



Executive Summary Report

Project on Mainstreaming Strategic Environmental Assessment (SEA)



Mahidol University

September 2022



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Engineering
Consultant Co., Ltd.

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Executive Summary

1. Background

Strategic Environmental Assessment (SEA) is a systematic process to support decision making in the planning process, taking into consideration a balanced view of economic, social and environmental factors, and placing importance on the engagement of all stakeholders to ensure sustainable development (NESDC, 2021). The Office of the National Economic and Social Development Council (NESDC) is the main agency that has developed and driven SEA in Thailand through knowledge formation, capacity building for government agencies, SEA guideline development, knowledge dissemination, and introduction of SEA mechanism to all stakeholders. For continuous advancement of SEA, NESDC implements “Mainstreaming Strategic Environmental Assessment (SEA)” project between April 2021 and September 2022. The project objectives are described as follows:

1) Reviewing and evaluating the outputs of the previous SEA mainstreaming activities and trainings, alignment of existing SEA reports with the Thailand’s SEA guideline (NESDC, 2020a), and relating plan in the SEA pilot area such as Special Economic Zone (SEZ) plans and provincial development plans;

2) Continuing the SEA in the pilot area from the previous project in fiscal year 2020 at the scoping step, completing the SEA process in which the SEA report and the lessons learned can be applied to improve the SEA guideline (NESDC, 2021) in more practical and effective ways;

3) Developing a sector-based or area-based SEA manual to facilitate SEA-designated government agencies to prepare the SEA report academically acceptable, and conducting a training on application of the SEA manual which enhances practicality and appropriate use of the manual;

4) Integrating and improving the NESDC’s SEA website with connection to other public platforms such as Line, Facebook and YouTube, as well as enabling interactive communication of the website, to be a national SEA-related knowledge hub to support the SEA driving mechanism under the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ...;

5) Strengthening SEA-related knowledge and the SEA driving mechanism through organizing public hearing events with stakeholders via training courses and academic seminars, and video production; and

6) Developing a set of recommendations for mainstreaming SEA in Thailand, and revising the SEA guideline (NESDC, 2021) in terms of its appropriateness, practicality and effectiveness.

To achieve the aforementioned objectives, NESDC designates activities under this project namely, (1) reviewing and evaluating the Thailand's SEA mainstreaming activities and trainings, and SEA guideline consistency of the previous SEA reports, (2) completing the SEA process in the pilot area, (3) developing a SEA manual either sector-based or area-based concept, (4) improving NESDC's SEA website to be integrative and smart, (5) organizing SEA-related training courses and academic seminars, and (6) developing recommendation in mainstreaming SEA in Thailand and revision of the SEA guideline (NESDC, 2021).

2. Framework

The project framework consists of a series of activities as illustrated in **Figure 2-1**.

