PTT Exploration and Production Public Company Limited

Social Return on Investment Guideline

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Rev.	Description of Revision	Authorized by	Effective Date
0	This Social Return on Investment (SROI) Guideline has been newly developed, with reference to some certain information from the previous version, SROI Guideline No. 12052-GDL-004 (2012), and hereby supersedes the aforementioned SROI Guideline No. 12052-GDL-004 (2012).	Bussaban Cheencharoen Vice President, Stakeholder Management and Corporate Social Responsibility Department	25 Feb 25

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1. Intent

This Social Return on Investment (SROI) guideline has been developed to serve as a framework for evaluating the social impact of PTT Exploration and Production Public Company Limited's (PTTEP) social development projects or called “CSR project”. Its purpose is to assess the effectiveness with which these projects have achieved their intended objectives. The assessment results will serve as a basis for enhancing existing social development projects or CSR and guiding the selection and development of initiatives in the future. Furthermore, the guideline outlines a step-by-step approach to conducting SROI assessments, along with practical recommendations for effectively utilizing the tools and applying the results to maximize impact.

2. Scope of Application

This guideline on SROI is applicable to PTTEP and its subsidiaries across all locations.

3. Definitions

Term	Description
Social Investment	The voluntary contributions made by the company to help communities sustainably address their development priorities.
Social Return on Investment	Social return on investment provides a framework for measuring the costs and benefits of social development projects. It accounts for not just the economic but also the social and environmental outcomes associated with these projects.
Stakeholder	Relevant individuals, organizations, or entities that experience an outcome, whether positive or negative, as a result of the project.
Activity	Operations or methods implemented to achieve the defined objectives of a social development project.
Input	Inputs are the contributions or resources needed to undertake the social development project. The focus is on the investment that PTTEP has made. This includes: • Direct contributions e.g. financial support, infrastructure, equipment; • Management cost e.g. salaries, implementation expenses, consultant fees; • In-kind contributions e.g. donated materials, and volunteer hours contributed by staff.

Term	Description
Output	Results that arise from conducting activities aligned with the project's objectives. These results can be measured directly and immediately upon the completion of the activity e.g. number of communities supported.
Outcome	Outcomes are the changes that have occurred as a result of an investment. Outcomes can be intended or unintended and positive or negative.
Indicator	Indicators provide a means of demonstrating or proving that change (i.e. outcome) has occurred and by how much. They can be based on information provided by those experiencing the outcome or from other sources.
Financial Proxy	Consideration of economic, social, and environmental outcomes from social development project in monetary terms.
Deadweight	The value of outcomes that would have happened even if the activity had not taken place. In some instances, the outcome or a portion of the outcome would have been achieved without the investment.
Attribution	The value of outcomes generated by other organizations that conduct projects similar to those implemented by PTTEP.
Displacement	The positive outcomes created by PTTEP through its social development project inadvertently led to negative outcomes for other stakeholders who were not the intended target group of the project.
Drop-off	The value of the outcomes generated from implementing a social development project which will affect stakeholders during the project implementation or shortly after the project ends. Before these outcomes are realized, there is a rate or level of impact that progressively decreases over time due to a lack of funding or deterioration of equipment. This impact is generally used for calculating outcomes over a period of one year.
Net Present Value	The calculation of the present value of social returns generated from a project or activity after deducting all investment costs.

4. Social Investment

Social investment (SI) refers to the voluntary contributions made by companies to help communities and broader society in sustainably addressing their development priorities[1]. When implemented effectively, SI can drive long-term benefits within communities through social development projects and foster an environment that supports the success of a company's operations[2].

4.1 Social Investment Strategy

Companies are shifting from philanthropic donations to strategically planned and implemented social development projects. Key to this transition is the development of comprehensive strategies for social development projects by businesses (Box 1).

1 International Finance Corporation. 2010, Strategic Community Investment Guide
2 Social investment should be designed to complement a company's efforts to mitigate its environmental and social impacts, not replace its mitigation obligations.

Box 1. Social Investment Strategy

A good social investment strategy should:

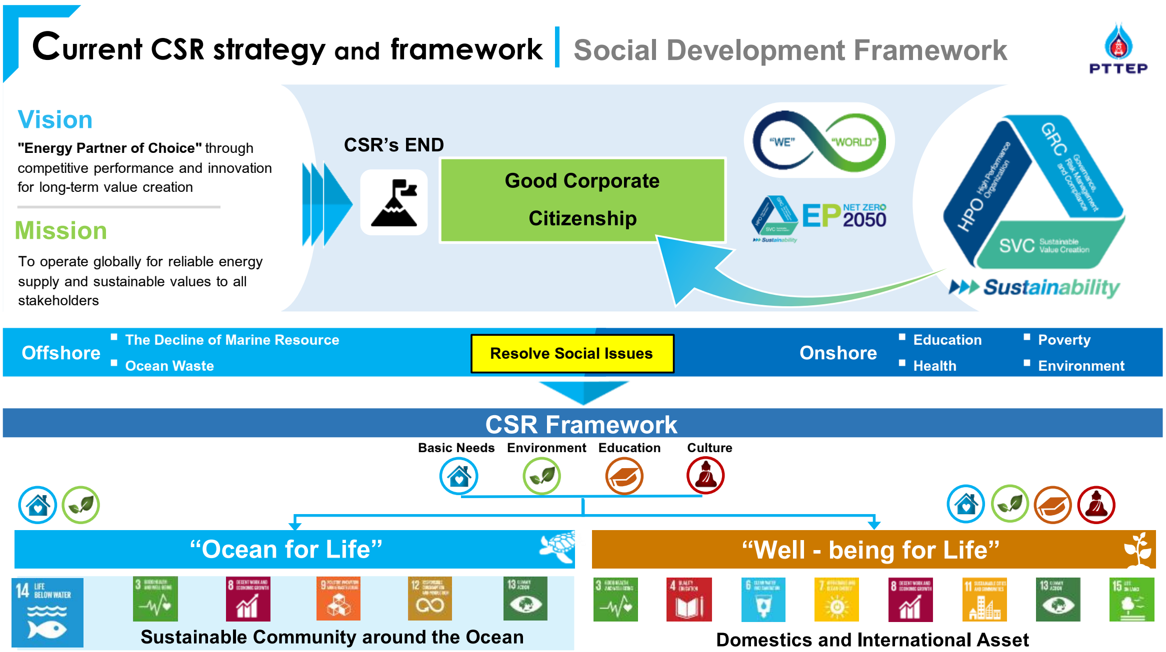
- Establish objectives and outline specific criteria and guiding principles. These will serve as benchmarks for screen new projects and selecting potential partners;
- Leverage the company's core resources and expertise to support the organization's long-term goals and create benefits for community, with a focus on utilizing the company's innovations, technology, or knowledge to promote and develop the community;
- Ensuring that social initiatives are aligned with the UN SDGs to address global challenges;
- Identify targeted stakeholder groups;
- Establish an iterative process for engaging with key stakeholders;
- Integrate, to the extent possible, with other company programs that involve some level of community engagement to the fullest extent possible, with the primary aim of generating social and community benefits;
- Gain an understanding of and establish connections with the local community context, while seeking ways to support local businesses through sourcing raw materials or employing community members or local entrepreneurs, in order to promote the local economy and strengthen the community; and
- Identify an implementation model and define the roles and responsibilities involved in its execution. This includes establishing a monitoring and evaluation process and a strategy for communicating the outcomes to stakeholders.

References:

- AA1000 Stakeholder Engagement Standard (AA1000SES), 2015
- SDG Compass: The Guide for Business Action on the SDGs, 2015
- Impact Reporting and Investment Standards (IRIS) by the Global Impact Investing Network (GIIN), 2019
- Global Reporting Initiative (GRI) Standards, 2020
- The Business for Social Responsibility (BSR) framework, 2020

PTTEP has established a Social Development Framework along with long-term goals to support the company's vision and mission within the context of the Sustainability Framework. The focus is on creating shared value for stakeholders, addressing community and societal issues in both offshore and onshore operational areas, and aligning with the United Nations Sustainable Development Goals (UN SDGs). The framework consists of two main strategies: "Ocean for Life" and "Well-being for Life." These strategies encompass projects and activities in four key areas: basic needs, education, environment, and culture (Figure 1).

Figure 1 Social Development Framework



4.2 Investing in Social Development Projects

PTTEP implements a variety of social development projects through its core social development framework and strategies. These projects are selected based on the following principles:

1) **Defined:** The project is clearly defined, including its objectives, inputs, outputs, and expected outcomes;

2) **Sustainable:** The project will create long-term positive outcomes for PTTEP, such as improvements in reputation, reduced operational costs and the promotion of a sustainable corporate culture of social responsibility;

3) **Responsive:** The project will help to mitigate PTTEP's social risks;

4) **Engaging:** Stakeholders have been engaged in the development and implementation of the project;

5) **Beneficial:** The project is expected to result in positive benefits for both the community and the environment; and

6) **Voluntary:** Employees have voluntarily contributed to the implementation of the project (during the working hours).

Considering emerging trends in social development projects is essential as it enhances positive outcomes, maximize investment efficiency, and meet stakeholder expectations. Keeping up with these trends ensures that investments effectively address important social and environmental issues. Currently, the key trends in social development projects are summarized as outlined in Box 2.

