component in Quang Nam Province consists of two components, divided into 3 packages, after implementation, a sum of money is saved and this amount will be used for the implementation of 02 additional components in 2018 and 2020, specifically as follows:

Table 1: Packages of project

No.	Items	Project location	Descriptions
I	**Package QN-CW 01: Supplying equipment and building raw water pumping stations, raw water pipes, water treatment plants for Dien Nam - Dien Ngoc and Tam Hiep**		
A	**Dien Nam - Dien Ngoc Water Treatment Plant**		
1	Construction of raw water intake works and raw water pumping stations.	DienHoa Commune, Dien Ban District	The raw water pumping station has a capacity of 15,000 m3/day and night, using raw water from Bau Sau river.
2	Construction of Dien Nam - Dien Ngoc water treatment plant	Trang Nhat 1 industrial park, Dien Ban district.	Dien Nam - Dien Ngoc water treatment plant with a capacity of 15,000 m3/day and night including: - Raw water sedimentation tank with a capacity: 32,000m3 - Treatment complex with a capacity of 15,000m3/day and night; - Clean water reservoir: 2,000m3; - Secondary pumping station and washing system, electrical equipment, etc.
3	Auxiliary works		Operating house, chemical house, warehouse, gate, fence, greenery, internal road, drainage system, etc.
B	**Tam Hiep Water Treatment Plant**		
4	Construction of raw water pumping stations	Tam Ngoc Commune	Construction of raw water station with a capacity of 15,000 m3/day and night;
5	Construction of raw water pipes	Tam Ngoc Commune, Tam Xuan 2	Installing 0.3km of D630 raw water pipe at Ho PhuNinh to the water plant in Tam Xuan 2 commune;
5	Increased capacity of Tam Hiep water plant from 5,000m3/day to 20,000 m3/day and night	Bich Son Hamlet, Tam Xuan 2 Commune, Nui Thanh District	- Construction of a new water plant with a capacity of 15,000 m3/day and night; - Construction of a clean water reservoir of 2,000m3 - Construction of auxiliary works
6	Construction of auxiliary works		Operating house, chemical house, warehouse, gate, fence, greenery, internal road, drainage system, etc.
II	**Package QN-CW 02: Supplying equipment and constructing transmission, distribution and service pipeline, water meter for Dien Nam - Dien Ngoc component**		
1	Installation of transmission, distribution and service pipelines for components of Dien Nam - Dien Ngoc	The communes: Dien Ngoc, Dien Nam Bac, Dien Nam Dong, Dien Nam Trung, Dien Duong, Dien Thang Bac, Dien Thang	- Installing 18km of HDPE transmission pipes D400 and D300; - Installing 54km of HDPE D110, D160, D225 and D250 distribution pipes - Installing 90km of service pipes connecting 8,000 households

No.	Items	Project location	Descriptions
		Trung, Dien Thang Nam and DienHoa	
III	**Package QN-CW 03: Supplying equipment and constructing transmission, distribution and service pipelines, water meters for Tam Hiep**		
1	Installation of transmission, distribution and service pipeline for Tam Hiep	Communes: Tam Xuan 1, Tam Xuan 2, Tam Anh Bac, Tam Anh Nam, Tam Hoa, Tam Hiep, Tam Giang, Tam Quang, Tam Nghia, Tam Hai and Nui Thanh Town	- Installing an additional 18.1km of transmission pipeline D500, D400 and D300; - Installing 39km of distribution pipes D110, D165, D250; - Installing 75km of service pipes connecting to 8,000 households
IV	**Additional Items**		
1	Construction of HDPE pipeline D225	Cua Dai Ward, Hoi An city, Quang Nam province	Installing HDPE D225 transmission pipeline with a length of 7900m
2	Construction of HDPE pipeline D315	From Cua Dai bridge to Vinpearl Quang Nam resort complex, Quang Nam province	Installing HDPE D315 transmission pipeline with a length of 2600m
3	Expansion of Tam Hiep water treatment plant	Thai Xuan hamlet, Tam Hiep commune, Nui Thanh district, Quang Nam province	Expansion of Tam Hiep water plant, raising the capacity of the treatment unit located in Thai Xuan commune, Nui Thanh district from 5,000m^3/day to 10,000m^3/day with the addition of 5,000m^3/day
4	Expansion of Dien Nam – Dien Ngoc water treatment plant	Dien Nam Dong ward, Dien Ban town, Quang Nam province	- Construction of additional treatment unit 5,000 m3/day to increase capacity from 15,000 m3/day to 20,000 m3/day in Dien Nam - Dien Ngoc; - Construction of a 24,000 m3 reservoir
V	**Additional items using surplus budget**		
1	D315 water supply pipelines from Trang Nhat factory to Go Kheo	Through the inter-communal roads of Dien Thang Trung, Dien Thang Nam, Dien Nam Trung, Dien Ban district	Installing D315 pipeline with the length of 11km from Trang Nhat water plant to Con Kheo
2	Clean water tank 2000m^3	Dien Nam - Dien Ngoc Water Supply Company	Construction of water storage 2000m3 in existing Dien Nam - Dien Ngoc water plant

II. SOCIAL SAFEGUARD IMPLEMENTATION

A. Scope of Impacts

2. Impacts on households

7. The total number of households affected by the project according to the updated Resettlement Plan report is 50 households; during the implementation period, the number of households affected by this project has not changed. However, when implementing, there will be a source of surplus budget and investment in 02 items which is an additional item in 2018 as well as an item using the surplus budget in 2020. When doing these two items, it will have a temporary impact on 61 households. Therefore, the total number of households affected by the project increases to 111 households.

Table 2: Summary of impacts on households (2020) against Updated RP (2017)

Package/ item		Permanently affected HHs				Temporarily AHs		Total number of AHs	
		Marginally AHs		Severely AHs					
		uRP	Actual	uRP	Actual	uRP	Actual	uRP	Actual
Package QN-CW01	Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep	25	25	12	0	0	0	37	37
Package QN-CW02	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component	10	10	0	0	0	0	10	10
Package QN-CW03	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component	0	0	0	0	0	0	3	3
Additional Item	HDPE transmission pipeline from Cua Dai bridge to VinpearlQuang Nam complex resort in south Hoi An	0	0	0	0	0	5	0	5
	Expansion of Tam Hiep water treatment plant	0	0	0	0	0	0	0	0
	Expansion of Dien Nam – Dien Ngoc water treatment plant	0	0	0	0	0	53	0	53
Additional items using surplus budget	D315 water supply pipelines from Trang Nhat factory to Go Kheo	0	0	0	0	3	3	0	3
	Clean water tank 2000m^3	0	0	0	0	0	0	0	0
Total		**35**	**35**	**12**	**0**	**0**	**61**	**50**	**111**

Source: uRP(2017) and Final Monitoring Results (2020)

3. Impacts on land

8. The total land area to be acquired according to the updated resettlement assessment report is 5.53 ha, in the implementation period, these items will not incur any additional land acquisition. However, the additional item of D400 raw water pipeline under the package QN-CW01 has a temporary impact on 0.3245ha of agricultural land of 05 households

Table 3: Summary of permanently affected land area (2020) against uRP (2017)

Package/ item		Permanently acquired land area (ha)								Temporarily affected land area (ha)		Total temporarily and permanently affected land area (ha)	
		Agricultural land		Aquaculture land		Forestry land		Total					
		uRP	Actual	uRP	Actual	uRP	Actual	uRP	Actual	uRP	Actual	uRP	Actual
Package QN-CW01	Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep	1	1	1.32	1.32	3.15	3.15	4.93	4.93	0	0	0	4.93
Package QN-CW02	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component	0.6	0.6	0	0	0	0	0.6	0.6	0	0	0	0.6
Package QN-CW03	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component	0	0	0	0	0	0	0	0	0	0	0	0
Additional Item	HDPE transmission pipeline from Cua Dai bridge to VinpearlQuang Nam complex resort in south Hoi An	0	0	0	0	0	0	0	0	0	0.3245	0	0.3245
	Expansion of Tam Hiep water treatment plant	0	0	0	0	0	0	0	0	0	0	0	0
	Expansion of Dien Nam – Dien Ngoc WTP	0	0	0	0	0	0	0	0	0	0	0	0
Additional items using surplus budget	D315 water supply pipelines from Trang Nhat factory to Go Kheo	0	0	0	0	0	0	0	0	0	0	0	0
	Clean water tank 2000m^3	0	0	0	0	0	0	0	0	0	0	0	0
Total		**1.6**	**1.6**	**1.32**	**1.32**	**3.15**	**3.15**	**5.53**	**5.53**	**0**	**0.3245**	**0**	**5.8545**

Source: uRP(2017) and Final Monitoring Results (2020)

D. Objectives and Methods for Resettlement Evaluation

1. Objectives of resettlement evaluation

9. The final resettlement evaluation is conducted to review the status of resettlement implementation and the RP compliance for the projects. Although measures to minimize the negative impacts of the project have been applied, some permanent and temporary impacts on social and environmental conditions are unavoidable. The objective of this monitoring is to provide information on resettlement evaluation after the project is completed, including:

(i) Resettlement objectives that have been achieved, including identifying differences between the project's policy in the RP and the actual implementation in the project areas; updating and providing land acquisition and resettlement information of the project; reviewing complaints related to land acquisition (if any) during the construction; assessing levels of satisfaction of affected people on land acquisition, compensation, and resettlement implemented by the project; and evaluating the effectiveness of the Grievance Redress Mechanism.

(ii) Changes in living standards and livelihoods.

(iii) Restoration and/or improvement of socio-economic conditions of the affected households after the project implementation.

