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| Country Name | The Project for Strengthening Capacity of Water Environmental Management in River Basin |
| Socialist Republic of Viet Nam | |

I. Project Outline

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|---|---|-----------------------------------|---|---------------|-----------------|---|---|----------------------------------|---|---|--|
| Background | <p>At the time of the Ex-Ante Evaluation, the water environment in Viet Nam was degraded due to an increase in pollution load accompanied by rapid urbanization and industrial development and a shortage of wastewater treatment facilities as well as their operation and maintenance capabilities. While the Ministry of Natural Resources and Environment (MONRE) had been established and laws and other institutional arrangements for environmental conservation had been developed, the actual pollution situation was worsening. As for water resources conservation, Viet Nam was aiming for integrated water resource management, which includes flood control and water utilization in addition to water environment management. MONRE was required to promote regional water environment management in all domestic river basins in Viet Nam, but in practice, this had been limited to the establishment of basin management committees in major rivers and trial efforts at the regional level. In addition, the Department of Natural Resources and Environment (DONRE), which was responsible for environmental management in provinces, lacked the human resources, budget, experience, and technical skills necessary for proper environmental management. Thus, the system for the enforcement of water environment management administration needed to be strengthened.</p> | | | | | | | | | | |
| Objectives of the Project | <p>Through establishing a foundation for institutionalization of the River Basin Water Environmental Management (RBWEM) mechanism, strengthening the capacity of MONRE/VEA* and target DONREs to enforce RBWEM, and preparing a roadmap for improving RBWEM, the project aims at strengthening policy development and implementation capacity of MONRE/VEA and policy implementation capacity of target DONREs and institutionalizing RBWEM, thereby contributing to the enforcement capacity of MONRE/VEA and DONREs being strengthened and MONRE/VEA being prepared to implement RBWEM in other than the target river basin area. (VEA: Vietnamese Environment Administration)</p> | | | | | | | | | | |
| | <ol style="list-style-type: none"> Overall Goal: Enforcement capacity of MONRE/VEA and DONREs is strengthened, and MONRE/VEA is ready to implement river basin water environmental management system other than the target river basin area. Project Purpose: Policy development and implementation capacity of MONRE/VEA, and enforcement capacity of target DONREs regarding RBWEM are strengthened and institutionalized. | | | | | | | | | | |
| Activities of the Project | <ol style="list-style-type: none"> Project Site: Hanoi City, Cau River Basin (Thai Nguyen Province, Bac Giang Province, and Bac Ninh Province) and Dong Nai River Basin (Binh Duong Province, Dong Nai Province, Ho Chi Minh City, and Ba Ria-Vung Tau Province) Main Activities: (1) Prepare the final draft guidelines on the coordination mechanism for RBWEM, loading capacity calculation, wastewater discharge sources inventory development, and environmental information and data sharing and the final draft Circulars/legal documents on assessment of loading capacity and procedures and responsibilities for environmental compensation etc., and conduct related training courses; (2) Prepare the capacity development plan based on the capacity assessment, conduct related training courses, and implement the pilot project in the Cau river basin and the Dong Nai river basin; and (3) Develop the overall plan and the implementation schedule for improvement and institutionalization of RBWEM mechanism in the target river basins, and prepare a road map including further steps toward the Integrated River Basin Water Resource Management (IRBWRM), etc. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Vietnamese Side</td> </tr> <tr> <td>1) Experts: 2 persons (long term) and 11 persons (short term)</td> <td>1) Staff Allocated: 114 persons (PMU, TF, and WG members)</td> </tr> <tr> <td>2) Trainees Received: 33 persons</td> <td>2) Project office, budget allocation for salary and other expenditure for C/Ps, and running cost of equipment</td> </tr> <tr> <td>3) Equipment: Lap Top computers, photocopy machine, flow meter for river, software etc.</td> <td></td> </tr> </table> | | | Japanese Side | Vietnamese Side | 1) Experts: 2 persons (long term) and 11 persons (short term) | 1) Staff Allocated: 114 persons (PMU, TF, and WG members) | 2) Trainees Received: 33 persons | 2) Project office, budget allocation for salary and other expenditure for C/Ps, and running cost of equipment | 3) Equipment: Lap Top computers, photocopy machine, flow meter for river, software etc. | |
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| Project Period | (ex-ante) November 2015 – October 2018 (36 months) (actual) November 2015 – May 2019 (43 months) | Project Cost (Japanese side only) | (ex-ante) 547 million yen, (actual) 506 million yen | | | | | | | | |
| Implementing Agency | Ministry of Natural Resources and Environment (MONRE) (Vietnamese Environment Administration (VEA), Institute of Environment and Science (ESI), and Department of Waste Management (DWM)), Department of Natural Resources and Environment (DONRE) | | | | | | | | | | |
| Cooperation Agency in Japan | Nippon Koei Co., Ltd., CTI Engineering International Co., Ltd. | | | | | | | | | | |