Box 2. Emerging Trends in Social Investment

There have been several changes in social investment over the past decade including:

- Integration of Technology for Impact Measurement: The adoption of advanced technologies such as blockchain and AI for monitoring and reporting social development project outcomes is growing, improving accuracy and accountability.
- Focus on Just Transitions: Companies are investing in projects that support communities affected by the transition to a low-carbon economy, ensuring equitable and fair transitions for workers and local economies.
- Partnerships for Social Innovation: There is an increasing trend towards collaborating with NGOs, startups, and academic institutions to drive social innovation.
- Alignment with Global Standards and Frameworks: Social investment strategies are aligning more closely with global standards such as the UN Sustainable Development Goals (SDGs) to ensure broader and more impactful contributions.

Source: International Energy Agency (IEA). (2024). Social Investment and Sustainability in Oil and Gas: Current Trends and Future Directions.

5. Social Return on Investment (SROI)

Social return on investment (SROI) provides a framework for measuring the costs and benefits of social development project. It accounts for not only the economic but also the social and environmental outcomes associated with these projects.

5.1 Principles of SROI Assessment

SROI compares the amount of money invested in a social development project with the social impacts or benefits achieved. It is underpinned by eight key principles (Box 3).

Box 3. SROI Principles

There are eight key principles:

1) Involve stakeholders: Defining the outcomes to be measured, methods of measurement, and the valuation of outcomes should involve a process of stakeholder engagement both within and outside the organization.
2) Understand what changes: To explain how change occurs, it is essential to understand all the changes experienced by stakeholders, including both positive and negative changes, as well as those that are intended and unintended.
3) Value the things that matter: Decisions about allocating resources for social development project need to consider the outcomes that stakeholders expect or value. This means that the level of importance of the outcomes will be determined by stakeholders' expectations.
4) Only include what is material: Outcomes that are important for resource allocation decisions are referred to as "material outcomes." These are the outcomes resulting from various activities that impact stakeholders. Prioritizing material outcomes is essential so that the organization can use its limited resources to maximize the value of these outcomes effectively.
5) Do not over-claim: Only claim the value of outcomes that are directly created by the project's activities.
6) Be transparent: The analysis of results must be transparent, verifiable, and involve reporting and considering outcomes based on input from stakeholders or other reliable sources.
7) Verify the result: Verifying the results presented in the report will help ensure the quality and credibility of the assessment.
8) Be responsive: Aim to achieve optimal social value through timely decision-making, financial management, and appropriate reporting.

Source: Social Value International, 2021 (https://www.socialvalueint.org/principles)

SROI has traditionally been used by non-governmental organizations to determine the likely return of social development projects. However, it is currently recognized by various organizations and is increasingly used to measure and communicate outcomes (Box 4). These include government agencies, private companies involved in social development projects, investors, and funders.

Box 4. Benefits of SROI

There are several benefits to using SROI to evaluate social development projects, for example:

- To maximize the community/ societal benefits arising from social development projects;
- To direct resources towards managing unexpected positive and negative outcomes;
- To promote the image of social development projects by transparently communicating the outcomes of projects;
- To increase the effectiveness of social development projects by assessing whether the objectives have been achieved;
- To encourage stakeholder engagement, improving understanding and communication of the value of outcomes; and
- To help organizations make strategic decisions based on SROI analysis.

Source: Social Value International, 2021 (https://www.socialvalueint.org/principles)

The results from an SROI evaluation are numerical figures that reflect the outcomes of an organization's social development projects. However, beyond presenting the analysis in quantitative terms, it is also necessary to include qualitative descriptions to gain a more comprehensive understanding of the impacts or benefits of social development projects.

The assessment of SROI is divided into two main types: Evaluative and Forecast, which differ as follows:

1) Evaluative: this is the measurement of actual outcomes after an activity or project has been completed, primary data such as the actual investment and the social outcomes that have already occurred. The purpose is to assess the effectiveness of the project in terms of how much social value has been created and to communicate these outcomes to stakeholders or funders.

2) Forecast: this involves forecasting potential future outcomes from social development projects, using hypothetical data or estimations, such as projected investments and anticipated social outcomes. It helps in making decisions related to resource allocation, planning activities, or assessing the feasibility of investments.

Both forms of SROI assessment can be applied to the same project, providing the organization with more comprehensive information, whether it is data on past outcomes or predictions for future results. This combined approach enhances strategic decision-making and allows for more effective project improvement in the future.

5.2 Evaluation Tool

Development of the tool has been guided by industry best practice. This includes the work that has been completed by the London Benchmarking Group (Box 5) and the SROI Network International.

Box 5. London Benchmarking Group

London Benchmarking Group (LBG) provides a recognized standard for measuring social investment, including a framework for assessing and reporting their achievements.

The LBG provides standard terminology for categorizing the types of social development projects in which companies invest. These categories are described in Appendix A. Using these categories enable comparisons to occur between companies.

More information about the LBG can be found at

https://b4si.net/wp-content/uploads/2018/10/LBG-Public-Guidance-Manual_2018.pdf

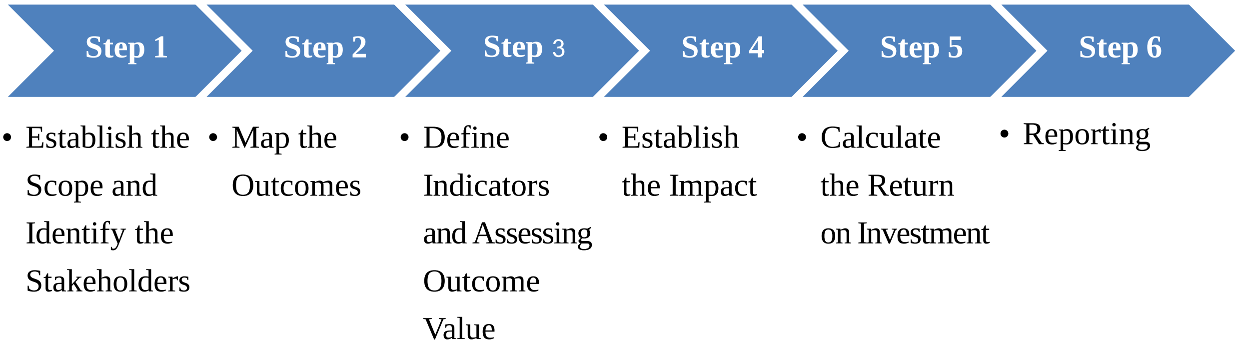
The tool has been developed using Microsoft Excel. The steps outlined in the template correspond to those described in the following sections. It is up to the assessor (or assessment team) to populate the template with specific information about social development projects. The template will then assist in calculating the SROI.

An example of SROI assessment case study, including details on how to use the template and lessons learned from the case study for future application, is provided in Appendix B.

5.3 SROI Assessment Process

The process for assessing SROI consists of six key steps (Figure 3), which are described in more detail below.

Figure 3 SROI Process



5.3.1 Step 1: Establish Scope and Identify the Stakeholders

The first step in SROI is to establish the scope and identify the relevant stakeholders – individuals, organizations or entities that experience change, whether positive or negative, as a result of social development projects. These people are also referred to as the beneficiaries (Figure 4).

Figure 4 Step 1: Establish Scope and Identify the Stakeholders

Step 1

Activity	Stakeholder	Quantity	Output	Outcome
1. Establishment of an Aquatic Animal Hatchery Learning Center	Coastal fishing groups (who may or may not be project members)	19	Coastal fishing groups (whether they are project members or not) can be hired to provide catering services (meals, snacks, beverages) for the opening ceremony of the Learning Center.	Coastal fishing groups (who may or may not be project members) earn additional income by providing catering services (food, snacks, drinks) for the opening ceremony of the Learning Center.
	Coastal fishing groups (project members)	19	Coastal fishing groups (project members) can use the Aquatic Animal Hatchery Learning Center as a central hub for organizing group activities.	Coastal fishing groups (project members) can save on rental fees (including water and electricity) for important periodic meetings.
	Coastal fishing groups (who may or may not be project members)	19	Coastal fishing groups (whether they are project members or not) can sell food, snacks, and beverages to visitors or training participants due to the presence of the Learning Center.	Coastal fishing groups (whether project members or not) earn additional income from selling food and beverages to visitors at the Learning Center.
	Offices of Marine and Coastal Resources 1, 2, 3, 4, 5, 8, 9 (covering 17 provinces around the Gulf of Thailand)	17	Local Marine and Coastal Resources offices can use of the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.	Local Marine and Coastal Resources offices can save on venue rental costs by using the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.

The scope of an SROI analysis defines what is being considered. It is typically determined through discussions regarding feasible measurements and desired improvements or communications. There are several factors that must be considered when setting the scope, including:

1) **Purpose**: What is the purpose of this SROI analysis?

2) **Audience**: Which target groups are involved in this SROI evaluation?

3) **Background**: What are the goals and objectives of your company and how it aims to make a difference?

4) **Resources**: What resources, such as staff time or money, will be needed? Are these resources available?

5) **Responsible Party**: Can the SROI analysis be done internally, or is external help needed?