(iv) Effectiveness and sustainability of compensation and allowance packages.

(v) Recommendations and lessons learned.

2. Methods of resettlement evaluation

10. Multi-methods of information collection were applied in this report such as the primary and secondary data collection method, the quantitative survey method, and the qualitative survey method.

11. From 15/11 to 28/12/2020, the PMU conducted surveys in the project areas in Tam Xuan 2, Dien Thang Trung, wards/communes of Quang Nam province. In addition, community consultations were conducted with affected households and project beneficiaries. Specifically, the methods are as follows:

12. Secondary document research: Reviewing documents provided by the Project Management Unit such as resettlement reports, Resettlement Policy Framework, semi-annual external monitoring reports, detailed designs and other relevant documents were conducted. Reviewing land acquisition, resettlement and compensation plans, and reviewing data related to complain settlement from the Project Management Unit, the Land Development Center, the Commune/Ward People's Committees to identify any outstanding issues related to site clearance, resettlement and compensation of the project were conducted too. The document review usually provides basic information of the project and causes that affect the project progress (if any).

13. Qualitative method

14. In-depth interviews were conducted with the stakeholders (affected people and commune/ward officers) to collect their opinions and evaluations about the project implementation.

15. In-depth interviews (IDI) were conducted with the stakeholders (affected people, head village and commune/ward officers) to collect their opinions and evaluations about the project implementation and RP implementation results. There are 04 IDIs conducted (01 officer at Tam Xuan 2 commune, Nui Thanh district, 01 officer at Dien Thang Trung commune, Dien Ban district and 02 affected households).

16. There were 11community consultations in 08 communes/wards of the project with the participation of 203 people, including132 men and 74 women (35%).

17. During the organizing public consultation meetings with the presence of vulnerable groups, including women-headed households (with dependents), poor households, policy households, elderly helpless households, to gather their feedback about the project on such issues as community participation, resettlement policy and gender, women were encouraged to participate in. In addition, public consultations ensured that information is collected regarding (1) successful livelihood restoration activities; (2) The effectiveness and the constraint of livelihood restoration activities and the level of changing livelihood after IRPs and (3) change observed after the resettlement.

Table 4: Summary of consultations in the resettlement evaluation process

No.	Locations (ward/commune)	Number of participants		Total
		Male	Female	
1	Thanh Quyt 2, DienTrung commune, Dien Ban district	34	21	55
2	Representative of DOF, Land Acquisition and Resettlement, PMU and representative of Quang Nam Forestry Company	11	9	20
3	Representative of DOF, Land Acquisition and Resettlement, PMU and representative of Quang Nam Forestry Company and representative of Tam Xuan II CPC	14	11	25
4	Representative of Tam Xuan II and Bich Ngo Dong village	22	13	35
5	Representative of Tam Xuan II and Bich Ngo Dong village	24	15	39
6	Dien An Commune	6	0	6
7	Dien Thang Nam Commune	6	0	6
8	Dien Thang Trung Commune	6	0	6
9	Dien Nam Trung Commune	4	1	5
10	Dien Nam Dong Commune	5	1	6
	Total	**132**	**71**	**203**

18. Quantitative method - a survey by questionnaire: During the monitoring, this method was used as a tool to monitor the resettlement contents. Surveys have been conducted with 100% of directly affected households with support from local authorities. The sample size information is shown in the following table.

Table 5: Sociological survey on the households affected by the project

No.	Work-items	Number of AHs participating in the survey	Percentage
1	Package QN-CW01	10	100%
2	Package QN-CW02	20	100%
3	Package QN-CW03	20	100%
	Total	**50**	**100%**

Source: Socio-economic survey,12/2020

19. Information on household questionnaires includes: (1) general household information; (2) household economic conditions; (3) household incomes and expenditures; (4) types of affected households; (5) information on payment and resettlement; (6) assessing household changes; and (7) household's opinions about the project.

20. The household survey results reflect their actual socio-economic conditions, including: (1) Basic information of affected households such as demographics, education levels, income and living standards, production conditions; (2) identification of impacts and changes caused by the project to their lives, incomes, and living standards before and after the project implementation (if any); (3) assessment of their satisfaction/recommendations on the project resettlement and implementation.

21. Observing method: The observation method was used to understand and observe the actual living conditions of people, conditions of civil works and resettlement areas.

E. Evaluation of results of resettlement plan implementation

1. Evaluation of implementation of social safeguard policies in the Resettlement Plan

22. At the project preparation stage, a Resettlement Plan was prepared for the project in compliance with ADB's Safeguard Policy Statement (SPS, 2009). The RP and uRP were disclosed on the project website in 2014 and 2016.

23. During the detailed design phase, an updated Resettlement Plan was prepared based on the detailed design, DMS results, and consultation with the affected households for the project in compliance with ADB's Safeguard Policy Statement (SPS 2009) in May 2017 and disclosed on the ADB's website

24. During the construction phase, a Resettlement Due Diligence Report for the additional item of the project: the construction and installation of the HDPE transmission pipeline from Cua Dai bridge to Vinpearl Quang Nam complex resort in south Hoi An was prepared and approved by ADB in December 2018.

25. After the construction completion, the remaining unallocated value of the 3251 loan of the project is about USD 1,032 million. Therefore, the Project owner has proposed two work items using residual capital. The DDR and EMP reports were already prepared and approved by ADB in 2020.

Table 6: Summary required document on social safeguards

Component	Social Safeguards Documents Prepared during Preparation		Social Safeguards Documents Prepared during Implementation		
	Social Safeguards Documents	Disclosure status	Social Safeguards Documents	Status	Disclosure status
- Expansion of Tam Hiep WTP - Urban Water Supply of Dien Nam-Dien Ngoc	RP	Disclosure of RP: 2014	-	-	-
			uRP	Approved in 2016	Disclosure of uRP: 2016-
Additional item	-	-	DDR	Approved in 2018	Disclosure of DDR: 2018
Additional items using surplus budget	-	-	DDR	Approved in 2020	Disclosure of DDR: 2020

2. Community consultation and information disclosure

26. Consultation and information disclosure have been carried out throughout the implementation of the Quang Nam water supply sub-project (from August 2013 to December 2020). Through the local authorities, all affected households have received invitations to participate in community meetings on project information dissemination as well as the project's compensation and resettlement policy.

27. Project information and resettlement plan reports, (updated) resettlement plan report, resettlement appraisal report for the additional item in 2018 and resettlement appraisal report for the item using the surplus budget of the year 2020 has been made public on the website of Quang Nam Water Company and publicly listed at the People's Committee of wards/communes affected by the project. The subproject consultation and information dissemination process are detailed in the following table:

Table 7: Public consultations

Time	Objective	Avenue	Participants	Issues raised	Respond
20/8/2013	Consulting with local household to collect information on so-economic for preparation of RP and FS	Thanh Quyt 2, DienTrung commune, Dien Ban district	- 42 AHs, 9 AHs who had household head were women; - Representatives of Dien Ban DPC - Cente Development of Industry Zone - Representative of affected communes; - Representative of PMU - Representative of Quang Nam WSC	AHs want to receive compensation in cash and propose to develop an acceptable compensation unit price; AHs support project implementation because project's objective is to build a water supply plant. Local people will be connected with fresh clean water. They consider community health;	Provided information on the compensation policy of the project and other related issues
8/9/2015	Updated RP	Quang Nam Forestry Company Office	- Representative of DOF, Land Acquisition and Resettlement, PMU and representative of Quang Nam Forestry Company - 12 people of AHs	Review implementation of RP; Collect information about the impact on the asset during the construction period; Record opinion of community-related to project implementation Provide the updated schedule of project construction to local people Provide (again) information on project resettlement policy	Informed about compensation policy for all impacts during the construction period for local authority and AHs

Time	Objective	Avenue	Participants	Issues raised	Respond
16/09/2015	Updated RP		- Representative of DOF, Land Acquisition and Resettlement, PMU and representative of Quang Nam Forestry Company and representative of Tam Xuan II CPC - 15 people of AHs	Review implementation of RP; Collect information about the impact on the asset during the construction period; Record opinion of community-related to project implementation Provide the updated schedule of project construction to local people Provide (again) information on project resettlement policy	Informed about compensation policy for all impacts during the construction period for local authority and AHs
29/9/2017	Consulting with local people to monitor implementation of RP and prepare for DDR	Site	- Representative of Tam Xuan II and Bich Ngo Dong village - 32 AHs	(i) Households are aware of the significance of the project and consensus, (ii) The route has only temporary impact; (iii) during and after construction, environmental sanitation must be ensured at good condition; and Reimbursement status or better than the current status	The construction would be done carefully to ensure minimize the negative impact on the asset of local people
12/10/2017	Consulting with local people to monitor implementation of RP and prepare for DDR	Site	- Representative of Tam Xuan II and Bich Ngo Dong village - 32 Ahs	(i) Households are aware of the significance of the project and consensus, (ii) The route has only temporary impact; (iii) during and after construction, environmental sanitation must be ensured at good condition; and Reimbursement status or better than the current status	

Time	Objective	Avenue	Participants	Issues raised	Respond
2018-2019	To update timely all-new impact due to construction activities	Site	Consultants, the staff of PMU, and local people who live along with the pipeline.		
1-7/10/2020	Consulting with local people to monitor implementation of RP and prepare for DDR		- Representative of Dien An Ward People's Committee, Dien Thang Nam Ward People's Committee; Dien Thang Trung Ward People's Committee; Dien Nam Trung Ward People's Committee; Dien Nam Dong Ward People's Committee. - 03 Ahs	(i) The local government and 03 affected business households totally agreed with the implementation of the project; (ii) The impacts are temporary and short-term so no compensation is requested; (iii) People expect the project will be implemented soon.	The project owner thanked the local authorities and people for their support; Construction work will be closely monitored to ensure the lowest impact on the people.
Last 2020	To update timely all new impact due to construction activities	Site	- Consultants, the staff of PMU and local authorities and a number of households in the project area	Record opinions of local authorities and people in the project area on the implementation of the project's compensation, assistance and resettlement policies.	The project's compensation and resettlement support policy are well implemented. Up to now, no complaints have been recorded.