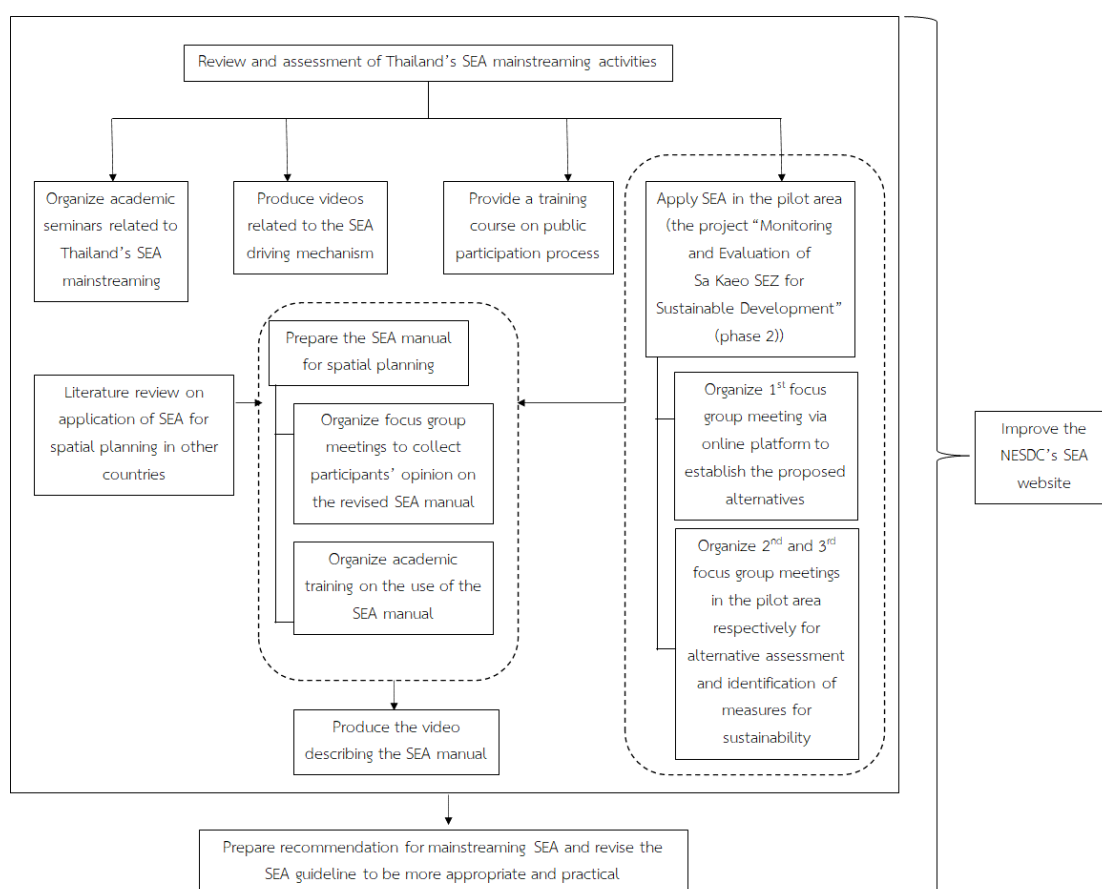


Figure 2-1 Project framework

3. Results

3.1 Reviewing and evaluation of the SEA mainstreaming activities

3.1.1 Objective

The project reviews and evaluates the outputs of the previous SEA mainstreaming activities and training courses, and alignment of the existing SEA reports with the Thailand's SEA guideline (NESDC, 2020a). Four main missions, which are jointly implemented among NESDC and other relevant agencies., are implemented namely, 1) disseminating SEA-related knowledge to public via the SEA manual for public, medias and NESDC's SEA website, 2) developing the SEA guideline which is appropriate and consistent with the context of Thailand, 3) capacity building by SEA experts through training courses for personnel including executives from various government agencies, and 4) establishing the SEA driving mechanism to facilitate the government agencies by drafting the Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ... to be a framework and guidance for adopting SEA in a planning process.

3.1.2 Methodology

This project in line with the four main missions is separated into two parts as follows:

1) Reviewing the outputs of the previous SEA mainstreaming activities

The project reviews the platforms established with aim to create SEA-related knowledge to public (SEA manual for public, medias and the SEA website) and quality of the previous SEA reports in total of seven projects using the SEA quality control checklist (NESDC, 2020a). Furthermore, the SEA training courses under the project in fiscal years 2019 and 2020 are investigated. Moreover, the national SEA driving mechanism by the Senate Committee on Natural Resources and Environment, the National Committee on Sustainable Development (NCSD), the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ... and other supporting activities for government agencies, is also considered; and

2) Assessing the outputs of the previous SEA mainstreaming activities

The project evaluates SEA-related knowledge of the public and the government agencies before and after perceiving media platforms using the online knowledge evaluation forms. The public respondent in total of 85 persons is across six regions (north, north-eastern, central. eastern, western and southern regions) consisting of 28 respondents from government agencies, 23 respondents from universities, 8 respondents from private

sectors and 26 respondents from others. For the government agencies, totally 45 respondents from various agencies involve in the assessment. The respondents consist of eight persons from the Department of Marine and Coastal Resources, two persons from the Department of Mineral Resources, four persons from the Department of Public Works and Town & County Planning, four persons from the Department of Primary Industries and Mines, eight persons from the Department of National Parks, Wildlife and Plant Conservation, four persons from the Ministry of Industry, two persons from the Eastern Economic Corridor Office, six persons from ONWR, six persons from the Office of Transport and Traffic Policy and Planning, and one person from the Energy Policy and Planning Office.

Practicality of the SEA guideline (NESDC, 2018; NESDC, 2020a) is also investigated by in-depth interview with the representative from the Office of the National Water Resources (ONWR). The selection of ONWR is due to its most extensive implementation of SEA. Therefore, suggestion and advice based on lessons learned from the previous ONWR's SEA implementation can be used for revision of the SEA guideline (NESDC, 2021). In addition, SEA understanding of trainees in the NESDC's SEA trainings in fiscal years 2019 and 2020 are also evaluated by in-depth interview to investigate whether: (1) the trainees apply the SEA-related knowledge obtained from the training courses in a process of plan development; (2) the NESDC's training courses can enhance the trainees' capacity of SEA utilization; and (3) specific SEA processes should be considered for additional training courses.

3.1.3 Key achievement

1) Evaluation results

Evaluating SEA knowledge of the public with previously limited SEA-related knowledge reveals that after perceiving three media platforms namely, the SEA manual for public (NESDC, 2020b), the video clip entitled "SEA for public" and the Frequently Asked Questions (FAQ) indicated on the NESDC's SEA website, 68 percent of total respondent is scored as excellent level (the score is in range between 80 and 100 percent). The website is regarded as the most effective platform in which 79 percent is at excellent level, followed by the SEA manual for public (65 percent of total respondent gains excellent level) and the video clip (61 percent of total respondent gains excellent level).

After watching four video clips entitled; 1) What is SEA?, 2) The SEA Process, 3) Public Participation, and 4) SEA Administrative Mechanisms, the respondents can apparently improve their SEA-related knowledge in which 73 percent of total respondent is averagely marked as excellent level. Particularly, the "What is SEA?" clip provides the SEA-related knowledge with 84 percent at excellent level, followed by "SEA Administrative Mechanisms"

clip, “Public Participation” clip and “The SEA Process” clip, accountable for 76 percent, 73 percent and 58 percent at excellent level, respectively.

According to the in-depth interview with the representative from ONWR, adoption of the SEA guideline (2020a) can support ONWR in formulating the Master Plan on Water Resource Management through integrated consideration of economic, social and environmental aspects in the master plan development process. Importantly, SEA unfolds roots of the concerns and the needs of the local communities. Such information can later lead to an action plan which is indeed corresponding with the context and the potential of the planned watershed.

SEA understanding evaluation of the trainees in the NESDC’s training courses in fiscal years 2019 and 2020 explains that most of the trainees conduct SEA knowledge transfer to their colleagues especially the ones in a policy and planning section. The knowledge gained can be applied in the process of planning and consultant employment.

2) Key findings

Part of the public is still confused difference between SEA and Environmental Impact Assessment (EIA) after perceiving the SEA knowledge platforms. Furthermore, the government agencies designated to implement SEA under the draft Regulation of the Office of the Prime Minister, are not fully understanding the SEA process, particularly alternative development and assessment. To solve these issues, the public requires easily understandable infographics, describing different application between SEA and EIA. Likewise, for government agencies, the SEA guideline can be further improved by addition of clear explanation and examples.