II. Result of the Evaluation

<Constraints on Evaluation>

- Due to the difficulty in making appointments with implementing agencies in the Cau River Basin and the Dong Nai River Basin, JICA made an evaluation judgment by analyzing information collected to a possible extent through an interview with the Institute of Environment, Sea and Islands Science and sending questionnaires to all the relevant implementing agencies. No field survey was conducted.

<Special Perspectives Considered in the Ex-Post Evaluation>

- Regarding Indicator 3 of the Overall Goal (Local authorities in target river basin explicitly state policy on RBWEM in their Socio-Economic Development Plan (SEDP)), SEDP is a planning document with socio-economic targets and not a document to include topics such as RBWEM. On the other hand, since 2022, the Government of Viet Nam (GOV) has advocated the formulation of provincial master plans which include broader topics including RBWEM. Therefore, a provincial master plan is more relevant to evaluate the continuation of project effects, and in this regard, Indicator 3 should be interpreted as “Local authorities in target river basin explicitly state policy on RBWEM in their provincial master plans,” and the achievement level of the indicator was evaluated considering whether the policy on RBWEM is stated in their provincial master plans.

1 Relevance/Coherence

[Relevance]

<Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation>

The project was consistent with the development policy of Viet Nam at the time of ex-ante evaluation. The “Five-Year Socio-Economic Development Plan (SEDP) (2011-2015)” set water environment management as one of the main goals of development policy in the field of urban environmental management. In terms of environmental sector policy, the GOV revised the “National Strategy for Environmental Protection” in 2012, focusing on pollution source control and pollution management. These strategies/plans placed MONRE and DONRE as the main agencies responsible for implementing the priorities.

<Consistency with the Development Needs of Viet Nam at the Time of Ex-Ante Evaluation>

The project was consistent with the development needs of Viet Nam at the time of ex-ante evaluation. The water environment in Viet Nam was degraded due to an increase in pollution load caused by rapid urbanization and industrial development and a shortage of wastewater treatment facilities. For example, in the Dong Nai River basin, the amount of polluted wastewater was expected to increase to 4.5 million m³/day in 2020 and 7 million m³/day in 2040. Thus, the system for the enforcement of water environment management administration needed to be strengthened.

<Appropriateness of Project Design/Approach>

The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed. Lessons learned from the “Project for Strengthening Capacity of Water Environmental Management in Vietnam” (2010-2013) included the importance of promoting information sharing between MONRE and DONRE to strengthen coordination. Based on this lesson learned, this project secured a working period to develop a common understanding of the relevance and importance of the project objectives among the relevant agencies, including MONRE and DONREs.

<Evaluation Result>

In light of the above, the relevance of the project is ③¹.