6) **Activities**: Will you analyze all activities or focus on specific ones?

7) **Period of Time**: What timeframe are you looking at?

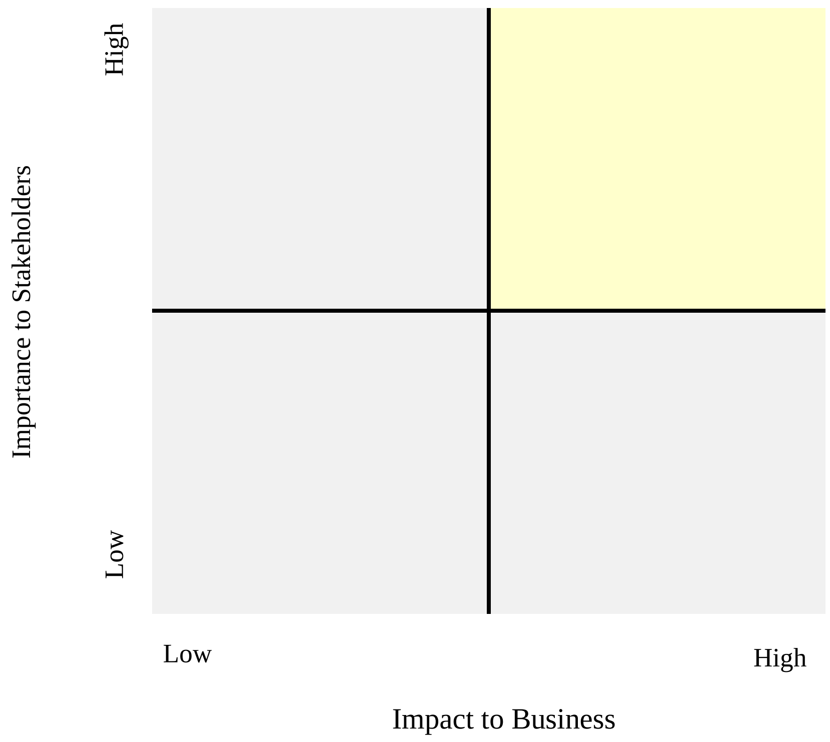
8) **Type of Assessment**: Whether the analysis is a forecast or an evaluation?

It is at this early stage that materiality should be assessed, as this will help identify the material issues—those that are important to both stakeholders and the company. Box 6 provides an overview of the process for assessing materiality.

Box 6. Materiality Assessment

Assessing materiality helps determine the most significant issues for a company and its stakeholders. The assessment process involves three steps. Step 1 is to identify relevant internal and external stakeholders (e.g. individuals or groups with an interest in or influence over a company's operations). Step 2 is to identify stakeholder issues, which are concerns related to the company and its operations. Step 3 is to map the stakeholder issues by comparing them with the company's concerns. An example matrix is provided in Appendix C.

The issues appearing in the top right quadrant of the matrix are of the greatest importance to stakeholders and are likely to have the most significant impact on the company. These issues (or social risks) should be reviewed to determine which can be addressed through social development projects. This information will also be valuable in identifying the outputs and outcomes of social development projects, ensuring that the final step (i.e. reporting) focuses on the issues that are relevant to both stakeholders and the company.



Due to budget and time constraints in SROI assessment, it may not be feasible to evaluate all social development projects. Therefore, selecting representative case studies from each area is crucial to reflect the outcomes and successes of these projects. When selecting projects for case studies, various criteria can be considered, such as the Delphi technique, which gathers expert opinions to identify projects with the potential to effectively demonstrate success across different areas. The selection criteria may include:

- Projects that align with the company's strategic goals.
- Projects with a manageable size and scope that can be assessed within time and budget constraints.
- Projects with accessible and reliable data that can be thoroughly evaluated.
- Projects that have a significant social impact and can sustain outcomes, providing long-term benefits for stakeholders after project completion. Additionally, the results should be applicable or expandable to other areas.

Practical Example: PTTEP's Social Development Projects

PTTEP has launched 10-year social development projects under the 'Ocean for Life' strategy and roadmap (2020 - 2030). The initiative aims to enhance biodiversity and restore resources in Thai seas, while generating employment opportunities and improving community income. Key flagship projects under this strategy include the Ocean Waste Management Project, Mangrove Reforestation Project, Aquatic Animal Hatchery Learning Center Project, Sea Turtle Conservation Project, Coastal Conservation Area and Fish Home Project, and Sea Products Development Project.

These projects might be considered suitable for SROI assessment because they align closely with the organization's values and strategic objectives. They are flagship initiatives within PTTEP's long-term strategy, involving significant budget allocations over an extended period. Evaluating their SROI is crucial for demonstrating their impact and ensuring accountability to stakeholders and decision-makers. It also has the potential to expand its outcomes to 17 provinces along the Gulf of Thailand.

Helpful Tip

These are some basic, general key characteristics of projects that are typically suitable or unsuitable for SROI assessment.

Suitable

- The project is evaluated for its return on investment by decision-makers who approve the budget for implementation.
- The project requires outcome indicators for evaluation before initiation and/or for future continuation.
- The project is initiated by the company and involves investment (project budget) to carry out activities.
- The project uses the budget to sustain operations over a long period and requires continuous budget allocation each year.
- The project is intended for presentation to the government and public sectors to showcase its success, requiring realistic social performance indicators.

Unsuitable

- The project is initiated by the organization without financial investment (i.e., no project budget).
- The project does not undergo evaluation of its return on investment by budget-approving decision-makers, nor does it face budget allocation issues.
- A small-scale project with short-term, non-continuous activities that experiences frequent changes in stakeholders. For example, annual donations to communities or contributions to charitable organizations, where the beneficiaries may change each time. These projects are not capable of generating sustainable, long-term social or economic impact.

Source: Guidelines and Criteria for Social Impact Assessment (SIA) and Social Return on Investment (SROI) for Sustainable Business Operations (ESG) (2023)

After the scope has been defined, the next step is to identify relevant stakeholders. This involves listing all individuals or groups who may have the capacity to influence, or be influenced by, the activities within the defined scope. This includes those who are impacted, either positively or negatively, regardless of whether the outcomes are intended or unintended.

It is important to note that including too many stakeholders may lead to controversies and may not necessarily contribute to achieving the desired goals and objectives. Therefore, it is crucial to evaluate the reasons for including or excluding each stakeholder and to systematically organize this information.

After identifying the relevant stakeholders, the next step is to plan stakeholder engagement. This process is essential for understanding the strengths and weaknesses of the activities being analyzed. Engagement methods may include inviting stakeholders to meetings or events, conducting surveys via email, or arranging one-on-one interviews. An effective approach also involves incorporating 'multipliers,' individuals who can connect with and provide insights from a broad range of stakeholders.

While stakeholder engagement is a fundamental principle of SROI assessment, it is not mandatory to engage with all identified stakeholders, particularly when the groups are large. In such cases, it may be necessary to select key individuals from these stakeholder groups whose insights can effectively represent the group as a whole. Criteria for selecting these key individuals include:

1) They must be stakeholders in the project area.

2) They should possess detailed knowledge of the project.

3) If the key person is a community or group leader, they can streamline the assessment process by coordinating with community members during interviews.

4) The key individual should be willing to collaborate during follow-up or retrospective data collection by the evaluator.

Typically, sampling 10-15% of project stakeholders is considered adequate. However, for projects with a smaller number of stakeholders, involving 5-10 key persons may sufficient.

Practical Example: Aquatic Animal Hatchery Learning Center Project

The Aquatic Animal Hatchery Learning Center Project is part of PTTEP's 10-year "Ocean for Life" strategy (2020-2030), aimed at enhancing biodiversity and increasing income for coastal communities across 17 provinces around the Gulf of Thailand. Launched in 2013, the project involves collaboration between PTTEP, local fisheries, Singhanakhon District in Songkhla Province, the National Institute of Coastal Aquaculture, the Department of Fisheries, the Department of Marine and Coastal Resources, and Rajamangala University of Technology Srivijaya to advance knowledge in aquatic animal breeding.

Example of results of the stakeholder identification process for the project:

Included Stakeholders	Reason for Inclusion
Local fisheries	These stakeholders directly benefit from increased knowledge and practices in aquatic animal breeding, which can enhance local livelihoods and income.
Department of Marine and Coastal Resources	The project supports the operations of the organization by advancing aquatic animal breeding practices, aligning with its mission, and helping to manage budgetary constraints.

Excluded Stakeholders	Reason for Exclusion
Tourism industry	While they may benefit from improved environmental conditions, their direct involvement in project activities is minimal.
Local governments in non-coastal areas	Authorities outside the project's geographical focus lack direct involvement in coastal resource management and conservation efforts.

5.3.2 Step 2: Map the Outcomes

The second step involves developing the Impact Map (also known as the Social Impact Pathway, Impact Value Chain, or similar) for social development projects. (Figure 5). The Impact Map outlines how the activities being analyzed utilize certain resources (inputs) to carry out activities (outputs), ultimately generating outcomes for stakeholders. Definitions of key terms associated with the Impact Map are provided in Table 1.