3.2 Application of SEA in the pilot area

3.2.1 Objective

The project applies the SEA guideline for plan development of Sa Kaeo Special Economic Zone (SEZ) and provides the recommendation on SEZ development at policy and planning levels.

3.2.2 Methodology

The project “Monitoring and Evaluation of Sa Kaeo SEZ for Sustainable Development” in fiscal year 2020 (the first phase) reaches the SEA at the scoping step consisting of the development goals, strategic issues, sustainable development objectives and indicators, baseline assessment, proposed alternatives, and the participation and communication plan. In the project in fiscal year 2021 (the second phase), a process of

alternative development and assessment, identifying measures for sustainability designed to support the preferred alternatives, SEA reporting, and integrating the SEA result into the Sa Kaeo Provincial Development Plan (2023-2027) are performed.

Four focus group meetings are conducted in the second phase of the project. The stakeholders are categorized into three groups namely, (1) the government agencies at provincial and local levels, (2) the public, and (3) the private business entities, the non-governmental organizations and the academic institutes. The first meeting, aiming to formulate the primary alternatives, was organized on 18 March 2022 via Zoom Meeting platform with 61 participants. The second and the third meetings, aiming for alternative assessment and identification of measures for sustainability, were organized on 21 June 2022 and 22 June 2022, with 106 and 73 participants, respectively. The fourth meeting entitled “Conclusion on Integration of the SEA result into the Sa Kaeo Provincial Plan (2023-2027) and the related plans” was organized between 8 August 2022 and 9 August 2022 via Zoom Meeting platform with 21 and 14 participants from Sa Kaeo government and local government agencies, respectively. In this meeting, the SEA result was introduced to integrate into the Sa Kaeo Provincial Development Plan (2023-2027).

3.2.3 Key achievement

1) Summary of the SEA in the pilot area

The important output from the SEA in the second phase is the revised development goal which is “Sa Kaeo SEZ to be a gateway linking economic activities in Thailand and other countries in the sub-region, driven by high value-added economy through sustainable utilization of local natural resources and environment”. Furthermore, the output also includes the strategic issues, and the sustainable development objectives and indicators. It is noteworthy that indicators define the developmental direction of the strategic issues established in response to development goal as shown in **Table 3.2-1**.

Table 3.2-1 Strategic issues, sustainable development objectives, and indicators

Strategic issue	Sustainable development objective	Indicator
1. Developing Sa Kaeo SEZ to be linkage of logistics and supply chain for prosperity and sustainability	1) To create incentives for attracting high value-added investment in Sa Kaeo SEZ.	1) Value of cross-border exports from Sa Kaeo Province (economic indicator)
	2) To enhance cooperation and opportunity with other industrial areas or other SEZs.	2) Value of the granted projects by the Thailand Board of Investment (BOI) in which they are already in operation, and the registered capital value of

Table 3.2-2 Strategic issues, sustainable development objectives, and indicators (Continue)

Strategic issue	Sustainable development objective	Indicator
	3) To provide infrastructure supporting establishment of the logistical linkage. 4) To strengthen the entire supply chain value.	the newly established juristic person (economic indicator)
		3) Number of small and medium enterprises (SMEs) with qualification of the Thailand Industrial Standard S (TIS-S) (environmental indicator)
		4) Amount of municipal solid waste properly treated (environmental indicator)
2. Promoting the high value-added agro-processing industry	1) To be the environmentally-friendly high value-added agro-processing industry. 2) To enhance environmentally-friendly agriculture. 3) To enhance and stimulate to be appropriate agriculture considering the context of the area and the targeted industrial demands.	1) Value of the economic crops and herbs in Sa Kaeo Province (economic indicator)
		2) Number of the industries with qualification of the Green Factory certification (environmental indicator)
		3) Number of the community products with qualification of the Thai Community Product Standard (environmental indicator)
3. Improving education, and building knowledge and capacity of people corresponding with the demand of the labor market	1) To improve the skills, knowledge and expertise corresponding with the demand of the labor market in Sa Kaeo SEZ. 2) To raise the quality of life and incentives of the labor and people in Sa Kaeo SEZ as well as promoting public participation.	1) Average monthly labor income by sources (economic indicator)
		2) Number of workers who pass the training for labor capacity building (social indicator)
		3) Number of graduates classified by grades and occupations (social indicator)
		4) Percentage of household in poverty which has income less than the Basic Minimum Needs (BMN) (social indicator)

After establishment of the strategic issues, sustainable development objectives and indicators, and baseline assessment, the SEA formulates the strategic alternatives for Sa Kaeo SEZ. Such alternatives are considerate of being practical to be implemented in accordance with the plan or the program, and also being beneficial to stakeholders in the area. Furthermore, the alternatives are consistent with the sustainable

development objectives of the strategic issues, integrating economic, social and environmental aspects. Therefore, four alternatives are proposed as described in the following.

(1) Business-as-Usual (BAU) is no intervention scenario in order to compare with other alternatives. Under BAU, Sa Kaeo SEZ is “to be a gateway linking economic development activities in Thailand and the borderlands, driven by transportation and logistics to support agriculture, industries and services”

(2) Alternative 1 “to be a gateway linking economic development activities in Thailand and the sub-region, driven by environmentally-friendly logistics, agro-processing industries and community economy in which they are connectable with the local economic activities”.

(3) Alternative 2 “to be a gateway linking economic development activities in Thailand and the sub-region, driven by environmentally-friendly logistics and high value-added agro-processing industries in which they are concurrent with development concept of Bio-Circular-Green economy (BCG), being connectable with the local economic activities”.