[Coherence]

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan’s ODA policy to Viet Nam at the time of ex-ante evaluation. The “Country Assistance Policy for the Socialist Republic of Viet Nam” (2012) states that in order to deal with the negative aspects of the growth, Japan supports Viet Nam to address emerging environmental issues (urban environment and natural environment) caused by rapid urbanization and industrialization.

<Collaboration/Coordination with JICA’s other interventions>

Any collaboration/coordination between the project and JICA’s other intervention was not clearly planned at the time of ex-ante evaluation or during the project period.

<Cooperation with other institutions/ Coordination with international framework>

The cooperation/coordination with the World Bank was planned at the time of ex-ante evaluation and implemented as planned, and the positive effect was confirmed at the time of ex-post evaluation. The World Bank conducted the project “Vietnam Industrial Pollution Management Project (2013-2018).” In January 2018, a joint workshop was held, in which the existing issues on the implementation of total pollution loads control, such as insufficient available data and challenges to address such issues, were shared and discussed between both projects. This workshop contributed to preparing the proposals in the Overall Plan for RBWEM under the project.

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

At the time of project completion, the Project Purpose was mostly achieved as planned. Several final draft Circulars related to RBWEM were prepared under the project; one of them was issued as a Circular, and two of them were in the process of being legalized as a Decree (Indicator 1). The policy regarding the RBWEM mechanism was shared among the concerned DONREs through pilot activities and workshops during the project implementation (Indicator 2). VEA commenced necessary activities with the target DONREs in accordance with the Action Plan and the Overall Plan of RBWEM (Indicator 3). Four out of seven DONREs started trial activities such as pollution load analysis and loading capacity assessment to reflect them in their environmental management plans (Indicator 4). The road map for Integrated Water Resource Management (IWRM) was also prepared and shared among relevant organizations (Indicator 5).

<Continuation Status of Project Effects at the Time of Ex-Post Evaluation>

By the time of the ex-post evaluation, the project effects have been continued. Various laws related to RBWEM have further been established after the project completion, among which three Circulars have been legalized utilizing the project outputs (Indicator 1 of the Project Purpose). MONRE has organized various seminars to disseminate legal documents for environmental protection including the RBWEM mechanism (Indicator 2 of the Project Purpose). MONRE has also conducted some necessary activities in accordance with the Action Plan and the Overall Plan of RBWEM (Indicator 3 of the Project Purpose). Five out of seven target DONREs have prepared their provincial master plans for 2021-2030 with a vision towards 2050 (two of them have been approved by the Prime Minister), and policies

¹ ④ : very high, ③ : high, ② : moderately low, ① : low

on RBWEM, though partially, are stated in these plans (Indicator 4 of the Project Purpose). In addition, MONRE has implemented various tasks stated in the IWRM Road Map prepared under the project (Indicator 5 of the Project Purpose).

As Indicators 1 and 4 of the Project Purpose are directly related to the achievement level of the Overall Goal, the continuation status of these indicators was used for the verification of the achievement status of the Overall Goal.

<Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

At the time of ex-post evaluation, the Overall Goal has been partially achieved. As stated above, MONRE has institutionalized the RBWEM mechanism for IRBWEM through the establishment of various laws (Indicator 1). However, a River Basin Organization (RBO), as the institutional mechanism for the allocation of allowable discharged pollution load at the river basin level and coordination among the concerned provinces/cities, has not yet been established because it is time-consuming to legalize its function and structure. Nonetheless, the function and structure of an RBO will be legalized in the revised Law on Water Resources to be institutionalized in 2024, which will be followed by the establishment of the organization in the future (Indicator 2). As stated above, five DONREs have prepared their provincial master plans for 2021-2030 with a vision towards 2050, which, though partially, includes policies on RBWEM (Indicator 3). MONRE has formulated integrated river basin master plans for eight river basins, which state that RBWEM should be promoted in these river basins as next targets (Indicator 4).