Figure 5 Step 2: Map the Outcomes

		Step 2		
Activity	Stakeholder	Quantity	Output	Outcome
1. Establishment of an Aquatic Animal Hatchery Learning Center	Coastal fishing groups (who may or may not be project members)	19	Coastal fishing groups (whether they are project members or not) can be hired to provide catering services (meals, snacks, beverages) for the opening ceremony of the Learning	Coastal fishing groups (who may or may not be project members) earn additional income by providing catering services (food, snacks, drinks) for the opening ceremony of the Learning
	Coastal fishing groups (project members)	19	Coastal fishing groups (project members) can use the Aquatic Animal Hatchery Learning Center as a central hub for organizing group activities.	Coastal fishing groups (project members) can save on rental fees (including water and electricity) for important periodic meetings.
	Coastal fishing groups (who may or may not be project members)	19	Coastal fishing groups (whether they are project members or not) can sell food, snacks, and beverages to visitors or training participants due to the presence of the Learning Center.	Coastal fishing groups (whether project members or not) earn additional income from selling food and beverages to visitors at the Learning Center.
	Offices of Marine and Coastal Resources 1, 2, 3, 4, 5, 8, 9 (covering 17 provinces around the Gulf of Thailand)	17	Local Marine and Coastal Resources offices can use of the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.	Local Marine and Coastal Resources offices can save on venue rental costs by using the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.

Table 1 Activity, Inputs, Outputs and Outcomes

Term	Description
Activity	Processes or approaches employed to achieve the defined objectives of social development project.
Input	Inputs refer to the contributions or resources required to carry out a social development project, with a particular emphasis on those provided by PTTEP. These may include, but are not limited to: • Direct contributions: Such as financial support, infrastructure, or equipment; • Management cost: Including salaries, overhead expenses, consultant fees; • In-kind contributions: Such as donated materials; and • Volunteer hours: Including time contributed by staff.
Output	Results that arise from conducting activities aligned with the project's objectives. These results are measurable and can be observed immediately upon the activity's completion.
Outcome	Outcomes represent the changes resulting from a social development project. These changes can be intentional or unintentional and may have positive or negative impacts.

Helpful Tip

The terms outputs and outcomes are often confused. A simple way to distinguish them is that outputs describe ‘what we do’ while outcomes reflect ‘what difference we make’.

Practical Example: PTTEP's Aquatic Animal Hatchery Learning Center Project

Activity:

- Establishing the aquatic animal hatchery learning center
- Organizing educational and awareness-raising activities
- Hatching aquatic animals and releasing them back into nature
- Creating relevant databases such as aquatic animal capture and community income
- Establishing network for natural resources and marine environmental protection

Input:

- Project budget of 32,275,495 THB

Output:

- Aquatic animal hatchery learning center
- Educational activities on natural resources and marine environmental protection
- Number of economic aquatic animals hatched and released into nature
- Databases such as aquatic animal capture volume and community income
- Number of natural resources and marine environmental protection networks

Outcome

- Local schools can take students on field trips at the learning center and reduce the costs of organizing field trips outside the area.
- Local fishermen experience higher income due to the increased quantity of aquatic animals.
- Local government organizations and other relevant governmental agencies reduce limitations in budget allocation for educational and networking activities, as well as database development.

The Impact Map should be developed with the involvement of stakeholders. However, it might also be beneficial to draft the initial version of the Impact Map prior to stakeholder engagement in order to establish a preliminary direction for the impact. In this case, the map can be outlined based on the project's objectives and anticipated outcomes. Nevertheless, it is essential to revisit and revise the Impact Map following the completion of the stakeholder engagement process.

Practical Example: Aquatic Animal Hatchery Learning Center Project

One of the key activities of the Aquatic Animal Hatchery Learning Center Project is hatching aquatic animals and releasing them back into their natural habitat. The increased number of economically valuable aquatic animals released contributes to greater resources, thereby enhancing income and livelihoods for coastal fishermen. Based on the positive impact observed by stakeholders, the Impact Map can be outlined as follows:

Inputs	Activity	Stakeholder	Output	Outcome
Project budget of 32,275,495 THB	Breeding aquatic animals and releasing them back into the sea.	Coastal fishermen in the area	Aquatic species of economic importance bred and released back into the natural habitat.	Increase in income due to higher quantities of aquatic species.

It is generally acceptable and common practice to estimate the inputs; particularly when it comes to management-related salaries, as this is sensitive information. It is recommended to consult the relevant department or the Human Resources Department when salary information is required and to request a summary of salary costs, rather than specific details pertaining to any individual's salary.

Once the inputs have been calculated, the next step is to identify the outputs and outcomes resulting from the social development project. Table 2 illustrates examples of outputs and outcomes. It is unlikely that an outcome will be associated with every output; for instance, some outcomes may take time to materialize or become evident, making it challenging to identify or measure the results in the short term or during initial evaluations.

Table 2 Examples of Outputs and Outcomes

Outputs	Outcomes
Aquatic animal hatchery learning center	Local schools can take students on field trips at the learning center and reduce the costs for organizing field trips outside the area
Educational activities on natural resources and marine environmental protection	Local government organizations and other relevant government agencies reduce limitations in budget allocation for educational and networking activities, as well as database development.
Economic aquatic animals hatched and released into nature	Local fishermen experience higher income due to increased quantity of aquatic animals.

At the commencement of any new social development project, the objectives should be clearly defined. While the outputs are typically aligned with the objectives, this alignment is not always guaranteed. Occasionally, the objectives may not align with the actual outputs or outcomes. For example, the social development project objectives may not be fully realized, or unforeseen outcomes may emerge. The results of the evaluation process can help determine why this has occurred.

5.3.3 Step 3: Define Indicators and Assess Outcome Value

Helpful Tip

An efficient and effective approach to identifying inputs, outputs and outcomes is through a workshop. This should include key members responsible for developing and implementing the social development project. While this process may require several hours, it ensures that feedback from all relevant staff is thoroughly captured.

Once the outcomes for stakeholders have been mapped and defined, the next step is to establish outcome indicators and utilize them to gather evidence of these outcomes and the value they generate (Figure 6). This process involves identifying relevant indicators and selecting appropriate financial proxies (Table 3).

Figure 6 Step 3: Define Indicators and Assess Outcome Value

Activity	Outcome	Step 3			
		Indicator		Financial Proxy	
		Quantity	Description	Quantity	Description
1. Establishment of an Aquatic Animal Hatchery Learning Center	Coastal fishing groups (who may or may not be project members) earn additional income by providing catering services (food, snacks, drinks) for the opening ceremony of the Learning Center.	1	Number of times catering services are provided (times/year)	20,000.00	Catering service fee (THB/time)
	Coastal fishing groups (project members) can save on rental fees (including water and electricity) for important periodic meetings.	4	Number of meetings held by coastal fishing groups (times/year)	457	Venue rental cost for activities (THB/time)
	Coastal fishing groups (whether project members or not) earn additional income from selling food and beverages to visitors at the Learning Center.	174	Number of meals, snacks, and beverages provided to visitors (sets/year)	110	Value of food, snacks, and beverages (THB/set)
	Local Marine and Coastal Resources offices can save on venue rental costs by using the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.	12	Number of times the center is used for organizing activities (times/year)	1,036	Venue rental cost (THB/time)

Table 3 Indicators and Financial Proxies

Term	Description
Indicator	Indicators serve as a means to demonstrate or substantiate that change (i.e. outcome) has occurred and to quantify its extent. They may be based on information provided by those directly experiencing the outcome or derived from other sources.
Financial Proxy	Consideration of the economic, social, and environmental outcomes of social development project in monetary terms

Indicators should be assigned to each of the outcomes identified in Step 2. These indicators are essential for determining whether the outcome has occurred and to what extent. Whenever feasible, a combination of subjective indicators (such as personal perceptions, opinions, or self-assessments) and objective indicators (such as measurable and verifiable data) should be employed. Table 4 provides an example of indicators and financial proxies.

Table 4 Examples of Indicators and Financial Proxies

Outcome	Indicator	Financial Proxy
Local schools can take students on field trips at the learning center and reduce the costs of organizing field trips outside the area	Number of field trips organized offsite	Difference in expenses between local field trips and excursions beyond the local area
Local government organizations and other relevant government agencies can save on budget for educational and networking activities, as well as database development.	Number of work plans for educational and networking activities, as well as database development	Expense of educational and networking activities, as well as database development which could be avoided
Local fishermen experience higher income due to the increased quantity of aquatic animals.	Increase the volume of aquatic animals caught	Value of aquatic animals caught

Once indicators have been selected, a monitoring program should be established to collect relevant data (Box 7). The monitoring program will ensure that relevant data is gathered over time. This information is then integrated into the template to assist in assessing the SROI.

Box 7. Monitoring Program

A monitoring program should clearly define the data to be collected, assign responsibility for data collection, and specify the frequency of data collection. It is important that the program is supported by a data management system (i.e. to store the collected data). A systematic approach to data collection will help minimize delays in completing the SROI evaluation.

Establishing a monitoring program at the outset of a project is the most cost-effective approach, as it allows for data collection throughout the implementation of the project, rather than requiring retrospective data gathering.