(4) Alternative 3 “to be a gateway linking economic development activities in Thailand and the sub-region, driven by environmentally-friendly logistics and high value-added agro-processing industries in which they are connectable with the local economic activities, emphasizing on human resource development”

Alternative assessment applies Multi-Criteria Analysis (MCA) in which pairwise comparison used for determining weighting of each indicator (totally 11 indicators plus economic, social and environmental aspects). Then, the weightings are incorporated with impact matrix analysis for assessing the proposed alternatives as the results are summarized in **Table 3.2-2**. The preferred alternative is concluded to be Alternative 3 by the relevant stakeholders. It is noteworthy that such selection is also consistent with the assessment results by the academia and the project’s consultants. Alternative 3 emphasizes on the high value-added economic activities including agro-processing industries with BCG concept. This alternative is correspondent with the development goal and the targeted industries covering a sector of services and tourisms which are to be environmentally-friendly. The alternative relies on human resources to be prepared under development of high value-added economic activities. Therefore, the important initial measure is a survey on demanded labor types within year two to year three of Sa Kaeo Provincial Development Plan (2023-2027). In order to respond to such demand, a training course for capacity building of labors is required, for examples short-term and long-term training courses to be prepared for high value-added agro-processing industries with BCG concept. The preferred alternative along with the impact assessment results, and suggestions from public participation process is taken into account for

identification of measures for sustainability as well as development of a recommendation for integrating the SEA process with the Sa Kaeo Provincial Development Plan.

Table 3.2–2 Results of impact matrix analysis

Alternative assessment by	Impact score (percent)			
	BAU	Alternative 1	Alternative 2	Alternative 3
Academia and the project's consultants	16.02	22.42	30.12	31.45
Stakeholders in Sa Kaeo Province	16.38	25.79	28.34	29.48

Under this project, two outputs are the SEA technical report and the SEA non-technical report. The SEA results and the recommendation for integrating the SEA process with the Sa Kaeo Provincial Development Plan (2023-2027) are introduced to the relevant stakeholders including with the representatives from the Office of Sa Kaeo Province and related government agencies, non-government organization and public, to be discussed and additional opinions obtained are incorporated in a recommendation for future SEA projects.

2) Key findings

“Monitoring and Evaluation of Sa Kaeo SEZ for Sustainable Development” project is implemented with two-year duration. Maintaining continuousness of stakeholder engagement across two years is challenging because stakeholders especially local people and agriculturists have limited access to participate in focus group meetings. The limitation arises from distant location and work restriction. By these, informal communication with such stakeholders should be regularly conducted to ensure that stakeholders who have direct impacts from the plan implementation are indeed taken into account in entire participation process. Furthermore, the country and regional policies are subject to changes by time, therefore after the first phase of the project in fiscal year 2020, it is unavoidable to revisit the development goal, the strategic issues, the sustainable development objectives, and indicators. They are time-consuming process in the second phase in fiscal year 2021. Then, it is advisable to closely consult with local governments regarding those aforementioned elements to be timely aware of any political changes.

In this project, the public participation process for assessing alternatives and identifying measures for sustainability are connectedly implemented causing lack of scrutinization of the preferred alternative. Several issues important for appropriate measure identification may be overlooked. Hence, segregation of those two processes is required in

order to provide adequate time for the project consultant to carefully gather all important issues to be later proposed to stakeholders for the measure identification.

In this project, the approach for integrating the SEA results with Sa Kaeo Provincial Development Plan (2023-2027) and the related plans can be adopted in other SEA project with similar plan objective. In order to be more effective integration in Sa Kaeo SEZ, the relevant stakeholders suggest amendment of the laws related to land use which are currently conflicted with other laws, regulations and standards.

Lessons learned from the SEA is beneficial to developing the SEA manual for spatial planning in which the SEA in this project can be utilized as a case study.

3.3 Development of SEA manual for spatial planning

3.3.1 Objective

The manual aims to be an example to perform each SEA process (NESDC, 2021a) to facilitate the government agencies designated to adopt SEA for plan development under the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. Likewise, it supports achievement of the measure indicated in the 12th National Economic and Social Development Plan (2017-2022) by promoting legislation of SEA, leading SEA to practicality.

3.3.2 Methodology

The project reviews application of SEA for spatial planning in foreign countries. In consistence with the SEA guideline (NESDC, 2021), the SEA process flow particularly designed for spatial planning is introduced, and it is applicable for both new spatial planning, and a plan during implementation which is subject to revision. The lessons learned from the SEA for Sa Kaeo SEZ under the pilot project are used for the SEA manual development. In addition, two focus group meetings were organized via Zoom Meeting and on-site venue with 89 participants on 20 May 2022 and 50 participants on 22 July 2022, respectively. The meeting objectives were to collect participants' opinion on the revised SEA manual. Thereafter, the training course on "Use of the SEA Manual for Spatial Planning in Practice" was conducted on 26 August 2022 with 68 participants including government agencies, consultants, academia, related organizations and public. It aims to strengthen understanding on the manual contents and importance of applying SEA for spatial planning. The training exemplifies application of SEA for SEZ plan development leading to sustainability of the area.

3.3.3 Key achievement

1) Development of SEA manual for spatial planning

The SEA manual for spatial planning contains three chapters namely, introduction (Chapter 1), SEA process flow for spatial planning (Chapter 2) and conclusion (Chapter 3). The contents of Chapter 2 include approaches and techniques, as well as output from each process step. There are six steps in the SEA guideline. However, there are two additional steps, being in total of eight steps in this manual as listed below.