<Other Impacts at the Time of Ex-Post Evaluation>

No negative impacts on the natural environment nor any other positive or negative impacts have been observed.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Achievement of Project Purpose and Overall Goal

| Aim | Indicators | Results | Source |
|--|---|--|--|
| (Project Purpose) Policy development and implementation capacity of MONRE/VEA, and enforcement capacity of target DONREs regarding RBWEM are strengthened and institutionalized. | Indicator 1 MONRE/VEA and relevant agencies submit the final draft legislative documents (final draft Decrees, Circulars or other documents) to the Minister of MONRE. | Status of the Achievement (Status of the Continuation): achieved as planned (continued) (Project Completion) Circular 76 on “Regulating assessment of wastewater receiving capacity and loading capacity of rivers and lakes” was issued in March 2018. Moreover, the VEA Decision No. 154 as a guideline for loading capacity assessment was officially approved in February 2019. In addition, the final draft of Circulars 5 and 6 for environmental compensation prepared under the project was in the process of being legalized as a Decree. (Ex-Post Evaluation) The final draft of Circulars 5 and 6 have been legalized as the following laws: (1) The 2020 Law on Environmental Protection (issued in November 2020) (The Law contains new provisions on compensation for environmental damages.) (2) The Decree No. 08/2022/ND-CP (issued in January 2022) (The Decree contains some articles on environmental protection and compensation for environmental damages.) In addition, utilizing the project outputs, Circular No. 02/2022/TT-BTNMT, which specifies regulations on the loading capacity of river and lake water resources, was issued in January 2022. | Project Completion Report, interview with the Institute of Environment, Sea and Islands Science |
| | Indicator 2 MONRE/VEA share the policy regarding RBWEM mechanism among MONRE/VEA and relevant organizations. | Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued) (Project Completion) The outcomes of the project were disseminated to the concerned DONREs in the workshops held in November 2018 and April 2019. In addition, Thai Nguyen, Bac Ninh, Binh Duong, and Dong Nai DONREs started trial activities on pollution load analysis or examination of loading capacity. These trial activities were conducted based on the policy regarding RBWEM shared by the project. (Ex-Post Evaluation) MONRE has organized various seminars, including the following: (1) Seminar on the 2020 Law on Environmental Protection (2022) (Principles of RBWEM, loading capacity assessment, and compensation for environmental damages regulated in the Law and related legal documents were explained to 19 provinces and cities in the central region.) (2) Seminars on the evaluation of the environmental protection program for the Cau River, Nhue-Day River, and Dong Nai River Basin (2022) (The direction of RBWEM and the necessity of loading capacity assessment and inter-provincial collaboration were shared among participants.) | Project Completion Report, interview with the Institute of Environment, Sea and Islands Science |
| | Indicator 3 MONRE/VEA commences necessary activities in accordance with the action plan | Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued) (Project Completion) VEA commenced necessary activities to proceed with RBWEM with the | Project Completion Report, questionnaire |