3. Detailed measurement survey (DMS)

28. The detailed tallying work has been carried out for 03 project packages starting from September 20, 2013, and ending on May 20, 2015. The project's asset inventory process was conducted publicly and transparently with the participation of representatives of the PMU, local authorities, land fund development centers, regional officials and representatives of AHs. After reaching agreement on the affected assets, all parties sign the detailed inventory minutes.Details of the tallying process of each bidding package are shown in the following table:

Table 8: DMS process of packages

Package/ item		DMS commencement date	DMS completion date
Package QN-CW01	Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep	20/9/2013	18/10/2013

Package QN-CW02	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component	6/5/2015	12/5/2015
Package QN-CW03	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component	6/5/2015	20/5/2015

4. Preparation of compensation plans

- Preparation and approval of compensation plans

29. The compensation plan preparation was carried out in November 2013. The compensation plans were calculated for the affected assets with the application of decisions on compensation for land, trees, and assets issued by Quang Nam PP.

- Compensation Price Rate

30. The compensation unit price is implemented according to Decision No. 34/2012/QD-UBND dated December 20, 2012 of the People's Committee of Quang Nam province on promulgating the regulation of land prices in 2013 and Decision No. 32/2013/QD-UBND dated December 20, 2013 of the People's Committee of Quang Nam province on promulgating the regulations on land prices in 2014 in Quang Nam province. The compensation unit price for trees and crops is implemented in accordance with Decision No. 18/2012/QD-UBND dated June 28, 2012 of the People's Committee of Quang Nam Province on the provision of the price slippage coefficient for the compensation unit price: housing, architectural objects and other properties specified in Appendix 01 attached to the Decision No. 23/2010/QD-UBND dated September 30, 2010 of the People's Committee of Quang Nam province

31. The compensation unit price was consulted with AHs. All AHs are satisfied with the unit price that the project applies for payment. There were no complaints of people related to the application of compensation rates. The unit price applied to the project is as follows:

Table 9: Compensation price applied to the project(VND)

No	Type	Unit price of the province	Unit price of the project
1	Agricultural land	45,000 – 48,000	45,000 – 48,000
2	Paddy	4,720	4,720
	Annual crops	7,670	7,670
	Trees for firewood	16,000 – 198,240	16,000 – 198,240

- Support Policy

32. In addition to compensation, project-affected households are also entitled to other supports such as the project resettlement update report mentioned below:

  - Support for income recovery: 3 times of agricultural land compensation unit price;
  - Support for vulnerable households (13 households): Receive 2 million VND/household in cash. Participate in the project's income recovery program;
  - Progress bonus: Affected households who relocate as planned will be rewarded with 2-2.5 million VND per household.

33. The level of support for affected households is applied according to Decision No. 23/2010/QD-UBND dated September 30, 2010 and Decision No. 43/2014/QD-UBND dated December 22, 2014 of the People's Committee of Quang Province. South on compensation, support and resettlement when the State recovers land. This level of support meet the requirements in project policy.

34. To carry out the compensation for site clearance for project implementation, the People's Committee of Quang Nam province has issued the following decisions:

- Decision No. 621/QD-UBND dated February 26, 2010 of the People's Committee of Quang Nam province on approving the compensation rates for site clearance for the urban water supply project of Dien Nam - Dien Ngoc and Tam Hiep;
- Decision No. 42020/QD-UBDN dated October 29, 2015 of the People's Committee of Quang Nam province on approving the compensation rates for site clearance for the urban water supply project of Dien Nam - Dien Ngoc and Tam Hiep;
- Decision No. 39/2015/QD-UBND dated October 21, 2018 of the People's Committee of Quang Nam province on approving the compensation rates for site clearance for the urban water supply project of Dien Nam - Dien Ngoc and Tam Hiep.

➢ Payment process

35. Compensation for households affected by the project has been implemented since November 2013 and completed in December 2018. The total amount of compensation paid to affected households (directly) is: 4,146,187,833 VND, of which:

- Package QN –CW01- Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep: VND 840.563.000 according to Decision No 4020/QĐ-UBND, dated 29/10/2015, issued by Quang Nam CPC; Compensation payment period for affected households is in October 2015.
- Package QN- CW02 - Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component and Package QN- CW03 - Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component: VND 2.721.021.163, according to Decision No 621/QĐ-UBND dated 26/2/2014, issued by Quang Nam CPC; Compensation payment period for affected households is in March 2014.
- Additional work: VND 584.603.670, according to Decision No 39/2015/QĐ-UBND dated 21/10/2018, issued by Quang Nam CPC; Compensation payment period for affected households is in October 2018.

36. All affected households have received the full amount of compensation and assistance in accordance with the compensation plan and in accordance with the project policy framework. The payment of compensation is made on time.

Table 10: Disbursement of compensation and assistance to Ahs

Package/ item		Number of AH received			Compensation cost (VND)		Compensation amount paid to AHs (VND)		
		Total Number of AHs (APs)	Number of AHs (APs) received compensation	Cumulative number of AHs (APs) paid	Total approved cost estimate in uRP	Total cost approved in accordance with compensation plan	Compensation amount paid as of the reporting time	Remaining amount expected to be paid	% Progress disbursement
Component 1:									
Package QN-CW01	Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep	37	37	37	949,111,686	840.563.000	840.563.000	0	100
Component 2:									
Package QN-CW02	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component	10	10	10	4,193,756,035	2.721.021.163	2.721.021.163	0	100
Package QN-CW03	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component	3	3	3					
Additional Item		53	53	53	584.603.670	554.000.670	554.000.670	0	100

- Hand over the land process

37. The project started construction on June 11, 2017and was completed in December 2020. Site clearance work is consistent and on schedule, ensuring the principle: “Only starting construction on the land that has been fully compensated, no disputes”.

Table 11: Hand over land process

Project Component		Total affected land area (ha)	Land handed over (ha^2)		Land that still has to be acquired/ handed over (ha^2)	
			Cumulative amount of land handed over			
			Amount in ha^2	% of total affected land	Amount in ha^2	% of total affected land
Package QN-CW01	Supply equipment and construction of raw water pumping station, raw water pipeline, WTPs for both components Dien Nam – Dien Ngoc and Tam Hiep	4.93	4.93	100	0	0
Package QN-CW02	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Dien Nam – Dien Ngoc component	0.6	0.6	100	0	0
Package QN-CW03	Supply equipment and constructions of transmission, distribution and service pipelines, water meters for Tam Hiep component	0	0	0	0	0
Additional Item	HDPE transmission pipeline from Cua Dai bridge to VinpearlQuang Nam complex resort in south Hoi An	0.3245	0.3245	100	0	0
	Expansion of Tam Hiep water treatment plant	0	0	0	0	0
	Expansion of Dien Nam – Dien Ngoc water treatment plant	0	0	0	0	0
Additional items using surplus budget	D315 water supply pipelines from Trang Nhat factory to Go Kheo	0	0	0	0	0
	Clean water tank 2000m^3	0	0	0	0	0

5. Livelihood restoration program (IRP) for affected households

38. There were 13 vulnerable households (10 poor households and 9 female-headed households, of which 6 are poor households) and 12 households who lost more than 10% of agricultural land. All of them were beneficiaries of IRP. The project's income restoration program was implemented and completed as follows:

- Supports for life subsistence and career change and job seeking (in cash) were all provided;
- On August 22, 2016, a short training course on agriculture was conducted, the content of the course provided seedlings and instructions for cultivation and care techniques for animals, and disease prevention measures for animals, nutrition regimen and tools and equipment used in livestock production.
- The project has recruited 31 affected workers to work for the project.

39. By the end of the project, the livelihoods of vulnerable and severely affected households have been improved. Up to now, all poor households have escaped from poverty and have stable incomes.

6. Complaints and settlement of complaints

40. A grievance mechanism has been set up to help ensure that the complaints of AHs are resolved in a timely and satisfactory manner. Through the holding of consultations during RP preparation and implementation, including the distribution of PIBs, the AHs have been and will be made fully aware of their rights to file a complaint, as needed. The resolution of a complaint will pass through 4 stages, beginning with the commune, then the district, and then the provincial level of the People's Committee before it is elevated to a court of law as a last resort. Water Supply Joint Stock Company will bear all administrative costs and fees incurred in the process of resolving complaints. During the project implementation, there is no record of any complaints from the people related to the subproject's compensation and resettlement assistance.

7. Institutional arrangement and organization of the implementation of the RP

- ***Investment & Construction Projects Management Unit***

41. The Project Management Unit is the representative unit for Quang Nam Water Supply Joint Stock Company as the project implementation unit. Main tasks assigned to PMU include the followings:

- Ensure that project implementation complies with Vietnamese regulations and ADB, policies and guidelines particularly regarding social safeguards;
- Prepare monthly, quarterly and annual progress reports and a completion report and submit to both EA and PSC;
- Procure consultantsensuring procedures are according to Vietnamese regulations and ADB rules;
- Prepare detailed Annual Implementation Plans;
- Maintain a separate accounting system for Project expenditures and manage in a

timely manner.