Step 1: Screening for SEA for spatial planning

Step 2: SEA Scoping for spatial planning

Step 3: Alternative development for spatial planning

Step 4: Alternative assessment for spatial planning

Step 5: Measures for sustainability for spatial planning

Step 6: SEA reporting for spatial planning

Step 7: Integration of the SEA for spatial planning with other spatial plans

Step 8: Monitoring and evaluation of the SEA for spatial planning

2) Key findings

The SEA manual for spatial planning contains basic principle of SEA process to facilitate readers to be able to conduct SEA rapidly. It is noteworthy that this manual can be adopted in other sectors with slight modification of approaches and techniques strictly based on concept of the SEA guideline and the SEA manual for spatial planning. However, careful consideration of the plan objectives should be performed. The manual user can freely select appropriate approaches and techniques by referring to literature reviews such as the SEA guideline and academic papers. The review should emphasize on projection of changes due to development or spatial management.

From the training course on “Use of the SEA Manual for Spatial Planning in Practice” with the approach of lecture, group discussion and practice based on lessons learned from the SEA for Sa Kaeo SEZ, it is found that according to the pre- and post-training examination, the participants improve their understanding on SEA for spatial planning. However, the participants provide advice on the length of the training which is too short compared with the large amount of the learning contents. Furthermore, the content is relatively difficult for the person who inexperienced a SEA training. The training should be more concise and the length of the training should be extended to three to five days. Moreover, recruitment of the participant should be screened with prerequisite SEA knowledge. Finally, participant alumni or database should be established in order to facilitate allocation of the targeted participants in accordance with the training objective.

3.4 SEA Website improvement

3.4.1 Objective

The project aims to improve the NESDC's SEA website to be comprehensive, smart, linkable with other public platforms with interactive two-way communication. Therefore, the website can serve as the country's SEA knowledge hub.

3.4.2 Methodology

The project applies web-based application technology (website responsive) and word press, to design the SEA database to support SEA implementation. The design is consistent with the NESDC's website framework, and links with NESDC's server platforms. It also supports multiple device usage (application and responsive) with designation of access right levels including standard users and administrators. The database is enabled to be added input, modified and disseminated information which can be easily searched. Likewise, the database is linked with other public platforms such as Line, Facebook and YouTube. The databased server is currently installed in the NESDC's server.

The website can be served as the national SEA knowledge hub, communication channel with the public, and the SEA driving mechanism. It is further improved by being responsive with the website user's interest, sharing SEA activities, and casting voting related to the SEA issue. In addition, the two-way communication allows the website to be information disseminator and receiver which are interactive with the website user. Moreover, the information of "Mainstreaming Strategic Environmental Assessment (SEA)" project is displayed in relation to each Sustainable Development Goal (SDG) and supports the website user to share their related stories.

3.4.3 Key achievement

NESDC's SEA website is integrative, smart and connectable with other public platforms such as Line, Facebook and YouTube. The up-to-dated website serves as the national SEA knowledge hub, communication channel with the public, and the SEA driving mechanism under the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ..., by its two-way interactive communication, as illustrated in **Figure 3.4**.

