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Taiwan Cement Corporation

TCC DAKA Open Eco-Factory Social Return on Investment (SROI) Report



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Mr Ben Carpenter
Chief Executive Officer
Social Value International



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Executive Summary

Located in Heping Village, the northernmost village in Hualien, Taiwan, TCC DAKA Open Eco-Factory (TCC DAKA) is situated within 3-in-1 Port, Power Plant, and Factory Hoping Circular Park. In 2020, which marks the 20th anniversary of the Hoping Plant, TCC DAKA was officially unveiled, allowing more external stakeholders to have a better understanding of Taiwan Cement Corporation (TCC). Established for a non-profit purpose, TCC DAKA pays attention on the development of the local economy and education. In addition to offering a guided tour focusing on how circular economy functions, TCC DAKA has assisted local villagers in running the TCC DAKA market and also employed them for the operation and maintenance of TCC DAKA. Revenues generated have been funneled into the education fund of Heping Elementary School in hopes of increasing the income of local villagers and securing educational resources in remote areas.

The Social Return on Investment (SROI) analysis focuses on "Community Rejuvenation" in respect of the operation of the TCC DAKA market and local employment and "Social Dialogue" through the Plan B guided tour. In terms of Community Rejuvenation, TCC calls on villagers neighboring around the Hoping Plant to run the DAKA market by offering specialty meals, handicrafts, and quilts; TCC also provides job opportunities for local villagers to operate and maintain TCC DAKA. On the part of Social Dialogue, employees on the Hoping Plant act as guides to show visitors around the 3-in-1 Port, Power Plant, and Factory Hoping Circular Park and communicate with them on TCC's innovative utilization of resources across industries and its commitments and efforts to zero emissions, zero pollution, and zero waste, as well as resources recycling.

To further understand the social benefits created by TCC DAKA, TCC engaged KPMG Sustainability Consulting Co., Ltd. to conduct an SROI analysis. The SROI analysis measured changes brought forth by TCC DAKA to key stakeholders in terms of Community Rejuvenation and Social Dialogue in 2020. The key stakeholders of the project include TCC, TCC DAKA project leader, head of Heping Village, campus cleaners, campus guides, market vendors, families of the market vendors, villagers assisting the market vendors, visitors to the TCC DAKA market, employees on the Hoping Plant, participants in the Plan B guided tour (general tourists), and the participants in the Plan B guided tour (competent authorities), etc.

According to the result of the analysis, the overall SROI of TCC DAKA, including Community Rejuvenation and Social Dialogue, was 3.54; that is, the social return on an average investment of NT\$1 in the project was NT\$3.54. According to the results of social benefits by different types of stakeholder, campus cleaners, campus guides, and families of the market vendors were the main beneficiaries of TCC DAKA. This indicates that the establishment of TCC DAKA has effectively made a good impression on external stakeholders and improved TCC's corporate image. Through Community Rejuvenation, local villagers have been offered job opportunities so that they can obtain remuneration as well as a sense of accomplishment from work and furtherly brought positive relationships with their family at the same time.



1. Explanation of SROI Analysis Structure and Scope

1.1 Explanation of SROI

Social Return on Investment (SROI) analysis is an extension from the Cost Benefit Analysis (CBA), and by using the Theory of Change as a core, used to quantify the changes of and impacts on stakeholders from implementing a project. This result will be displayed in the form of money. For example, if the project's SROI is 3.5, it means that for every NT\$1 spent on the project, NT\$3.5 will be generated in changes of stakeholders and social return.

The SROI analysis can be classified as "forecast" and "evaluative" according to the project type. A forecast SROI is primarily used to evaluate a project that is still in the planning stage and has not been implemented, so as to understand the possible social return beforehand; alternatively, an evaluative SROI is used to evaluate a project that has already been implemented, so as to understand the social return created from the inputs and outputs of the project.

1.2 Analysis Principles of SROI

The SROI analysis is used to evaluate the intangible value of a project in the form of money; therefore, the following seven principles should be upheld throughout the analysis to ensure that the analysis and its results comply with the SROI's principle of "not over-claiming." The seven principles are as follows:

1. Principle 1 - Involve stakeholders
Identify stakeholders and involve them in the SROI analysis to provide a better understanding of the impacts and values created from the project.
2. Principle 2 - Understand what changes
Clearly identify the ways a project has brought forth changes (including both positive and negative, intended and unintended) through evidence and data collection, analyze the impacts, and value the things that matter.
3. Principle 3 - Value the things that matter
Assign monetary values (prices) to outcomes through financial proxies, so that the outcomes that are excluded from market transactions but affected by a project could be shown.
4. Principle 4 - Only include what is material
Decide the type of information and evidence to be factored into consideration to draw an authentic impact map, so that the impacts on stakeholders can be reasonably determined.
5. Principle 5 - Verify the result
Subjective judgment and analysis may inevitably exist in the SROI analysis; hence, an appropriate independent verification can test the reasonableness of the SROI analysis.
6. Principle 6 - Be transparent
Document and explain the identified stakeholders, outcomes, financial proxies, and measurement in the analysis. The more transparent the process, the more reliable the SROI analysis results will be.
7. Principle 7 - Do not over-claim
Eliminate irrelevant factors and only state the values brought forth by the project.



1.3 SROI Analysis Procedures

There are five major steps in the SROI analysis procedures. The figure below indicates the analysis structure, and the following is a brief explanation.



Figure 1.3.1 SROI Analysis Procedures

1. Plan and set objectives

In the commencement stage of a project, identifying the social investment project to conduct SROI analysis is a prioritized step. Typically, the selection process will focus on projects with potential significant impacts and sufficient resources and are long-term in nature. After identifying overall project objectives (what problem does the project aims to solve), key stakeholders, and potential changes resulted in the project, a stakeholder engagement map will be established.

2. Map impacts

After confirming the scope of project implementation, the analysis begins to identify the outcomes and impacts from the project. Project outcomes are direct results from implementing the project such as enhancing productivity; project impacts refer to direct or indirect impacts of the long-term implementation of the project such as increased employment. At this procedure, an impact map based on the evaluation of outcomes and impacts will be built.

3. Collect data

Collecting relevant data such as resources inputs and activity outputs of the project, as well as evidence and financial proxies, based on the initial analysis structure identified in the above-mentioned stages is the main context of execution in this step. Methods of data collection include (but are not limited to) questionnaires, phone interviews, face-to-face interviews, and secondary data analyses.

4. Analyze impacts

This stage aims to identify adjustment factors that may affect the project outcomes, and also calculate SROI value. Adjustment factors include deadweight, displacement, and attribution; considering the drop-off factor, this stage also calculates the future impact of the project and discounts the cost of the year to calculate SROI.

5. Evaluate



Inspect whether the overall outcomes created by the project are as expected based on quantitative and qualitative information provided by stakeholders . It also examines the SROI analysis procedures and results to propose ways future enhance of the project accordingly.

1.4 Limitations to SROI Analysis

Based on the theory of change, the SROI analysis measures the changes in stakeholders made from implementing a project, monetizes the project outcomes through financial proxies, and takes change factors into consideration. The entire analysis procedures and calculations of SROI correlate to subjective judgment from stakeholders; therefore, different degrees of stakeholder involvement may lead to different outcomes. To avoid errors caused by the different degrees of stakeholder involvement, the SROI analysis is conducted with the average responses of the respondents based on the prudent principle.

2. Project Introduction

2.1 Project Content

On January 9, 2020, TCC held the opening ceremony of TCC DAKA Open Eco-Factory to open TCC DAKA to public officially. The SROI analysis focuses on the two events of TCC DAKA: Community Rejuvenation and Social Dialogue. The content of the events are described below.

As to Community Rejuvenation, TCC provides a platform and resources for villagers from Heping Village and the neighborhood to run the TCC DAKA market that offers specialty meals, handicrafts, and quilts; TCC DAKA also creates job opportunities for local villagers to work locally as campus guides and campus cleaners, hoping that the benefits of the project would extend from Heping Village to other communities to boost local placemaking. With regard to Social Dialogue, a guided tour at TCC DAKA is available for reservation online. In Plan B, a 3-in-1 Tour of Port, Power Plant, Cement Plant, employees of the Hoping Plant would guide visitors to Hoping Mine to overlook the Hoping Circular Economy Park by the Pacific Ocean, followed by Hoping EcoPort, which is known as the Heping Great Barrier Reef and was granted a certificate of verification from the European EcoPorts Port Environmental Review System in 2019. By visiting TCC's unique 3-in-1 Port, Power Plant, and Factory Hoping Circular Park in person, visitors have an opportunity to come at TCC's commitments and efforts to circular economy and resources recycling. Overall, the SROI analysis centered on "Community Rejuvenation" arising from the TCC DAKA market and local employment and "Social Dialogue" through the Plan B guided tour which communicates TCC's commitments to zero emissions, zero pollution, and zero waste, as well as resources recycling to the general public.

TCC DAKA involves different types of stakeholders, including TCC and its employees, local villagers, tourists, and participants in the Plan B guided tour, and had a high degree of continuity, which was conducive to the local community and TCC's corporate image in the long run. As a result, an evaluative SROI analysis was conducted to measure social benefits brought forth by TCC DAKA to different stakeholders.

2.2 Project Analysis Procedures

According to the SROI analysis procedures specified in 1.3 and the principles of SROI analysis specified in 1.2, the detailed procedures for the SROI analysis are described in Figure 2.2.1 below:

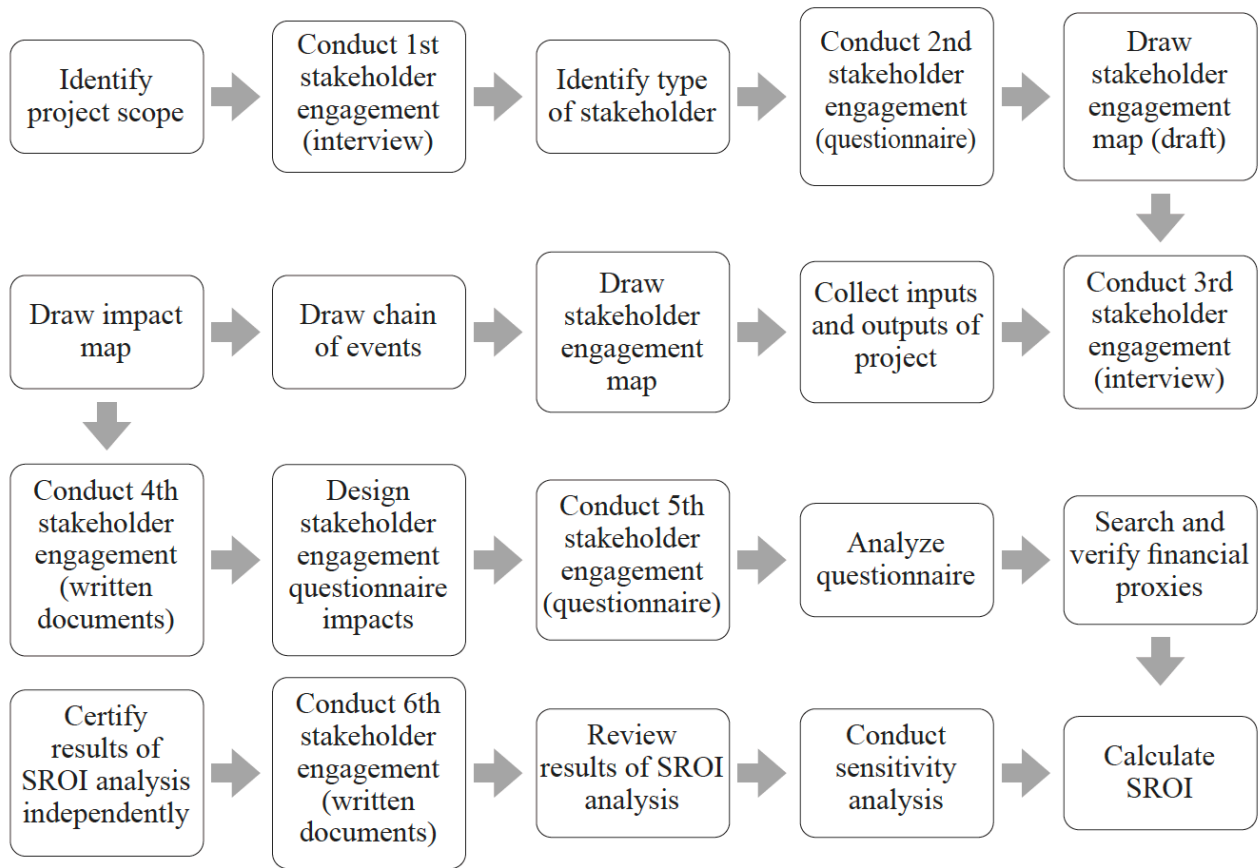


Figure 2.2.1 Project Analysis Procedures

2.3 Project Scope

An evaluative SROI analysis was conducted for TCC DAKA. The analysis focused on two events of TCC DAKA in 2020: Community Rejuvenation and Social Dialogue. In terms of Community Rejuvenation, TCC DAKA employed local villagers as guides and cleaners and also helped them start their own businesses at the TCC DAKA market. Social Dialogue was facilitated through the 3-in-1 Tour of Port, Power Plant, Cement Plant. The future value of each outcome was calculated given both drop-off and the duration of the outcome up to the 5th year (excluding the year of the event). The number of years calculated for each outcome was based on the results of the 5th stakeholder engagement - questionnaire.

The two events of TCC DAKA involved different types of stakeholders. To make the SROI analysis procedures and results clear and concise and to avoid confusion caused by the combination of information, all figures and analysis results are presented directly in two parts: Community Rejuvenation and Social Dialogue. The calculations of SROI of the two events are presented individually and collectively to fully demonstrate the social benefits brought forth by TCC DAKA as a whole.

To sum up, the scope of the project is briefly described as follows:

1. Community Rejuvenation: TCC DAKA has created a number of job opportunities for the locals, including guides, cleaners, and market vendors. TCC worked with the head of Heping Village to employ villagers as campus cleaners and campus guides; local villagers were also drawn to vend at the TCC DAKA market, thereby pulling their families and other villagers in.

- 2、 Social Dialogue: In addition to the aforesaid guided tour and market at TCC DAKA, TCC also offered the 3-in-1 Tour of Port, Power Plant, Cement Plant, where TCC's employees trained to guide a tour featuring the circular economy around Hoping EcoPort, Hoping Power Plant, and Hoping Plant. Reservations for such a guided tour can be made online for general tourists, as well as competent authorities as a group.

2.4 SROI Literature Review

In addition to following the SROI analysis procedures, the SROI analysis also referred to related international literature. The literature is summarized in Table 2.4-1. Among the literature, the study (Rudd & Davis, 1998), taking the Bingham Canyon Mine in Utah, USA as an example, indicated that investing in factory or park tours can help improve the corporate image and create an opportunity for factories to communicate and establish long-term relationships with nearby villagers. The study conducted by Mitchel & Orwig in 2002 listed other benefits of factory tours, including word-of-mouth marketing, increased brand loyalty, and increased trust in and cooperation with suppliers. Gilbert's report also showed that factory tours can heighten students' image and awareness of the industry where companies fall into and help employees better understand the skill requirements of the industry. Regarding ecological tours, Zeppel, H., & Muloin, S. (2008) and Groff, Lockhart, Ogden, & Dierking (2005) found that ecological tours can increase the attention of guides and visitors to ecological and environmental issues and prompt people to endorse and recognize conservation initiatives.



Table 2.4-1 List of the Literature for TCC DAKA

Institution	Research Report/Literature	Benefit of SROI Analysis	Year
Columbia University	Rudd, M. A., & Davis, J. A. (1998). Industrial heritage tourism at the Bingham Canyon copper mine. <i>Journal of travel research</i> , 36(3), 85-89.	Improve the corporate image and establish long-term relationships with nearby villagers	1998
University of South Carolina & Mercer University	Mitchell, M. A., & Orwig, R. A. (2002). Consumer experience tourism and brand bonding. <i>Journal of Product & Brand Management</i> .	Shape word-of-mouth marketing, increase brand loyalty, increase trust in and cooperation with suppliers, and change the corporate image	2002
Oregon State University	Groff, A., Lockhart, D., Ogden, J., & Dierking, L. D. (2005). An exploratory investigation of the effect of working in an environmentally themed facility on the conservation-related knowledge, attitudes and behavior of staff. <i>Environmental Education Research</i> , 11(3), 371-387.	Increase employees' attention to conservation and environmental issues, train them for global perspectives and thinking, and cause them to make conscious changes for the environment (recycling, creation of habitat in the backyard, etc.)	2005
James Cook University	Zeppel, H., & Muloin, S. (2008). Conservation benefits of interpretation on marine wildlife tours. <i>Human Dimensions of Wildlife</i> , 13(4), 280-294.	Develop an environmentally friendly attitude and cause behavior change and increase willingness to support and participate in ocean conservation initiatives	2008
Advanced Technological Education	Gilbert, R. Impact of Student Tours of Manufacturing Facilities. age, 23, 1.	Change students' impression and understanding of manufacturing industry	2013



3. Involvement of Stakeholders

Stakeholder involvement is not only one of the seven principles of SROI, but also a very critical procedure in SROI analysis. The analysis consists of the following six stages of stakeholder engagement:

Sequence	SROI	Method of Stakeholder Involvement	Group of Stakeholders	Purpose
1st	Stakeholder Identification and Verification	Interview	Project initiators	Conduct interviews with project initiators and project executors to identify all possible stakeholders involved in the project
2nd		Questionnaire		Make a list of identified stakeholders and design a questionnaire based on the five principles of AA1000 Stakeholder Engagement Standard; distribute the questionnaire to project initiators and main project executors to verify the materiality of each stakeholder; and identify key stakeholders based on the result of the questionnaire
3rd	Outcome Identification and Verification	Interview	Project initiators, project executors, and project beneficiaries	Conduct face-to-face or phone interviews with groups of key stakeholders to identify the outcomes of the project brought forth to the stakeholders
4th		Written documents		Make the chain of events and an impact map after verifying the types of stakeholders and benefits, and verify the process of change and final outcomes with the project initiators mainly via written documents and partially through an interview
5th	Stakeholder Questionnaire	Questionnaire	Project initiators, project executors, and project beneficiaries	Verify the existence and materiality of the benefits with groups of stakeholders again through a questionnaire and collect information on adjustment factors and some financial proxies



6th	Analysis Process and Result Verification	Written documents	Project initiators	Verify the analysis and results with the project initiators mainly via written documents and partially through an interview
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3.1 Stakeholder Identification and Verification

Given the importance of stakeholders to the SROI analysis, the overall value of a social investment project can only be measured by identifying key stakeholders and changes brought by the project. This involves in listing groups of potential stakeholders involved firstly to understand changes they experienced. The materiality of stakeholders was assessed based on the five principles of AA1000 Stakeholder Engagement Standard (SES). The reason for using AA1000 SES is that the SROI analysis lays much stress on the importance of stakeholder engagement. Stakeholder engagement hinges on the identification of groups of stakeholders and their differences. An organization's activity will affect or may affect different individuals or groups and different individuals or groups may also have different attributes, using a systematic method for identifying stakeholders will help achieve the purpose of stakeholder engagement (e.g., identifying the outcomes brought forth by the project). AA1000 SES is the currently accepted methodology for identifying stakeholders in an organization's activity.

The 1st stakeholder engagement was carried out on November 6, 2020. A face-to-face interview was conducted with the project initiator - TCC project leader according to the diverse perspectives under the five principles of AA1000 SES to identify and verify every group of potential stakeholders (including subgroups). Taking charge of the overall planning and execution of TCC DAKA, TCC project leader was able to fully grasp all groups of potential stakeholders and subgroups of stakeholders, as well as their roles and participation in the project. Table 3.1-1 lists the types of potential stakeholders after the interview. Please see Appendix 1 for the outline of the interview.

Table 3.1-1 Types of Potential Stakeholders Identified after the Interview

Community Rejuvenation			
TCC DAKA Market		Local Employment	
TCC project leader	Employees on the Hoping Plant (TCC DAKA operation)	TCC project leader	Campus guides
Tourists visiting the market	Villagers of Heping Village	Head of Heping Village	Villagers of Heping Village



Market vendors	Other Taroko tribes	Campus cleaners	Employees on the Hoping Plant (TCC DAKA operation)
Villagers of Heping Village assisting the market vendors	Local opinion leaders		
Families of the market vendors			
Social Dialogue			
Plan B Guided Tour			
TCC		Participants in Plan B	
Employees on the Hoping Plant (Plan B)		Other cement companies	

The 1st stakeholder engagement (interview) identified nine types of potential stakeholders associated with the TCC DAKA market and six types of stakeholders associated with local employment, including campus guides and campus cleaners locally employed by TCC DAKA; four types of stakeholders in respect of Plan B were identified, including participants in Plan B. According to the information acquired from the interview, participants in Plan B were general tourists who reserved the guided tour online and groups such as competent authorities. Therefore, participants in Plan B consisted of two subgroups of stakeholders: **general tourists** and **competent authorities**.