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| | and overall plan of RBWEM targeting 2020. | target DONREs related to the Action Plan and the Overall Plan. VEA also issued Decision No. 154 to proceed with the calculation of loading capacity based on Circular-76. In addition, VEA reflected the contents of the technical guideline for pollution source inventory development in the implementation plan of Prime Minister Decision No.140. (Ex-Post Evaluation) MONRE has conducted some activities in accordance with the Action Plan and the Overall Plan, such as the establishment of Circular No. 02/2022/TT-BTNMT and the approval of the Plan for National Water Resource Inventory until 2025. Information collecting and sharing activities for RBWEM have also continued through workshops on loading capacity assessment for several river basins. | survey to DONREs |
| | Indicator 4 Local authorities explicitly state policy on RBWEM in their water environmental management activity. | Status of the Achievement (Status of the Continuation): mostly achieved as planned (partially continued) (Project Completion) Thai Nguyen DONRE, Bac Ninh DONRE, Binh Duong DONRE, and Dong Nai DONRE started trial activities to reflect pollution load analysis or loading capacity assessment in their environmental management plans. (Ex-Post Evaluation) Thai Nguyen DONRE, Bac Ninh DONRE, Dong Nai DONRE, Ba Ria Vung Tau DONRE, and Bac Giang DONRE have prepared their provincial master plans for 2021-2030 with a vision towards 2050, in which policies on RBWEM, including environmental zoning, loading capacity assessment, targets for discharge water treatment, wastewater discharge sources inventory are stated. However, the policies on RBWEM are not holistically stated in these master plans except for Ba Ria Vung Tau DONRE's master plan, in which the principle of IRBWEM is clearly stated. | Project Completion Report, questionnaire survey to DONREs |
| | Indicator 5 MONRE/VEA prepares the road map of IRBWEM proposed. | Status of the Achievement (Status of the Continuation): mostly achieved as planned (continued) (Project Completion) IWRM Road Map was prepared and shared with VEA and relevant organizations in the final Joint Coordination Committee (JCC) and workshop in May 2019. (Ex-Post Evaluation) MONRE has implemented various tasks stated in the IWRM Road Map, including (Code P.06) the revision of circular No. 65 on minimum flow, (Code P.07) the modification of five rules for inter-reservoir operation, (Code L.17) the revision of laws on water resource, environment protection, and irrigation, and continuous finalization of legal documents, (Code T.34) development of the master planning of national water resources, (Code T.37) development of a monitoring system for water quality activities and discharge of wastewater into water sources, etc. | Project Completion Report, interview with the Institute of Environment, Sea and Islands Science |
| (Overall Goal) Enforcement capacity of MONRE/VEA and DONREs is strengthened, and MONRE/VEA is ready to implement river basin water environmental management system other than the target river basin area. | Indicator 1 MONRE/VEA institutionalizes RBWEM mechanism considering the IRBWEM. | Status of the Achievement: achieved as planned (Ex-Post Evaluation) See Indicator 1 of the Project Purpose. | - |
| | Indicator 2 Improved RBWEM Committees in Cau river basin and Dong Nai river basin are established. | Status of the Achievement: partially achieved (Ex-Post Evaluation) The establishment of an RBO has not been realized in the target river basins. The River Basin Environmental Protection Committee for Nhue- Day, Cau and Dong Nai Rivers, which existed during the project implementation, still functions in the target river basins to provide guidance for inter-provincial and inter-regional issues. | Questionnaire survey to DONREs |
| | Indicator 3 Local authorities in target river basin explicitly state policy on RBWEM in their Socio-Economic Development Plan (SEDP). | Status of the Achievement: partially achieved (Ex-Post Evaluation) See Indicator 4 of the Project Purpose. | - |
| | Indicator 4 MONRE/VEA designates other important river basins as next targets for further promotion of RBWEM in Viet Nam. | Status of the Achievement: achieved as planned (Ex-Post Evaluation) MONRE has formulated integrated river basin master plans for eight out of 13 river basins (Bang Giang - Ky Cung (2021), Se San (2021), Srepok (2021), Hong - Thai Binh (2023), Mekong (2023) and Ma, Huong and Dong Nai (2024)) and plan to develop integrated river basin plans for the remaining river basins by 2025. These plans state that RBWEM should be promoted in | Interview with the Institute of Environment, Sea and Islands Science |

these river basins.

3 Efficiency

The project cost was within the plan (the ratio against the plan: 93%) and the project period slightly exceeded the plan (the ratio against the plan: 119%). The project period was extended for seven months because JICA side proposed to extend project duration to ensure sustainability of project outcomes in light of the restructuring of VEA and a change in direction of legislative document development in MONRE. The reason why the project cost was kept within the plan even though the project period was extended was unavailable.

Outputs were produced as planned.

| | Project Cost (Japanese side only, yen) | Project Period (months) |
|----------------|--|-------------------------|
| Plan (ex-ante) | 547 million yen | 36 months |
| Actual | 506 million yen | 43 months |
| Ratio (%) | 93% | 119% |

In the light above, the efficiency of the project is ③.