Helpful Tip

It is important that when selecting indicators consideration be given to the process involved in collecting the relevant data. Examples of questions to consider include:

- Can the indicator be reasonably measured?
- What is the cost of collecting the relevant data?
- Will the indicator provide evidence that the outcome has occurred?
- Does the indicator help determine the extent to which the outcome has occurred?

Currently, there are standards and metrics used to measure and report social and environmental impacts, focusing on systematic and consistent measurement at an international level. These standards enable investors to more easily compare the performance between different projects or investments. Additionally, they can serve as supplementary tools for collecting quantitative data related to the outcomes to be assessed in the SROI calculation process. These standards are known as the Impact Reporting and Investment Standards (IRIS), which are used for measuring and reporting the social and environmental impacts resulting from investments. The principles and key points of these standards are summarized in Box 8.

Box 8. Principles and Key Points of IRIS

- IRIS emphasizes the use of standardized and globally consistent metrics, allowing investors to comprehensively assess the impact of different projects or investments and compare performance across them.
- Using IRIS standards helps ensure transparency in data reporting and enhances credibility in measuring and assessing social and environmental impacts, benefiting both investors and stakeholders.
- IRIS offers a set of metrics covering various aspects of impact, such as access to public services, job creation, and environmental conservation, allowing for a tangible measurement of the outcomes resulting from investments.
- While IRIS provides standardized metrics, it also offers flexibility to adapt to different contexts and investment goals, making it suitable for a wide range of industries or project types

The IRIS library, accessible through http://www.iris.thegiin.org/, can be used as a resource when elaborating and defining these aspects.

Remark: As IRIS is a relatively new initiative, the SROI process may result in the need for indicators not yet available on IRIS.

Once indicators have been selected, the next step is to determine the duration of the outcome (i.e., the number of years it will last). The duration is likely to vary by outcome, even within a single social development project. Estimating the duration is acceptable, provided that each estimation is supported by a clear rationale. There is space in the template to document this rationale. Recording this information will be valuable during the reporting process and for future assessments. The following factors should be considered when estimating the duration of outcomes:

1) The nature of the outcome, such as short-term impacts (e.g., temporary job creation) or long-term impacts (e.g., behavioral changes or knowledge enhancement), will influence the duration of the outcome.

2) Consider whether the outcome can be sustained without additional support after the project concludes, such as improvements in infrastructure or enhanced knowledge that is anticipated to endure over an extended period.

3) The economic, social, and environmental conditions that may influence the longevity of the outcome, such as changes in government policy or shifting economic conditions.

4) The involvement and support from stakeholders, such as ongoing collaboration with stakeholders or government partners who support and monitor the project, can affect the sustainability and duration of the outcome.

Ongoing data collection and evaluation can offer valuable insights into the duration of the outcomes and facilitate more informed adjustments to time predictions.

Once the duration is determined, the next step is to assign a value to the outcomes (identified in Step 2). In SROI financial proxies are used to estimate this value[3]. Some financial proxies are straightforward to define, such as cost savings or increases in income generated. However, other proxies may be more challenging to source. Techniques such as contingent valuation (i.e. asking people to assess the value they place on something) and revealed preference (i.e. inferring valuations from related market-traded goods) may be required (Box 9). A list of example proxies is provided in Appendix D.

[3] All prices applied to items in day-to-day life are approximations or proxies. For some items, such as a pint of milk, there is generally a high degree of agreement and consistency in the price; however, for other items, such as a house, there is significant variation in the price. Value, or the price placed on items is inherently subjective, and it is through markets that these prices are determined and regulated.

Box 9. Valuation Methodologies

Contingent valuation and stated preference techniques assess an individual's willingness to pay (or accept compensation) for a particular item or service. This is achieved by directly asking people to indicate the value they place on something. The process typically involves (1) evaluating the relative value of one item compared to another, or (2) inquiring how much an individual would be willing to pay to obtain or avoid something.

Revealed preference infers the value of an item based on related market-traded goods, often reflecting consumer purchasing behavior. Hedonic pricing is a form of revealed preference commonly used to assess the value of environmental amenities by examining their impact on property prices.

Source: SROI Value International. 2019. Standard on applying Principle 3: Value the things that matter.

Not only should the financial proxy be identified, but also the source of the proxy and any assumptions made during its selection. There is designated space in the template to record this information, which will be utilized during the reporting process.

It is important to recognize that from time to time, it may not be possible assign a financial proxy to an outcome, which is acceptable. For example, maintaining social equity or fostering community cohesion are qualitative outcomes that cannot easily be converted into numerical or financial values. In such cases, methods such as interviews or surveys with stakeholders can be employed to assess the social impact, such as the willingness to pay for preserving fairness or promoting social unity.

Practical Example: Aquatic Animal Hatchery Learning Center Project

Continuing with the example of project outcomes related to increased income for coastal fishermen due to higher quantities of aquatic species, the indicator assigned to this outcome and the financial proxy considered appropriate to reflect the value of this outcome are presented below:

Outcome	Indicator	Financial Proxy
Increase in income due to higher quantities of aquatic species.	The increased quantity of aquatic species caught (kilograms or tons per year)	The value of the aquatic species caught (Baht per kilogram or ton)

At this stage, it might be useful to browse through the IRIS library to find standardized indicators for identified outcomes. The picture below shows a list of metrics under the category 'Oceans and Coastal Zones' which might be relevant for the assessment of the aquatic animal hatchery learning center project impacts.

ID	Metric Name	Definition
PD4686	Livestock/Fish Type	Type of livestock product(s) produced by the organization during the reporting period.
PI5935	Smallholder Agricultural Yield	Total agricultural yield of farmer client of the organization during the reporting period.
PI9151	Number of Threatened Species	Number of threatened species present on land directly controlled by the organization during
PD6429	Species Conservation Status	Describes the conservation status of species during the reporting period. Choose all that
PD2584	Species Area of Habitat	Describes the area of habitat available to a species within the species' range during the
PD6363	Species Extinction Threat	Describes applicable threats to species during the reporting period. Choose all that apply:
OI2767	Protected Area Connectedness Assessment	Describes whether the organization has assessed protected area connectedness to evaluate
PI6504	Number of Routes Served	Number of directly connected port pairs or routes served during the reporting period.
OI1010	Vehicle/Container Inactive Hours	Number of hours spent inactive or waiting (inclusive of turnaround and dwell time) by a
PI2112	Vehicle Distance Traveled	Distance traveled (in miles or kilometers) by vehicles owned, operated, or sold by the
PI8394	Space Per Passenger	Amount of space per passenger (in an airport, passenger port, or vehicle) during the
PI6471	Average Vehicle Speed	Average speed of vehicles on roads, waterways, or in flight during the reporting period.
PD3922	Type of Land Area	Describes the type(s) of land present on hectares directly or indirectly controlled by the
PD8494	Ecosystem Services Provided	Describes the ecosystem services provided by land directly or indirectly controlled by the
PI2538	Length of Coastline Restored	Length of marine or freshwater coastline under ecological restoration management on
PI3239	Length of Streams Present	Length of freshwater streams present during the reporting period on protected land, land
PI5840	Length of Coastline Present	Length of marine or freshwater coastline present during the reporting period on protected
PI6885	Length of Streams Restored	Length of freshwater streams under ecological restoration management on protected land,
PI7170	Area of Fresh Water Bodies Present	Surface area of freshwater bodies present during the reporting period on protected land,
OI9278	Water Treatment Level	Describes the level of treatment that discharged water received during the reporting period.

Source: IRIS, v5.2 (2022)

5.3.4 Step 4: Establish the Impact

The fourth step is to establish the impact (Figure 7). This step focuses on assessing whether the outcomes analyzed directly result from the social development projects and activities. It involves evaluating whether these outcomes are solely a consequence of project's activities or would have occurred independently (Deadweight), as well as determining the proportion of the outcome attributable to project's activities (Attribution) (Table 5). This step is crucial for mitigating the risk of overclaiming, thereby enhancing the credibility of the analysis.

Figure 7 Step 4: Establish the Impact

		Step 4			
Activity	Outcome	Deadweight		Attribution	
		Ratio	Rationale	Ratio	Rationale
1. Establishment of an Aquatic Animal Hatchery Learning Center	Coastal fishing groups (who may or may not be project members) earn additional income by providing catering services (food, snacks, drinks) for the opening ceremony of the Learning Center.	0%	Without support from PTTEP, this outcome would not occur; therefore, Deadweight is not considered.	0%	No other organization is carrying out a project similar to the Aquatic Animal Hatchery Learning Center. Therefore, Attribution is not considered.
	Coastal fishing groups (project members) can save on rental fees (including water and electricity) for important periodic meetings.	30%	Without support from PTTEP, this outcome might still naturally occur at a rate of 30%, as alternative facilities are available through, such as the village leader's office or premises of the fisheries association.	50%	The reduction in venue rental costs for the coastal fishing group may be primarily attributed to the availability of alternative venues, which accounts for 50% of the outcome.
	Coastal fishing groups (whether project members or not) earn additional income from selling food and beverages to visitors at the Learning Center.	0%	Without support from PTTEP, this outcome would not occur; therefore, Deadweight is not considered.	0%	No other organization is carrying out a project similar to the Aquatic Animal Hatchery Learning Center. Therefore, Attribution is not considered.
	Local Marine and Coastal Resources offices can save on venue rental costs by using the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.	50%	Without support from PTTEP,This outcome might still naturally occur at a rate of 50%, as there are facilities provided by other government agencies, such as subdistrict administrative organizations (SAOs) or municipalities, that can be used for meetings.	75%	The reduction in venue rental costs for the Marine and Coastal Resources Office may be largely due to the availability of other venue options, contributing to approximately 75% of the outcome.