After a list of potential stakeholders and subgroups of stakeholders was made based on the aforesaid interview, the 2nd stakeholder engagement (questionnaire) ensued. According to the other four principles of AA1000 SES, a list of identified stakeholders (see Appendix 2) was designed separately for the TCC DAKA market and local employment under Community Rejuvenation and Plan B under Social Dialogue. The project initiators were asked to score, from 1 to 5 points, the materiality of each stakeholder involved in the project using the aforesaid four principles. The principles used in the questionnaire are described as follows:

- 1、 Dependency: stakeholders on whom the TCC DAKA market and local employment and Plan B are dependent, directly or indirectly, in order to operate successfully
- 2、 Degree of impact: stakeholders on whom the TCC DAKA market and local employment and Plan B have a great impact (e.g., local villagers who are employed as guides by TCC to secure their employment and pay)
- 3、 Influence over decision-making: stakeholders who have influence over the TCC DAKA market and local employment and Plan B in terms of



strategic or operational decision-making

- 4、 Tension: stakeholders who need immediate attention from the TCC DAKA market and local employment and Plan B with regard to their states or opinions

Based on each stakeholder's average score on the four principles, the materiality of stakeholders was classified as high (scores on all of the four principles higher than the average), medium (scores on some of the four principles higher than the average), and low (scores on three principles or more lower than the average). The SROI analysis included stakeholders of medium and high materiality; stakeholders of low materiality were excluded from the analysis. The results of the questionnaire are shown in Table 3.1-2 and Table 3.1-3.¹

Table 3.1-2 1st Stakeholder Engagement - Materiality Questionnaire Results

TCC DAKA Market (Community Rejuvenation)						
Potential Stakeholders (Including Subgroups)	Dependency	Degree of Impact	Influence over Decision-making	Tension	Materiality	Included in Analysis (Y/N)
TCC project leader	5	5	4	5	High	Y
Tourists visiting the market	5	4	5	4	High	Y
Market vendors	4	5	4	4	High	Y
Villagers of Heping Village assisting the market vendors	4	5	4	4	High	Y
Families of the market vendors	4	4	4	4	Medium	Y
Employees on the Hoping Plant (TCC DAKA operation)	3	5	3	3	Low	N

¹Average refers to the average score of all potential stakeholders for the indicator.



Villagers of Heping Village	3	4	3	4	Low	N
Other Taroko tribes	3	4	3	3	Low	N
Local opinion leaders	3	3	3	3	Low	N
Local Employment (Community Rejuvenation)						
Potential Stakeholders (Including Subgroups)	Dependency	Degree of Impact	Influence over Decision-making	Tension	Materiality	Included in Analysis (Y/N)
TCC project leader	5	4	5	5	Medium	Y
Head of Heping Village	3	4	4	4	Medium	Y
Campus cleaners	3	5	2	3	Low medium→	Y
Campus guides	3	5	2	3	Low medium→	Y
Villagers of Heping Village	3	4	3	4	Low	N
Employees on the Hoping Plant (TCC DAKA operation)	3	3	2	3	Low	N
Plan B Guided Tour (Social Dialogue)						
Potential Stakeholders (Including Subgroups)	Dependency	Degree of Impact	Influence over Decision-making	Tension	Materiality	Included in Analysis (Y/N)



TCC	5	5	5	5	High	Y
Participants in Plan B (general tourists)	5	5	5	5	High	Y
Participants in Plan B (competent authorities)	5	5	4	5	Medium	Y
Employees on the Hoping Plant (Plan B)	5	5	4	4	Medium	Y
Other cement companies	3	4	3	4	Low	N

According to the results of the aforesaid questionnaire, five types of potential stakeholders of medium and high materiality and four types of potential stakeholders of low materiality were identified in respect of the TCC DAKA market among Community Rejuvenation. As to local employment, in addition to two types of potential stakeholders of medium materiality, four types of potential stakeholders of low materiality were identified preliminarily; when verifying the results of the questionnaire, however, TCC project leader responded that among the four types of potential stakeholders of low materiality, the project had a greater impact on campus guides and campus cleaners than on other stakeholders and concentrated much attention on these two types of stakeholders. Based on the results of the two stakeholder engagements and upon TCC project leader's verification, the materiality of both campus guides and campus cleaners was classified as medium. On the part of Plan B (Social Dialogue), four types of potential stakeholders of medium and high materiality were identified, including two subgroups of stakeholders (general tourists and competent authorities participating in Plan B).

In the 2nd stakeholder engagement (questionnaire), stakeholders that should be included in the analysis and those excluded were verified. Based on the information acquired from the questionnaire, the stakeholders were classified as project initiators, project executors, and project beneficiaries according to their roles in the project. Table 3.1-3 lists the stakeholders identified in the 1st and 2nd stakeholder engagements that should be included in the analysis. Table 3.1-4 explains the reasons why the stakeholders were excluded from the analysis.

In the project scope of social dialogue, the TCC DAKA offered the 3-in-1 Tour of Port, Power Plant, Cement Plant, where TCC's employees trained to guide a tour featuring the circular economy around Hoping EcoPort, Hoping Power Plant, and Hoping Plant. Reservations for such a guided tour can be made online for general tourists, as well as competent authorities as a group. The stakeholder groups of general tourists and competent authorities are the direct beneficiaries. Through interviews, we distinguished the subgroups into ""general tourists"" and ""competent authorities"" based on ""identity"" and ""type and degree of



knowledge acquired." The participants of the Plan B tour were divided into two sub-groups for independent analysis to understand the social dialogue impact. The figure is as the following:

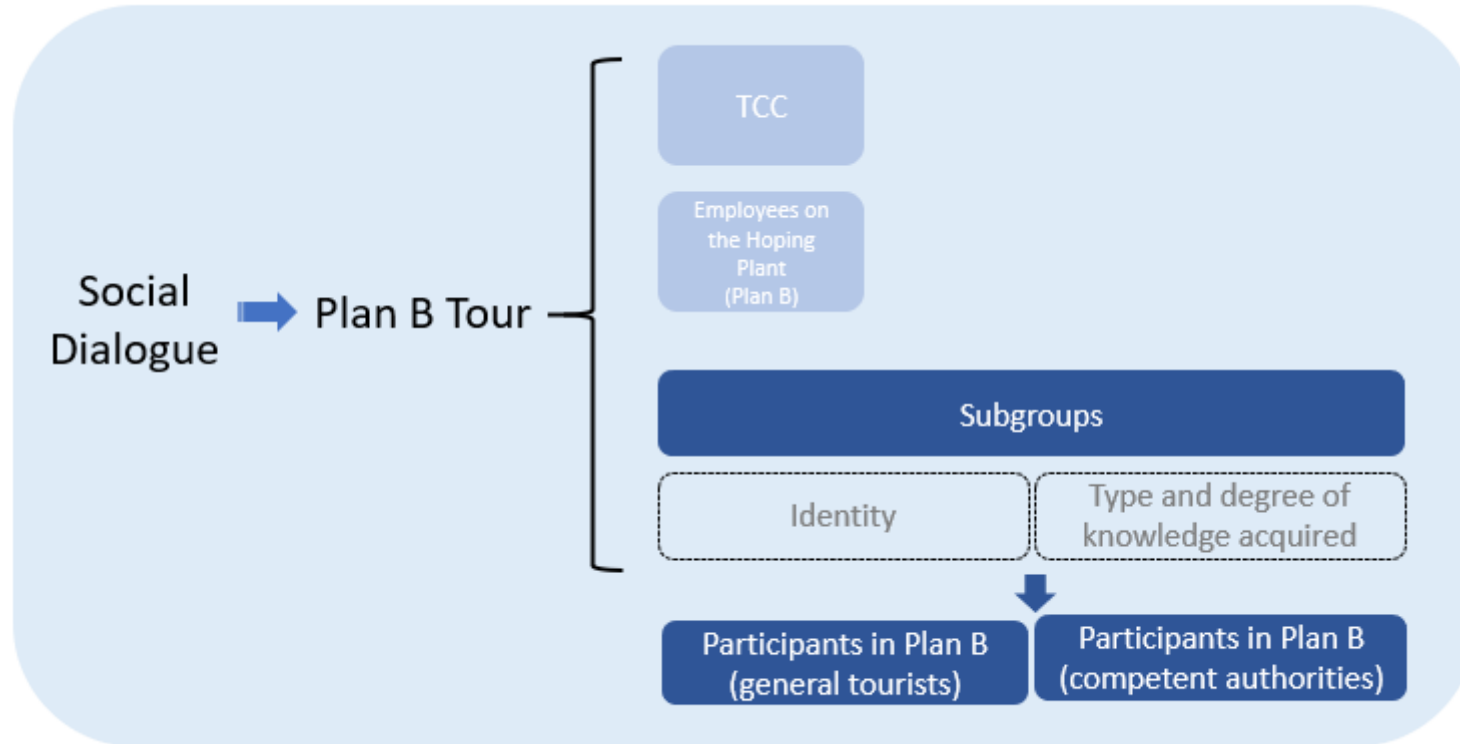


Figure:3.1.1 The identification of stakeholder subgroups

According to interviews and investigations, in this case, the Plan B tour participants (general tourists) and Plan B tour participants (competent authorities) of the project participated in the same context of the tour but gained different experiences after the interview. The Plan B guided tour participants (general tourists) are one-time tourists. They participated in the guided tour as part of the tour itinerary. During the visit, The Plan B guided tour participants (general tourists) increased the awareness of circular economy, environmental protection and local culture. Also, the Plan B guided tour participants (general tourists) gained



shallow knowledge due to the leisure purpose. On the other hand, the Plan B tour participants (competent authorities) in this group is characterized by industry relevance and possess a high degree of industry knowledge. Because of the participants' educational background and professional experience, Plan B guided tour participants (competent authorities) experienced more profound changes during the tour. Therefore, the degree of experience modification is different, so this stakeholder group is classified into subgroups. The two groups experience the outcome without a difference, no matter the social-economic background. For future research and improvement, it is recommended to understand further the changes that may be experienced by stakeholders based on different characteristics (such as gender, education level, economic status, and location).

Table 3.1-3 Stakeholders Included in the Analysis

Community Rejuvenation			
Key Stakeholders		Materiality	Reason for Inclusion
Project initiators	TCC project leader	High	Takes charge of the planning of the TCC DAKA market and local employment and communication with all types of stakeholders involved
Project executors	Head of Heping Village	Medium	Help TCC DAKA employ and manage campus cleaners
Project beneficiaries	Market vendors	High	Take training courses on how to start a business and vend at the TCC DAKA market to acquire necessary skills and income
	Families of the market vendors	Medium	Help operate the market vendors at the TCC DAKA market
	Villagers of Heping Village assisting the market vendors	High	Produce handicrafts for the market vendors (e.g., indigenous women's studio) to earn extra money
	Tourists visiting the market	High	Visit and spent at the TCC DAKA market as the main source of income for the market
	Campus cleaners	Medium	Find employment at TCC DAKA as contract cleaners
	Campus guides	Medium	Find employment at TCC DAKA as guides; attractive to young people who wish to work locally
Social Dialogue			
Key Stakeholders		Materiality	Reason for Inclusion
Project initiators	TCC	High	Take charge of the planning and funding of the TCC DAKA market and local employment and Plan B and communication with all stakeholders involved
Project executors	Employees on the Hoping Plant (Plan B)	Medium	Take charge of the planning and execution of Plan B and introduction to the circular economy and factory operation



Project beneficiaries	Participants in Plan B (general tourists)	High	Increase the awareness of the cement industry, the circular economy, and environmental protection, as well as local culture; the main subject of social dialogue in the project
	Participants in Plan B (competent authorities)	Medium	Increase the awareness of the cement industry, the circular economy, and environmental protection, as well as local culture; the main subject of social dialogue in the project and the key to the spillover effects of social dialogue

Table 3.1-4 Stakeholders Excluded from the Analysis

Community Rejuvenation	
Stakeholders Excluded from Analysis	Reason for Exclusion
Employees on the Hoping Plant (TCC DAKA operation)	Helped TCC DAKA with the local employment and operation of the TCC DAKA market; excluded from the analysis as their average score on dependency, influence over decision-making, and tension was lower than the average, resulting in low materiality
Local opinion leaders	Tribal chairmen or representatives of villagers act as local opinion leaders to help local villagers choose stands at the TCC DAKA market; excluded from the analysis as their average score on dependency, degree of impact, influence over decision-making, and tension was lower than the average, resulting in low materiality
Other Taroko tribes	Consign products to the market vendors for sale at the TCC DAKA market; excluded from the analysis as their average score on dependency, degree of impact, influence over decision-making, and tension was lower than the average, resulting in low materiality
Villagers of Heping Village	Excluded from the analysis as their average score on dependency, degree of impact, and influence over decision-making was lower than the average, resulting in low materiality in terms of the TCC DAKA market and local employment
Social Dialogue	
Stakeholders Excluded from Analysis	Reason for Exclusion
Other cement companies	Gain identification with the public; excluded from the analysis as their average score on dependency, degree of impact, influence over decision-making, and tension was lower than the average, resulting in low materiality



3.2 Stakeholder Engagement Map

After key stakeholders were identified in the 1st and 2nd stakeholder engagements, the analysis proceeded to look into the changes that the stakeholders expected the project to bring forth by interviewing the stakeholders and reviewing relevant literature on the impacts of guided tours and philanthropic activities. Such changes were used as a guide to subsequent stakeholder engagements. As shown in Table 3.2-1, the project's stakeholder engagement map was drawn based on the 1st and 2nd stakeholder engagements and literature review.

Table 3.2-1 First Draft of Stakeholder Engagement Map

Key Stakeholders		Community Rejuvenation
Key Stakeholders		Intended Changes
Project initiators	TCC project leader	<ul style="list-style-type: none"> • Have a better understanding of local culture of the indigenous peoples • Improve communication and coordination skills • Encourage a sense of accomplishment • Improve management thinking and capacity • Boost identification with the company • Improve the capability of project planning
Project executors	Head of Heping Village	<ul style="list-style-type: none"> • Improve communication and coordination skills • Encourage a sense of accomplishment
Project beneficiaries	Market vendors	<ul style="list-style-type: none"> • Encourage a sense of accomplishment • Improve interpersonal skills • Develop entrepreneurial thinking • Improve family financial situation
	Families of the market vendors	<ul style="list-style-type: none"> • Encourage a sense of accomplishment • Improve interpersonal skills
	Villagers of Heping Village assisting the market vendors	<ul style="list-style-type: none"> • Improve personal finances • Encourage a sense of accomplishment • Develop entrepreneurial thinking
	Tourists visiting the market	<ul style="list-style-type: none"> • Understand local culture of the indigenous peoples
	Campus cleaners	<ul style="list-style-type: none"> • Find employment with a stable income • Encourage a sense of accomplishment
	Campus guides	<ul style="list-style-type: none"> • Find employment with a stable income



		<ul style="list-style-type: none"> • Encourage a sense of accomplishment • Boost identification with Heping Village • Acquire knowledge of the cement industry and circular economy • Improve communication and coordination skills • Improve interpersonal skills
Social Dialogue		
Key Stakeholders		Intended Changes
Project initiators	TCC	<ul style="list-style-type: none"> • Elevate the corporate image and value • Facilitate the relationship with the community
Project executors	Employees on the Heping Plant (Plan B)	<ul style="list-style-type: none"> • Boost identification with the company • Improve communication and coordination skills • Encourage a sense of accomplishment • Improve interpersonal skills
Project beneficiaries	Participants in Plan B (general tourists)	<ul style="list-style-type: none"> • Acquire knowledge of the cement industry and circular economy • Being able to have physical and mental relaxation
	Participants in Plan B (competent authorities)	<ul style="list-style-type: none"> • Acquire knowledge of the cement industry and circular economy

3.3 Stakeholder Outcome Identification and Verification

To verify the changes brought forth to the stakeholders after participating in the project, the 3rd stakeholder engagement (interview) was conducted. To ensure that both positive and negative outcomes of the project are covered, open-ended questions about the changes brought forth to the stakeholders and the process of the changes were designed in the interview outline for the 3rd stakeholder engagement; in addition, benefits to be included in the analysis were identified based on the intended changes in the aforesaid stakeholder engagement map.

The 3rd stakeholder engagement was conducted mainly through interviews and covered all the key stakeholders included in the analysis. The average interview time per person was about 30 minutes. To make sure that the interviewees are representative and information provided by them is sufficient to draw the chain of events and define outcomes, the analysis centered on stakeholders have long been engaging in the events of TCC DAKA and tourists visiting the market or participating in the guided tour recently. Interviews were conducted with different types of market vendors to reduce the uncertainty caused by personal experience and space-time constraints, and at least two stakeholders of the same group were interviewed per group (except for a group of less than two stakeholders)



to make sure that the outcomes of the project would be fully measured. As shown in the table below, a total of 29 stakeholders were interviewed in the 3rd stakeholder engagement.

Table 3.3-1 3rd Stakeholder Engagement - List of Interviewees Included in the Analysis

Community Rejuvenation				
Key Stakeholders	Number of Interviewees	Interviewee	Method of Interview	Date of Interview
TCC project leader	1	Assistant Vice President of TCC	Face-to-face	December 3, 2020 (Thursday)
Market vendors	3	Vendor 1	Face-to-face	January 13, 2021 (Wednesday)
		Vendor 2	Face-to-face	January 13, 2021 (Wednesday)
		Vendor 3	Face-to-face	January 13, 2021 (Wednesday)
Villagers assisting the market vendors	2	Villager 1	Face-to-face	January 13, 2021 (Wednesday)
		Villager 2	Face-to-face	January 13, 2021 (Wednesday)
Families of the market vendors	2	Family 1	Face-to-face	January 13, 2021 (Wednesday)
		Family 2	Face-to-face	January 13, 2021 (Wednesday)
Head of Heping Village	1	Head of Heping Village	Face-to-face	January 14, 2021 (Thursday)
Campus cleaners	3	Cleaner 1	Face-to-face	January 13, 2021 (Wednesday)
		Cleaner 2	Face-to-face	January 13, 2021 (Wednesday)
		Cleaner 3	Face-to-face	January 13, 2021 (Wednesday)
Campus guides	3	Guide 1	Face-to-face	January 13, 2021 (Wednesday)
		Guide 2	Face-to-face	January 14, 2021 (Thursday)
		Guide 3	Face-to-face	January 14, 2021 (Thursday)
TCC DAKA market visitors	6	Visitor 1	Phone	January 12, 2021 (Tuesday)
		Visitor 2	Phone	January 14, 2021 (Thursday)
		Visitor 3	Phone	January 14, 2021 (Thursday)
		Visitor 4	Phone	February 23, 2021 (Tuesday)
		Visitor 5	Phone	February 23, 2021 (Tuesday)
		Visitor 6	Phone	February 23, 2021 (Tuesday)



Social Dialogue

Key Stakeholders	Number of Interviewees	Interviewee	Method of Interview	Date of Interview
Employees on the Hoping Plant (Plan B)	3	Employee on the Hoping Plant 1	Face-to-face	January 13, 2021 (Wednesday)
		Employee on the Hoping Plant 2	Face-to-face	January 13, 2021 (Wednesday)
		Employee on Hoping EcoPort 3	Face-to-face	January 13, 2021 (Wednesday)
Participants in Plan B (general tourists)	3	General tourist 1	Phone	January 15, 2021 (Friday)
		General tourist 2	Phone	January 12, 2021 (Tuesday)
		General tourist 3	Phone	January 16, 2021 (Saturday)
Participants in Plan B (competent authorities)	2	Competent authority 1	Phone	January 12, 2021 (Tuesday)
		Competent authority 2	Phone	January 12, 2021 (Tuesday)

The outcomes brought forth to different groups of key stakeholders throughout the project were synthesized based on the results of the interview in the 3rd stakeholder engagement. In the process of defining outcomes, the causality of each outcome was outlined based on the information provided by the stakeholders in the interview; then, the chains of events in respect of Community Rejuvenation and Social Dialogue were separately drawn to demonstrate the process of changes brought forth to each group of key stakeholders, further defining the outcomes clearly. Considering the size of the report, only the chain of events in respect of Community Rejuvenation is presented in the report, as shown in Figures 3.3-1 to 3.3-10. For excerpts from interviews with stakeholders, please refer to Appendix 5.