- Prepare Internal Monitoring and Evaluation reports as part of the PPMS;
- Supervise the implementation of the resettlement plan and update as required;
- Ensure implementation of the Gender Action Plan (GAP);
- Disseminate information to local government agencies, institutions and communities involved in the Project.

- ***Nui Thanh District Land Fund Development Center, Dien Ban Town Industrial Park Development Center***

42. Center for Industrial Complex Development in Dien Ban District has been assigned to work directly with PMU to prepare and implement the resettlement plan with other relevant institutions. The Centre for Land Fund Development of Nui Thanh district, Center for Industrial Complex Development in Dien Ban District will oversee the implementation of the DMS and establish a database of AHs, impacts on property and livelihoods, as well as compensation, assistance and allowances. Specific to the Project, the Centre for Land Fund Development of Nui Thanh district, Center for Industrial Complex Development in Dien Ban District will execute the following tasks:

- Issue Notice of Land Acquisition when the project is formally approved;
- Inform Ahs about the Detailed Measurement Survey process;
- Conduct Detailed Measurement Survey;
- Prepare Ahs database;
- Prepare compensation plans in line with resettlement plans
- Prepare individual “AH Compensation Forms” which detail all types of losses with its corresponding established compensation rates.
- Inform AHsregarding payment schedule at least two (2) weeks in advance.
- Present proposed compensation amounts to AHs and explain in detail the AH’srights and entitlements based on Project policies and explain how compensation amounts were calculated.
- If compensation payments are acceptable to AHs, process payment and inform Ahs of the exact date of release of payment.
- Effect compensation payment. Copies of compensation payment documents will be provided to AHs. Copies will also be provided to the Implementation and Support Consultants.
- Review grievances in consultation with main stakeholders and HH who raised grievances.Submit recommendation to solve grievance to District and Province PC;
- Prepare and update regularly a database and lists of AHs, including information regarding disbursement dates for monitoring purposes.

- ***Local Administrative Authorities (Communes/Ward)***

43. The concerned local administrative authorities at commune level play an important role

in theplanning and implementation of resettlement-related activities. Their roles and responsibilities are to:

- Coordinate and work closely with the concerned stakeholders in relation to the conduct of consultation, census and DMS and other resettlement-related activities;
- Act as grievance officers and ensure that grievance is resolved;
- Assist AHs during the negotiation and compensation process;
- Involve the local-based organizations to carryout the RP activities;
- Certify the list of AHs and sign compensation documents.

- ***Local Mass Organizations***

44. Mass organizations in Viet Nam are types of community-based organizations. Such organizations would include the Fatherland Front, Women's Union, Farmer's Union and other relevant organizations.

45. Women's Union and Farmer's Union will be involved in the RP preparation and implementation. They will also be a channel to disclose information to AHs. WU will follow-up vulnerable HH during implementation and will counsel HH on the use of the compensation received.

- ***Construction Supervision Consultants***

46. The construction supervision consultants will supporting the implementation and monitoring of the RP. There will be the provision of social safeguards consultants within the team.

8. Socio-economic situation and livelihood restoration after the project implementation

47. Prior to the project implementation, 50 households directly affected by the subproject mainly engaged in agriculture (68.5%), trading (24%) and 7.5% of households doing other jobs, earning income. Average household/month for package 1 is 3,500,000 VND/household/month and package No. 2 and 3 is 3,800,000 VND/household/month. There are 13 vulnerable households, of which 10 are poor and 9 are female-headed households with dependents (6 female-headed households are poor).

48. Households have received full compensation and support from the project in accordance with regulations. Compensation and support money has been used by households to pay for their lives, to invest in their children's education and to small businesses; some members of the household have been recruited by the Contractors to work as workers for the project with stable income sources. After 3 years of project implementation, the income of households in package 1 increased from 3,500,000 VND/household to 5,320,000 VND/household (up 65.7%), Package 2 and No. 3 increased by 63.2% from 3,800,000 VND/household to 6,004,000 VND/household. All 10 poor households are no longer in poverty and have stable incomes.

Table 12: Household income before and after project implementation

Component/ package		Locations (Wards/communes)	Monthly household income (2017)	Monthly household income (2020)
1	Package QN-CW01	Tam Xuan 2	3,500,000[1]	5,320,000[2]
2	Package QN-CW02	Dien Thang Trung	3,800,000	6,00,400
3	Package QN-CW03	Dien Thang Trung	3,800,000	6,00,400

F. Conclusions and lessons learned

1. Conclusions

49. In general, the resettlement for the subproject has achieved its objectives as required in the project resettlement policy. The livelihood and income of all affected households of the whole project, in general, have been restored and improved. Their lives have been stabilized and better, no one has been worse-off due to land acquisition.

50. The implementation of land acquisition, compensation and assistance for the subproject has complied with the project's policy. The processes and procedures of the land acquisition and compensation have been implemented transparently, accurately and adequately.

2. Lessons learned

51. In order to well implement the work of compensation, support and settlement, the Investment and Construction PMU has applied a number of measures as follows:

- The work of measuring, counting and applying compensation prices is done in a fair, open and transparent manner;
- Compensation payment was implemented on schedule and in a timely manner for affected people
- Affected households are fully participated and consulted;

[1]Resettlement Plan updated report 2017

[2]Final survey

III. ENVIRONMENT SAFEGUARD IMPLEMENTATION

A. The EMP compliance monitoring during the last 6 months of the year 2020

52. Two packages QN-CW01 and QN-CW03 have completed construction from previous periods. Particularly for package CW02, in September 2020, due to the demand of the construction, the contractor and the client agreed to extend the contract till the end of December 2020 to complete the remaining works.

53. In November 2020, the contractor and the Client signed an Annex No. 11/PLHD, increasing works of pipeline system from Trang Nhat WTP to Go Keo, which added 1 clean water reservoir with capacity of 2000m3, and 11,300m pipeline system. All the additional works have been completed in December 2020.

54. Generally, the QN-CW02 contractor environmental and safety performance is considered generally satisfactory. However, some non-compliances of contractors have been observed by CSC. The contractors were directly reminded and requested by CSC to implement corrective actions to address these non-compliances, such as there are still some workers who are not fully PPE wearing and traffic control on the site under package QN-CW02. Site tidiness is generally improved in all the sites.

55. Some photos of site restoration and operation activities under QN-CW02 package

	
Workers are not wearing enough PPE Install pipeline D225, Line 38A	Good site restoration on the Line 38A

	
Lack of fences to ensure safety during construction on the Line 38A	The clean water reservoir with capacity of 2000m3 has been completed and put into use

B. Summary of potential environment impact and requested mitigation measures

56. At project preparation stage, an Initial Environmental Examination (IEE) including environmental management plan (EMP) and the Resettlement Plan were prepared for the project in compliance with ADB's Safeguard Policy Statement (SPS, 2009). The IEE, RP and uRP and EMP were disclosed on the project website in 2014 and 2016.

57. Prior to the construction phase, a domestic EIA was prepared in compliance with Decree No. 18/2015/ND-CP dated 14/02/2014 of the Government regulating the planning on environmental protection, environmental assessment strategy, environmental impact assessment and environmental protection plan and Circular No. 27/2015/TT-BTNMT of the Ministry of Natural Resources and Environment dated 29/05/2015 on environmental assessment strategy, environmental impact assessment. This EIA also includes an EMP which was approved by DONRE in 2015.

58. During the project preparation phase, the PMU was responsible for ensuring that all EMP requirements were included in the bidding documents and the contracts are followed by the contractors. The templates for construction packages in the bidding documents and the contract documents prepared by the CSC have included EMP compliance requirements and were used for all packages. These documents have been submitted to ADB.

59. After the construction completion, the remaining unallocated value of the 3251 loan of the project is about USD 1,032 million. Therefore, the Project owner has proposed two work items using residual capital. The DDR and EMP reports were already prepared and approved by ADB in 2020.

60. EMPs updated by the Consultant during detailed design: Before the construction phase, an EIA including EMP was prepared by the PMU and it was approved by DONRE in 2015.

61. Based on the uEMPs were approved for all components under the Project, table below to summary of impacts and requested mitigation measures during construction.

Table 13: Summary of impacts and requested mitigation measures

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
Pre-construction phase					
1. Shuffling social life due to the information about the project implementation	Early informing the project to the affected communities. Coordinating with local government to organize community consultation meeting which clearly explain some social problems arising from the implementation of the project and finding solutions.	The whole project area	QNWDS.JSC and Local governments	Local government and community	Yes
2. Technical Design	Will be done carefully to limit the relocation and effects to culture, religion, history and archaeology location as well as the natural habitats.	The whole project area	Consultants	QNWDS.JSC	Yes
3. Land acquisition and resettlement	Compliance with laws, regulations and policies on land acquisition and resettlement issued by Governments and provincial People's Committees. Compensation policies publicity for affected people should be carried out by the community consultations. Based on the contact between the affected with the local governments and investors, the problems related the compensation price will be solved. Implementing clearance plan according to plan has been agreed between the investor and the affected. Supporting to relocated households. The poor households need further help. Policy giving priority for households willing to handover the space, family under preferential treatment policy, households doing business in the current residence.	The whole project area	QNWDS.JSC, and Nui Thanh/Dien Ban People's committee	Local government and community	Yes
4. Movement and business obstruction	Adherence to the regulations on traffic safety. Maintaining roads accessing stores. At all times the contractor will create convenient and safe routes for vehicles, walkers and livestock to reach the nearby	The whole project area	Contractor	Local government and community	Yes