Table 5 Deadweight and Attribution

Term	Description
Deadweight	Deadweight is a measure of the extent to which an outcome would have occurred even if the activity had not taken place. In certain instances, the outcome or a portion of the outcome would have been achieved without the social development project.
Attribution	Attribution is an assessment of the extent to which the outcome is attributable to other organizations, projects or individuals in the area. It is often challenging to determine attribution precisely. In cases where a precise assessment cannot be made, the following methods should be employed: • Conduct interviews with relevant individuals to gather information on the involvement of each organization or person. • Compare with case studies or similar projects (Benchmarking) to determine whether they align with the expected direction. • Examine data and factors that may influence the results to identify the probable causes of those outcomes (Causal Analysis).

Deadweight and attribution are calculated as percentages, for example, "X" percent of the outcome would have occurred without the social development project and can be attributed to another project.

Helpful Tip

Limit the amount of effort spent searching for information to establish deadweight and attribution. This can be achieved by setting a time limit for Step 4 to enhance the efficiency and effectiveness of the evaluation process, such as:

- Setting a clear time limit, such as establishing a maximum duration for data collection or analysis in Step 4 to avoid spending excessive time.
- Defining the scope of data by specifying the required sources or the number of sources to be reviewed, such as using only three primary sources.
- Making optimal use of existing data and analysis results, rather than seeking additional new data.
- If the information is insufficient or no new useful insights are found within the allocated time, rely on the existing data to make a decision.

For deadweight, it is important to understand the broader context of activities occurring in the area. If other projects are underway, it is likely that a portion of the outcome would have occurred even without PTTEP's social development projects.

The most straightforward way to assess attribution is to identify the other contributors to the outcome. For example, if five other organizations are involved, the attribution is 20 percent. Box 10 outlines several key considerations when determining deadweight and attribution.

Box 10. Deadweight and Attribution Considerations

Although deadweight and attribution must be determined on a case-by-case basis, there are a few issues that may be useful to consider when assessing both.

The simplest way to assess deadweight is to examine trends over time. There are two key questions to ask:

- How have local trends changed since the social development project was made?
- How do these trends compare to those observed in the broader population?

For attribution, the key question is: what other projects may be contributing to the outcome?

Deadweight and attribution are always estimations. Therefore, it is important to document the assumptions made during the process of determining deadweight and attribution. This will ensure that these assumptions can be reported in Step 6.

In addition to the key aspects like Deadweight and Attribution, Displacement is another component of impact, assessing how much the outcome has replaced other outcomes. Displacement occurs when positive outcomes for one stakeholder group negatively affect another, such as providing job opportunities to one group at the expense of another's employment opportunities. While not applicable to every SROI analysis, it is important to consider its possibility. This can be achieved by engaging with stakeholders to assess whether they believe the social development project has caused negative impacts on any groups. When recording baseline impact data, it is important to clearly specify the types of displacement and indicate the percentage of both positive and negative impacts they represent.

5.3.5 Step 5: Calculate the Return on Investment

Step 5 involves calculating the return on investment (Figure 8). This step includes assessing drop-off, calculating net present value (NPV), and conducting a sensitivity analysis.

Figure 8 Step 5: Calculate the Return on Investment

		Step 5										
Activity	Outcome	Drop-off		Social Return on Investment								
		Ratio	Rationale	Year 1	Year 2	Year 3	Year 4	Year 5	Total Value	Discount Rate	NPV
1. Establishment of an Aquatic Animal Hatchery Learning Center	Coastal fishing groups (who may or may not be project members) earn additional income by providing catering services (food, snacks, drinks) for the opening ceremony of the Learning Center.	0%	Drop-off is not considered because once the Learning Center is established, it will provide continuous benefits within the center's area.	10,000.00	0.00	0.00	0.00	0.00	10,000.00	10.23%	9,071.94
	Coastal fishing groups (project members) can save on rental fees (including water and electricity) for important periodic meetings.	0%	Drop-off is not considered because once the Learning Center is established, it will provide continuous benefits within the center's area.	500.00	500.00	500.00	500.00	500.00	2,500.00	10.23%	1,884.31
	Coastal fishing groups (whether project members or not) earn additional income from selling food and beverages to visitors at the Learning Center.	40%	it is believed that the survival of these species will be affected by other factors, leading to a decline in their abundance. Therefore, a drop-off rate of 40% is applied, based on a study by the Coastal Aquaculture Research Institute on the survival rate of aquatic animals released in conservation areas in Songkhla province.	10,000.00	6,000.00	3,600.00	2,160.00	1,296.00	23,056.00	10.23%	18,957.17
	Local Marine and Coastal Resources offices can save on venue rental costs by using the Aquatic Economic Species Hatchery Learning Center for activities such as information briefings with coastal fishing groups and various training sessions.	0%	Drop-off is not considered because once the Learning Center is established, it will provide continuous benefits within the center's area.	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	7,500.00	10.23%	5,652.93

For outcomes lasting more than one year, it is important to consider that their amount is likely to diminish over time or be influenced by other factors, thereby reducing attribution to the company. This is where drop-off considerations become relevant. Drop-off is a measure of the deterioration of an outcome over time. In other words, the outcome is likely to decrease over time.

Drop-off is an estimated percentage which is deducted from the impact for the duration of the outcome. (The impact is established in Step 4 and the duration is established in Step 5.)

Practical Example: Aquatic Animal Hatchery Learning Center Project

Referring to previously presented outcome related to increased income for coastal fishermen due to higher quantities of aquatic species, it is established in Step 3 that the outcome can last beyond the time of intervention. However, it is believed that the survival of these species will be affected by other factors, leading to a decline in their abundance. Therefore, a drop-off rate of 40% is applied, based on a study by the Coastal Aquaculture Research Institute on the survival rate of aquatic animals released in conservation areas in Songkhla province.

Supposing that coastal fishermen experience a higher income of 10,000 THB in the first year after a project intervention, the impact diminishes over time due to a 40% drop-off rate. In the second year, their income decreases to 6,000 THB (a 40% reduction from 10,000 THB). By the third year, their income further declines to 3,600 THB (a 40% reduction from 6,000 THB). This calculation demonstrates how the drop-off rate affects the sustained impact of the project on fishermen's income over three years.

After establishing the drop-off, the SROI is calculated by following these steps:

1) Multiply the financial proxy by the quantity of the outcome. to obtain a total value for each outcome.

2) Deduct any deadweight, attribution, and displacement (if applicable) from the total value.

3) Repeat steps 1 and 2 for each outcome to ensure all outcomes are accounted for.

4) Add all total values together to calculate the overall impact.

The evaluation tool that has been developed includes embedded formulas, which assist in performing the calculations outlined above with convenience and accuracy. Subsequently, the evaluator is required to calculate the NPV by aggregating costs and benefits over different time periods, allowing for effective comparison, a process called discounting is used. This process is based on the understanding that people generally prefer to receive money today rather than in the future due to risk or the opportunity cost involved. The Present Value (PV) of benefits can be calculated using the formula below. The NPV is then determined by subtracting the value of the input from the present value of the outcomes.

$$\boldsymbol{Present\ Value} = \frac{\textbf{Value of impact in Year 1}}{(\mathbf{1}+\boldsymbol{r})} + \frac{\textbf{Value of impact in Year 2}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} + \frac{\textbf{Value of impact in Year 3}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{3}}}$$

Where r represents the discount rate.

NPV = [Present value of benefits] - [Value of investments]

Helpful Tip

The easiest way to calculate present value (PV) is to use Microsoft Excel, which has a built-in PV formula that automatically generates the PV. Additionally, the evaluation tool has embedded formulas to streamline the calculation of PV. Many SROI assessments typically use a basic discount rate of 3.5%, in line with standard practices in economic evaluation. However, for private sector projects, the Weighted Average Cost of Capital (WACC) can be applied. WACC reflects the average return a company must provide to its investors, considering both the cost of equity and the cost of debt in the assessment.

Sources:

- Achavanuntakul, S., & Yamla-or, P. (2017). Handbook for Social Impact Assessment and Social Return on Investment (Revised Edition).
- Organisation for Economic Co-operation and Development (OECD), Cost-Benefit Analysis and the Environment, 2021

The SROI ratio is then calculated by dividing the PV by the value of the inputs. Alternatively, the net SROI ratio can be calculated by dividing the NPV by the value of the inputs.

SROI = Present Value (PV)/ Value of Inputs

Or Net SROI ratio = Net Present Value (NPV) / Net Value of Inputs

To assess reliability, conducting sensitivity analysis after calculating the SROI ratio is recommended, examining factors such as the discount rate, the time period used for the evaluation, and estimates for deadweight, attribution, and drop-off. It helps the evaluator understand which factors have the greatest impact on the SROI results, allowing for adjustments in strategies or operations as needed to maximize the benefits of the project.