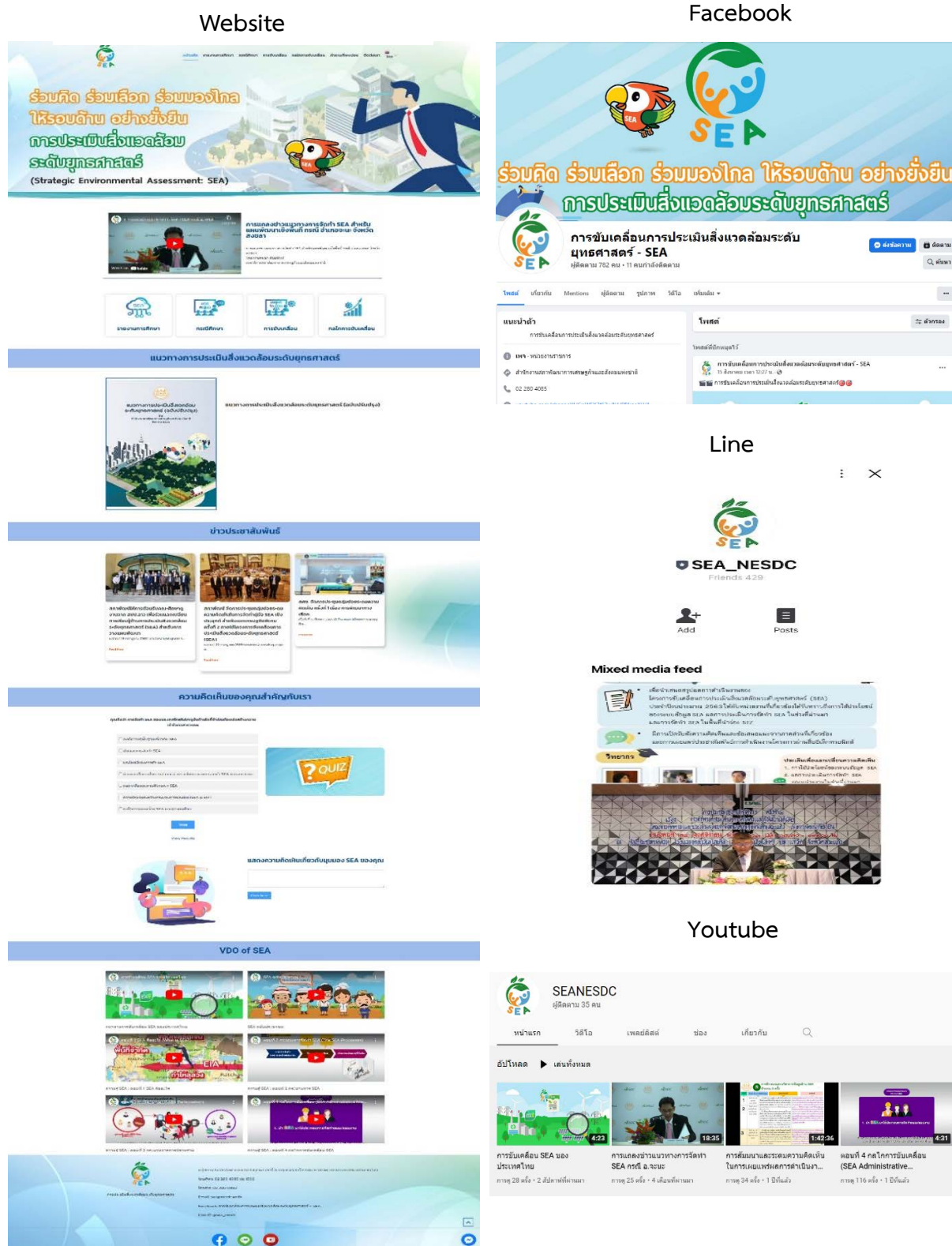


Figure 3.4 Examples of SEA public communication platforms

3.5 SEA seminar and video production

3.5.1 Objective

The SEA driving activities especially SEA seminar and video production aim to strengthen SEA understanding and the SEA driving mechanism for the relevant agencies, academia and public.

3.5.2 Methodology

Three academic seminars related to driving the national SEA, and two video production narrative of the national SEA driving activities which are entitled “Mainstreaming SEA in Thailand” (Part 1) and “SEA Manual for Spatial Planning” (Part 2), are implemented under this project.

1) Academic seminar related to driving national SEA

1.1) The first academic seminar on mainstreaming SEA in Thailand on the topic “Looking Back and Forward to the Challenges of mainstreaming SEA”

The seminar was organized on 28 October 2021 via Zoom Meeting, with 197 participants. The activities included presentation on the outputs of driving SEA from “Mainstreaming SEA” project in fiscal year 2020 and implemental direction of the project in fiscal year 2021, the special talk on experience sharing from the SEA driving activities by the relevant agencies, and public hearing on plan formulation using SEA.

1.2) The second academic seminar on mainstreaming SEA in Thailand on the topic “Challenge to Reach the Core of SEA”

The seminar was organized on 29 October 2021 via Zoom Meeting, with 199 participants. The activities included the special talk on “Challenge to Reach the Core of SEA” consisted of (1) alternative development and assessment, and (2) public participation in SEA and opinion exchange on SEA challenge.

1.3) The third academic seminar on mainstreaming SEA in Thailand on the topic “SEA on a new challenge pathway”

The seminar was organized on 18 August 2022 on-site with 116 participants. The activities included presentation on mainstreaming of SEA in fiscal year 2021, the special lecture on “SEA principal understanding in the context of the world and Thailand”, the special talk on “experience and challenge from the plan formulation using SEA”, opinion and experience exchange from the SEAs, and seminar conclusion.

2) Video production

Two video production narrative of the national SEA driving activities which are entitled “Mainstreaming SEA in Thailand” (Part 1) and “SEA Manual for Spatial Planning” (Part 2). Part 1 explains background and important of SEA in various nations and Thailand, up-to-dated SEA driving activities in Thailand, SEA in the National Economic and Social Development Plan, SEA in the National Reform Plan, SEA in the National Strategic Plan, SEA in SDGs, main responsible agencies for SEA mainstreaming, and the related NESDC’s SEA activities. Part 2 describes definition of spatial planning, examples of the spatial plans, necessity and core of SEA for supporting spatial planning, the SEA process for spatial planning, application of Geographical Information System (GIS) for evaluating potentials and limitation of the area as well as alternative development and assessment.

3) Key achievement

3.1) Lessons learned from the academic seminars on mainstreaming SEA in Thailand

SEA is a flexible tool to support decision making in the planning process, integrating economic, social and environmental factors, which eventually leads to sustainability of the plan. SEA can be conducted concurrent with the planning without necessity for disaggregation of the sea elements from the conventional planning. The tool highlights essence of public participation through various platforms, and joint implementation with the related agencies.

The SEA should be enforced at planning level, not for project level operations. The planner can enlarge the vision and align the formulated plan with supporting measures in consistence with the national goal.

Additional important issue is involvement of the true public participation in the initial SEA process, focusing on conflict management. Precise information presentation, disclosure of all impact, frequent public events, and various platforms open for collecting stakeholders’ opinion including publics, private sectors, government agencies and academia, are required for public trust building.

3.2) Video production output

Part 1 “Mainstreaming SEA in Thailand” is with duration of three minutes. It aims to introduce SEA driving activities in Thailand and the perceiver includes the government agencies, and the public who has interest in SEA. The video content in Part 1 displays background, importance of SEA, SEA connectivity with SDGs, up-to-dated SEA driving activities in Thailand, SEA in the National Economic and Social Development Plan, SEA in the

National Reform Plan, SEA in the National Strategic Plan, SEA in SDGs, main responsible agencies for SEA mainstreaming, and the related NESDC's SEA activities as illustrated in **Figure 3.5-1**. Part 2 “SEA Manual for Area-based Planning” is with duration of four minutes, aiming to demonstrate application of the SEA manual for spatial planning to the government agencies designated to adopt SEA under the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ..., leading such agencies to perform SEA academically accepted. Definition of spatial planning, examples of the spatial plans, necessity and core of SEA for supporting spatial planning, the SEA process for spatial planning, application of Geographical Information System (GIS) for evaluating potentials and limitation of the area as well as alternative development and assessment, are shown in the video Part 2 as illustrated in **Figure 3.5-2**.