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
	streets, and access to assets related to the construction.				
5.Residue of the demolition and ground clearance	Reuse, recycle. The waste which can not be reused or recycled will be transferred to the local disposal.	The whole project area	Contractor	Local government and community	Yes
6. The noise from the demolition and ground clearance	Using the devices generate less noise. The demolition works and ground clearance generate noise exceeds permitted standards as ISO 5949:1998 will not be allowed at sensitive time as bedtime and in / near sensitive locations as hospitals, schools, temples, etc.	The whole project area	Contractor	Local government and community	Yes
7. The dust from the demolition and ground clearance	Spray water within the demolition and ground clearance area. The trucks transporting the waste from this process will have to be carefully covered to prevent dust emissions.	The whole project area	Contractor	Local government and community	Yes
8. Impacts on vegetation	Don't cut or remove any tree without permission.	The whole project area	Contractor	Local government and community	Yes
Construction phase					
9. Solid waste					
9.1 Domestic solid waste	Will be collected in the recycle bins located on site and periodically transported to the local landfill.	The whole project area	Contractor	Project owners, supervision consultants and local government	Yes
9.2 Construction Waste	Solid wastes such as excavated soil and debris from the demolition will be transported to the landfill in accordance with the plan approved by local authorities.	The whole project area	As above	As above	Yes

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
	The other residues such as cement bags, iron and steel will be collected and gathered in one location on the site and sold to local The wood waste will be utilized as fuel for cooking by workers.				
10. Wastewater					
10.1 Domestic wastewater	A wastewater drainage system on the construction site will be designed and constructed to discharge wastewater into the waste drainage system of local community.	Camp areas	As above	As above	Yes
10.2 Construction Wastewater (arising from the construction equipment cleaning)	Will be collected into a settling pond in the collection area of construction equipment before being discharged into the local drainage system. The discharge standards promulgated under the provisions of Republic Socialist Vietnam: NTR 14:2008 / MONRE will be strictly followed and the project's waste will be eliminated in a way approved by the advisory.	Area gathering equipment and construction machinery	As above	As above	Yes
11. Air pollution					
11.1 Emissions from equipment and construction machinery operation.	The equipment, machineries and vehicles involved in construction will comply with the emission standards to ensure the quality of the ambient air environment at national technical regulations NTR 05:2009 / MONRE. In case of projects using concrete mixer, it shall be placed away from the residential area of at least 800 m to the end windward.	The whole project area	As above	As above	Yes
11.2 Dust pollutant	All vehicles transporting raw and fine construction materials to the site will be covered by tarpaulin to avoid spillage. The route is used as a transport route of construction materials must be maintained regularly to avoid deterioration.	Construction area of water treatment plants, routes for construction materials and	As above	As above	Yes

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
	The route around the construction site and extent of construction area will be watered frequently (especially in dry, operating, heat weather conditions).	waste transportation			
12 Noise pollution caused by construction equipment	All vehicles, equipment and machinery used for construction will strictly follow detail noise standards, namely ISO 5949:1998 "Acoustics - Noise in residential and public areas - maximum noise level allowed ". When construction through residential areas or sensitive areas such as temples, schools, hospitals ... need to use 2 m high noise barrier wall is made of steel and to limit construction in the afternoon and night.	Construction area of water treatment plant, raw water pumping station and raw water and clean water distribution pipelines corridor's	As above	As above	Yes
13. Vibrations from vehicles, construction equipment and machinery, mixing and piling stations	All vehicles, equipment, machinery, mixers and poles used in construction have to comply with international standards TCVV 6962:2001 on "Vibrations and collision - Vibration generated by construction activities and plants - maximum limit in residential and public areas.	Treatment plant and entire water pipeline areas	As above	As above	Yes
14. Impeding the draining water flow	Don't gathering building materials near the local drainage flows. Maintaining the drainage flows in the project area at any time.	Areas of water treatment plant and raw water clean water distribution pipelines corridors.	As above	As above	
15. Pollution caused by waste oil	Waste oil in the area of equipment maintenance, vehicles and construction machinery will be stored in secure containers, dry place, away from the water and periodically transferred to the treatment facility. Maintenance of vehicles, machinery and equipment and fuel charge will be done in a way to prevent water pollution.	Maintenance area of construction equipment and machinery	As above	As above	

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
16. Workers and community's health	Construction workers will be checked health before taking part in construction. The construction camp will be located away from populated areas and ensure sanitary conditions. Workers will be provided with a full range of medical services and the dissemination of HIV / AIDS. Health checks will be conducted periodically. The clinics will be set up at the workers' camp (if necessary).	Camp area	As above	As above	Partial *(Lack of fences to ensure safety during construction on the Line 38A; Workers are not wearing enough PPE Install pipeline D225, Line 38A under QN-CW01)*
17. Affect vegetation	The contractor is not allowed to cut down any trees from outside corridor. In case of force majeure, the contractor should obtain permission of the supervising consultant and the Department of Agriculture and Rural Development, if required.	Corridor construction of the raw water transmission pipeline	As above	As above	Yes
18. Soil compaction	Heavy-duty construction equipment will not be allowed in the area of agricultural land The construction activities are only allowed within the planed areas. In general, heavy-duty equipment or truck control should be avoided in anywhere with subterranean sprinkler regime.	Raw water pipeline corridor	As above	As above	Yes
19. Local people's movement obstruction	Notice to resident the construction program of components. Arrange the temporarily safe routes at all times for people and animals. Arrange suitably the transportation of construction materials and waste to avoid traffic jams Not to place materials and building wastage on road	Whole project area	As above	As above	Yes

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
	Return space immediately after completion of the construction items.				
20. Prevention and control of Covid-19	- Disseminate workers on the situation of the Covid-19 disease since the first case was discovered in Vietnam. - Provide masks, hand sanitizer for workers and engineers on site. - Strictly implement anti-epidemic measures adopted by the Government of Vietnam during the period of worldwide social distancing. - Remind workers about Covid-19 prevention; Implement "5K: Masks - Disinfection - Distance - Distractions - Medical declaration"	Whole project area	As above	As above	Yes
Operational Phase					
20. Underground water pollution	Within the scope of the protected area with a radius greater than or equal to 25 m, the construction activities, digging privy tank, wastes burial and grazing activities are strictly forbidden Raw water will be protected in compliance with Decision No. 04/2008/QD-BXD issued in April 3rd, 2008 by the Ministry of Construction.	Raw water pumping station and water treatment plant area	Project owner	The local authorities	Yes
21. Damage of raw water pipeline and clean water distribution system	Notice to the user and stop all water supply activities. Inspection, repair and troubleshoot because of pipeline damage immediately. Only supply water to the people when it is safe.	Raw water and clean water distribution pipelines	Project owner	The local authorities	Yes
22.Wash water, sewage sludge from the treatment process	Disposal sludge will be collected, dried and transported to local waste landfill. Wash water and water from sedimentation pond will be discharged into the drainage system of the city.	Water treatment plant area	Project owner	The local authorities	Yes
23. Risks due to chemicals used in	Strictly obey to safety regulations for chemical use.	Water treatment plant area	Project owner	The local authorities	Yes

Environmental impacts	Mitigation measures	Location	Responsibility		Compliance (Yes, Partial, No)
			Implementation	*Supervision*	
water treatment processes	In the case of chemical risks, the station staff shall immediately notify the professional body to handle.				
24. Safety for water treatment plant	Establish warning sign systems to ask people not to go to the treatment plant area. The treatment plant will be built fence, barrier, or concrete wall around to prevent access of unrelated objects. Transformer station of treatment station will be fenced to prevent livestock and people approaching as well as dangerous warning sign to inform people.	Water treatment plant area	Project owner	The local authorities	Yes
25. The landscape around the plant	Landscaping in treatment plants by planting trees for, design and installation of electrical systems and restoring vegetational cover around the area to create a environmentally friendly landscape.	Water treatment plant area	Project owner	The local authorities	Yes

C. Environment monitoring

62. Monitoring requirements are set out in the uEMPs and summarized in Table below. The Environmental Monitoring Program for the Components would include: (i) monitoring the uEMP compliance, and (ii) monitoring of environmental effects caused by the activities attendant to the execution of works for the Component activities with major concentration on construction.

63. Environmental effects monitoring was implemented with major concentration during the construction phase where most of the adverse impacts are projected to occur. It is conducted to evaluate the impacts by the Component activities on ambient environmental quality and determine the extent of variations and changes in the levels of pollutants in the environment and other parameters and indicators considering the implementation and operation of the Project. Environmental performance monitoring is conducted to evaluate compliance with the standard operating procedures, national standards on environment and technical specifications. The main purpose of environmental performance monitoring is to ensure that all proposed mitigation measures are established and complied with by Contractors during construction phase.

64. Sampling schedules corresponding with construction progress of the three packages are presented in the table below in line with Initial Environmental Examination (IEE)/Environment Management Plan (EMP) and uEMPs approved by ADB in 2014 and 2015.