The focus of a sensitivity analysis is on assessing the extent to which the results would change if one or more of the assumptions were altered. This is done by adjusting key values in the tool to understand which values significantly affect the SROI assessment. The recommended approach involves calculating the necessary adjustments to each estimate to achieve a social return ratio of 1:1. It is important to reflect on the assumptions associated with these values to ensure their appropriateness.

5.3.6 Step 6: Reporting

The last step is reporting the outcomes from the SROI assessment. The report should offer readers a clear understanding of the inputs, outputs, outcomes, and impacts associated with the social development project, as well as the SROI. The SROI should be presented as a ratio—for example, for every "X" Baht invested, a return of "X" Baht is achieved (Box 11).

Box 11. Social Return on Investment

Most investments typically achieve, at a minimum, a ratio of 1:1, meaning that for every 1 baht invested, 1 baht in return is generated. However, highly effective investments often yield higher returns, particularly for projects that produce long-term outcomes. The return on these investments tends to increase as the results persist over an extended period.

PTTEP has established a focus on delivering positive outcomes to communities and society, with a target for the social development projects to achieve an SROI ratio of at least 2:1.

As part of the reporting process, the materiality assessment should be revisited. It is important that key stakeholder issues (i.e. material issues) are addressed, to the extent possible, during the reporting process. The final report should include a description of the assumptions made in calculating the SROI, as well as the sources of information used (e.g., financial proxies).

A number of helpful resources have been provided in Box 12. These resources will support those involved in implementing SROI.

Box 12. Useful Resources

Below are a number of resources that may assist those responsible for assessing SROI. The organizations listed are actively involved in developing the field of SROI or actively assess the SROI of their activities.

SROI Network International – https://www.socialvalueint.org/

Social Value UK - https://socialvalueuk.org/

The Social Impact Investment Taskforce - https://www.socialimpactinvestment.org/lander

Global Impact Investing Network (GIIN) - https://thegiin.org/

Organizations should leverage the assessment results of SROI assessments, ensuring they maximize social benefits in alignment with their intended goals. These insights can also guide the design and development of future social development projects, improving investment efficiency and amplifying their impact on communities and society at large. Additionally, the assessment results should inform decisions on whether to continue, expand, or replicate projects based on demonstrated effectiveness. This approach enables a more strategic and efficient allocation of resources.

Additionally, assessment results should be used to improve systems for tracking and collecting key data, such as projected outcomes, deadweight, attribution, and displacement. Refining these systems will contribute to more accurate and effective SROI assessments in the future, ensuring that the organization can consistently measure and enhance the impact of its social development projects.

5.4 Key Points to Consider in Evaluating SROI

In evaluating SROI, several key considerations are essential to ensure that the assessment is accurate and reliable. These key considerations include:

1) Compare the net benefits gained by society, assess the outcomes before and after the project, or with and without the project.

2) Assess the project's benefits in line with its expected impacts. avoiding overclaiming benefits unrelated to the project and double counting gains that offset reduced costs.

3) Assess SROI over three timeframes:

- Ex-Ante Evaluation: Predict future outcomes to plan actions for maximum societal impact.
- On-going Evaluation: Monitor project implementation to ensure adherence to plans and identify necessary corrective actions.
- Ex-Post Evaluation: Utilize the project outcomes to analyze the actual results and changes that have occurred.

4) Consider realistic minimum criteria for expected benefits based on available data when conducting ex-ante evaluations or assessing anticipated future impacts. Anticipate potential shocks or sensitivities that could hinder the achievement of project objectives.

5) Examine the adoption period of project outcomes used by beneficiaries.

6) Establish a discount rate that reflects the opportunity cost of investment.

7) Consider the appropriateness of NPV, SROI, and Internal Rate of Return (IRR). Verify calculations and analyze reasons for projects with exceptionally high or low values in a short period.

8) Utilize the synthesized results of SROI analysis to reflect the value of investments, identify project problems and obstacles, lesson learned, and consider project approvals or expansions.

9) Adhere to the cultural norms of impact evaluation, such as "Avoiding bias or influence in impact assessment." Evaluators should maintain a neutral perspective.

10) SROI analysis should focus specifically on the value of social outcomes and should not include financial benefits that apply solely to the organization, such as profit margins, cost savings, or operational efficiencies that do not result in social outcomes. Assessors should clearly distinguish between social outcomes and indicators related to business performance to ensure the accuracy of the analysis. Furthermore, social outcomes should exclude the PR value of the project or the company, as such value may not accurately reflect the true social outcomes achieved.

11) Conducting an SROI analysis should adhere to the Personal Data Protection Act (PDPA). This includes obtaining consent from data providers before collecting any information and clearly explaining the purpose of data use. Additionally, robust data security measures should be in place to prevent unauthorized access, alongside clear data management policies such as deleting data when no longer necessary. When publishing SROI analysis results, any personally identifiable information should be excluded to safeguard the rights and privacy of the relevant stakeholders.

5.5 Refinement Guidelines for Social Development Projects Following SROI Analysis

Following the analysis and evaluation of the SROI, strategies for enhancing social development projects can be developed based on the assessment results, with the goal of improving the effectiveness and impact of future projects. The following approaches can be considered:

1) Upon reviewing the results from the SROI evaluation, consideration can be given to additional activities that can generate sustainable social outcomes in the long term. For instance, activities that foster collaborative networks between various sectors, such as government, private enterprises, and communities. It is also important to assess whether any unintended negative outcomes have emerged and to establish strategies for mitigating and addressing these adverse effects.

2) Use the data, feedback, and suggestions gathered from relevant stakeholders to review and revise the project's activity plan. These insights should also guide the setting of new goals based on stakeholder input, accompanied by clear indicators to measure progress. This will facilitate a more effective evaluation process in the future. However, it is essential to assess the potential risks associated with implementing these suggestions, such as evaluating their long-term feasibility and addressing any challenges that may arise during execution.

3) Consider the impact of external factors that may affect the project, such as economic changes, policies, or legal requirements that could influence the project's outcomes. Taking these factors into account will enable the project to be adjusted and optimized in alignment with future circumstances.

4) It is essential to define the necessary data to be collected, the responsible parties for data collection, and the frequency of data gathering. All of these should align with the established objectives and indicators. Additionally, it may be beneficial to develop a monitoring plan along with a data management system to ensure the organized collection and storage of data. The gathered information should encompass the project’s investment budget, activities, and any outcomes or changes occurring from the initial stages of project development. This approach ensures continuous data collection, eliminating the need for retrospective data retrieval.

6. Review Period

The SROI guideline should be reviewed every 5 years, or whenever necessary.

7. Effective Date

This SROI guideline shall come into effect on 25 February 2025.

Appendix A: London Benchmarking Group

The LBG uses four key criteria to describe or categorize social investments:

1) Type of contribution (i.e. how we contribute);

2) Motivation for investment (i.e. why we contribute);

3) Subject focus (i.e. what we support); and

4) Geographic location (i.e. where we contribute).

The definitions used by the LBG are summarized below.

Table A1 Type of Contribution

Contribution	Description
Cash contributions	This includes direct donations, social sponsorship, matching employee giving, and memberships and subscriptions to community organizations.
Time contributions	This includes employee volunteering, fundraising activities, secondments to community organizations and supervision of work experience placements. It is common (and acceptable) to estimate employee costs.
In-kind contributions of product, property or services	This includes products, equipment or other non-cash items donated to communities. Examples include contributions of used office equipment or furniture, use of company premises, provision of free advertising space in a publication or on a website to a community organization at no cost and provision of pro bono professional services.
Management costs	This includes the costs incurred in making the investment, such as salaries and overhead costs. Examples include staff costs (e.g. salaries, insurance, benefits, recruitment costs), running costs and overheads (e.g. phone and faxes, computer equipment, travel), professional services, and research.

Table A2 Motivation for Investment

Motivation	Description
Charitable gifts	The focus is on intermittent support for good causes. Charitable gifts are often provided in response to requests or appeals from community organizations or one-off events (e.g. natural disasters).
Community investment	This term is used to describe the long-term involvement in community partnerships to address a range of social issues. The issues are typically chosen by the company in order to protect its long-term corporate interests and to enhance its reputation. Community investments tend to be proactive and strategic.
Commercial initiatives in the community	This refers to commercial activities undertaken to promote a company's brand. The most common example is cause-related marketing – i.e. a marketing campaign that involves a contribution from a company to a charitable cause.

Table A3 Subject Focus

Subject area	Description
Education and Young People	Contributions to schools and universities and other projects or organizations that work with or promote the needs of young people.
Health	Contributions to hospitals, health trusts, and other health-related activities.
Economic Development	Contributions to activities that promote economic development, such as regeneration or job creation projects.
Environment	Contributions to projects or organizations that support or protect the environment. (Costs associated with managing the company's environmental impact should not be included.)
Arts / Culture	Support for arts and cultural institutions (e.g. theatres, museums, public galleries).
Social Welfare	Support to organizations addressing issues such as homelessness, legal support, domestic violence, older people, etc.
Emergency Relief	Contributions to disaster relief efforts.
Other Support	Support for activities that cannot be classified elsewhere.

Appendix B: Case Studies

The SROI tool described in this document was tested using the case study of the Aquatic Animal Hatchery Learning Center Project. The case study outputs are summarized in the boxes. below.