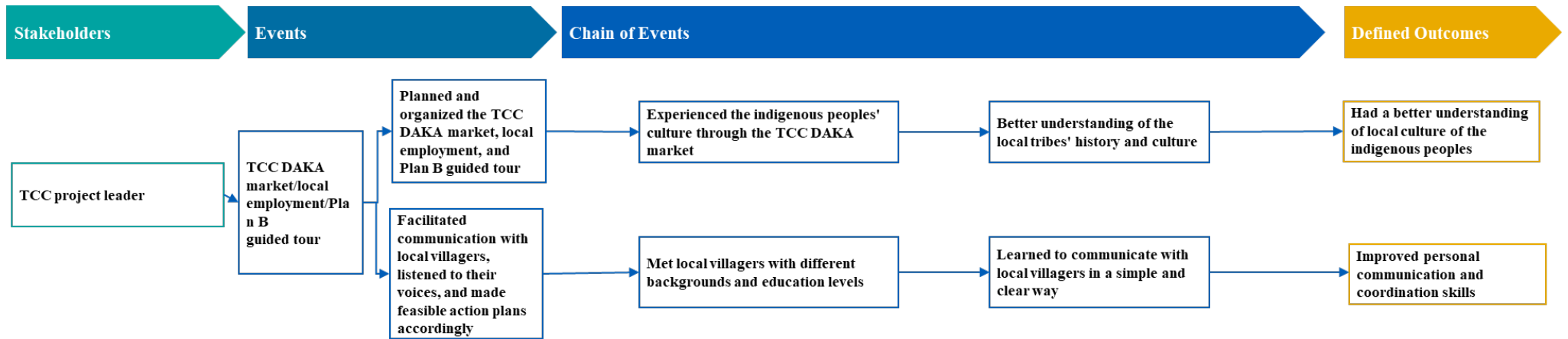


Figure 3.3-1 Chain of Events - Community Rejuvenation (TCC Project Leader)

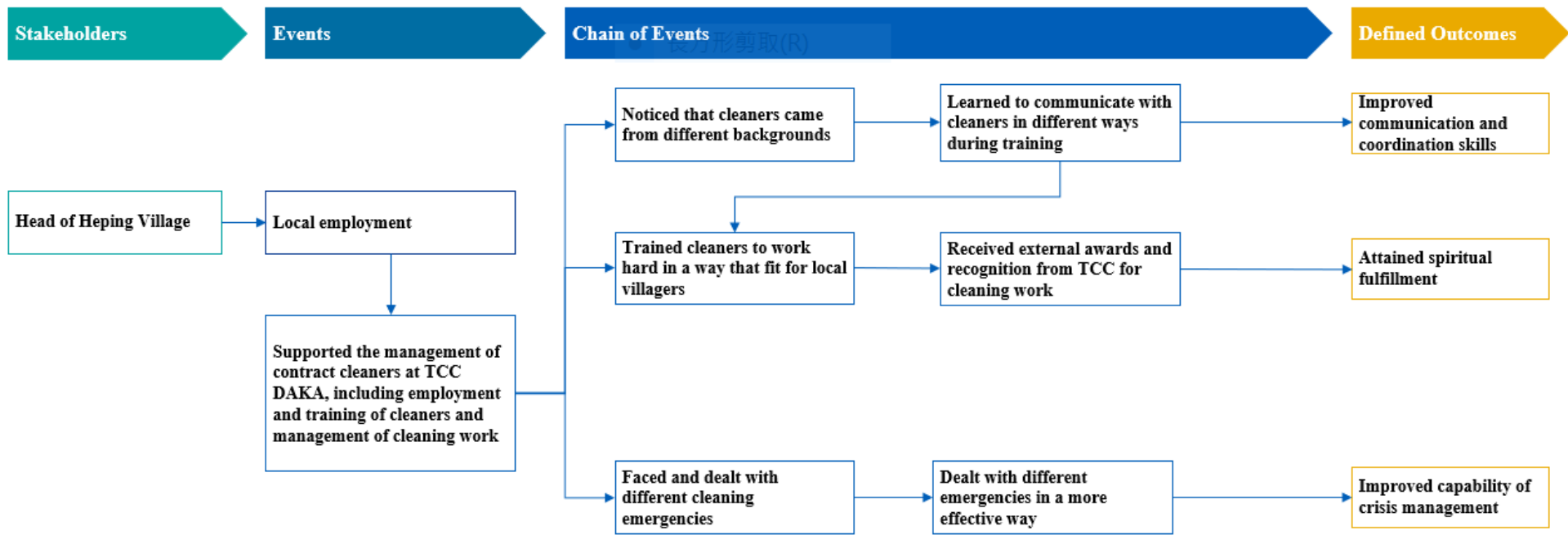


Figure 3.3-2 Chain of Events - Community Rejuvenation (Head of Heping Village)

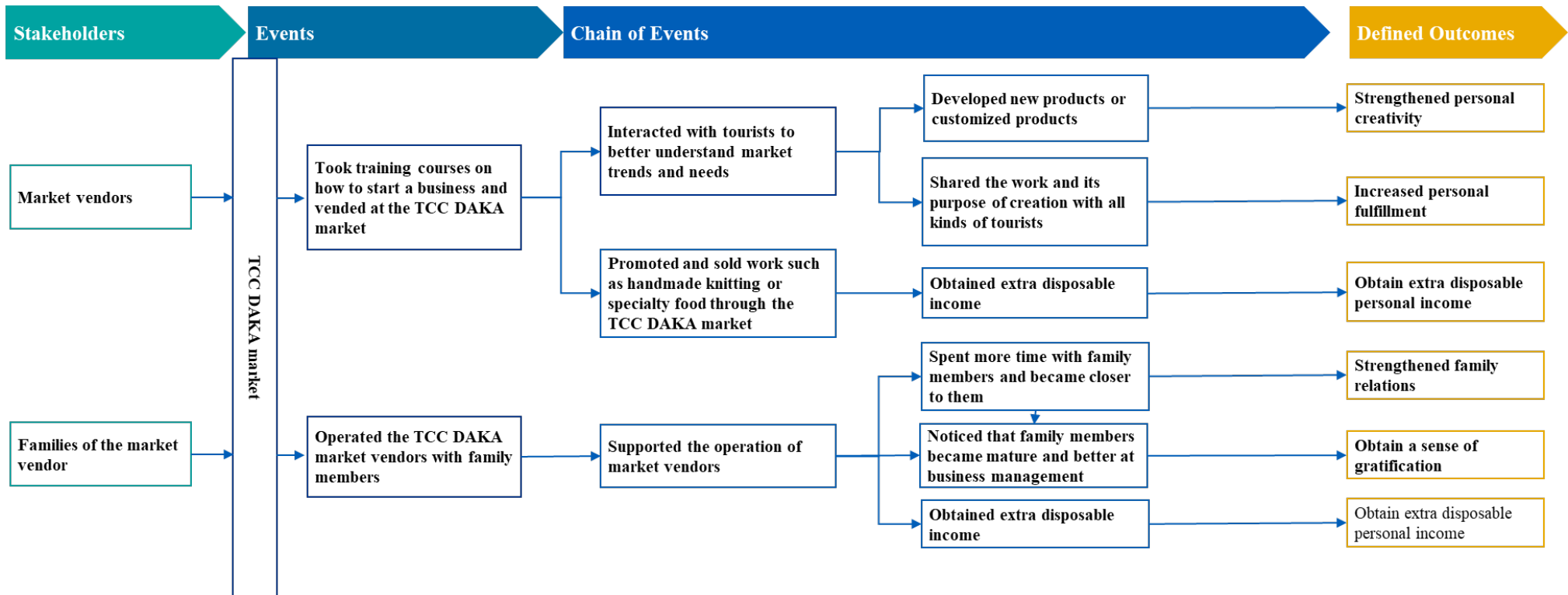


Figure 3.3-3 Chain of Events - Community Rejuvenation (Market Vendors/Families of the Market Vendors)

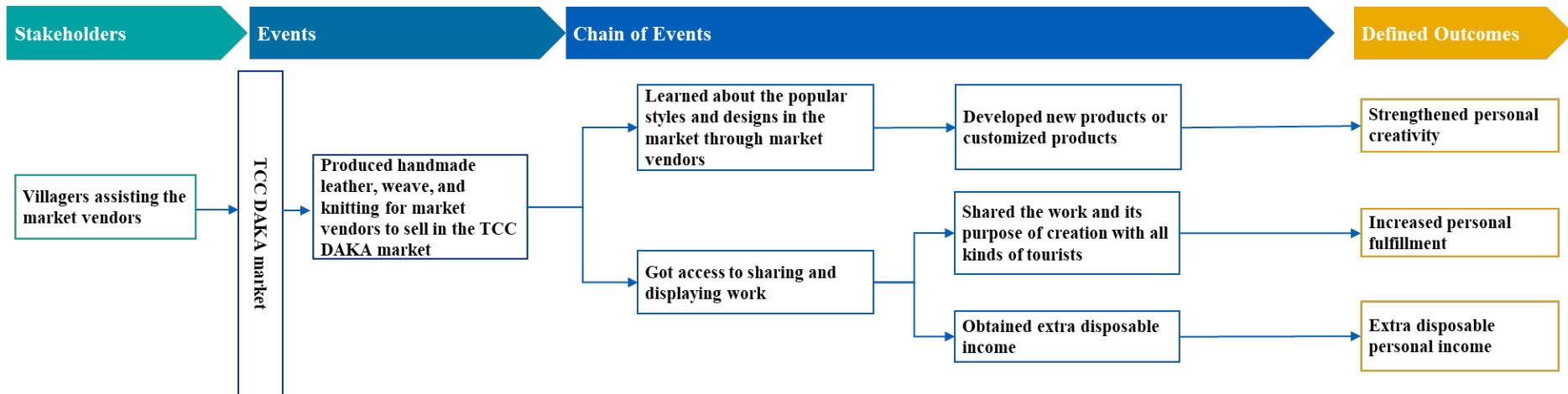


Figure 3.3-4 Chain of Events - Community Rejuvenation (Villagers Assisting the Market Vendors)

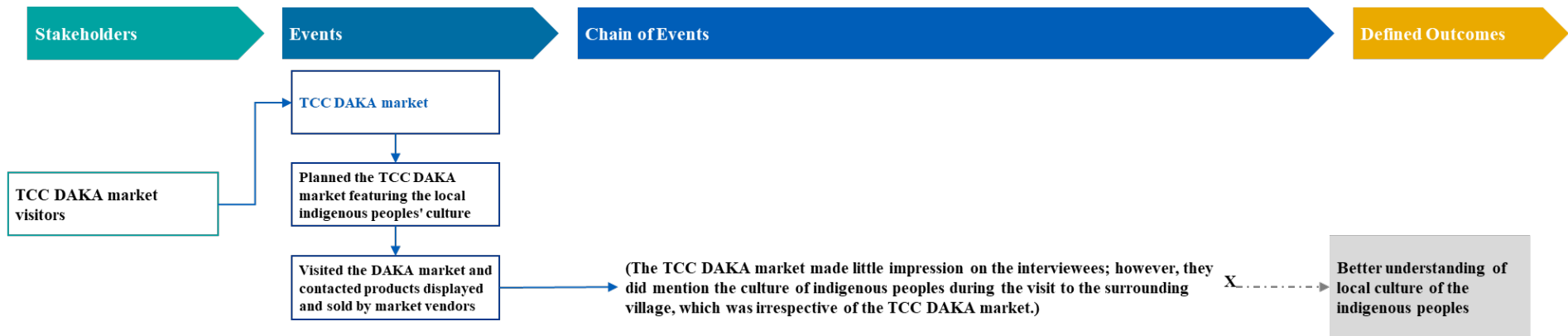


Figure 3.3-5 Chain of Events - Community Rejuvenation (TCC DAKA Market Visitors)

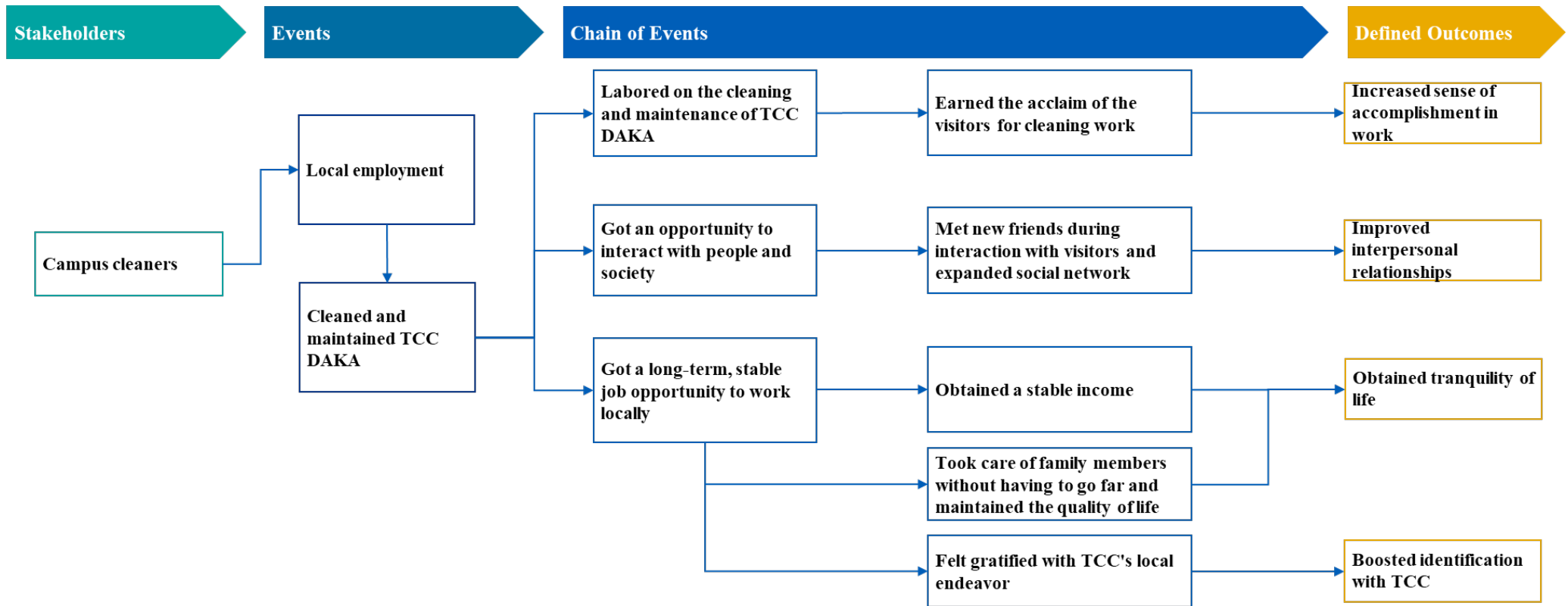


Figure 3.3-6 Chain of Events - Community Rejuvenation (Campus Cleaners)

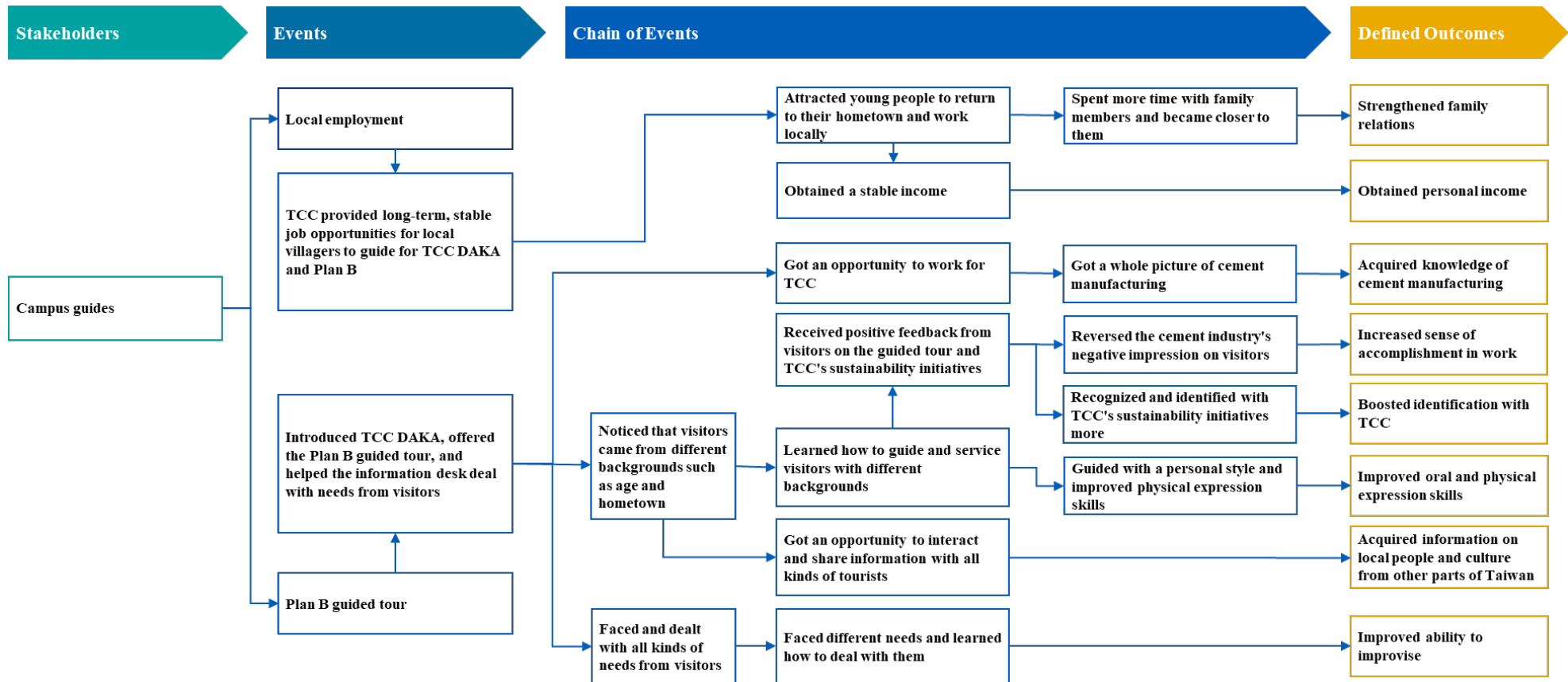


Figure 3.3-7 Chain of Events - Community Rejuvenation (Campus Guides)

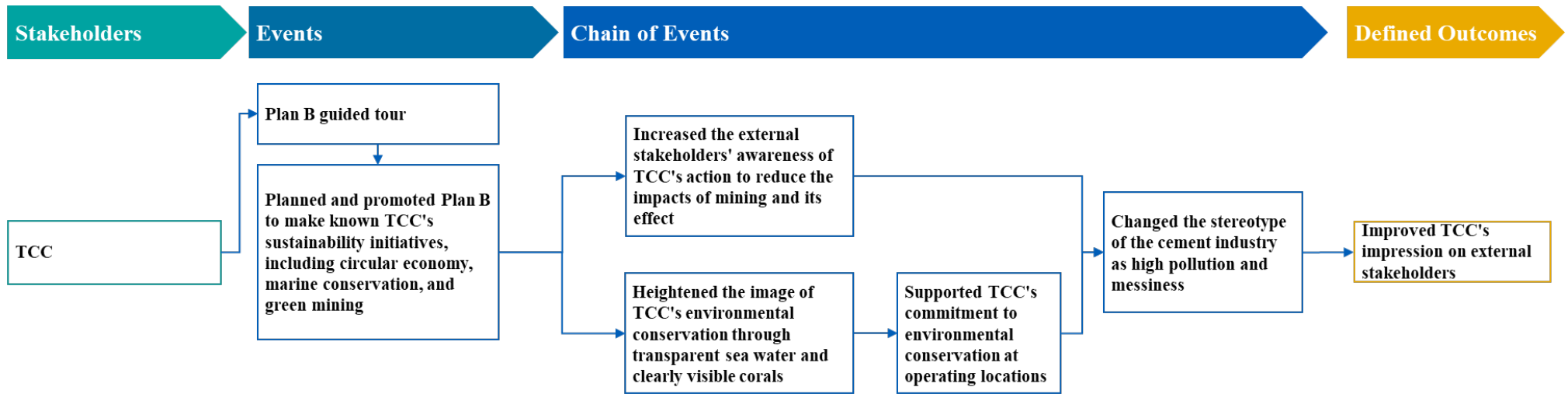


Figure 3.3-8 Chain of Events - Social Dialogue (TCC)