Table 14: Environmental Effects Monitoring Plan for Packages

Environmental Indicators	Location	Means of Monitoring	Frequency	Reporting	Compliance (Yes, Partial, No)
Component 1					
Pre-construction Phase - Update Baseline Conditions					
Update baseline on presence of rare & endangered fauna & flora, and critical habitat that may be affected by intake at PhuNinhN2 channel, PS, WTP, reservoir and pipeline construction and operation. Include aquatic resources of affected reaches of N2 channel as well.	All sites	Review of existing data and information supplemented by original surveys as required.	Once	Once	Yes
Air quality (dust, CO, NOx, SOx, noise, wind, and vibration levels) to supplement baseline air quality data collected during PPTA and reported in IEE Water quality parameters sampled PhuNinhN2 channel during PPTA& reported in IEE. Water quality data collected PhuNinhN2 channel during PPTA& reported in IEE are sufficient.	Representative sites of heavy civil &earthwork including along truck routes At raw water intake and reservoir.	Using field and analytical methods described in QCVN&TCVN standards for ambient air and surface water quality sampling & analysis.	One day and one-night measurement	One baseline supplement report before construction phase starts	Yes
Construction phase					
Air quality: dust, CO, NOx, SOx, noise, wind, and vibration levels Surface water quality: TSS, heavy metals (As, Cd, Pb,) oil and grease, total & fecal coliform, pH, DO, COD, BOD5, temperature, NH_3, and other nutrient forms of N & P.	(A - B): At water quality sites #1 - #4 sampled during PPTA and reported in IEE (PhuNinhN2 channel)	(A - B): Using field and analytical methods described in QCVN and TCVN standards for ambient air and surface water quality monitoring. Include visual observations of dust and noise from contractor & public reports.	(A - B): Quarterly during construction periods	Quarterly	Yes
Operation of WTPs& Pipeline Network					

Environmental Indicators	Location	Means of Monitoring	Frequency	Reporting	Compliance (Yes, Partial, No)
Air quality: dust, noise and vibration levels	At WTP	Using field and analytical methods described in QCVN&TCVN standards for ambient air quality monitoring.	Quarterly for 5 years	Biannual	Yes
Treated water quality: total & fecal coliform, pH, DO, NH3, NO3, NO, chlorine, PAC, NaCl, and heavy metals (As, Cd, Pb,).	At WTP& random user locations along distribution network	Using field and analytical methods described in QCVN&TCVN standards for water quality monitoring, and parameters of QCVN 14:2008/BTNMT&TCXDVN 33:2008/BXD	Biannually, or when public complaint arises	For each event	Yes
WTP sludge quality: ToC, heavy metals (As, Cd, Pb,), coliforms, pH, BOD, nutrients (N&P), PAC, chlorine,	After removal from sludge drying building and before disposal at designated landfill.	Using field and analytical methods described in QCVN&TCVN standards for water quality monitoring	Quarterly for 5 years	Biannually	It will be carried out prior to the collection, transport and treatment of sludge from the water treatment process
Component 2					
Pre-construction Phase - Update Baseline Conditions					
Update baseline on presence of rare & endangered fauna & flora, and critical habitat that may be affected by intake, PS, WTP, reservoir and pipeline construction and operation. Include aquatic resources of affected reaches of Bau Sau river.	All sites.	Review of existing data and information supplemented by original surveys as required.	Once	Once	Yes
Air quality (dust, CO, NOx, SOx, noise, wind, and vibration levels) to supplement baseline air quality data collected during	Representative sites of heavy civil & earthwork including along truck routes	Using field and analytical methods described in QCVN and TCVN standards for ambient air and	One day and one-night measurement	One baseline supplement report before construction phase starts	Yes

Environmental Indicators	Location	Means of Monitoring	Frequency	Reporting	Compliance (Yes, Partial, No)
PPTA and reported in IEE Water quality parameters sampled at Bau Sau river during PPTA& reported in IEE. Water quality data collected in Bau Sau river during PPTA& reported in IEE are sufficient.	At raw water intake and reservoir.	surface water quality sampling & analysis.			
Construction of WTPs& Pipeline Network					
Air quality: dust, CO, NOx, SOx, noise, wind, and vibration levels Surface water quality: TSS, heavy metals (As, Cd, Pb,) oil and grease, total & fecal coliform, pH, DO, COD, BOD5, temperature, NH_3, and other nutrient forms of N & P.	A - B): At water quality sites #1 - #4 sampled during PPTA and reported in IEE (Bau Sau river)	A - B: Using field and analytical methods described in QCVN and TCVN standards for ambient air and surface water quality monitoring. Include visual observations of dust and noise from contractor & public reports.	(A - B): Quarterly during Construction periods	Quarterly	Yes
Operation of WTPs& Pipeline Network					
Air quality: dust, noise and vibration levels	At WTP	Using field and analytical methods described in QCVN&TCVN standards for ambient air quality monitoring.	Quarterly for 5 years	Biannual	It will be carried out in quarter 3/2021 while the is stable operation
Treated water quality: total &fecal coliform, pH, DO, NH_3, NO_3, NO, chlorine, PAC, NaCl, and heavy metals (As, Cd, Pb,).	At WTP& random user locations along distribution network	Using field and analytical methods described in QCVN&TCVN standards for water quality monitoring, and parameters of QCVN14:2008/BTNMT&TCXDVN 33:2008/BXD	Biannually, or when public complaint arises	For each event	It will be carried out in quarter 3/2021 while the is stable operation
WTP sludge quality: ToC, heavy metals (As, Cd, Pb,), coliforms, pH, BOD, nutrients (N&P), PAC, chlorine,	After removal from sludge drying building and before	Using field and analytical methods described in QCVN&TCVN standards for water quality monitoring	Quarterly for 5 years	Biannually	It will be carried out prior to the collection, transport and

Environmental Indicators	Location	Means of Monitoring	Frequency	Reporting	Compliance (Yes, Partial, No)
	disposal at designated landfill.				treatment of sludge from the water treatment process

D. Summary of implemented mitigation measure during construction

65. Construction/Contractor EMPs (CEMP) of three packages (QN-CW01, QN-CW02 and QN-CW03) were submitted by the Contractors and approved by the Construction Supervision Consultants (CSC) on 17 July 2017. The implementation of the CEMPs is under the responsibility of the Contractors which includes appropriate and timely mitigation measures stipulated in the EMPs. These mitigation measures are to provide the safeguards that will control and reduce unexpected effects during the Project implementation.

66. In the last half of 2020, the CSC has conducted compliance inspections at worksites regularly daily to: (i) Examine safety of the construction activities, workers and the public; (ii) Inspect the environmental condition and sanitation of construction sites;

67. During the reporting periods, all violations discovered at the worksites were minor but recorded by the CSC. Contractors were reminded and warned of their violations by the CSC's document and direct reminder. The QN-CW02 contractor environmental and safety performance is considered generally satisfactory. However, some non-compliances of contractors have been observed by CSC such as there are still some workers who are not fully PPE wearing and traffic control on the site under package QN-CW02. The contractor was carried corrective actions to address these non-compliances. Site tidiness is generally improved in all the sites.

68. The following table highlight the contractors' performance and compliance with the EMP requirements for all packages. The construction items under the Project have been completed and these are operating.

Table 15: Summary of Compliance with EMP Requirements (Environmental Performance)

Environmental and social issues	**Implemented mitigation measures**	**Pending issues**			**Requested for follow up actions**		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
Initiate EMP& sub-plans	- Initiate the EMP including individual management sub-plans for the different types of potential impacts identified in pre-construction phase. See sub-plan implementation guidance below.	No	No	No			
Obtain & activate construction permits and licenses	- Contractors to comply with all statutory requirements set out by DoNRE for use of construction equipment, hazardous waste & chemicals management, and operation of construction plants, e.g., concrete batching.	No	No	No			
Environmental quality monitoring	- Conduct the air ambient quality and surface water quality monitoring	No	No	No			
Worker camp operation	- Locate worker camps away from human settlements…	No	No	No			
Training & capacity	Implement training and awareness plan for QNWSD.JSC / PMU (Environmental staff) and contractors.	No	No	No			
Tree and vegetation removal, and	- Restrict tree and vegetation removal to within designated RoWs. - Within RoWs minimize removals and	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
site restoration sub-plan	install protective physical barriers around trees that do not need to be removed. - All RoWs to be re-vegetated and landscaped after construction completed. Consult forestry department to determine the most successful restoration strategy and techniques. Recuperate tree logs and make them available for local use.						
Degradation of terrestrial resources	- All construction sites should be located away forested, plantation, &agricultural areas as much as possible. - No unnecessary cutting of trees. - All construction fluids such as oils, and fuels should be stored and handled well away from forested and plantation areas. No waste of any kind is to be discarded on land or in forests/plantations.	No	No	No			
Degradation of water quality &aquatic resources	- Minimize earthworks & final area of foundation for intake in Bau Sau River and PhuNinhN2 canal. - Excavation spoils and reprofiling activities of the actual reservoir should be done so the excess water	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	does no disperse back into the river. - Erosion channels must be built around aggregate stockpile areas to contain rain-induced erosion. - Plastic tarps should be used to cover piles to avoid drying and erosion of the piles. - Earthworks should be conducted during dry periods. - All construction fluids such as oils, and fuels should be stored and handled well away from surface waters. - No waste of any kind is to be thrown in surface waters. - No washing or repair of machinery near surface waters. - Pit latrines to be located well away from all surface waters. - No unnecessary earthworks in or adjacent to all water courses. - No aggregate mining from Bau Sau river or river channel from PhuNinh reservoir or from nearby lakes. All existing irrigation ditches, canals and channels to be protected the same way as rivers and lakes.						

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
Cultural chance finds	- As per detailed designs, all civil works should be located away from all cultural property and values including cemeteries and pagodas. - Chance finds of valued relics and cultural values should be anticipated by contractors. Site supervisors should be on the watch for finds. - Upon a chance find all work stops immediately, find left untouched, and PMU and CPC notified. If find deemed valuable, provincial cultural authorities must be notified. Work at find site will remain stopped until authorities allow work to continue.	No	No	No			
Construction materials acquisition, transport, and storage sub-plan	- All borrow pits and quarries should be approved by DoNRE. - Select pits and quarries in areas with low gradient and as close as possible to construction sites. - Required aggregate volumes must be carefully calculated prior to extraction to prevent wastage. - Pits and quarries should not be located near surface waters, forested areas, critical habitat for wildlife, or cultural property or values. - Although it should be avoided at all	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	costs, if aggregate mining from fluvial environments is required small streams and rivers should be used, and dry alluvial plains preferred. - All topsoil and overburden removed should be stockpiled for later restoration. - All borrow pits and quarries should have a fence perimeter with signage to keep public away. - After use, pits and quarries should be dewatered and permanent fences installed with signage to keep public out and restored as much as possible using original non-organic overburden excavation spoils.[3] - Unstable slope conditions in/adjacent to the quarry or pit caused by the extractions should be rectified with tree planting. - Define & schedule how materials are extracted from borrow pits and rock quarries, transported, and handled &stored at sites.						