Case Study: Aquatic Animal Hatchery Learning Center Project

The Aquatic Animal Hatchery Learning Center Project is part of PTTEP's 10-year "Ocean for Life" strategy (2020-2030), aimed at enhancing biodiversity and increasing income for coastal communities across 17 provinces around the Gulf of Thailand. Launched in 2013, the project involves collaboration between PTTEP, local fisheries, Amphoe Singhanakhon in Songkhla Province, National Institute of Coastal Aquaculture, the Department of Fisheries, the Department of Marine and Coastal Resources, and Rajamangala University of Technology Srivijaya to advance knowledge in aquatic animal breeding.

Under this project, PTTEP has supported a variety of activities, including the construction of an Aquatic Animal Hatchery Learning Center, educational activities, awareness-raising, and participation (conservation networks), economic aquatic species hatchery and release into the sea, as well as the creation of databases such as catch quantities and community income data. Additionally, efforts have been made to build networks for the conservation of natural resources and marine environments.

Based on the anticipated data and outcomes, the SROI analysis indicates a return of 4.13 Baht for every 1 Baht invested. PTTEP has made a significant investment in this project, and other organizations have also supported marine environmental conservation, which has contributed to the overall return rate.

Remark: *Analysis data from 2022

The case study also highlighted a number of lessons for future social development projects. These lessons are summarized in the box below.

Lessons Learned

Based on the case studies, a number of lessons can be learned for future social development projects and their evaluation. This includes following lessons:

- Social development projects should aim to address significant societal issues;
- Social development projects should be developed with input from key stakeholders, as this is likely to increase their success;
- Objectives should be established during the development, covering both the expected outcomes for the company and the community;
- Continuous monitoring is essential. A monitoring program should be set up at the beginning of the project to collect important data throughout the process. This data will assist in the evaluation, especially when assessing the SROI. The results of the project should be communicated to stakeholders to ensure effective participation; and
- Sufficient internal resources should be allocated for the implementation, monitoring, and evaluation of the project to ensure its proceeds efficiently.

To support the ongoing evaluation of social development projects, the following actions are recommended:

1) Establish an SROI working team to oversee the implementation and maintenance of the SROI evaluation tool.

2) Proactively develop internal capacity through structured training on evaluation.

3) Develop a reporting template to ensure consistent reporting on outcomes.

4) Establish a system for continuous monitoring of data, such as on a quarterly basis, and ensure that an SROI review is conducted whenever there are changes in activities or project objectives.

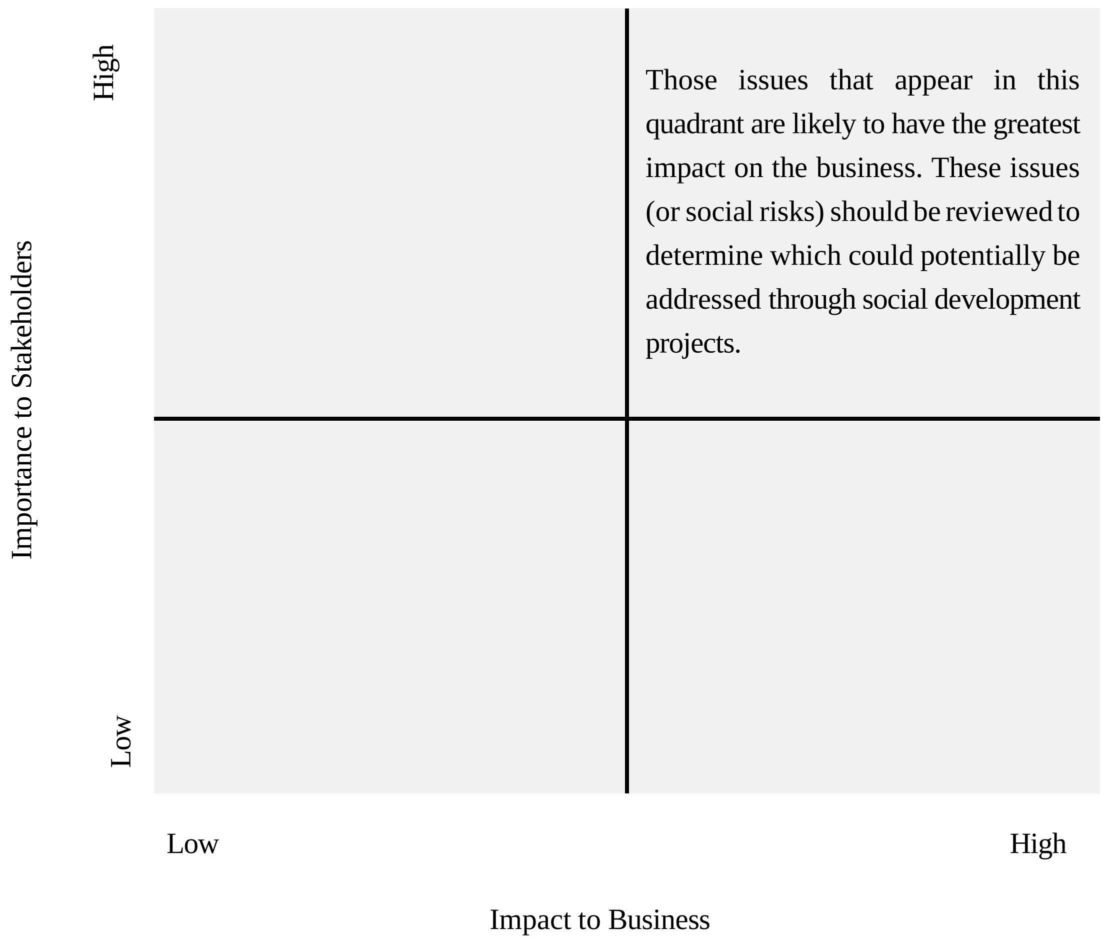
5) Establish monitoring plans (or programs) for social development projects, including responsibility for implementation and budget for rollout.

6) Develop a system for recording and maintaining all monitoring data collected.

Appendix C: Materiality Matrix

Assessing materiality helps to identify the issues that are of greatest significance to a business or organization. Once identified the focus should be on managing these issues and reporting the outcomes.

Below is the materiality assessment matrix used to compare the issues of significance to PTTEP against those identified as significant to PTTEP's stakeholders. The output from the assessment informs material issues that may potentially be addressed through social development projects.



Appendix D: Financial Proxies

The table presented below provides a list of potential outcomes and relevant financial proxies. This list is based on the existing body of literature on SROI. The value assigned to each proxy will need to be determined on a case-by-case basis to ensure that the value is context-specific.

Outcome	Example proxy	Remark
Human Resource Outcomes		
Increased Skills, Knowledge, and Abilities	Costs related to seminars, training, courses, consulting, and lost income from participating in training programs	
Enhanced Social Networks / Improved Social Relationships	Costs associated with social networking activities during leisure time, such as membership fees for associations, expenses for dining with friends, and costs related to participating in therapy or family counseling sessions	
Higher Education and Work Experience	The income difference between individuals with lower and higher levels of education	
Economic Outcomes		
Income and Wealth	Wages, rental income from property, business owner income	
Entry into the Labor Market	The difference between earnings from work and unemployment benefits	
Cost Savings	Savings on unemployment benefits, healthcare expenses (e.g., hospitalization), management costs, and personnel costs	To calculate personnel costs, you can use the formula of multiplying the time spent on the task by the hourly wage. For example: volunteer hours × hourly wage.

Outcome	Example proxy	Remark
Quality of Life and Well-being Outcomes		
Improved health	Cost of visiting a clinic/ doctor	Another proxy could be the cost of health insurance or a gym membership - if the focus is on improved physical health.
Constructive recreational activities	Costs for exercise classes, music courses, and fitness club memberships	
Improved access to local services (e.g. local parks, forested recreation areas, healthcare facilities)	Savings in time and travel costs of being able to access services locally	
Improved perception of a local area	Change in local property values	Another proxy could be the amount of money spent on home improvements.
Environmental and Conservation Outcomes		
Increased awareness of biodiversity values (or other environmental features)	Cost associated with an adult continuing education course (in the leisure category)	Increased awareness in the community reflects the same outcome associated with lifelong learning.
Increase awareness or understanding of biodiversity values (or other environmental features) of students	Cost estimate for a teacher to teach a class	The cost should reflect the number of hours spent increasing awareness – i.e. if the time spent is one hour of a teacher's annual salary that should be the proxy.

Outcome	Example proxy	Remark
Increased visitation to national parks (or forests, woodlands, marine sites) for recreation	Changes in park entrance fees	This information will likely come from the agency or organization responsible for parkmanagement.
Preserved or restored ecological system/ biodiversity values (e.g. coastal mangroves, forested catchments)	Value placed on the ecological system per hectare per year	Ecosystem service valuation research has been conducted around the world. This research will provide the financial proxy.
Reduction in carbon emissions	Cost associated with the emission of carbon dioxide (e.g. tons per annum)	There is a variety of studies that have established a carbon price.
Increased sense of satisfaction from doing something to help the environment	Average household spends on gardening (to represent a similar sense of helping the environment)	