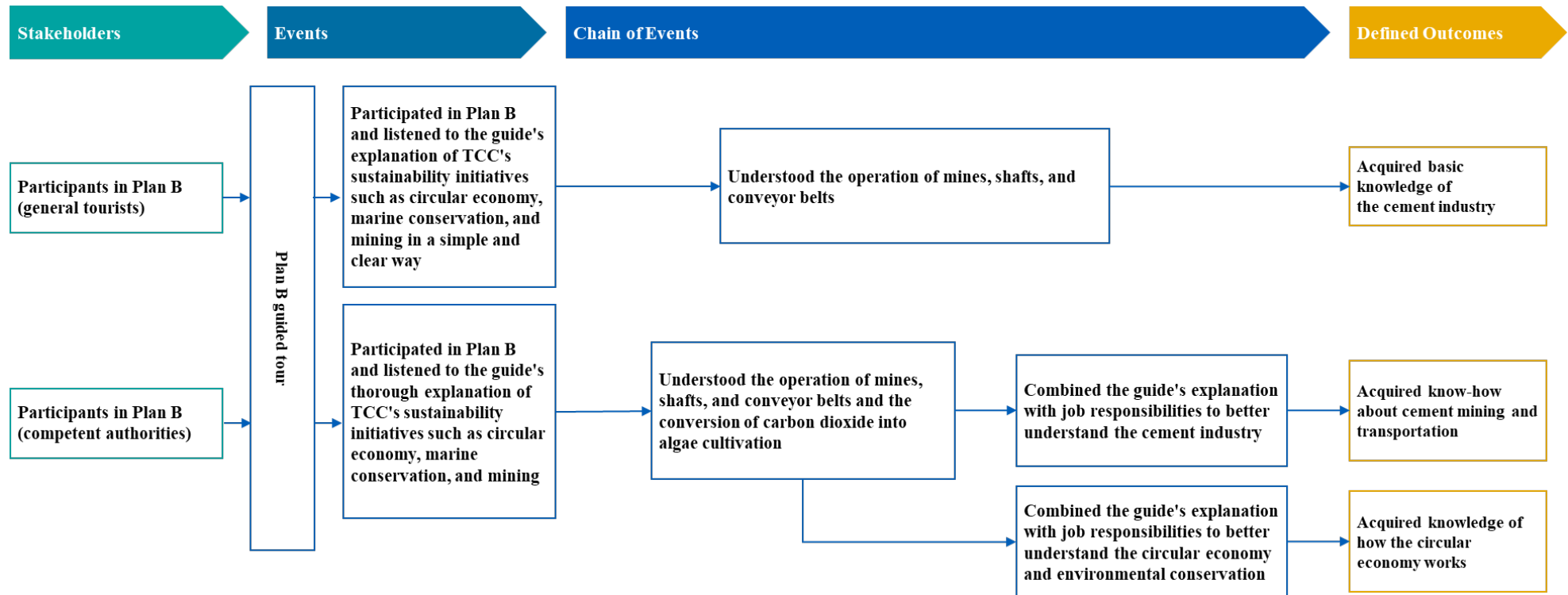


Figure 3.3-9 Chain of Events - Social Dialogue (General Tourists/Competent Authorities)

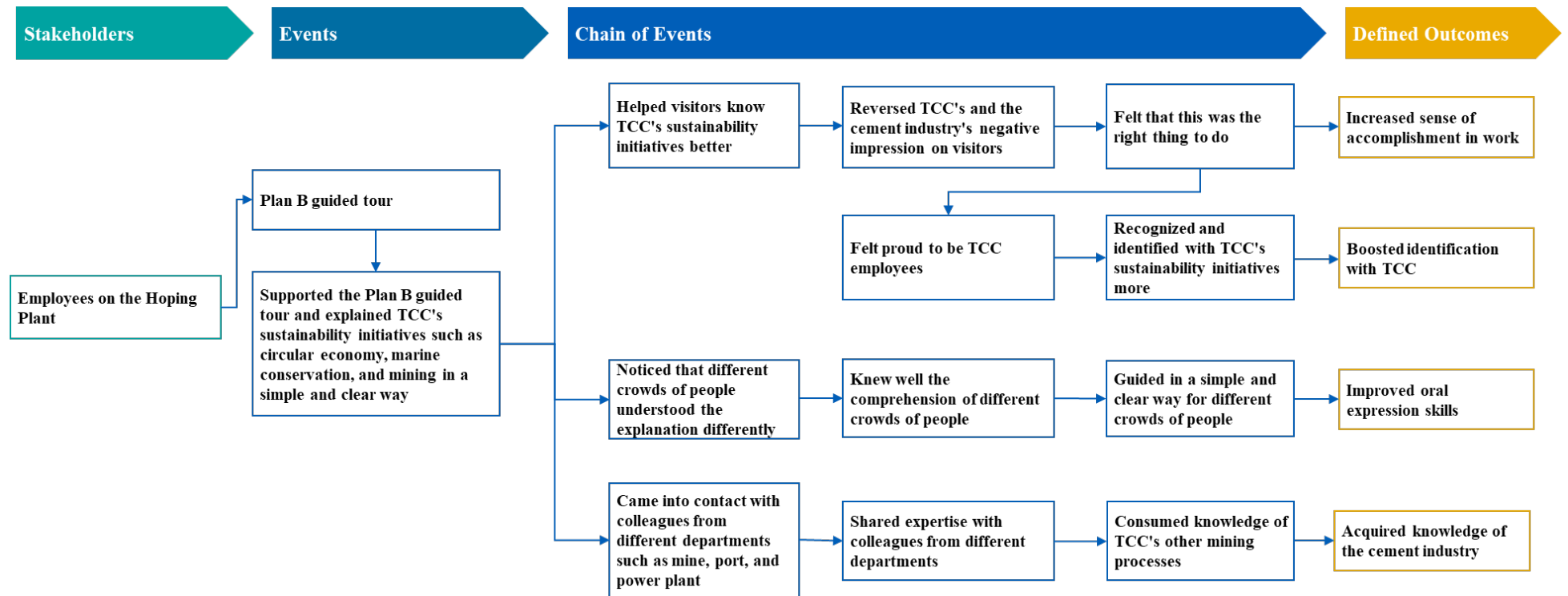


Figure 3.3-10 Chain of Events - Social Dialogue (Employees on the Hoping Plant for Plan B Guided Tour)



Based on the results of the interview with groups of key stakeholders and the chains of events drawn accordingly, changes brought forth by the project to the groups of key stakeholders in terms of Community Rejuvenation and Social Dialogue were clearly identified. Regarding Community Rejuvenation, most of the campus cleaners indicated in the interview that the greatest benefit of working for TCC DAKA was to Obtain tranquility of life, which included a stable income and taking care of family members without having to travel far away; as a result, acquiring a stable income was replaced by living a tranquil life.

In the interview, campus guides also pointed out a number of outcomes not as originally expected. For example, campus guides interacted with tourists a lot, so they had to adjust their interpretations for tourists from different backgrounds, which could improve their oral and physical expression skills; when interacting with tourists from different backgrounds, campus guides also acquired more information on local people and culture from other parts of Taiwan. In order to meet different needs from tourists, campus guides had to learn constantly, thus enhancing their ability to improvise, not the communication and coordination skills and interpersonal interaction skills as originally expected.

As to families of the market vendors, they indicated in the interview that family members spent more time together by operating vendors at the TCC DAKA market, which deepened family relations rather than the originally expected sense of accomplishment; as market vendors spent more time with their family members, they felt gratified by their family members' change of mindset.

As to Social Dialogue, rather than the increased interpersonal interaction skills as originally expected, employees on the Hoping Plant pointed out in the interview that their oral expression skills improved gradually in course of the Plan B guided tour. The reason was that they had to explain things within the tourists' grasp; therefore, they tried to guide in a simple way so that each tourist could understand.

Last, open-ended questions were designed in the interview outline to ensure that interviewees could express their positive and negative thoughts on Community Rejuvenation and Social Dialogue without bias. To be sure, the analysis also verified the negative outcomes of the project by referring to the literature. In the five documents that were similar in content to the project, **they did not specify the negative benefits of such events**; instead, they indicated that factory tours would enhance the corporate image and facilitate communication with stakeholders such as local residents, consumers, or suppliers. Noticeably, the three TCC DAKA market tourists stated unanimously in the interview that they did not stay in the market for too long so the market made little impression on them; therefore, no obvious positive or negative changes were brought forth to them; however, they did mention the culture of indigenous peoples during the visit to the surrounding village, which was irrespective of the TCC DAKA market. To make the results of the stakeholder engagement impartial in terms of gender, three female tourists were interviewed separately for reconfirmation in addition to the aforesaid three male tourists. The three female tourists' statements were almost the same as the three male tourists'. As information reached a saturation point, neither positive nor negative outcomes brought forth to the TCC DAKA market tourists were included in the analysis. Throughout the stakeholder engagement, no stakeholders gave negative feedback except for the TCC DAKA market visitors. Based on the supporting evidence given in the literature, no negative benefits were included in the analysis, and intended benefits to the TCC DAKA market visitors were also excluded from the analysis.



The analysis also checked whether outcomes brought forth by the project to subgroups of stakeholders varied due to their backgrounds. According to the results of the interview, competent authorities participating in the Plan B guided tour had parts of their job responsibilities in relation to manufacturing, sustainability, or environmental protection. Different from the basic ideas of the cement industry consumed by general tourists, the benefits of the project the competent authorities received were mainly work-related expertise such as know-how about cement and how the circular economy works.

After the chains of events were drawn and the outcomes were defined, the 4th stakeholder engagement (written documents) was conducted to verify the defined outcomes and stakeholders. The defined outcomes are shown in Table 3.3-2 below:

Table 3.3-2 Results of 3rd Stakeholder Engagement

Community Rejuvenation		
Stakeholders		Defined Outcomes
Project initiators	TCC project leader	<ul style="list-style-type: none"> • Have a better understanding of local culture of the indigenous peoples • Improve personal communication and coordination skills
Project executors	Head of Heping Village	<ul style="list-style-type: none"> • Improve communication and coordination skills • Attain spiritual fulfillment • Improve capability of crisis management
Project beneficiaries	Campus cleaners	<ul style="list-style-type: none"> • Increase sense of accomplishment in work • Improve interpersonal relationships • Obtain tranquility of life • Boost identification with TCC
	Campus guides	<ul style="list-style-type: none"> • Strengthen family relations • Obtain personal income • Acquire knowledge of cement manufacturing • Increase sense of accomplishment in work • Boost identification with TCC • Improve oral and physical expression skills • Acquire information on local people and culture from other parts of Taiwan • Improve the ability to improvise
	Market vendors	<ul style="list-style-type: none"> • Strengthen personal creativity • Increase personal fulfillment • Obtain extra disposable personal income



	Families of the market vendors	<ul style="list-style-type: none"> Strengthen family relations Obtain a sense of gratification Obtain extra disposable personal income
	Villagers assisting the market vendors	<ul style="list-style-type: none"> Strengthen personal creativity Increase personal fulfillment Obtain extra disposable personal income
	TCC DAKA market visitors	The TCC DAKA market made little impression on the interviewees; however, they did mention the culture of indigenous peoples during the visit to the surrounding village, which was irrespective of the TCC DAKA market.
Social Dialogue		
Stakeholders		Outcomes
Project initiators	TCC	<ul style="list-style-type: none"> Improve TCC's impression on external stakeholders
Project executors	Employees on the Hoping Plant (Plan B)	<ul style="list-style-type: none"> Increase sense of accomplishment in work Boost identification with TCC Improve oral expression skills Acquire knowledge of the cement industry
Project beneficiaries	Participants in Plan B (general tourists)	<ul style="list-style-type: none"> Acquire knowledge of the cement industry
	Participants in Plan B (competent authorities)	<ul style="list-style-type: none"> Acquire know-how about cement mining and transportation Acquire knowledge of how the circular economy works

3.4 Stakeholder Questionnaire

In the 5th stakeholder engagement (questionnaire), a questionnaire was further designed to collect feedback from stakeholders based on the aforesaid chain of events. In addition to verifying whether the defined outcomes were material and did occur, the questionnaire was designed to identify the degree of changes for each outcome by collecting information on related adjustment factors (e.g., indicators, deadweight, displacement, attribution, and drop-off) for the subsequent analysis. The valid sample size of the questionnaire was set at a 90% confidence level and the maximum sampling error at $\pm 20\%$ to keep the questionnaire data representative. The questionnaire was distributed to every group of stakeholders included in the analysis. As shown in the table below, a total of 113 valid questionnaires were retrieved (refer to Appendix 4 for more information):



Table 3.4-1 5th Stakeholder Engagement - Questionnaire Results

Community Rejuvenation			
Key Stakeholders		Population	Number of Valid Questionnaires Retrieved
Project initiators	TCC project leader	1	1
Project executors	Head of Heping Village	1	1
Project beneficiaries	Campus cleaners	18	11
	Campus guides	6	6
	Market vendors	14	10
	Families of the market vendors	11	7
	Villagers assisting the market vendors	12	9
Social Dialogue			
Key Stakeholders		Population	Number of Valid Questionnaires Retrieved
Project initiators	TCC	1	1
Project executors	Employees on the Hoping Plant (Plan B)	7	7
Project beneficiaries	Participants in Plan B (general tourists)	299	39
	Participants in Plan B (competent authorities)	179	21

The 5th stakeholder engagement (questionnaire) adopted an error detection mechanism. The validity of questionnaires was examined first upon retrieval. After the removal of invalid questionnaires, the valid ones were coded and compiled. Following that, a separate member of the analysis team helped check the correctness of data to ensure that the subsequent calculations of SROI would be correct. As the questionnaires were mainly compiled based on the average, extreme values were examined to avoid neglect. Upon examination, no excessively extreme value was found.

3.5 Indicator Setting

The purpose of the 5th stakeholder engagement (questionnaire) was to collect information on adjustment factors in addition to verifying whether the defined outcomes did occur and the amount of change for each outcome. For each defined outcome, the analysis set a quantitative indicator for each defined outcome. Information on the amount of change and the evidence of occurrence was collected through the questionnaire. Quantitative indicators should be as objective as possible. In terms of Community Rejuvenation, market vendors indicated that vending at the TCC DAKA market helped improve personal creativity; therefore, the number of new products designed by market vendors was used as an indicator to measure whether personal creativity improved or not. On the part of Social Dialogue, employees on the Hoping Plant stated that they improved



their oral expression skills through the Plan B guided tour; hence, the percentage of positive feedback from tourists on the clear oral expression during the guided tour was used as an objective indicator. Regarding outcomes relate to knowledge, economic statues, and mental well-being improvement, suchknowledge of cement, spiritual fulfillment, or sense of accomplishment at work, stakeholders were asked to score the extent of an outcome on a scale of 0 to 10.

Each outcome indicator was averaged based on the results of the questionnaire. As shown in Table 3.5-1, the indicators of spiritual outcomes were all between 8 and 9 out of 10 points, showing a relatively high amount of change and the actual occurrence of the outcomes; the indicators of knowledge-based outcomes were between 7.5 and 10 points, showing a certain amount of change. Employees on the Hoping Plant had a relatively low outcome indicator in terms of "acquired knowledge of the cement industry" (7.5 points); in the questionnaire, 57% of the employees responded that they acquired knowledge of cement mining and transportation and 71% acquired knowledge of port transportation and environmental conservation, which could further support the amount of change. The success rate and the positive feedback rate were used to measure the outcomes in relation to personal skills; if the rate falls between 60% and 90%, it means that stakeholders do acquire skills required to perform their work. The number of new products designed was used to measure whether personal creativity improved or not. An average of 7.3~8.9 showed that personal creativity did improve. Each outcome indicator is listed in Table 3.5-1.

Table 3.5-1 List of Outcome Indicators

Community Rejuvenation				
Key Stakeholders		Outcomes	Indicators	Outcome Indicators
Project initiators	TCC project leader	Have a better understanding of local culture of the indigenous peoples	Degree of the increase in understanding of local culture of the indigenous peoples (on a scale of 1 to 10)	10 points
		Improve personal communication and coordination skills	Successful communication rate	70%
Project executors	Head of Heping Village	Improve communication and coordination skills	Successful communication rate	90%
		Attain spiritual fulfillment	Attained spiritual fulfillment (on a scale of 1 to 10)	9 points
		Improve capability of crisis management	Rate of success in crisis management	100%
Project beneficiaries	Campus cleaners	Increase sense of accomplishment in work	Degree of the increase in sense of accomplishment in work (on a scale of 1 to 10)	9.4 points
		Improve interpersonal relationships	Degree of the improvement in interpersonal relationships (on a scale of 1 to 10)	9.4 points
		Obtain tranquility of life	Extra time spent with family members each week	108.5 hours
		Boost identification with TCC	Degree of boosting identification with TCC (on a scale of 1 to 10)	9.5 points
	Campus guides	Strengthen family relations	Extra time spent with family members each week	52.3 hours
		Obtain personal income	Degree of personal income obtained (on a scale of 1 to 10)	9.2 points



		Acquire knowledge of cement manufacturing	Degree of the increase in acquiring knowledge of the cement industry (on a scale of 1 to 10)	8.8 points
		Increase sense of accomplishment in work	Degree of the increase in sense of accomplishment in work (on a scale of 1 to 10)	7.7 points
		Boost identification with TCC	Degree of boosting identification with TCC (on a scale of 1 to 10)	8.5 points
		Improve oral and physical expression skills	Rate of positive feedback on the guided tour	67.3%
		Acquire information on local people and culture from other parts of Taiwan	The average amount of information obtained in a week	5.58 pieces
		Improve the ability to improvise	Rate of success in improvisation	81.67%
	Market vendors	Strengthen personal creativity	Number of new products designed after vending at the TCC DAKA market	8.9 products
		Increase personal fulfillment	Degree of the increase personal fulfillment (on a scale of 1 to 10)	8.3 points
		Obtain extra disposable personal income	Degree of extra disposable personal income obtained (on a scale of 1 to 10)	6.6 points
	Families of the market vendors	Strengthen family relations	Extra time spent with family members every day	8.3 hours
		Obtain a sense of gratification	Degree of gratification at family members (on a scale of 1 to 10)	7.9 points
Obtain extra disposable personal income		Decree of personal income obtained (on a scale of 1 to 10)	6.86 points	
Villagers assisting	Strengthen personal creativity	Number of new products designed after vending at the TCC DAKA market	7.3 products	



	the market vendors	Increase personal fulfillment	Degree of the increase in sense of accomplishment in work (on a scale of 1 to 10)	8.2 points
		Obtain extra disposable personal income	Degree of extra disposable personal income obtained (on a scale of 1 to 10)	6.4 points
Social Dialogue				
Key Stakeholders		Outcomes	Indicators	Outcome Indicators
Project initiators	TCC	Improve TCC's impression on external stakeholders	Degree of the improvement on corporate image of TCC (on a scale of 1 to 10)	8.8 points
Project executors	Employees on the Hoping Plant (Plan B)	Increase sense of accomplishment in work	Degree of the increase in sense of accomplishment in work (on a scale of 1 to 10)	8.3 points
		Boost identification with TCC	Degree of boosting identification with TCC (on a scale of 1 to 10)	9 points
		Improve oral expression skills	Rate of positive feedback on the guided tour	81.7%
		Acquire knowledge of the cement industry	Degree on the acquired knowledge of the cement industry (on a scale of 1 to 10)	7.57 points
Project beneficiaries	Participants in Plan B (general tourists)	Acquire basic knowledge of the cement industry	Degree on the acquired knowledge of the cement industry (on a scale of 1 to 10)	8.6 points
	Participants in Plan B (competent authorities)	Acquire know-how about cement mining and transportation	Degree on the acquired know-how about cement mining and transportation (on a scale of 1 to 10)	9 points
		Acquire knowledge of how the circular economy works	Degree on the acquired knowledge of how the circular economy works (on a scale of 1 to 10)	8.25 points

3.6 Materiality Verification

After the outcomes brought forth by the project to the key stakeholders and the amount of change were identified through the aforesaid stakeholder engagements, the SROI analysis proceeded to verify the materiality of the outcomes based on the principle: **Only includes what is material**. The materiality of outcomes has two aspects: **relevance of**



outcomes and significance of outcomes. The principles of materiality identification are stated below.

Regarding the relevance of outcomes, the benefits identified in the analysis were based on the stakeholders' direct feedback on open-ended questions during their interviews; the outcomes were defined by the saturation of the collected feedback, and such saturation hinged on the consistency of information provided by the stakeholders. For example, campus guides mentioned that they often obtained information on local people and culture across Taiwan. Such information gradually reached a saturation point as different interviewees made the same statement. As a result, information on local people and culture across Taiwan was included in the process of defining the outcomes. On the whole, the outcomes defined in the analysis were derived from the stakeholders who had long-term involvement in TCC DAKA; the stakeholders' involvement and the consistency of information provided by the same type of stakeholders were the bases for determining whether the outcomes were objective and relevant.

While the relevance of outcomes focused on the verification of qualitative information, the significance of outcomes hinged on the verification of quantitative data. For outcomes defined in the chains of events, stakeholders were asked in the questionnaire whether the outcomes did occur. If more than 85% of the respondents (or 100% when the population of stakeholders is 1) select "yes," the outcomes are verified to be prevalent among all types of stakeholders and thus significant. Based on the results of the questionnaire, the significance of all outcomes reached **85%** and above; therefore, all outcomes were included in the analysis. For the significance of each outcome, refer to Table 3.6-1.

In terms of Community Rejuvenation, the significance of each outcome was 100%, indicating that all of the respondents considered that each outcome did occur; on the part of Social Dialogue, the significance of three outcomes did not reach 100%, which required review of information acquired from the 3rd stakeholder engagement (interview). The reason why the significance of three outcomes did not reach 100% could relate to the past experience of the stakeholders. For example, some employees on the Hoping Plant stated in the interview that they were already equipped with oral expression skills; some participants in Plan B (competent authorities) also mentioned that they were already conversant with the cement industry and the circular economy due to the nature of their work. On the whole, the significance of outcomes reached 85% and above in community rejuvenation and social dialogue, showing that the outcomes generally occurred among the groups of stakeholders to which they belonged.