[3]Note: Organic matter buried at a certain depth preventing oxygen to infiltrate the soil will degrade while emitting methane which is 21 times stronger than carbon dioxide as a greenhouse gas

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	Define and schedule how fabricated materials such as						
Flooding from loss of drainage & flood storage	- Provide adequate short-term drainage away from construction sites to prevent ponding and flooding. - Manage to not allow borrow pits and quarries to fill with water. Pump periodically to land infiltration or nearby water courses. - Install temporary storm drains or ditches for construction sites. - Ensure existing road & street drains do not become plugged with construction waste.[4] Protect surface waters from silt and eroded soil.	No	No	No			
Contamination of land and surface waters from construction waste	- Management of general solid and liquid residual matter of construction will follow GoV regulations, and will cover, collection, handling, transport, recycling, and disposal of waste created from construction activities and worker force. - Areas of disposal of solid and liquid residual matter to be determined by	No	No	No			

[4]Waste: A WASTE is the end product which can't be recycled, reused or transformed and needs to be sent to a landfill or a furnace. The term RESIDUAL MATTER fits best where recycling material are either collected separately from the wastes or when they are gathered with the actual wastes.

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	DoNRE. - Disposed of residual matter should be catalogued for type, estimated weigh, and source. - Construction sites should have large garbage bins. - A schedule of solid and liquid residual matter pickup and disposal must be established and followed that ensures construction sites are as clean as possible. - Solid residual matters should be separated, and recyclables sold to buyers in community. Hazardous Waste - Collection, storage, transport, and disposal of hazardous waste such as used oils, gasoline, paint, and other toxics must follow GoV regulations. - Wastes should be separated (e.g., hydrocarbons, batteries, paints, organic solvents) - Wastes must be stored above ground in closed, well labeled, ventilated plastic bins in good condition well away from construction activity areas, all surface water, water supplies, and cultural and ecological sensitive						

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	receptors. - All spills must be cleaned up completely with all contaminated soil removed and handled with by contaminated spoil sub-plan. During construction, a prevention kit consisting of heavy weight oil only absorbent and / or cat litter should be available to prevent infiltrations much as possible.						
Dust and Noise	- Regularly apply wetting agents to exposed soil and construction roads especially in high density areas. - Cover or keep moist all stockpiles of construction aggregates, and all truckloads of aggregates. - Minimize time that excavations and exposed soil are left open/exposed. Backfill ASAP. - As much as possible restrict working time between 07:00 and 17:00. In particular, are activities such as pile driving. - Maintain equipment in proper working order - Replace unnecessarily noisy vehicles and machinery. - Vehicles and machinery to be turned	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	off when not in use. - Construct temporary noise barriers around excessively noisy activity areas where possible and if the impacts of constructing such a barrier is lesser then the noise impact itself. Watering on the material transporting road twice a day for reducing dust in dry days						
Public and worker injury, and health	- Proper fencing, protective barriers, and buffer zones should be provided around all construction sites. - Sufficient signage and information disclosure, and site supervisors and night guards should be placed at all sites. - Worker and public safety guidelines published by MoLISA should be followed. - Population near blast areas should be notified 24 hours ahead and evacuated well before operation. Accepted GoV blast procedures and safety measures implemented. - Speed limits should be imposed on all roads used by construction vehicles. - Standing water suitable for disease vector breeding should be filled in.	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	- Worker education and awareness seminars for construction hazards should be given. A construction site safety program should be developed and distributed to workers. - Appropriate safety clothing and footwear should be mandatory for all construction workers. - Adequate medical services must be on site or nearby all construction sites. - Drinking water must be provided at all construction sites. - Sufficient lighting be used during necessary night work. All construction sites should be examined daily to ensure unsafe conditions are removed.						
Prevention and control of Covid-19	- Disseminate workers on the situation of the Covid-19 disease since the first case was discovered in Vietnam. - Contractors provide masks, hand sanitizer for workers and engineers on site. - Strictly implement anti-epidemic measures adopted by the Government of Vietnam during the period of worldwide social distancing.	No	No	No			

Environmental and social issues	Implemented mitigation measures	Pending issues			Requested for follow up actions		
		PackgaeQN-CW01	PackgaeQN-CW02	PackgaeQN-CW03	Requested action	Responsibility	Time
	- Remind workers about Covid-19 prevention; Implement "5K: Masks - Disinfection - Distance - Distractions - Medical declaration"						
Traffic disruption, traffic block, accidents, public injury	- Schedule construction vehicle activity during light traffic periods. Create adequate traffic detours, and sufficient signage & warning lights at all construction locations. - Post speed limits and create dedicated construction vehicle roads or lanes. - Inform community of location of construction traffic areas and provide them with directions on how to best co-exist with construction vehicles on their roads. - Increase the number of pedestrian crossings away from construction areas. Increase road and walkway lighting.	No	No	No			

E. Summary of results of environment affect monitoring

a. QN-CW1 package

69. Sampling schedules corresponding with Package QN-CW1 are presented in the Table below.

Table 16: Sampling schedules corresponding with Package QN-CW1

	Ambient Air, Noise	Parameters	Surface water	Parameters
26/12/2017	1	Temperature Moisture Wind speed Noise Dust SO2 NO2 CO		pH, TSS, DO, COD, Nitrate, Nitrite, Clo, Phosphate, Fe, oil and grease, E.coli, Coliform
29/12/2017	1			
19/3/2018	2			
4/7/20018	2			
9/10/2018	2			
29/11/2018	2		1	
8/3/2019	2		2	
29/6/2019	2		2	
2/10/2019	1		1	
12/9/2019	1		1	
11/12/2019	1		1	
31/12/2019	1		1	
10/2/2020	1		1	

Remark:

70. **Air quality, noise, vibration**: The results show that concentrations of pollutants in ambient air samples are all lower than the maximum allowable levels under QCVN 05:2013/ BTNMT - National Technical Standard on Ambient Air Quality; noise and vibration are all lower than the maximum allowable levels under QCVN 26:2010/BTNMT - National Technical Standard on noise (normal areas: from 6 am-9 pm) and QCVN 27:2010/BTNMT: National Technical Regulation on Vibration (normal areas: from 6 am-9 pm), respectively.

71. **Surface water quality**: The monitoring results of surface water quality of packages QC-CW 01 around the project area illustrates that surface water quality was good. Most analyzed samples attained QCVN 08-MT:2015/BTNMT: National technical regulation on surface water quality.

b. QN-CW2 package

72. Sampling schedules corresponding with Package QN-CW2 are presented in the Table below.

Table 17: Sampling schedules corresponding with Package QN-CW2

	Ambient Air, Noise	Parameters	Surface water	Parameters
29/12/2017	1	Temperature Moisture Wind speed Noise Dust SO2 NO2 CO		pH, TSS, DO, COD, Nitrate, Nitrite, Clo, Phosphate, Fe, oil and grease, E.coli, Coliform
16/3/2018	1			
4/7/2018	1			
8/10/2018	1			
29/11/2018	1			
5/12/2018	1			
8/3/2019	1			
29/6/2019	1		1	
27/9/2019	1		1	
11/12/2019	1		1	

	Ambient Air, Noise	Parameters	Surface water	Parameters
16/3/2020	1		1	
10/6/2020	1		1	
1/9/2020	1		1	
5/12/2020	1		1	

Remark:

73. **Air quality, noise,** vibration: The results show that concentrations of pollutants in ambient air samples are all lower than the maximum allowable levels under QCVN 05:2013/ BTNMT - National Technical Standard on Ambient Air Quality; noise are all lower than the maximum allowable levels under QCVN 26:2010/BTNMT - National Technical Standard on noise (normal areas: from 6 am-9 pm).

74. **Surface water quality:** The monitoring results of surface water quality of packages QC-CW 02 around the project area illustrates that surface water quality was good. Most analyzed samples attained QCVN 08-MT:2015/BTNMT: National technical regulation on surface water quality.

c. QN-CW3 package

75. Sampling schedules corresponding with Package QN-CW3 are presented in the Table below.

Table 18: Sampling schedules corresponding with Package QN –CW03

	Ambient Air, Noise	Parameters	Surface water	Parameters
26/12/2017	1	Temperature Moisture Wind speed Noise Dust SO2 NO2 CO		pH, TSS, DO, COD, Nitrate, Nitrite, Clo, Phosphate, Fe, oil and grease, E.coli, Coliform
15/3/2018	1			
4/7/2018	1			
9/10/2018	1			
29/11/2018	1		1	
8/3/2019	1		1	
29/6/2019	1		1	
2/10/2019	1		1	
31/12/2019	1		1	
10/2/2020	1		1	

Remark:

76. **Air quality, noise, vibration:** The results show that concentrations of pollutants in ambient air samples are all lower than the maximum allowable levels under QCVN 05:2013/ BTNMT - National Technical Standard on Ambient Air Quality; noise are all lower than the maximum allowable levels under QCVN 26:2010/BTNMT - National Technical Standard on noise (normal areas: from 6 am-9 pm).