4 Sustainability

<Policy Aspect>

As stated above, the promotion of RBWEM is supported by the GOV policy through the establishment of various environmental protection laws, and such policy support is likely to continue in the future, as the promotion of RBWEM has been institutionalized by legal documents.

<Institutional/Organizational Aspect>

VEA was divided into three departments in November 2022: the Department of Environment, the Department of Biodiversity and Nature Conservation, and the Pollution Control Department (PCD). In addition, ESI was merged with another institute and became the Institute of Environment, Sea and Islands Science. No negative effects due to the organizational change have been observed. At the time of the ex-post evaluation, the PCD and the Institute of Environment, Sea and Islands Science are in charge of RBWEM. Organizations responsible for RBWEM also have sufficient employees to promote RBWEM. The number of staff in charge of RBWEM is 14 in the Institute of Environment, Sea and Islands Science, 10 in the PCD, 16 in Thai Nguyen DONRE, 13 in Bac Ninh DONRE, and 13 in Bac Giang DONRE.² As explained above, while an RBO has not yet been established, the River Basin Environmental Protection Committee still functions, and provincial organizations in the same river basins make regular communication to exchange information and solve environmental incidents. Moreover, the revised Law on Water Resource strongly advocates for the establishment of an RBO, and the future prospects for the establishment of the organization are considered to be high.

<Technical Aspect>

Although no specific training system has been established, staff members of relevant organizations have sustained their technical skills and knowledge to promote RBWEM by implementing various tasks related to RBWEM. In addition, as stated above, MONRE has organized various seminars for many provinces and cities to disseminate legal documents for environmental protection, including the RBWEM mechanism. The capacity of target DONREs has also been enhanced through collecting data on loading capacity and pollution load, developing a wastewater discharge sources inventory and database, and so on. Various guidelines prepared under the project are also utilized by relevant organizations in their daily activities in water environment management.

<Financial Aspect>

According to MONRE and target DONREs, they have received sufficient budget allocation to continue necessary activities for RBWEM every year. They also explained that, as environmental protection, including RBWEM, is a key priority in Viet Nam's development policies, the future prospects for securing the necessary budget are considered to be high. However, financial data to verify this was unavailable, and their financial viability could not be confirmed.

<Environmental and Social Aspect>

No issue on environmental and social aspect has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the financial aspect of the implementing agency. Therefore, the sustainability of the project effects is ③.

5 Summary of the Evaluation

The project mostly achieved strengthening policy development and implementation capacity of MONRE/VEA and policy implementation capacity of target DONREs and institutionalizing RBWEM (Project Purpose) as planned, and partially achieved further strengthening the enforcement capacity of MONRE/VEA and DONREs and designating other target river basin area to implement RBWEM (Overall Goal). While the achievement level of the Overall Goal has remained partial, various laws related to RBWEM have continuously been established, and DONREs have prepared their provincial master plans (including policies on RBWEM) for 2021-2030 with a vision towards 2050.

Considering all of the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

Partly due to the organizational change within MONRE, data and information available for the ex-post evaluation was quite limited. To identify challenges and solutions for further promoting RBWEM, MONRE should enhance the monitoring of DONREs' activities and document the monitoring results.

Lessons Learned for JICA:

During the project formulation, JICA dispatched an expert to conduct the Detailed Planning Survey (second dispatch), and discussions among stakeholders were facilitated to identify the actual needs in Viet Nam. This resulted in a large part of the project outputs being institutionalized by the GOV after the project completion. Therefore, it is important to find a project objective through surveys and

² The actual number of staff in other organizations was unavailable.



MONRE announcing the integrated river basin master plans for the Ma River, Huong River, and Dong Nai River basins in January 2024



Consultation workshop for the revised Law on Water Resources in April 2023