Table 3.6-1 Significance of Outcomes

Community Rejuvenation			
Key Stakeholders		Outcomes	Significance of Outcomes
Project initiators	TCC project leader	Have a better understanding of local culture of the indigenous peoples	100%
		Improve personal communication and coordination skills	100%
Project executors	Head of Heping Village	Improve communication and coordination skills	100%
		Attain spiritual fulfillment	100%
		Improve capability of crisis management	100%
Project beneficiaries	Campus cleaners	Increase sense of accomplishment in work	100%
		Improve interpersonal relationships	100%
		Obtain tranquility of life	100%
		Boost identification with TCC	100%
	Campus guides	Strengthen family relations	100%
		Obtain personal income	100%
		Acquire knowledge of cement manufacturing	100%
		Increase sense of accomplishment in work	100%
		Boost identification with TCC	100%
		Improve oral and physical expression skills	100%
		Acquire information on local people and culture from other parts of Taiwan	100%
		Improve the ability to improvise	100%
	Market vendors	Strengthen personal creativity	100%
		Increase personal fulfillment	100%
		Obtain extra disposable personal income	100%
		Strengthen family relations	100%



	Families of the market vendors	Obtain a sense of gratification	100%
		Obtain extra disposable personal income	100%
	Villagers assisting the market vendors	Strengthen personal creativity	100%
		Increase personal fulfillment	100%
		Obtain extra disposable personal income	100%
Social Dialogue			
Key Stakeholders		Outcomes	Significance of Outcomes
Project initiators	TCC	Improve TCC's impression on external stakeholders	100%
Project executors	Employees on the Hoping Plant (Plan B)	Increase sense of accomplishment in work	100%
		Boost identification with TCC	100%
		Improve oral expression skills	85.7%
		Acquire knowledge of the cement industry	100%
Project beneficiaries	Participants in Plan B (general tourists)	Acquire basic knowledge of the cement industry	100%
	Participants in Plan B (competent authorities)	Acquire know-how about cement mining and transportation	95.2%
		Acquire knowledge of how the circular economy works	95.2%



3.7 Analysis Process and Outcome Verification

The importance of stakeholder involvement is demonstrated in every step of this SROI analysis. Engaging and verifying with stakeholders are the key principles for maintaining transparency. In the analysis, the outcomes of the project were verified with the stakeholders through interviews and written documents. First, the results of the 1st and 2nd stakeholder engagements, that is, a list of stakeholders identified, were verified with the project initiators through written documents; in the 3rd stakeholder engagement, the outcomes brought forth by the project to different stakeholders were cross-examined in the interview so that different types of stakeholders could verify the outcomes mutually. For example, market vendors stated in the interview that vending at the TCC DAKA market helped improve the creativity of their own and villagers who assisted them; then, villagers assisting the market vendors were asked the same question for cross-examination. In addition, the chains of events and the impact map drawn based on the results of the 3rd stakeholder engagement were verified with the project initiators through written documents. Last, the project initiators were asked in the phone interview to verify the information they provided and the calculations of SROI; financial proxies were also provided for the project initiators in writing to verify that relevant indicator settings did not over-claim. Upon completion of the calculation, the final analysis and outcomes and recommendations for project advancement were provided for the project initiators' review and verification. Table 3.7-1 presents the information on stakeholder verification in the analysis, including the content, format, and stage of stakeholder engagement.

Table 3.7-1 Information on Stakeholder Verification

Content of Review/Verification	Method of Review/Verification	Stakeholder of Review/Verification	Date of Review/Verification	Stage of Stakeholder Engagement
Stakeholder identification results	Written documents	Project initiators	2020.12	2nd
Theory of change	Interviews and written documents	Project initiators Project executors Project beneficiaries	2021.01	3rd and 4th
Chain of events and impact map	Written documents	Project initiators Project executors Project beneficiaries	2021.02	4th
SROI results	Written documents	Project initiators	2021.03	6th
Recommendations for project improvement	Written documents	Project initiators	2021.04	6th

4. Mapping Impacts

4.1 Inputs

Inputs of Community Rejuvenation in 2020 included a project cost of NT\$2,579,913. Besides, it was found out that there should be additional time costs for stakeholders in relation to local employment and the TCC DAKA market during the stakeholder engagement. In the 5th stakeholder engagement (questionnaire), questions were designed accordingly to investigate additional time spent by each stakeholder, and the cost of time was calculated based on the minimum wage or minimum hourly wage announced by the government in 2020. The results of calculation suggests that the head of Heping Village had a time cost of NT\$285,600, families of the market vendors had NT\$1,613,857, villagers assisting the market vendors had NT\$1,391,242, and campus guides had NT\$267,020. the amount of inputs totaled NT\$9,795,396. For other stakeholders, as TCC project leader was employed by TCC already and would be responsible for other projects even if this even was not exist; similarly, campus cleaners did not spend extra time on the project outside working hours. As a result, there was no additional time cost for these two types of stakeholders.

Inputs of Social Dialogue in 2020 included a project cost of NT\$2,054,922. Likewise, participants in Plan B chose to participate in the Plan B guided tour instead of engaging in other activities, so there should be time costs for them. The time cost was calculated based on the minimum hourly wage announced by the government in 2020. According to the calculations, participants in Plan B (general tourists) had a time cost of NT\$94,484 and participants in Plan B (competent authorities) had NT\$56,564. The amount of inputs totaled NT\$2,205,970. Apart from the aforesaid stakeholders, employees on the Hoping Plant already were employed by TCC already and would be responsible for other projects even if Plan B was not exist ; as a result, there was no additional time cost for them.

4.2 Outputs

Outputs from Community Rejuvenation were the number of TCC DAKA market visitors, revenue generated from the TCC DAKA market, and the number of people employed locally in 2020 as shown in Table 4.2-1.

Table 4.2-1 Outputs from Community Rejuvenation in 2020

Community Rejuvenation		
Key Stakeholders		Outputs
Project initiators	TCC project leader	Number of business days in the TCC DAKA market: 357
Project executors	Head of Heping Village	Number of stands in the TCC DAKA market: 14
Project beneficiaries	Campus cleaners	Number of TCC DAKA market visitors: 2,529,576
	Campus guides	Average revenue per month generated from the TCC DAKA market: NT\$1,288,000
	Market vendors	Number of people employed locally: 18 campus cleaners
	Families of the market vendors	6 campus guides



	Villagers assisting the market vendors	
	TCC DAKA market visitors	

Outputs from social dialogue were the number of Plan B guided tours and the number of participants in 2020. The outputs are shown in Table 4.2-2.

Table 4.2-2 Outputs from Social Dialogue in 2020

Social Dialogue		
Key Stakeholders		Outputs
Project initiators	TCC	Number of Plan B guided tours: 65 Number of tours via online reservation: 28 Number of tours in group: 37 Number of participants: 995 Number of participants via online reservation: 299 Number of participants in group: 696
Project executors	Employees on the Hoping Plant	
Project beneficiaries	Participants in Plan B (general tourists)	
	Participants in Plan B (competent authorities)	



4.3 Impact Map

Through the 1st and 2nd stage of stakeholder engagement, this analysis has not only verified the changes that the project brought forth to the stakeholders and further understood the degree of impacts and changes experienced by the stakeholders. The impacts of TCC DAKA on key stakeholders are described below in the impact map (Table 4.3-1).

**Table 4.3-1 Impact Map of TCC DAKA
Community Rejuvenation**

Key Stakeholders		Number of People	Inputs		Outputs	Outcomes	Impacts
			Item	Amount (NT\$)			
Project initiators	TCC project leader	1	Project cost	\$2,579,913	Number of business days in the TCC DAKA market: 357 Number of stands in the TCC DAKA market: 14 Number of TCC DAKA market visitors: 2,529,576 Average revenue per month generated from the TCC DAKA market: NT\$1,288,000	<ul style="list-style-type: none"> • Had a better understanding of local culture of the indigenous peoples • Improved personal communication and coordination skills 	Strengthened interaction between the factory and the local community and furthered the development of Heping Village and the neighborhood through Community Rejuvenation (including the TCC DAKA market and local employment)
	Head of Heping Village	1	Time cost	NT\$285,600 (Note 1)			



					Number of people employed locally: 18 campus cleaners 6 campus guides	crisis management	
Project beneficiaries	Campus cleaners	18	N/A	N/A		<ul style="list-style-type: none"> • Increased sense of accomplishment in work • Improved interpersonal relationships • Obtained tranquility of life • Boosted identification with TCC 	Obtained a long-term, stable job opportunity of cleaning and maintaining TCC DAKA and could take care of their family members without traveling far away; had more interaction with society and gained recognition and a sense of accomplishment in work
	Campus guides	6	Time cost	NT\$267,020 (Note 2)		<ul style="list-style-type: none"> • Strengthened family relations • Obtained personal income • Acquired knowledge of cement manufacturing • Increased sense of accomplishment in work • Boosted identification with TCC • Improved oral and physical expression skills • Acquired information on local people and culture from other parts 	Obtained local job opportunities to work for TCC DAKA as guides; acquired knowledge of the cement industry and improved expression skills; improved the ability to improvise and acquired a diversified information when interacting with tourists



					<ul style="list-style-type: none"> of Taiwan Improved ability to improvise 	
Market vendors	14	Time cost	NT\$3,657,763 (Note 2)		<ul style="list-style-type: none"> Strengthened personal creativity Increased personal fulfillment Obtained extra disposable personal income 	Has a platform to share and display their creations. Obtained additional income and strengthened personal creativity while increasing personal fulfillment by vending in the TCC DAKA market
Families of the market vendors	11	Time cost	NT\$1,613,857 (Note 2)		<ul style="list-style-type: none"> Strengthened family relations Obtain a sense of gratification Extra disposable personal income 	Participated in the operation of the TCC DAKA market with family members, spent more time with family members and became closer to them. Felt gratified by witnessed the growth of their families
Villagers assisting the market vendors	12	Time cost	NT\$1,391,243 (Note 2)		<ul style="list-style-type: none"> Strengthened personal creativity Increased personal fulfillment Obtained extra disposable personal income 	Produced handmade leather, weave, and knitting for market vendors to sell in the TCC DAKA market; had a platform to share and display their work and creation. Increased personal fulfillment and strengthened personal



							creativity by receiving positive feedback from tourists
	TCC DAKA market visitors	2,529,576	N/A	N/A			Since the TCC DAKA market made little impression on both male and female interviewees, the outcomes were excluded from the analysis.
Social Dialogue							
Key Stakeholders		Number of People	Inputs		Outputs	Outcomes	Impacts
			Item	Amount (NT\$)			
Project initiators	TCC	1	Project cost	\$2,054,922	Number of Plan B guided tours: 65 Number of tours via online reservation: 28 Number of tours in group: 37	<ul style="list-style-type: none"> Improved TCC's impression on external stakeholders 	Organized the Plan B guided tour to facilitate communication between the industry and society and improved TCC's impression on external stakeholders
Project executors	Employees on the Hoping Plant	7	N/A	N/A	Number of participants: 995 Number of participants via online reservation: 299 Number of participants in group: 696	<ul style="list-style-type: none"> Increased sense of accomplishment in work Boosted identification with TCC Improved oral expression skills Acquired knowledge of the cement industry 	Reversed TCC's negative impression on visitors and improved oral expression skills through the Plan B guided tour



Project beneficiaries	Participants in Plan B (general tourists)	299	Time cost	NT\$94,484 (Note 3)		<ul style="list-style-type: none"> Acquired basic knowledge of the cement industry 	Participated in the Plan B guided tour and understood the operation of mines, shafts, and conveyor belts
	Participants in Plan B (competent authorities)	179	Time cost	NT\$56,564 (Note 3)		<ul style="list-style-type: none"> Acquired know-how about cement mining and transportation Acquired knowledge of how the circular economy works 	Participated in the Plan B guided tour and understood TCC's sustainability initiatives such as circular economy, marine conservation, and mining

Note 1: For 40 working hours spent per week, the time cost was calculated based on the minimum wage (NT\$23,800) announced by the government in 2020.

Note 2: For additional time spent in a week on average, the time cost was calculated based on the minimum hourly wage (NT\$158) announced by the government in 2020.

Note 3: For the two-hour Plan B guided tour, the time cost was calculated based on the minimum hourly wage (NT\$158) announced by the government in 2020.

5. Project Value Analysis

5.1 Establishment of Financial Proxies

Following the identification of stakeholders, verification of materiality and occurrence of the outcomes with stakeholders, collection of inputs and outputs, and impact-mapping, the next step is to quantify the outcomes of the events by establishing financial proxies. In the SROI analysis, three types of monetization, namely, Revealed Preference Method, Wellbeing Valuation Method, and Stated Reference Method, were introduced to establish financial proxies. The former two methods were acquired from the literature while the Stated Reference Method came from information provided by and questionnaires distributed to the stakeholders. The financial proxies adopted in the analysis were established based on the following two principles to make sure that they would be reasonable and fully represent the value of the outcomes:

- Relevance with the content of the project: Whether the content of a financial proxy is relevant to the content of TCC DAKA should be considered. The proxy should be excluded in case of irrelevance.
- Relevance with the process of changes: Whether the background or content of a financial proxy is similar to the process of changes stated by stakeholders should be considered based on the information acquired from the 3rd and 5th stakeholder engagements. The proxy should only be included if similarity holds.

In addition to the aforesaid two principles, if financial proxies are from different currencies or countries, they will be adjusted based on the average exchange rate or purchasing power parity, so as to use the financial proxies in the way that is closest to the actual value of the outcomes. The financial proxies are summarized in Table 5.1-1.



Table 5.1-1 Financial Proxies of TCC DAKA

Community Rejuvenation								
Key Stakeholders	Outcomes	Indicator	Financial Proxies (NT\$)	Source of Indicator	Applicability of Indicator	Selection Principle	Methodology	
Project initiators	TCC project leader	Improved personal communication and coordination skills	Successful communication rate	Course fee for interpersonal relationships and communication skills NT\$4,500 (per person/course)	Domestic training courses on interpersonal relationships and communication skills	The project leader improved communication skills by participating in the project, which is like the effect of domestic training courses on interpersonal relationships and communication skills.	Principle 2	Revealed preference method
		Have a better understanding of local culture of the indigenous peoples	Degree of the increase in understanding of local culture of the indigenous peoples	Ticket to the Indigenous Peoples Cultural Development Center NT\$150 (per person/time)	Indigenous Peoples Cultural Development Center	The project leader had a better understanding of local culture of the indigenous peoples by participating in the project, which is similar to the effect of a guide from the Indigenous Peoples Cultural Development Center.	Principle 2	Revealed preference method



Project executors	Head of Heping Village	Improved communication and coordination skills	Successful communication rate	Course fee for interpersonal relationships and communication skills NT\$4,500 (per person/course)	Domestic training courses on interpersonal relationships and communication skills	The Head of Heping Village improved communication and coordination skills by participating in the project, which is like the effect of domestic training courses on interpersonal relationships and communication skills.	Principle 2	Revealed preference method
		Attained spiritual fulfillment	Attained spiritual fulfillment	Spiritual fulfillment NT\$409,222.51 (per person/year)	Evaluation of Social Return on Investment created through Gentoo Living Older Person Support Service	The value of the same outcome proposed in this research is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
		Improved capability of crisis management	Rate of success in crisis management	Course fee for conflict management NT\$1,800 (per person/course)	Domestic training courses on conflict management	The Head of Heping Village improved the capability of crisis management by participating in the project, which is like the effect of domestic training courses on conflict management.	Principle 2	Revealed preference method
Project beneficiaries	Campus cleaners	Increased sense of accomplishment in work	Degree of the increase in sense of accomplishment in work	Value of increased confidence/self-esteem	Understanding the wider value of public policy	The value of similar outcomes cited from this research and based on feedback	Principle 1	Wellbeing valuation method



				NT\$22,895.81 (per person/year)	interventions (2014)	provided by the stakeholders is converted into the actual value based on Taiwan's price index.		
	Improved interpersonal relationships	Degree of the improvement in interpersonal relationships		Positive functioning NT\$22,895.81 (per person/year)	Understanding the wider value of public policy interventions (2014)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Obtained tranquility of life	Extra time spent with family members each week		Can rely on family NT\$147,092.24 (per person/year)	Measuring the Social Impact of Community Investment: A Guide to using the Wellbeing Valuation Approach (2018)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Boosted identification with TCC	Degree of boosting identification with the organization		Corporate identity - pride NT\$306,897.10 (per person/year)	Quantifying the Value of Emotions Using a Willingness to Pay Approach (2012)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based	Principle 1	Wellbeing valuation method



						on Taiwan's price index.		
Campus guides	Strengthened family relations	Extra time spent with family members each week	Strengthened family relations NT\$57,239.53 (per person/year)	Understanding the wider value of public policy interventions (2014)		The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Obtained personal income	Salary	Employee's annual salary NT\$402,000 (per person/year)	Employee's annual salary		Collected the actual annual income of campus guides.	Principle 2	²
	Acquired knowledge of cement manufacturing	Willingness to pay for equivalent knowledge acquired based on the questionnaire results	Willingness to pay for equivalent knowledge acquired based on the questionnaire results NT\$1,833.33 (per person/year)	Questionnaire		Information on willingness to pay for similar knowledge of cement manufacturing acquired is collected through the questionnaire.	Principle 2	Stated reference method
	Increased sense of accomplishment in work	Degree of the increase in sense of accomplishment in work	Value of increased confidence/self-esteem NT\$22,895.81 (per person/year)	Understanding the wider value of public policy interventions (2014)		The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the	Principle 1	Wellbeing valuation method

²The actual salary of campus guides was used as the financial proxy.



					actual value based on Taiwan's price index.		
	Boosted identification with TCC	Degree of boosting identification with the organization	Corporate identity - pride NT\$306,897.10 (per person/year)	Quantifying the Value of Emotions Using a Willingness to Pay Approach (2012)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Improved oral and physical expression skills	Rate of positive feedback on the guided tour	Course fee for oral expression skills NT\$8,000 (per person/course)	Fee for domestic training courses on oral expression skills	Campus guides improved oral and physical expression skills by participating in the project, which is similar to the effect of domestic training courses on oral expression skills.	Principle 2	Revealed preference method
	Acquired information on local people and culture from other parts of Taiwan	Additional amount of information acquired	One-year newspaper subscription fee, broken down by information page NT\$2,160 (per person/year)	1. One-year domestic newspaper subscription fee 2. Type of information accounting for the largest proportion of the information acquired based	Campus guides acquired a variety of information by participating in the project, which is similar to the effect of reading domestic newspapers.	Principle 2	Revealed preference method



					on the questionnaire results (%)		
	Improved ability to improvise	Rate of success in improvisation	Course fee for front-line customer service NT\$1,500 (per person/course)	Domestic training courses on front-line customer service	Campus guides improved the ability to improvise by participating in the project, which is similar to the effect of domestic training courses on front-line customer service.	Principle 2	Revealed preference method
	Strengthened personal creativity	Number of new product designs	Course fee for creativity development NT\$6,120 (per person/credit)	Domestic training courses on creativity development	Market vendors strengthened personal creativity by participating in the project, which is like the effect of domestic training courses on creativity development.	Principle 2	Revealed preference method
Market vendors	Increased personal fulfillment	Degree of the increase personal fulfillment	Value of increased confidence/self-esteem NT\$22,895.81 (per person/year)	Understanding the wider value of public policy interventions (2014)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Extra disposable personal income	Questionnaire results	Extra income obtained NT\$292,220.71 (per person/year)	Average annual revenue minus	Annual net income is calculated based on market vendors'	Principle 2	Revealed preference method



				average purchase cost	annual revenue minus purchase cost.		
Families of the market vendors	Strengthened family relations	Additional time spent with family members	Strengthened family relations NT\$57,239.53 (per person/year)	Understanding the wider value of public policy interventions (2014)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Obtain a sense of gratification	Degree of gratification at family members	Happiness NT\$478,705.66 (per person/year)	Quantifying the Value of Emotions Using a Willingness to Pay Approach (2012)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
	Extra disposable personal income	Questionnaire results	Income obtained based on questionnaire results NT\$168,000 (per person/year)	Questionnaire	Collected the actual annual extra income obtained by families of the market vendors.	Principle 2	Stated reference method
Villagers assisting the market vendors	Strengthened personal creativity	Number of new product designs	Course fee for creativity development NT\$6,120 (per person/credit)	Domestic training courses on creativity development	Villagers assisting the market vendors strengthened personal creativity by participating in the project, which is	Principle 2	Revealed preference method



						like the effect of domestic training courses on creativity development.		
		Increased personal fulfillment	Degree of the increase in sense of accomplishment in work	Value of increased confidence/self-esteem NT\$22,895.81 (per person/year)	Understanding the wider value of public policy interventions (2014)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
		Extra disposable personal income	Questionnaire results	Extra income obtained based on questionnaire results NT\$65,250 (per person/year)	Questionnaire	Collected the actual annual extra income obtained by villagers assisting the market vendors.	Principle 2	Stated reference method