Figure 3.5-1 Screenshots of the video clip “Mainstreaming SEA in Thailand”



Figure 3.5-2 Screenshots of the video clip “SEA Manual for Spatial Planning”

3.6 Training course on “Public participation process for development plan with SEA”

3.6.1 Objective

The training course strengthens the understanding on the public participation process for plan formulation using SEA, and also further building the SEA capacity of the relevant agencies being able to effectively apply SEA for plan formulation. Likewise, it can be a venue for knowledge exchange concerning the public participation concept, tools and techniques in SEA as well as collecting feedbacks and opinion from the trainee.

3.6.2 Methodology

The training was conducted between 9 June 2022 and 10 June 2022 on-site, with 32 participants from 16 government agencies which are to be legally adopted SEA under the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. The training course included lectures and workshops based on the case study on water resource management in the river basin in which two groups were formed namely, the SEA study team (Group 1) and the relevant stakeholders (Group 2).

3.6.3 Key achievement

1) Training outputs

The trainees can gain more knowledge on public participation process in SEA. Furthermore, a concept, tools, techniques and methods that the SEA experts introduced are lessons learned that can be adopted and improved for the next training course on SEA public participation process.

2) Key findings

Separation of the trainees into two groups with one SEA expert as a trainer in each group, results in different use of concept, techniques and methods. However, the outcome is same, through practice over the same packages of information and public participation processes in scoping, alternative development and assessment, identification of measures for sustainability, and integration of the SEA into the plan. Nevertheless, according to trainees' suggestion, the course duration should be longer in order to maximally improve understanding of trainee on the SEA process and steps, and case study context.

4. Conclusion and recommendation

4.1 Conclusion

The project corresponds to the four SEA mainstreaming missions of NESDC as summarized in **Table 4.1**. The missions include (1) continuous provision of SEA-related knowledge to public, (2) development of SEA guideline to be more appropriate and consistent with Thailand's context, (3) SEA capacity building of the relevant stakeholders through academic training platforms, and (4) enhancement of SEA driving mechanism.

Table 4.1 Project activities in response to NESDC's SEA missions

NESDC's SEA mission	Goal	Activity
1. Continuous provision of SEA-related knowledge to public	Organizing academic seminars relating to SEA mainstreaming in Thailand, and producing video	(1) Video Part 1 entitled "Mainstreaming SEA in Thailand"
		(2) Video Part 2 entitled "SEA Manual for Spatial Planning"
		(3) The first academic seminar on the topic "Looking Back and Forward to the Challenges of mainstreaming SEA"
		(4) The second academic seminar on the topic "Challenge to Reach the Core of SEA"

Table 4.1 Project activities in response to NESDC's SEA missions (Continue)

NESDC's SEA mission	Goal	Activity
		(5) The third academic seminar on the topic "SEA on a new challenge pathway"
	NESDC's SEA website improvement to be comprehensive and smart	(6) SEA website which is smart
2. Development of SEA guideline to be more appropriate and consistent with Thailand's context	Completing entire SEA process in the SEA pilot area (Sa Kaeo Special Economic Zone), including alternative development and assessment, identification of measures for sustainability for preferred alternative, SEA report preparation, and integration of the SEA result with the Sa Kaeo Provincial Plan (2013-2017)	(1) The project "Monitoring and Evaluation of Sa Kaeo SEZ for Sustainable Development"
	Develop an applied SEA manual for one sector or area	(2) The SEA manual for spatial planning
3. SEA capacity building of the relevant stakeholders through academic training platforms	Organizing training courses on SEA process or steps for the government agencies designated to implement SEA for their development plan	(1) Training course on "Public participation process for development plan with SEA"
		(2) Training course on "use of the SEA manual for spatial planning in practice"
4. Enhancement of SEA driving mechanism	Establishing a recommendation for mainstreaming SEA in Thailand and revising the SEA guideline (NESDC, 2021)	(1) A recommendation for mainstreaming SEA in Thailand
		(2) A recommendation for revising the SEA guideline (NESDC, 2021)
		(3) A recommendation for further study

All activity under this project in fiscal year 2021 closely relates to every stakeholder in accordance with the project objectives, resulting in strengthening SEA driving mechanism. Hence, outcome, experience, knowledge and stakeholders' opinion derived from entire project activity are carefully analyzed, leading to the recommendation for enhancing SEA mainstreaming in Thailand as described in the following sections.

4.2 Recommendation

According to the continuous effort of mainstreaming SEA development until the end of the project in fiscal year 2021 (September 2022), lessons learned and findings emerging during the implementation of NESDC's projects in every year, the project consultant refines

into three issues which are important for SEA mainstreaming in Thailand namely, 1) necessity of SEA-driving institute and related laws, 2) improvement of SEA Guideline and development of SEA manuals (such as SEA manuals for water resource, forest resource, coastal resource and energy sectors), and 3) capacity building of SEA personnel.

4.2.1 Necessity of SEA-driving institute and related laws

The Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ... is an important mechanism for effective SEA implementation. The enforcement can lead to better alignment of SEA implementation by the government agencies with quality control by national committees, and national SEA guideline and manuals. Moreover, issues that require attention and support to enforce the regulation are shown below.

1) Clear designation of the duty and role of the two subcommittees

According to the information derived from the public hearing on the draft Regulation of the Office of the Prime Minister on the Strategic Environmental Assessment (SEA) B.E. ... on 30 March 2021, after enforcement of the regulation, the SEA committee is established, then two subcommittees are formed by the SEA committee. The subcommittees include a subcommittee for academics and public participation, and a subcommittee for SEA monitoring and evaluation, and mechanism development. Such committee formation can enhance the integrated implementation of every concerned agency. However, there are still unclear designation concerning the duty and the role of subcommittees. Moreover, the composition of the committees is also important that it should contain a group of people who has an extensive vision of sustainability with sufficient professionalism and experience to ensure the SEA effectiveness and quality.