77. **Surface water quality:** The monitoring results of surface water quality of packages QC-CW 02 around the project area illustrates that surface water quality was good. Most analyzed samples attained QCVN 08-MT:2015/BTNMT: National technical regulation on surface water quality.

F. Loan compliance review

78. The results of compliance with ADB loan terms under the Project as following:

Table 19: Review loan covenant compliance

Loan terms	Compliance			Remark
	Y	N	P	
Borrower must ensure that				
(i) The project is implemented in accordance with the Borrower's Law and Environment Regulations, as well as ADB's 2009 Safeguard Policy (ADS SPS) and that no significant damage to the natural environment shall be incurred by the design, construction, operation and maintenance of the project;	√			All legal documents on environmental issues comply with Government and ADB policies, such as: Initial Environmental Assessment (IEE), Environmental Management Plan (EMP) and Environmental Impact Assessment/Environmental Protection Commitment (EIA/EPC) prepared and approved by the relevant Authority of Vietnam and ADB.
(ii) If there is a difference between the Borrower's laws and regulations, and the ADB's SPS, then the ADB policy will apply;	NA			There are no discrepancies
(iii) ADB's environmental policies and requirements are applied and implemented for all project components regardless of financial sources;	√			All works under Quang Nam subproject have complied with ADB's environmental policies and requirements regardless of financial sources.
(iv) The Environmental Management Plan for the Project will be included in the bid and the contract requires the contractor to comply with all terms;	√			EMP/uEMP conditions are included in bidding documents and contract of construction of all packages QN-CW1, QN-CW2 and QN-CW3. All updated EMPs approved by ADB were included in the bidding documents for civil works during the procurement phase. Bidders are required to consider the requirements of the EMPs when submitting their bids.
(v) budget and human resources allocated to the implementation of the EMP;	√			The budget for implementing CEMP is included in the corresponding contract costs. PMU and CSCs have regularly assigned officers to inspect the implementation of CEMPs by contractors.
(vii) environmental approval as requested by the Borrower is to be collected	√			Prior to the construction phase, a domestic EIA was prepared in compliance with Decree No. 18/2015/ND-CP dated 14/02/2014 of the

Loan terms	Compliance			Remark
	Y	N	P	
promptly and copies of such approvals will be submitted to ADB upon issuance;				Government regulating the planning on environmental protection, environmental assessment strategy, environmental impact assessment and environmental protection plan and Circular No. 27/2015/TT-BTNMT of the Ministry of Natural Resources and Environment dated 29/05/2015 on environmental assessment strategy, environmental impact assessment. This EIA also includes an EMP which was approved by DONRE in 2015.
(ix) construction works performed by the contractor are adequately monitored to ensure compliance with the EMP;	√			Continuous monitoring is carried out by the CSC's ESs and is routinely monitored by the PMU.
(x) The new or additional environmental assessment report shall be prepared in accordance with the ADB's SPS if any additional items or changes in the Project, such as location and design, would result in negative impact on the environment and not within the scope of the ADB approved environmental evaluation report; These documents will be submitted to ADB for clearance prior to the implementation of additional components or major changes and must be approved by the relevant approval body (s);	√			EMPs were updated prior to the construction phase. Particularly, - During construction phase, the DDR and uEMP and for additional items of the project: the construction and installation of the HDPE transmission pipeline from Cua Dai bridge to Vinpearl Quang Nam complex resort in south Hoi An was prepared and approved by ADB in December 2018. - After the construction completion, the remaining unallocated value of the Loan No.3251 loan of the project is about USD 1,032 million. Therefore, the Project owner has proposed two work items using residual capital. The DDR and uEMP reports were already prepared and approved by ADB in 2020.
(xi) if any apparent unforeseeable environmental impacts arise during the implementation of the project, corrective action plans must be prepared and submitted to ADB for approval and implementation of the	√			The second and third waves of Covid-19 outbreaks occurred in Vietnam (the second wave peaking from July to October 2020 and the third wave from Jan to Feb, 2021). The project area was well controlled. However, Contractors, CSC, PMU are still required and maintain good compliance with disease prevention measures as required by ADB and the Vietnamese government.

Loan terms	Compliance			Remark
	Y	N	P	
corrective action plan is mandatory				
(xii) establish an environmental grievance redress mechanism satisfactory to ADB to receive and address concerns, complaints and grievances of the people on the performance of the project; and	√			GRM has been prepared and approved under the IEE/EMP/uEMPs. CSC's and contractor's environmental staffs has been communicated the project's GRM; and GRM was also disclosed to communes and village heads in the project areas.
(xiii) a six-month report on the implementation of the EMP submitted to ADB.	√			Total 8 SEMRs since 2017, including: - The first semi-annual monitoring report (SEMR) for the first 6 months of 2017 submitted to ADB for approval in 6/2017; - The second SEMR for the last 6 months of 2017 submitted to ADBfor approval in 12/2017; - The third SEMR for the first 6 months of 2018 submitted ADB for appoval in 01/2019. - The SEMR for the last 6 months of 2018 submitted ADB for approval in 3/2019. - The semi-annual monitoring report for Jan to Jun 2019 was submitted ADB for approval in 9/2019. - The semi-annual monitoring report for Jul to Dec 2019 has submitted to ADB for approval in 3/2020. - The semi-annual monitoring report for Jan to June 2020 was submitted ADB for approval in July 2020; and - This completion monitoring report on social and environmental safeguards has been prepared and will submit to ADB in March 2021.

G. Grievance Redress mechanism implementation

79. A project GRM has been defined and agreed upon at project preparation stage and is defined in the IEE (Section VII) and RP (Section 6).

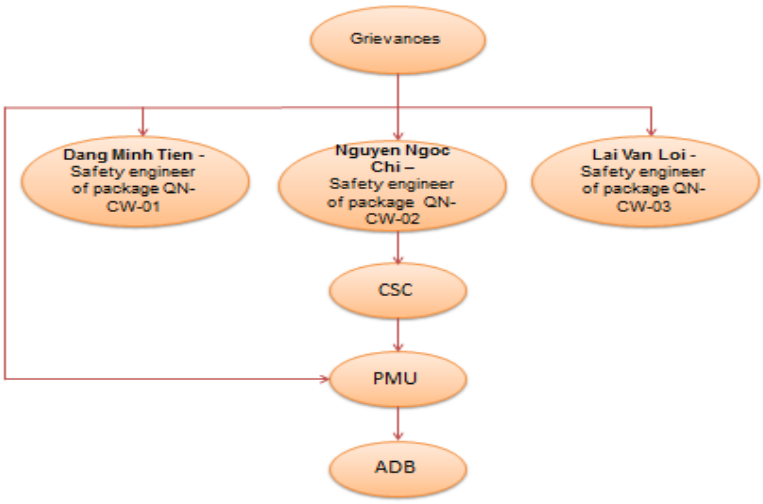

Figure 1: Grievance Redress Mechanism

80. A grievance register has been established at contractor's offices and the PMU to record and track grievances.

81. During the implementation of project, there has not been any grievance about construction and environmental and social safeguards yet.

82. Project site offices were established nearby the construction sites, and the Project's information has been disclosed to the public on the notice boards of the CPCs of the Project. As of December 2020, no written complaint was received by contractors, PMU and/or authorities at all levels. Information of environmental complaints during construction and solution taken:

- Total of grievance since beginning: 0
- Number of new grievances, if any, since last monitoring period: 0
- Number of grievances resolved: 0
- Number of outstanding grievances: 0

83. Generally, there is no pending or any pending complaints on environmental safeguard for all packages under the Project.

H. Lesson learned from EMP implementation and monitoring

84. The lessons learned are likely to come from the differences between ADB's projects and government projects such as corporation of EMP into construction and monitoring contracture arrangements; focal staffs in charge of environmental issues in the PMU, CSC and Contractors, such as:

- Clear assignment of the roles and responsibilities of stakeholders in the EMP implementation and monitoring is an important factor in compliance with EMP implementation.
- For the contractor: the arrangement of full-time personnel in charge of safety, environment and funding for EMP implementation will help in implementing the EMP well.
- PMU's experience and capacity is also a prerequisite for effective implementation of this project EMP implementation.

I. Conclusion and recommendation.

85. Overall, PMU has complied with the requirements for social and environmental safeguard

according to ADB's policy and GovV's requirements, includingg: (i) All quarterly reports including implementation of the Environmental Management Plan were submitted to ADB; (iii) PMU assigned environmental staff; integrated environmental requirement in bidding document and contract with contractor; (iii) approved CEMP of contractors; (iv) monitored EMP implementation; (v) GRM of the project was disseminated in communes, districts in project area; (vii) PMU periodically or irregularly supervises the contractor's activities on the construction, etc.

86. The CSC has completed the environmental management and monitoring roles with no serious complaints related to environmental issues. The CSCs had been (i) regularly monitoring the EMP implementation of contractors according to HSE checklists; (ii) usually visited construction sites, in case an environmental or safety issues were detected; (iii) recorded and required corrective action; and (iv) submitted monthly report on environmental monitoring for each package to PMU.

87. The contractors have implemented the environmental protection measures complied with EMP requirement. The construction activities have not affected traffic in the project area. The noise and dust levels have been lower than those levels in the Viet Nam standards. The construction equipment and vehicles are full of operating licenses and have emission level that is within the allowable limit. There is no grievance from local people about social and environmental issues and resettlement.

88. Public consultation was also carried out throughout the construction period with main subjects as follows: Local people wish that the project will be completed as soon as possible to the households can use the clean water for daily life. Majority of the contractors have shown that implementation of the contractors' mitigation measures has been quite good. The PMU, CSCs was requested the Contractors to solve these issues timely and reasonable during the construction phase. There is no pending issue.