Social Dialogue

Key Stakeholders		Outcomes	Indicator	Financial Proxies (NT\$)	Source of Indicator	Applicability of Indicator	Selection Principle	Methodology
Project initiators	TCC	Improved TCC's impression on external stakeholders	Degree of the improvement on corporate image of TCC	Media exposure fee NT\$1,289,229.75 (per year)	1. Online media exposure fee 2. Magazine coverage fee	TCC improved its corporate image, which is like the effect of positive media exposure.	Principle 2	Revealed preference method
Project executors	Employees on the Hoping Plant	Increased sense of accomplishment in work	Degree of the increase in sense of accomplishment in work	Value of increased confidence/self-esteem NT\$22,895.81 (per person/year)	Understanding the wider value of public policy interventions (2014)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is	Principle 1	Wellbeing valuation method



						converted into the actual value based on Taiwan's price index.		
		Boosted identification with TCC	Degree of boosting identification with the organization	Corporate identity - pride NT\$306,897.10 (per person/year)	Quantifying the Value of Emotions Using a Willingness to Pay Approach (2012)	The value of similar outcomes cited from this research and based on feedback provided by the stakeholders is converted into the actual value based on Taiwan's price index.	Principle 1	Wellbeing valuation method
		Improved oral expression skills	Rate of positive feedback on the guided tour	Course fee for oral expression skills + course fee for environmental guides NT\$11,983.52 (per person/year)	1. Domestic training courses on oral expression skills 2. Domestic training courses on environmental guides	Employees on the Hoping Plant improved oral expression skills by participating in the project, which is like the effect of domestic training courses on oral expression and tour guide skills.	Principle 2	Revealed preference method
		Acquired knowledge of the cement industry	Willingness to pay based on the questionnaire results	Willingness to pay for equivalent knowledge acquired based on the questionnaire results NT\$1,000 (per person/year)	Questionnaire	Willingness to pay by employees on the Hoping Plant for similar knowledge of the cement industry acquired is collected through the questionnaire.	Principle 2	Stated reference method



Project beneficiaries	Participants in Plan B (general tourists)	Acquired knowledge of the cement industry	Willingness to pay based on the questionnaire results	Willingness to pay for equivalent knowledge acquired based on the questionnaire results NT\$1,230.77 (per person/year)	Questionnaire	Willingness to pay by general tourists for similar knowledge of the cement industry acquired is collected through the questionnaire.	Principle 2	Stated reference method
	Participants in Plan B (competent authorities)	Acquired know-how about cement mining and transportation	Willingness to pay based on the questionnaire results	Willingness to pay for equivalent knowledge acquired based on the questionnaire results NT\$1,023.81 (per person/year)	Questionnaire	Willingness to pay by competent authorities for similar knowledge of cement mining and transportation acquired is collected through the questionnaire.	Principle 2	Stated reference method
		Acquired knowledge of how the circular economy works	Willingness to pay based on the questionnaire results	Willingness to pay for equivalent knowledge acquired based on the questionnaire results NT\$1,047.62 (per person/year)	Questionnaire	Willingness to pay by competent authorities for similar knowledge of circular economy acquired is collected through the questionnaire.	Principle 2	Stated reference method

5.2 Adjustment and Quantitative Analysis of Project Outcomes

The final step in the SROI calculation is adjustment analysis, which enables a more accurate calculation of the actual value of outcomes and the deletion of outcomes that may be duplicated or not directly affected by the project, so that the outcomes are not over-claimed in line with the principles of SROI. The four major change factors are as follows:

1. Deadweight measures the percentage of the outcomes that would happen even if TCC DAKA did not take place. The lower the percentage, the higher the impact.
2. Displacement assesses whether the results of TCC DAKA will effect other stakeholders outside of the project. The lower the percentage, the higher the impact.
3. Attribution assesses the possibility of the outcome caused by factors other than TCC DAKA. The lower the percentage, the higher the impact.
4. Drop-off explores how long the outcome lasts (analyzed by year). The lower the percentage, the higher the impact.

The existence of change factors for the outcomes was confirmed through the 3rd stakeholder engagement (interview). In the 5th stakeholder engagement, questions were designed for these change factors. Based on the results of the questionnaire, these change factors were averaged and analyzed in the most prudent way to avoid excessive assumptions. Regarding these change factors for the outcomes, refer to Table 5.2-1. For the said questionnaire, refer to Appendix 4.

➤ Deadweight

The deadweight of each outcome was collected from the 5th stakeholder engagement (questionnaire) and averaged. The higher the deadweight, that is, the higher the percentage of the outcome that still occurs, the lower the impact. In terms of Community Rejuvenation, the deadweight of each outcome brought forth to TCC project leader and the head of Heping Village fell between 10% and 40%. This shows that for the aforesaid two stakeholders, who had experience in executing other projects in the past, the outcomes of TCC DAKA remained irreplaceable as TCC DAKA was planned based on the cement industry, local culture, and local villagers' lifestyle. Notably, campus guides' improved ability to improvise showed the highest deadweight (75%), which should result from the interviewees' previous work experience (e.g., department store clerk and event host) that also required improvisation. On the part of Social Dialogue, the deadweight of each outcome brought forth to participants in Plan B (competent authorities) reached 50% and above probably because of the competent authorities' job responsibilities that gave them more access to knowledge of similar industries and circular economy. Employees on the Hoping Plant showed both the lowest (12%) and the highest (70%) deadweight of the outcomes; regarding the lowest deadweight of the outcome (improved oral expression skills), the original nature of work of employees on the Hoping Plant did not involve communication with tourists. Acting as the guides did give them an additional opportunity for oral expression, making the outcome irreplaceable; as to the highest deadweight of the outcome (boosted identification with TCC), employees on the Hoping Plant have been aware of TCC's sustainability initiatives during many years of service. They identified with TCC, so the deadweight of the outcome was relatively high.

➤ Attribution

The attribution of each outcome was collected from the 5th stakeholder engagement (questionnaire) and averaged. The higher the attribution, that is, the higher the percentage of the outcome that other factors contribute to, the lower the impact. In terms of Community Rejuvenation, the attribution of the outcomes brought forth to campus cleaners, campus guides,

market vendors, and families of the market vendors was generally low with an average of 36%, indicating that personal income, the tranquility of life, family relations, a sense of accomplishment in work, and other benefits were directly contributed by TCC DAKA. This is similar to the information acquired from the interview. Taking strengthened family relations, whose attribution (26%) was below average, for example, the families of the market vendors interviewed mentioned that the support from family was vitally important for them to doing business in the TCC DAKA market as there were too many preparations needs to be done every day; therefore, family members spent more time together. On the part of Social Dialogue, the attribution of the outcome, acquired knowledge of the cement industry, brought forth to participants in Plan B (general tourists) was the lowest (19%), showing that general tourists acquired knowledge of the cement industry mostly from the Plan B guided tour, including visits to the port and the mine that were generally not open to the public. The distinctness of such cement-related knowledge could be the reason for the low attribution.

➤ Drop-off

The drop-off of each outcome was collected from the 5th stakeholder engagement (questionnaire) and averaged. The higher the drop-off, the higher the percentage of the outcome that is gradually dropped off. How long the outcome lasted was calculated based on the duration of the outcome indicated by the stakeholders in the questionnaire, coupled with the drop-off factor. The overall drop-off of TCC DAKA was generally low, with the drop-off of the outcomes between 9% and 27% in Social Dialogue and below 10% (even 0% for many outcomes) in Community Rejuvenation; however, the duration of each outcome was not high. This could be in relation to the design of the event. As the first large-scale factory in Taiwan to obtain the Tourism Factory Label (MOEA), TCC DAKA enabled the stakeholders to feel engaged through local employment, the specialty market, and the first-ever guided tour to the factory, leading to a relatively low drop-off of the outcomes in a short period of time; however, the duration of the outcomes such as obtained personal income, increased sense of accomplishment in work, and acquired knowledge of the cement industry was not high once participation discontinued.

Knowledge related outcomes were the main impacts for stakeholders including Employees on the Hoping Plant, Campus guides, and Participants in Plan B (both general tourists and competent authorities) after their participation in TCC DAKA projects and the tour. According to the interview, being able to learn additional information on cement industry, cement mining and transportation, and circular economy were their main experiences in the project and a high proportion of stakeholder acknowledge this change happened on them as more than 95% of the responders affirmed the impact in the questionnaire.

This analysis noticed that the knowledge stakeholders acquired in the TCC DAKA and Plan B tour were very specific, and they may not be able to use and amplify it. In other words, the knowledge stakeholders learned in TCC DAKA was mostly related to cement industry and the chances they could elaborate these learning in their daily lives or works were uncommon once they exited TCC DAKA. It may result in a higher drop-off as the rarely used knowledge could fade away easier.

Given the narrative above, this analysis tested the sensitivity of drop-off on knowledge related outcomes and assumed the drop-off would increase by 20% as stakeholder may not use these knowledges often after leaving the park. Yet, a higher level of drop-off on knowledge related outcomes would hardly affect the SROI result as the number only slightly decreased to 3.53 from 3.54 (see 5.4 Sensitivity Analysis).

The result of sensitivity analysis gave this analysis enough confident to consider this impact would not pose a significant violation on SROI principle “Do not over claim” and the

above-mentioned information was sufficient for the analysis to conclude that the impact of drop-off stated above were not material. As a result, we took professional judgement to maintain the use of data from questionnaire with the respect to another SROI principle “Stakeholder involvement” and did not further have the drop off factor revised.

➤ Displacement

In this analysis, no outcomes were discounted for displacement. This is because the founding of TCC DAKA are set out to develop local economy and education. TCC DAKA has assisted local villagers in running the TCC DAKA market and also employed them for the operation and maintenance of TCC DAKA. Revenues generated have been funneled into the education fund of Heping Elementary School in hopes of increasing the income of local villagers and securing educational resources in remote areas. All outcomes experienced are not mutually exclusive. The employment opportunities that Heping Villagers attained from TCC DAKA were exclusively created for them, and no stakeholders’ outside the project would face reduction of employments opportunities. That is, stakeholders experience changes without taking the opportunity away from other stakeholders to also experience the outcomes.

Before conducting the interview with stakeholders, the analysis reviewed the literature to explore possible displacement of the events similar to TCC DAKA (see 2.4 SROI Literature Review). No displacement factors were specifically indicated in the literature. In addition, open-ended questions were designed in the 1st and 3rd stakeholder engagements to explore other impacts of TCC DAKA on the stakeholder’s outside the project. No displacement factors were specifically indicated by the stakeholders. Hence, this analysis does not include displacement in the calculation of impact. However, we still consider displacement factor for adjustment and testing in the sensitivity analysis.

The formulas used to calculate the impact of each event are described below:

- $\text{Impact} = (\text{Quantity} \times \text{Significance of outcomes}) \times (\text{Value of indicator}) \times (1 - \text{Deadweight}) \times (1 - \text{Displacement}) \times (1 - \text{Attribution})$
- $\text{Value in 2020} = \text{Impact (If the outcome occurs during the event)}$
 $\text{Value in 2021} = \text{Value in 2020} \times (1 - \text{Drop-off})$ or the impact in 2020 (if the outcome occurs after the event)
 $\text{Value in 2022} = \text{Value in 2021} \times (1 - \text{Drop-off})$
 $\text{Value in 2023} = \text{Value in 2022} \times (1 - \text{Drop-off})$
 $\text{Value in 2024} = \text{Value in 2023} \times (1 - \text{Drop-off})$
 $\text{Value in 2025} = \text{Value in 2024} \times (1 - \text{Drop-off})$
- $\text{Value in 2020~2025} = \text{Value in 2020} + [(\text{Value in 2021}) / (1 + \text{Discount rate})] + [(\text{Value in 2022}) / [(1 + \text{Discount rate})^2]] + [(\text{Value in 2023}) / [(1 + \text{Discount rate})^3]] + [(\text{Value in 2024}) / [(1 + \text{Discount rate})^4]] + [(\text{Value in 2025}) / [(1 + \text{Discount rate})^5]]$
- The discount rate was based on the 1-year deposit rate of 0.77% published by the five major banks in Taiwan in 2020.³

³Source: Central Bank of the Republic of China (Taiwan) (<https://www.cbc.gov.tw/tw/cp-371-1040-5C7A0-1.html>)



Table 5.2-1 Adjustment Analysis and Impact of TCC DAKA

Community Rejuvenation												
Key Stakeholders		Outcomes	Financial Proxies	Value (NT\$)	Deadweight	Displacement	Attribution	Drop-off	Impact (NT\$)	Duration of Outcomes (Year)	Impact in 2020 (NT\$) Year 0	Present Value 2020~2025 (NT\$) Year 0~Year 5
Project initiators	TCC project leader	Improved personal communication and coordination skills	Course fee for interpersonal relationships and communication skills (revealed preference method)	4,500.00	40%	0%	40%	0%	1,620.00	2	1,620.00	3,240.00
		Have a better understanding of local culture of the indigenous peoples	Ticket to the Indigenous Peoples Cultural Development Center (revealed preference method)	150.00	40%	0%	20%	0%	72.00	2	72.00	144.00
Project executors	Head of Heping Village	Improved communication and coordination skills	Course fee for interpersonal relationships and communication skills (revealed preference method)	4,500.00	40%	0%	80%	0%	540.00	5	540.00	2,700.00
		Attained spiritual fulfillment	Attained spiritual fulfillment (wellbeing valuation method)	409,222.51	30%	0%	80%	0%	57,291.15	5	57,291.15	286,455.76



		Improved capability of crisis management	Course fee for conflict management (revealed preference method)	1,800.00	10%	0%	90%	0%	162.00	5	162.00	810.00
Project beneficiaries	Campus cleaners	Increased sense of accomplishment in work	Value of increased confidence/self-esteem (wellbeing valuation method)	22,895.81	33%	0%	22%	14%	215,376.32	4	215,376.32	696,883.67
		Improved interpersonal relationships	Positive functioning (wellbeing valuation method)	22,895.81	57%	0%	42%	0%	102,783.87	4	102,783.87	411,135.50
		Obtained tranquility of life	Can rely on family (wellbeing valuation method)	147,092.24	25%	0%	4%	0%	1,914,258.45	5	1,914,258.45	9,571,292.23
		Boosted identification with TCC	Corporate identity - pride (wellbeing valuation method)	306,897.10	41%	0%	62%	0%	1,238,513.93	5	1,238,513.93	6,192,569.66
		Campus guides	Strengthened family relations	Strengthened family relations (wellbeing valuation method)	57,239.53	67%	0%	33%	7%	76,319.37	3	76,319.37
	Obtained personal income		Employee's annual salary	402,000.00	15%	0%	2%	23%	2,016,030.00	2	2,016,030.00	3,561,653.00



		Acquired knowledge of cement manufacturing	Willingness to pay for equivalent knowledge acquired based on the questionnaire results	1,833.33	33%	0%	43%	7%	4,155.56	2	4,155.56	8,034.07
		Increased sense of accomplishment in work	Value of increased confidence/self-esteem (wellbeing valuation method)	22,895.81	60%	0%	28%	10%	39,380.79	2	39,380.79	74,823.51
		Boosted identification with TCC	Corporate identity - pride (wellbeing valuation method)	306,897.10	32%	0%	35%	10%	817,880.77	3	817,880.77	2,216,456.88
		Improved oral and physical expression skills	Course fee for oral expression skills (revealed preference method)	8,000.00	48%	0%	48%	10%	12,813.33	3	12,813.33	34,724.13
		Acquired information on local people and culture from other parts of Taiwan	One-year newspaper subscription fee, broken down by information page (revealed preference method)	2,160.00	57%	0%	45%	10%	3,088.80	2	3,088.80	5,868.72
		Improved ability to improvise	Course fee for front-line	1,500.00	75%	0%	60%	10%	900.00	3	900.00	2,439.00



			customer service (revealed preference method)									
Market vendors	Strengthened personal creativity	Course fee for creativity development (revealed preference method)	6,120.00	47%	0%	50%	2%	22,705.20	4	22,705.20	88,132.32	
	Increased personal fulfillment	Value of increased confidence/self-esteem (wellbeing valuation method)	22,895.81	43%	0%	42%	16%	105,970.97	4	105,970.97	332,569.12	
	Obtained extra disposable personal income	Extra income obtained	292,220.71	45%	0%	32%	8%	1,530,067.64	4	1,530,067.64	5,424,224.41	
Families of the market vendors	Strengthened family relations	Strengthened family relations (wellbeing valuation method)	57,239.53	40%	0%	26%	0%	280,637.23	4	280,637.23	1,122,548.91	
	Obtained a sense of gratification	Happiness (wellbeing valuation method)	478,705.66	53%	0%	43%	0%	1,418,531.87	3	1,418,531.87	4,255,595.62	
	Obtained extra disposable personal income	Income obtained based on questionnaire results	168,000.00	31%	0%	29%	3%	905,142.86	4	905,142.86	3,468,338.54	



	Villagers assisting the market vendors	Strengthened personal creativity	Course fee for creativity development (revealed preference method)	6,120.00	43%	0%	51%	2%	20,345.60	3	20,345.60	59,690.47
		Increased personal fulfillment	Value of increased confidence/self-esteem (wellbeing valuation method)	22,895.81	58%	0%	90%	2%	11,600.54	3	11,600.54	34,033.99
		Obtained extra disposable personal income	Extra income obtained based on questionnaire results	65,250.00	62%	0%	56%	7%	131,466.67	3	131,466.67	368,690.96
Social Dialogue												
Key Stakeholders		Outcomes	Financial Proxies	Value (NT\$)	Deadweight	Displacement	Attribution	Drop-off	Impact (NT\$)	Duration of Outcomes (Year)	Impact in 2020 (NT\$) Year 0	Present Value 2020~2025 (NT\$) Year 0~Year 5
Project initiators	TCC	Improved TCC's impression on external stakeholders	Media exposure fee (revealed preference method)	2,813,692.31	33%	0%	32%	13%	1,289,229.75	3	1,289,229.75	3,374,916.98
Project executors	Employees on the Hoping Plant	Increased sense of accomplishment in work	Value of increased confidence/self-esteem (wellbeing)	22,895.81	54%	0%	53%	26%	34,539.97	1	34,539.97	34,539.97



			valuation method)									
		Boosted identification with TCC	Corporate identity - pride (wellbeing valuation method)	306,897.10	70%	0%	61%	9%	248,586.65	2	248,586.65	475,865.87
		Improved oral expression skills	Course fee for oral expression skills + course fee for environmental guides (revealed preference method)	11,983.52	12%	0%	67%	10%	21,170.89	2	21,170.89	40,224.68
		Acquired knowledge of the cement industry	Willingness to pay for equivalent knowledge acquired based on the questionnaire results	1,000.00	47%	0%	63%	17%	1,374.29	3	1,374.29	3,456.47
Project beneficiaries	Participants in Plan B (general tourists)	Acquired knowledge of the cement industry	Willingness to pay for equivalent knowledge acquired based on the questionnaire results	1,230.77	24%	0%	19%	27%	227,022.85	2	0.00	393,506.28
	Participants in Plan B (competent authorities)	Acquired know-how about cement mining and transportation	Willingness to pay for equivalent knowledge	1,023.81	54%	0%	36%	24%	51,941.66	2	0.00	91,417.32



		acquired based on the questionnaire results										
		Acquired knowledge of how the circular economy works	Willingness to pay for equivalent knowledge acquired based on the questionnaire results	1,047.62	53%	0%	47%	20%	44,961.07	2	0.00	80,929.92

5.3 Results of SROI Analysis

After the adjustment analysis and outcome value quantification, the SROI of TCC DAKA, including Community Rejuvenation and Social Dialogue, was calculated by the present value in 2020-2024 divided by the total amount of inputs, as listed in Table 5-3-1.

Table 5.3-1 Results of SROI of TCC DAKA

Event	Community Rejuvenation	Social Dialogue	All Events Combined
Total Impact	NT\$38,003,265.26	NT\$4,463,513.99	NT\$42,466,779.26
Total Inputs	NT\$9,795,396.01	NT\$2,205,970.00	NT\$12,001,366.01
SROI	3.88	2.02	3.54

5.4 Sensitivity Analysis

Information on the amount of changes brought forth by the project to the key stakeholders was collected through stakeholder engagements and analyzed based on the principle of prudence; however, given that the entire SROI analysis procedures correlated to the stakeholders' subjective judgment, different stakeholders involved or financial proxies adopted could lead to different results of SROI analysis. To identify the sensitivity of the project's SROI for the purpose of prudent and objective disclosure, the sensitivity analysis was conducted with the change factors and financial proxies of the outcomes. The results of the sensitivity analysis are shown in Table 5.4-1, Table 5.4-2, and Table 5.4-3.

Table 5.4-1 Results of Sensitivity Analysis - Community Rejuvenation

SROI	Chang Factor	Explanation
3.94	Financial Proxies	For campus cleaners, the outcome, "improved interpersonal relationships," was adjusted, with the financial proxy changed to "reduced isolation" and the value increasing to £2,640.
3.89	Deadweight	For campus guides, the deadweight of "increased sense of accomplishment in work" was reduced to 10%.
3.88	Deadweight	For campus guides, the deadweight of "improved ability to improvise" was reduced to 10%.
3.91	Attribution	For villagers assisting the market vendors, the attribution of "increased personal fulfillment" was reduced to 10%.
4.07	Drop-off	The overall drop-off was 0%.