2) Feasibility study on reconstruction of NESDC structure

As a secretary to the SEA committee and the subcommittees, NESDC may need to reconstruct the organization for its additional role and duty. The reconstruction can be done through increase in the personnel number, as well as, capacity building of NESDC's personnel by strengthening SEA-related knowledge and planning process. By these, NESDC will be able to conduct a study, analysis, and information collection for supporting the work of the SEA committee and the subcommittees. Furthermore, NESDC will also monitor and evaluate SEA outputs from all concerned agencies and then analyze problems, difficulties, and solutions. To successfully implement such duty and mission, the project consultant team proposes to conduct a feasibility study on reconstruction of NESDC structure determining necessity for increasing personnel number and requirement list of training courses to serve

future SEA implementation of NESDC. For example, the Natural Resources and Environment Development Strategy Division of NESDC is currently a main responsible unit for SEA mainstreaming, and there are five staffs fully involved in SEA. In comparison with the Secretary to the National Environment Board Unit with nine staffs under the Strategy and Planning Division of the Office of Natural Resources and Environmental Policy Planning, the secretary unit has similar framework with the SEA unit of NESDC after the regulation enforcement, it implies that the SEA unit of NESDC may need the additional recruitment. Nevertheless, the feasibility study should be conducted prior to decision on the reconstruction.

4.2.2 Improvement of SEA Guideline and development of SEA manuals

Improving the SEA guideline (NESDC, 2021) to be more effective and practical supports concerned agencies to be able to adopt and apply the SEA guideline. NESDC collects opinions regarding SEA outputs from the concerned agencies which follow the SEA guideline (NESDC, 2020a) and the SEA guideline (NESDC, 2021). The obtained opinions and suggestions are taken into account for improving contents, processes, methods, techniques, case studies, and lessons indicated in the SEA guideline. This current project supplies further recommendations on revision of the SEA guidelines (NESDC, 2021) as described below.

Chapter 3 Integration of planning and SEA processes

1) In general, there is still a lack of conclusion on issue which is important and necessary in each topic. Hence, it is recommended to add the conclusion at the end of a topic on screening, scoping, alternative development and assessment, and identification of measures for sustainability.

2) Criteria for indicator identification and selection should be further clarified. According to the interview with the government agencies which apply SEA for plan formulation in the second phase of the project, identification and selection of indicators are challenging. Although, the SEA guideline (NESDC, 2021) provides definition of good indicators, appropriate number of indicators and examples of sectoral indicators, it is still necessary to include scope and measurement of each recommended indicator, and weighting approach to be used for evaluation of strategic issues, baseline assessment, and alternative assessment.

3) It is also requested to provide an outline of scoping report to ensure consistency across SEA project.

Chapter 4 Participation for planning and SEA processes

1) In general, there is still a lack of conclusion on issue which is important and necessary in each topic. Hence, it is recommended to add the conclusion at the end of a topic on public participation process.

2) It should be further clarified the benefits, necessity, and effectiveness of a communication and participation plan. In addition, the guideline should include determining level of information and engagement for each stakeholder group in each SEA process. Furthermore, an explanation form of a communication and participation plan indicating connectivity among stakeholder importance level, appropriate communication level, recommended communication duration and frequency, appropriate content and methodology, and monitoring on progress and success of the communication and participation should be introduced.

For enhancing process learning on SEA application, a pilot project applying the developed SEA manual for spatial planning (NESDC, 2022c), and the development of SEA manual for the plan designated in the regulation should be implemented.

4.2.3 Capacity building of SEA personnel

Capacity building of SEA personnel to support the implementation of the SEA regulation is one of the important factors to mainstream SEA in the country. The recommendation can be developed for three target groups as described below.

1) Implementing agency: NESDC

Training courses for NESDC personnel who is going to involve in the consideration or participation in SEA process. The objective is to create deeper understanding of SEA to consistently, and effectively support the SEA implementation. The training can be separated into two parts based on duty of NESDC division namely, the training program for the Natural Resources and Environment Development Strategy Division, and the training program for other NESDC divisions. The list of recommended courses can be found in **Chapter 8**.

2) Government agencies

The target is personnel from other government agencies who participated in the NESDC's training program on SEA. The involved agencies are responsible for a plan indicated in the SEA regulation. The training courses include SEA process following the SEA guideline, good practices for conducting SEA under a limited budget and time, the interconnection between SEA results and decision-making processes to improve the output of the plan development, and so on.

3) Academic institutes and consultant firms

Academic institutes and consultant firms are organizations that will be assigned by the plan owners to conduct a SEA project. Therefore, the training courses should enhance the understanding on the use of the SEA guideline including SEA process following

the SEA guideline especially the effective stakeholder participation process. Likewise, a training course that aims to increase the potential of personnel to be SEA specialists or trainers on conducting SEA process should be established.

4.2.4 Recommended next steps and studies on the SEA agenda

Research on the SEA is crucial for SEA to be advanced and consistent with Thailand's context. Thus, reviews on the results and lessons learnt from the past SEA projects in Thailand should be conducted and published in academic journals related to SEA at both domestic and international levels. This can promote the awareness and acceptance of SEA advancement in Thailand to the international community.

For the recommended studies to drive the SEA in the future, which should be done through joint research with academic institutions, the project suggests the following:

1) of SEA, such as the development of the alternative impact assessment tools, especially on the cumulative impact from the group of sustainability measures specified in the plan, and a method for incorporating impacts of climate change into the long-term development alternatives as one of the factors in selecting preferred alternative;

2) Participation in SEA process, such as the study and development of guideline for public participation that is suitable for the context of Thailand; and

3) SEA monitoring and evaluation, such as studying and adopting lessons learnt from applying SEA to several plan preparations or studying the usefulness of applying SEA to the planning compared to not applying SEA.

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