- **Financial Proxies**
The outcome of the project acquired from the interview with campus cleaners, "improved interpersonal relationships," was closest to positive functioning specified in the literature (Social Value: Understanding the wider value of public policy interventions); given reduced isolation as a result of improved interpersonal relationships, the value of "reduced isolation" specified in the literature (£2,640) was adopted, with the SROI of Community Rejuvenation increasing to 3.94.
- **Deadweight**
Deadweight-related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all deadweight factors came from the questionnaire results. There was a difference between the deadweight of some outcomes and the information acquired from the interview. For example, most of the campus guides interviewed highlighted the existence of the two outcomes: increased sense of accomplishment in work and improved ability to improvise; according to the questionnaire results, however, they showed relatively high deadweight values (60% and 75% respectively). If the percentage was reduced to 10%, the SROI of Community Rejuvenation would become 3.89 and 3.88 respectively, which made little difference.
- **Attribution**
Attribution-related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all attribution factors came from the questionnaire results. There was a difference between the attribution of some outcomes and the information acquired from the interview. For example, most of the villagers assisting the market vendors mentioned in the interview that the TCC DAKA market gave them access to sharing and displaying work and thereby increased their personal fulfillment; according to the questionnaire results, however, the attribution of "increased personal fulfillment" reached 90%. If the percentage was reduced to 10%, the SROI of Community Rejuvenation would become 3.91.
- **Drop-off**
Drop-off related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all drop-off factors came from the questionnaire results. If the duration of the outcomes lasted with the stakeholders' continuous participation in Community Rejuvenation, the drop-off would be 0% and the SROI of community rejuvenation would increase to 4.07.

Table 5.4-2 Results of Sensitivity Analysis - Social Dialogue

SROI	Chang Factor	Explanation
2.89	Financial Proxies	The outcome, "improved TCC's impression on external stakeholders," was adjusted, with the layout of media exposure changed from half-page to full-page and the amount increasing to NT\$4,423,692 (full year).
2.04	Deadweight	For employees on the Hoping Plant, the deadweight of "increased sense of accomplishment in work" was reduced to 10%.
2.02	Attribution	For employees on the Hoping Plant, the attribution of "acquired knowledge of the cement industry" was reduced to 10%.
1.99	Drop-off	For participants in Plan B (general tourists/competent authorities), the drop-off increased to 50%.



- **Financial Proxies**
The financial proxy of the outcome, "improved TCC's impression on external stakeholders," was mainly the media exposure fee that was available and at the lowest price. If the second-lowest price was adopted, the overall SROI would increase to 2.89.
- **Deadweight**
Deadweight-related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all deadweight factors came from the questionnaire results. There was a difference between the deadweight of some outcomes and the information acquired from the interview. For example, most of the employees on the Hoping Plant interviewed mentioned the outcome, increased sense of accomplishment in work; according to the questionnaire results, however, the deadweight of the outcome was 54%. If the percentage was reduced to 10%, the SROI of Social Dialogue would increase to 2.04.
- **Attribution**
Attribution-related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all attribution factors came from the questionnaire results. There was a difference between the attribution of some outcomes and the information acquired from the interview. For example, most of the employees on the Hoping Plant interviewed mentioned that assisting with the guide gave them access to relevant knowledge other than that of the cement industry; according to the questionnaire results, however, the attribution of the outcome was 63%. If the percentage was reduced to 10%, the SROI of Social Dialogue would remain at 2.02.
- **Drop-off**
Drop-off related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all drop-off factors came from the questionnaire results. The knowledge-based outcomes brought forth to the participants in Plan B correlated to the frequency of participation. The higher the frequency of participation, the lower the percentage of knowledge in decline; on the contrary, low frequency of participation in the guided tour could lead to a significant decline in the outcomes. If the drop-off of the outcomes to participants in Plan B (general tourists/competent authorities) increased to 50%, the SROI of Social Dialogue was reduced to 1.99.

Table 5.4-3 Results of Sensitivity Analysis - All

SROI	Chang Factor	Explanation
3.53	Drop-off	The drop-off of knowledge related outcome increased by 20%
3.18	Displacement	The overall displacement increased to 10%

- **Drop-off**
Drop-off related questions were included in the 3rd and 5th stakeholder engagements through the interview and questionnaire respectively. According to the calculations, all drop-off factors came from the questionnaire results. This analysis noticed that the knowledge stakeholders acquired in the TCC DAKA and Plan B tour were very specific, and they may not be able to use and amplify it. If the duration of the knowledge related outcome, including "Acquired knowledge of cement manufacturing", "Acquired knowledge of the cement industry", "Acquire basic knowledge of the cement industry", "Acquired know-how about cement mining and transportation", and "Acquired knowledge of how the circular economy works" lasted with the stakeholders' all decreased by one-fifth percent (drop-off all increased by 20%), the overall SROI would decrease to 3.53. The barely changed result gave this analysis



to consider that the level of drop off on these outcomes were not material and no further action on the revisit of drop-off factors were taken.

➤ Displacement

No significant displacement was identified in the 3rd and 5th stakeholder engagements. Thus, there was no inaccuracy in displacement and should have no impact on the overall calculations. If we assumed that the overall outcomes have a 10% displacement, the overall SROI would decrease to 3.18.



6. SROI Analysis Results and Recommendations for Project Improvement

According to the result of the analysis, the social return on investment of NT\$1 in TCC DAKA was NT\$3.54. For the project outcomes generated from "Community Rejuvenation" in respect of the operation of the TCC DAKA market and local employment and "Social Dialogue" through the Plan B guided tour, the results of SROI analysis and the recommendations for project improvement are separately described below.

6.1 Results of SROI Analysis

6.1.1 Community Rejuvenation

In terms of Community Rejuvenation, the social return on an average investment of NT\$1 in TCC DAKA was NT\$3.88. As shown in Figure 6.1.1-1, the main outcomes were reflected in two aspects: personal income and family relations. The stakeholders obtained stable personal income by working for TCC DAKA or vending in the TCC DAKA market; they were also able to work locally or find employment in their hometown and thus spent more time with family members. Significantly, the stakeholders also boosted their identification with TCC. Through TCC's local employment and TCC DAKA market, the stakeholders improved various personal skills, including creativity, communication and coordination skills, oral expression skills, and crisis management; in addition, their devotion to work and the market operation brought them personal fulfillment and a sense of accomplishment in work. According to Figure 6.1.1-2, which shows the present value of the outcomes by stakeholder, the outcomes centered on the project beneficiaries, including campus cleaners, families of the market vendors, campus guides, and market vendors.

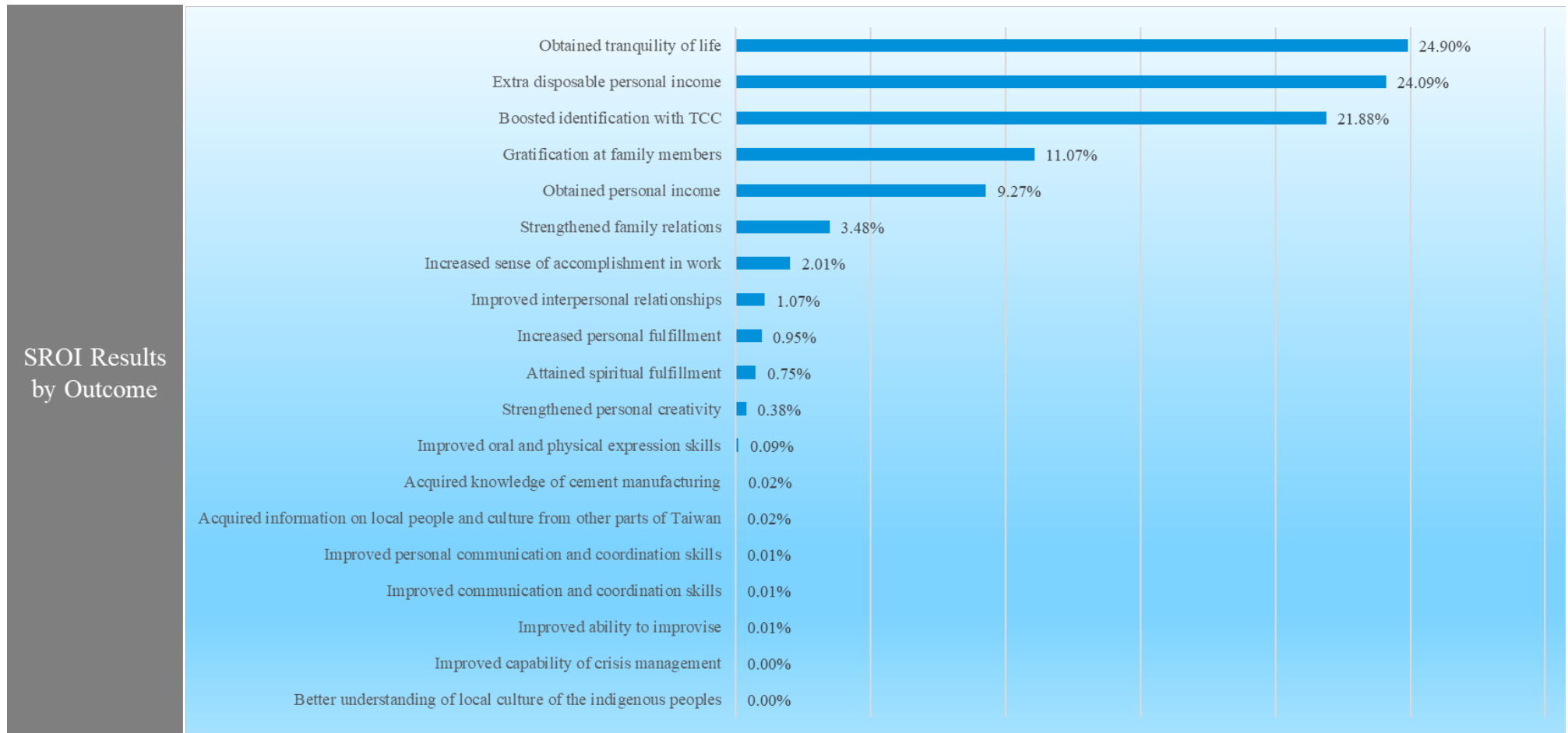


Figure 6.1.1-1 SROI Results by Outcome - Community Rejuvenation

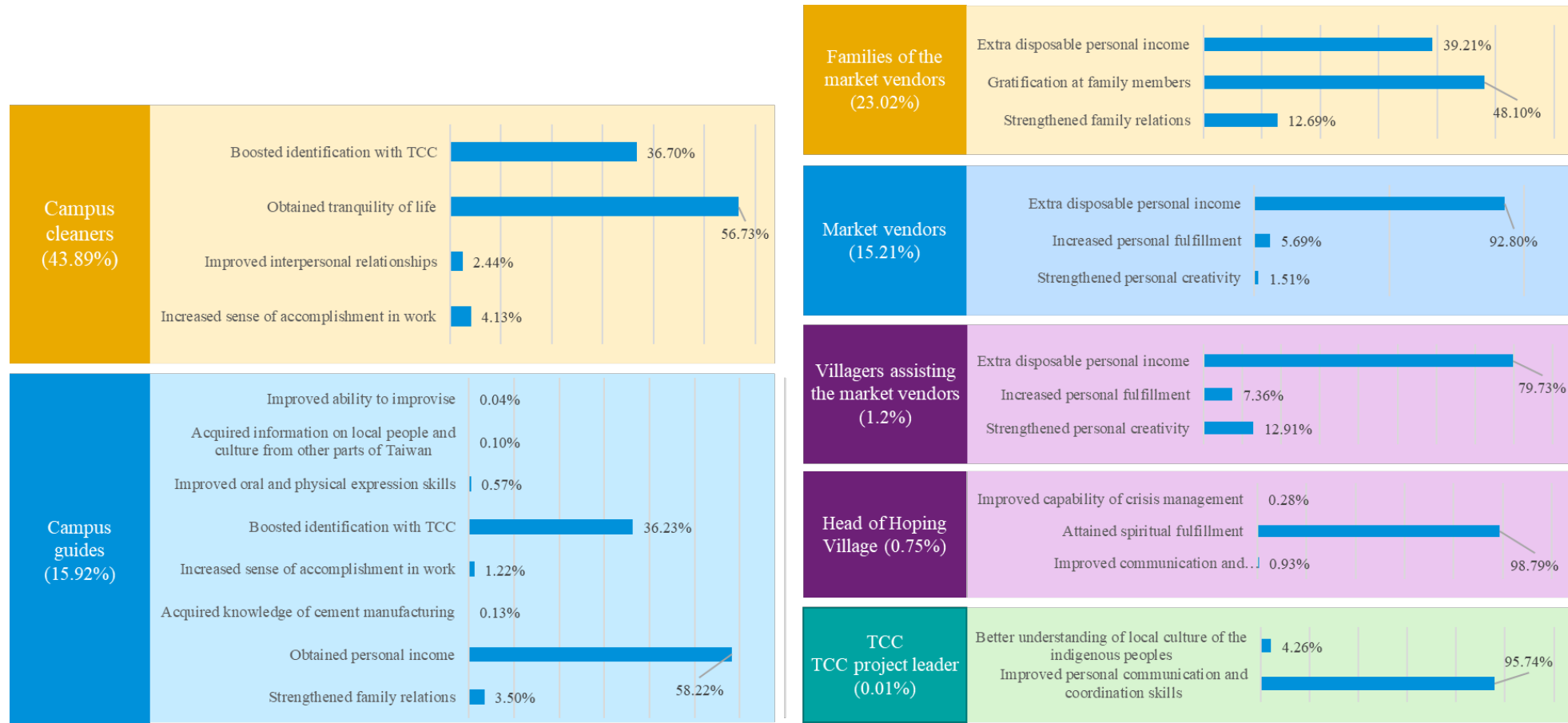


Figure 6.1.1-2 SROI Results by Stakeholder - Community Rejuvenation

6.1.2 Social Dialogue

In terms of Social Dialogue, the social return on an average investment of NT\$1 in TCC DAKA was NT\$2.02. As shown in Figure 6.1.2-1, the two main outcomes were reflected in communication with internal and external stakeholders. That is, TCC improved its impression on external



stakeholders and boosted its employees' identification with the company. During the Plan B guided tour, the external stakeholders acquired knowledge of the cement industry and circular economy while the trained employees improved their oral expression skills and gained a sense of accomplishment in work from the visitors' feedback. According to Figure 6.1.2-2, which shows the present value of the outcomes by stakeholder, improved TCC's impression on stakeholders was the main outcome.

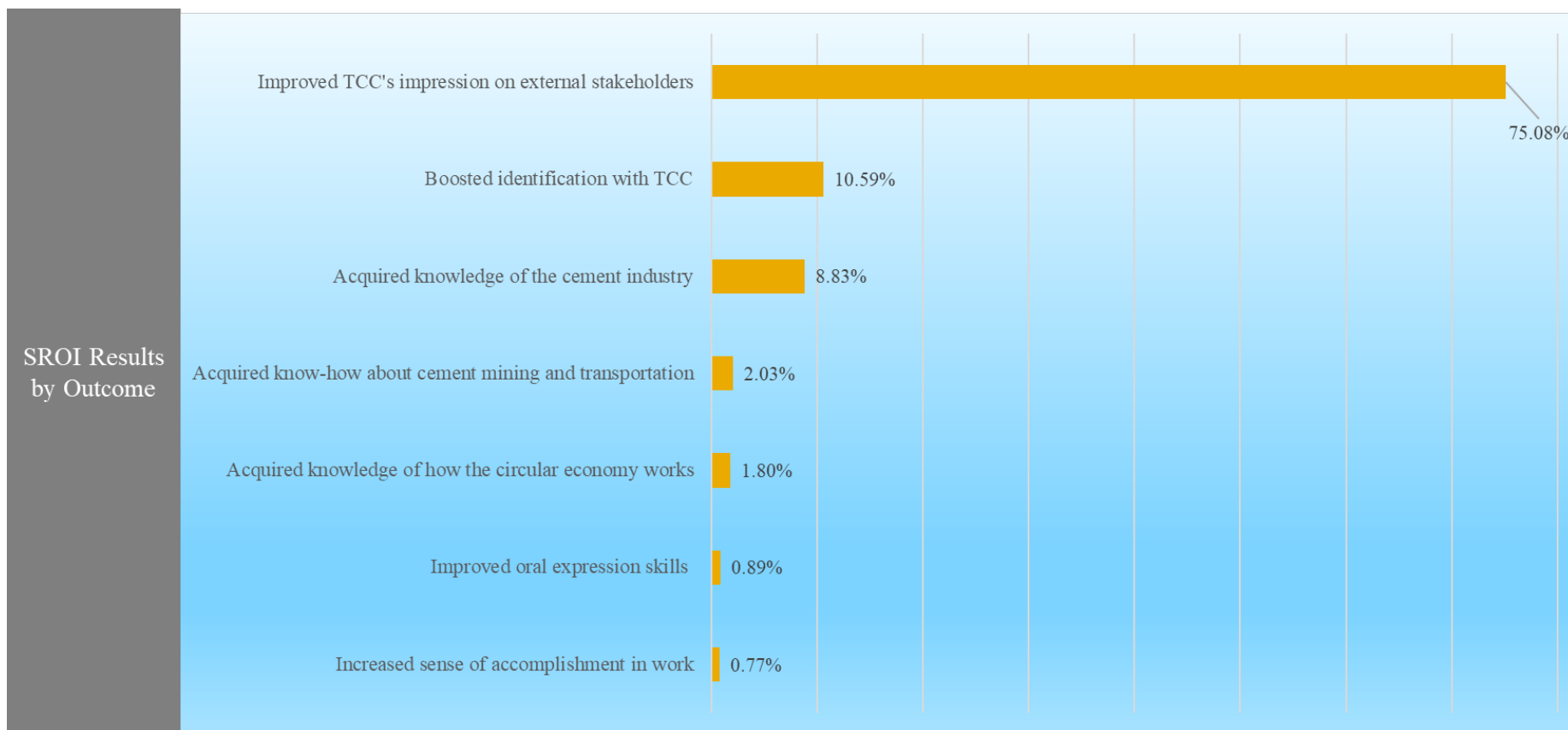


Figure 6.1.2-1 SROI Results by Outcome - Social Dialogue

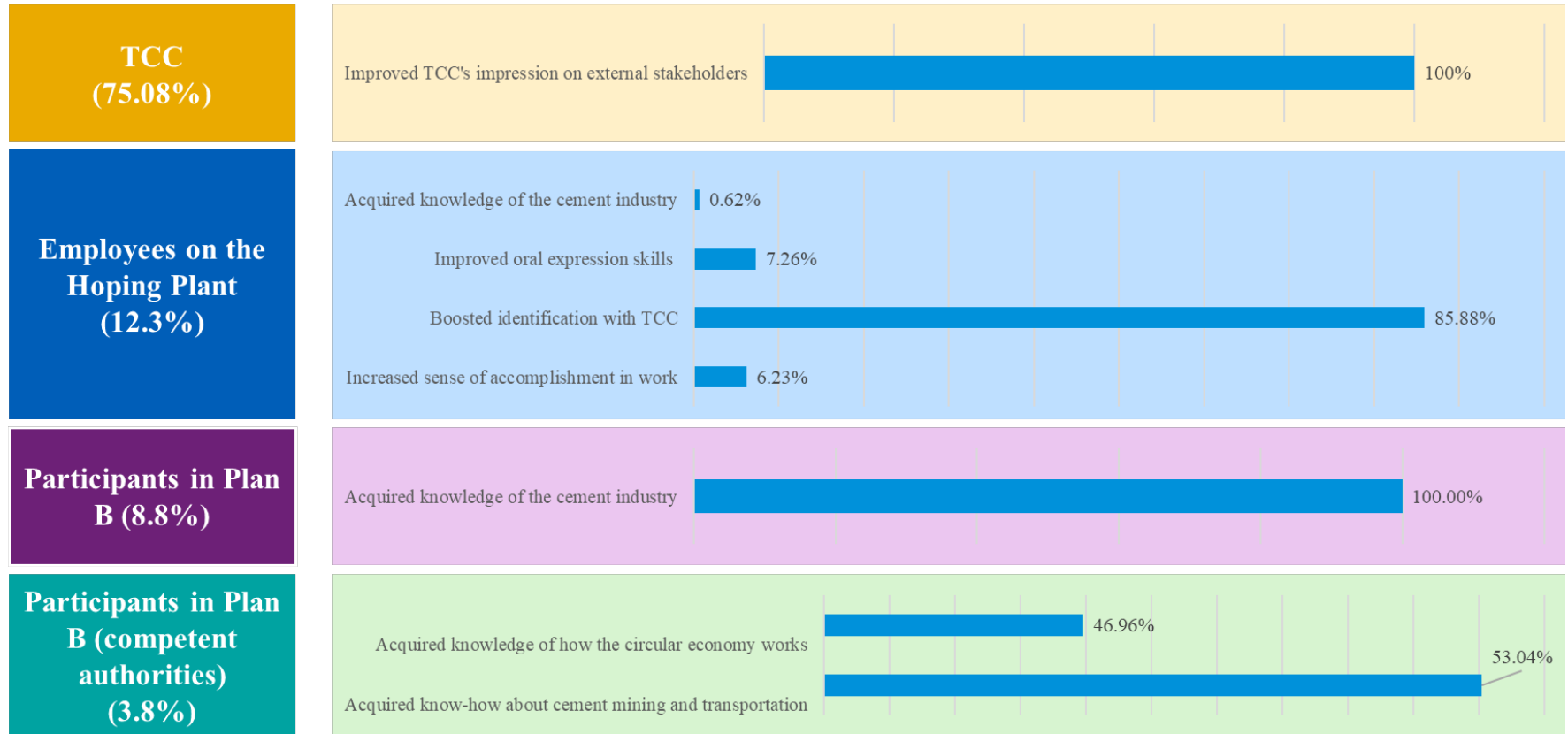


Figure 6.1.2-2 SROI Results by Stakeholder - Social Dialogue



6.2 Recommendations for Project Improvement

Based on the feedback from stakeholders and the outcomes of TCC DAKA identified in the SROI analysis, recommendations for improvement in Community Rejuvenation and Social Dialogue are separately described as follows:

6.2.1 Community Rejuvenation

- Local employment: According to the stakeholders' feedback in the interview, TCC DAKA has provided more job opportunities for the locals (reflected in the aforesaid two aspects: personal income and family relations). The features of local tribes or communities (e.g., culture of the indigenous peoples) should be incorporated into the 2nd or 3rd stage of the project in the future to promote the local culture and to measure whether more job opportunities can be created for local people.
- TCC DAKA market: Most of the interviewees mentioned that they did not stay in the TCC DAKA market long, so the market made little impression on them. In the future, the story of each market vendor could be promoted as the introduction of each stands of TCC DAKA market on the website of TCC DAKA. In addition to highlighting the handmade products or local specialties, the market vendors may display their business philosophy or core value to tourists on-site so that the tourists will stay longer and feel impressed by them. The original intention of TCC DAKA, which focuses on the development of the local economy and education for a non-profit purpose, should also be marked around the market, making it easier for tourists to understand and feel impressed by the philanthropic idea of TCC DAKA and its market.

6.2.2 Social Dialogue

- Knowledge-based outcomes: According to the questionnaire results, the participants in Plan B could obtain knowledge-based outcomes through other channels (average deadweight: 44%). In the future, a summary or Q&A session (with prizes offered) should follow the Plan B guided tour to impress the stakeholders with knowledge of the cement industry and circular economy; interactive activities such as DIY may also be organized at a certain location in TCC DAKA to convey cement-related knowledge to the stakeholders in an original way.
- Spiritual outcomes: According to the stakeholders' feedback in the interview, positive feedback the employees received from tourists through the Plan B guided tour was transformed into identification with TCC as the employees felt that they did the right thing and therefore recognized the company. In the future, the scope of the employees' participation in the Plan B guided tour should be expanded to enable more employees to guide and feel engaged with the organization, thereby boosting their identification with the company.

6.3 Recommendations for Methodology Improvement

The case was limited by time and resources, however, there is room for improvement in the methodology of this case, and reflections on the following points.

- The engagement and identification of stakeholder groups: Regarding the restriction on identifying stakeholders involved in this case, according to the SROI standard process, we



need to apply as much as possible of different stakeholders in the project and confirm the changes at each stage. However, the time and resources are limited, so we cannot communicate, negotiate, and ensure changes with all stakeholders in this case. For further improvement, we expect to meet the SROI standard process and requirements as much as possible in the future to identify the changes of stakeholders accurately.

- The identification and evaluation of negative outcomes: Regarding the limitation on the description and identification of the negative outcome of this case, we will add neutral questions in the interview outline and questionnaire in the future. For example, a question like “What has changed in your life?” to understand the interviewee’s change (or no change). In this case, we have designed neutral open-ended questions in the interview outline to ensure that interviewees can express their positive and negative feelings without bias. In the future, we can use open-ended questions to understand the negative outcome experienced by stakeholders, design negative scoring options of outcome in the questionnaire, such as 1~5 points, no change, and minus 1~5 points. The scoring scale and standard should be aligned with the questionnaire to identify the negative outcome.
- The change of all members of a stakeholder group: This project has enough qualitative and quantitative data to identify stakeholders and their changes or outcome. However, due to the limitations of the research, we cannot know the change or outcomes of stakeholders who claimed without change. In this case, more than 90% of stakeholders responded that they experienced a positive change in this project, so we assumed the negative outcome was the minority. We also back reviewed the data and interview results, and found no reliable information for proof that the stakeholder had experienced negative outcomes. For the recommendation in the future, in the case of solid qualitative and quantities evidence, we will elaborate the situation of stakeholders who have not experienced apparent change and dig the fact of stakeholder experiences, such as no change or a negative outcome. Or in future research projects, find out what factors and characteristics prevent the stakeholder from experiencing positive outcomes. Then, the project may consider excluding the stakeholder groups or providing support to the groups.
- Valuation and the representativeness of the value of the specific outcome to the specific stakeholder: In looking for improvements to the financial proxy, we recommend avoiding using too much third-party data in the future—instead, actions like applying the relative importance of changes or outcomes in the question. And ask about comparisons between different changes or outcomes. For example: ask the interviewee to rate different outcomes to understand the weight of various changes and outcomes, then conduct the calculations. According to the approach, we can find third-party data or financial proxy appropriately. In the future, the recommended process is to design the questions independently in the questionnaire and use the same scoring method as the whole questionnaire, such as 1 point (very unimportant) to 5 points (very important). And it can calculate the impact and value based on the relative importance appropriately.



Appendix 1 1st Stakeholder Engagement - Interview Outline

- **Interviewee**
Staff members of TCC DAKA in terms of community rejuvenation and social dialogue
- **Executor**
KPMG Sustainability Consulting Co., Ltd.
- **Date of Interview**
December 3, 2020
- **Duration of Interview**
90 minutes
- **Method of Interview**
Face-to-face interview (or telephone interview, depending on the situation)
- **Contents of Interview**

I. Background Information of Interviewee

- **Description:**
Questions in the 1st section are to understand the background of the interviewee as a reference for subsequent analyses.
- **Please answer the following questions:**
 1. What is your name and seniority?
 2. What is your main role and duty in TCC DAKA in terms of community rejuvenation (TCC DAKA market and local employment) and social dialogue (Plan B)?
 3. Have you ever participated in other project events similar to the TCC DAKA market and Plan B?
 4. What is the work that you do in TCC in addition to participating in the TCC DAKA market, local employment, and Plan B?

II. Basic Information on TCC DAKA Market, Local Employment, and Plan B

- **Description:**
Questions in the 2nd section are to have an in-depth understanding of the purpose, objective, and operations of TCC DAKA as a reference for subsequent sessions and analyses.
- **Please answer the following questions:**
 1. What is the origin of the TCC DAKA market, local employment, and Plan B respectively? What is the purpose or main objective of the project?
 2. What year did the TCC DAKA market, local employment, and Plan B start? Have TCC initiated similar projects in other parks? What are the main inputs of the three project events?
 3. What are the business hours and frequency of the TCC DAKA market? What is the approximate number of visitors each time? Are there other activities held in the TCC DAKA market?
 4. How many vendors are there in the TCC DAKA market each time? Are there villagers from Heping Village (non-indigenous peoples) who also vend at the TCC DAKA market in addition to the indigenous peoples?
 5. What is the scope of local villages defined by TCC? Are Heping Village and Aohua Village included (for clarification of local employment)?
 6. What is propaganda (including methods and channels) for recruiting local villagers to work in TCC DAKA?
 7. What is included in the Plan B guided tour?
 8. What is the frequency of Plan B (e.g., three times a month, two hours on Saturday)? How many people participate in the guided tour each time?
 9. Who are the main participants in Plan B (e.g., general tourists, environmental groups, and field trips)?

III. Information on Stakeholders of TCC DAKA Market, Local Employment, and Plan B, Including Intended Impacts/Outcomes

- **Description:**
Questions in the 3rd section are to understand the stakeholder groups involved in the TCC DAKA Market, local employment, and Plan B from TCC's perspective, so as to identify the main scope and subject of the SROI analysis. Questions are also to understand the changes that TCC DAKA Market, local employment, and Plan B could bring forth to the stakeholder groups involved. Such information will be an important reference for the second stage of the interview.
- **Please answer the following questions:**
 1. Currently known stakeholders include the following:
 - TCC DAKA market: TCC, project leader, market vendors, and visitors
 - Local employment: TCC, project leader, campus cleaners, and campus guides
 - Plan B: TCC, project leader, guides, visitors

Are there any other stakeholders involved in the operation of the above three events? What are their roles in the TCC DAKA market, local employment, and Plan B?
 2. In your opinion,
 - What are the main impacts of the TCC DAKA market? Which stakeholders are mainly affected by these impacts? What are the main outcomes of these impacts?
 - What are the main impacts of local employment? Which stakeholders are mainly affected by these impacts? What are the main outcomes of these impacts?
 - What are the main impacts of Plan B? Which stakeholders are mainly affected by these impacts? What are the main outcomes of these impacts?
 3. Is information on the number of tourists visiting the TCC DAKA market and participating in Plan B and the number of local hires collected?

IV. Information on Beneficiaries of TCC DAKA Market, Local Employment, and Plan B, Including Intended Impacts/Outcomes

- **Description:**
Questions are also to understand the changes that TCC DAKA Market, local employment, and Plan B could bring forth to the beneficiaries. Such information will be an important reference for the second stage of the interview.
- **Please answer the following questions:**
 1. Currently known beneficiaries include the following:
 - TCC DAKA market: Market vendors
 - Local employment: Campus cleaners and campus guides
 - Plan B: Tourists participating in the guided tour
 2. Are there any other beneficiaries in addition to the aforesaid beneficiaries?
In your opinion,
 - What are the main outcomes to the beneficiaries of the TCC DAKA market (e.g., market vendors)?
 - What are the main outcomes to the beneficiaries of local employment (e.g., local cleaners and guides)?
 - What are the main outcomes to the beneficiaries of Plan B (e.g., tourists participating in the guided tour)?
 3. What are other contributions or values of the TCC DAKA market, local employment, and Plan B in addition to the aforesaid impacts and outcomes?

V. Information on Outcomes

- Description:**
 In the 5th section, we will ask some questions about the changes brought forth by the TCC DAKA market, local employment, and Plan B to you and TCC. Please recall from your memory as much as you can and answer the questions based on your direct feelings.

→Overall outcomes

No.	Question	Purpose of Question
1.1	Overall, what do you think are the changes that the TCC DAKA market, local employment, and Plan B bring forth to you? The changes can be positive or negative. - What makes you most impressed during the process? - After participating, what is the biggest gain for yourself?	Open-ended questions about the overall outcomes as an introduction to subsequent questions
1.2	What are the changes that the TCC DAKA market, local employment, and Plan B bring forth to TCC? - What are the impacts and their subjects and contents?	

→Attained spiritual fulfillment due to the successful operation of the TCC DAKA market

2.1	Do you gain a sense of accomplishment in work from the successful operation of the TCC DAKA market?	- Confirmation of outcomes
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→Boosted identification with TCC due to the TCC DAKA market, local employment, and Plan B's contributions to local communities

3.1	There are more and more local businesses and people participating in Plan B, which has a positive impact on Heping Village economically. Does it boost your identification with TCC?	- Confirmation of outcomes
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→Improved interpersonal relationships through communication with internal/external personnel and indigenous peoples from different cultures

4.1	- The operation of the TCC DAKA market relies on the cooperation of many partners. Does communication with personnel from different cultures improve your interpersonal skills?	- Confirmation of outcomes
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→Enhanced corporate image due to the TCC DAKA market, local employment, and inputs in the circular economy

6.1	Is TCC's corporate image enhanced due to the TCC DAKA market, local employment, and inputs in the circular economy?	- Confirmation of outcomes
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→Others

7	This is the end of the interview. Last question: What is the future planning or development of the TCC DAKA market, local employment, and Plan B?	Collection of additional information
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Appendix 2 2nd Stakeholder Engagement - List of Identified Stakeholders

Name:

Description	Type of Stakeholder	Definition of Stakeholder	Give the stakeholder a score of 1 to 5 according to the "Evaluation Criteria and Score" in the table below.					Please specify the actions or methods through which the stakeholder participated in the events of TCC DAKA.
			Dependency	Degree of Impact	Influence over Decision-making	Tension	Total Score	
Example	Market vendors (local indigenous peoples)	Local indigenous peoples vending in the TCC DAKA market	5	5	3	5	18	Took TCC's business start-up training courses and sold handicrafts, specialty meals, and other local indigenous products in the TCC DAKA market

■ Evaluation Criteria and Score

Involvement	Score	Criteria
Very high	5	<input type="checkbox"/> <u>Dependency</u> Stakeholders on whom the TCC DAKA market and local employment and Plan B are dependent, directly or indirectly, in order to operate successfully <input type="checkbox"/> <u>Degree of Impact</u> Stakeholders on whom the TCC DAKA market and local employment and Plan B have an impact (e.g., local villagers who are employed as guides by TCC to secure their employment and pay) <input type="checkbox"/> <u>Influence over Decision-making</u> Stakeholders who have influence over the TCC DAKA market and local employment and Plan B in terms of strategic or operational decision-making <input type="checkbox"/> <u>Tension</u> Stakeholders who need immediate attention from the TCC DAKA market and local employment and Plan B with regard to their states or opinions
High	4	
Medium	3	
Low	2	
Very low	1	



I. Community Rejuvenation - Stakeholders of TCC DAKA Market

Type of Stakeholder	Description	Evaluation Criteria					Method of Participation
		Dependency	Degree of Impact	Influence over Decision-making	Tension	Total Score	
TCC project leader	Person in charge of the TCC DAKA market						
Market vendors	Local villagers vending in the TCC DAKA market						
Market visitors	Visitors to the TCC DAKA market						
Villagers	Other local villagers						
Other businesses	Other businesses in TCC DAKA (e.g., 7-11 and Starbucks)						
Others:	(List stakeholders who are also involved in the event in the columns below)						

- Does the above list fully and comprehensively cover the stakeholders of TCC DAKA market in community rejuvenation?
 Ans: _____ (on a scale of 1 to 5, with 5 representing full and comprehensive coverage)



II. Community Rejuvenation - Stakeholders of Local Employment

Type of Stakeholder	Description	Evaluation Criteria					Method of Participation
		Dependency	Degree of Impact	Influence over Decision-making	Tension	Total Score	
TCC project leader	Person in charge of local employment						
Campus cleaners	Cleaners employed by TCC locally						
Campus guides	Guides employed by TCC locally						
Others:	(List stakeholders who are also involved in the event in the columns below)						

- Does the above list fully and comprehensively cover the stakeholders of local employment in community rejuvenation?
 Ans: _____ (on a scale of 1 to 5, with 5 representing full and comprehensive coverage)



III. Social Dialogue - Stakeholders of Plan B

Type of Stakeholder	Description	Evaluation Criteria					Method of Participation
		Dependency	Degree of Impact	Influence over Decision-making	Tension	Total Score	
TCC project leader	Person in charge of Plan B						
Employees on the Hoping Plant (Plan B)	Plan B guides						
Participants in Plan B (general tourists)	The general public participating in Plan B						
Participants in Plan B (specific groups such as environmental groups, competent authorities, and schools)	Specific groups participating in Plan B (e.g., environmental groups, competent authorities, and schools)						
Others:	(List stakeholders who are also involved in the event in the columns below)						

■ Does the above list fully and comprehensively cover the stakeholders of Plan B in social dialogue?
 Ans: _____ (on a scale of 1 to 5, with 5 representing full and comprehensive coverage)

This is the end of the questionnaire. Thank you very much!

Appendix 3 3rd Stakeholder Engagement - Interview Outline⁴

➤ Community Rejuvenation - TCC DAKA Market

- **Interviewee**
TCC DAKA market vendors
- **Executor**
KPMG Sustainability Consulting Co., Ltd.
- **Date of Interview**
January 2021
- **Duration of Interview**
30~40 minutes
- **Method of Interview**
Face-to-face interview (or telephone interview, depending on the situation)
- **Contents of Interview**

I. Background Information of Interviewee

- **Description:**
Questions in the 1st section are to understand the background of the interviewee as a reference for subsequent analyses. These questions are also to have an in-depth understanding of how the relationship between the interviewee and the TCC DAKA market is established. Such information will serve as a background for the subsequent analysis of outcomes.
- **Please answer the following questions:**
 1. What occupation/activity did you engage in before becoming a TCC DAKA market vendor?
 2. Have you ever sold products in other markets?
 3. How did you come into contact with the TCC DAKA market in the first place?
 4. Why do you want to be a vendor in the TCC DAKA market?
 5. What preparations did you make before the official opening of the TCC DAKA market?
 6. How long did it take to prepare to vend in the TCC DAKA market?
 7. What assistance did TCC offer during your preparations for the TCC DAKA market?
 8. How long did you spend on the TCC DAKA market every week after its official opening?
 9. Did you ask your family members or friends to help you vend in the TCC DAKA market?

⁴Due to the length of the report, the interview outlines for TCC DAKA market vendors, campus guides, and employees on the Hoping Plant are representative of the interview outlines for respective stakeholders in terms of community rejuvenation, local employment, and social dialogue. The interview outlines for the remaining stakeholders are consistent with this outline in terms of structure and principles. Only the description of questions is adjusted according to the characteristics of different stakeholders.



II. Information on Outcomes

- **Description:**

In the 2nd section, we will ask some questions about the changes brought forth to you by being a TCC DAKA market vendor. Please recall from your memory as much as you can and we will explain more during the inquiry.

- **Please answer the following questions:**

4. What impact does vending in the TCC DAKA market have on you (e.g., positive impacts: improved interpersonal relationships, enhanced entrepreneurial thinking, and increased sense of accomplishment; negative impacts: tiredness or fatigue or stress)?
What are the events and feelings that impress you the most after starting to vend in the TCC DAKA market? What impact does the event have on you?

→Improved interpersonal relationships

No.	Question	Purpose of Question
1	<ul style="list-style-type: none"> ➤ Does vending in the TCC DAKA market help improve your interpersonal relationships? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your interpersonal relationships were improved? (For example, being a TCC DAKA market vendor gave you an opportunity to communicate with family members, friends, and employees of TCC, thus improving your interpersonal relationships.) 	- Confirmation of outcomes

→Enhanced entrepreneurial thinking

2	<ul style="list-style-type: none"> ➤ Do the business start-up courses and coaching provided by TCC help enhance your entrepreneurial thinking? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your entrepreneurial thinking was enhanced? (For example, you learned knowledge and skills required to start a business from courses and coaching provided by TCC and had an opportunity to apply them in the TCC DAKA market, thus enhancing your entrepreneurial thinking.) 	- Confirmation of outcomes
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→Increased sense of accomplishment

3	<ul style="list-style-type: none"> ➤ Does vending in the TCC DAKA market help increase your sense of accomplishment? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your sense of accomplishment increased? (For example, you began to have goals or hopes for life because of vending in the TCC DAKA market, thus feeling that life is meaningful and full of hope.) ➤ What are the key happenings in the process of vending in the TCC DAKA market that significantly increase your sense of accomplishment? 	- Confirmation of outcomes
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→Improved family finances

4	<ul style="list-style-type: none"> ➤ Does vending in the TCC DAKA market help improve your family finances? What is the degree of improvement? (With a scale indicated) 	- Confirmation of outcomes
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	<ul style="list-style-type: none"> ➤ What is the reason why your family finances were improved? (For example, you gained a stable income and enhanced the family's quality of life by vending in the TCC DAKA market.) 	
→Others		
5	<ul style="list-style-type: none"> ➤ This is the end of the interview. Last question: What are your expectations for the future of the TCC DAKA market? Are there any areas that require improvement? ➤ Do you have any other feelings that are not mentioned above? 	Collection of additional information

➤ Community Rejuvenation - Local Employment

- **Interviewee**
Campus guides
- **Executor**
KPMG Sustainability Consulting Co., Ltd.
- **Date of Interview**
January 2021
- **Duration of Interview**
30~40 minutes
- **Method of Interview**
Face-to-face interview (or telephone interview, depending on the situation)
- **Contents of Interview**

— 、 Background Information of Interviewee

- **Description:**
Questions in the 1st section are to understand the background of the interviewee as a reference for subsequent analyses. These questions are also to have an in-depth understanding of how the relationship between the interviewee and Plan B is established. Such information will serve as a background for the subsequent analysis of outcomes.
- **Please answer the following questions:**
 1. Are you a local villager from Heping Village, Hualien ("local villager" means that you come from Heping Village)?
 2. What occupation/activity did you engage in before becoming a guide for Plan B? Was the place of work also in Heping Village?
 3. Have you ever guided in other tours?
 4. Why do you want to be a guide for Plan B?
 5. How did you prepare for the first Plan B guided tour?
 6. Do you have any contact with the cement industry and circular economy issues?
 7. Have the contents/items of the guided tour changed since the launch of Plan B?

II. Information on Outcomes

- **Description:**

In the 2nd section, we will ask some questions about the changes brought forth by being a guide for Plan B to you. Please recall from your memory as much as you can and we will explain more during the inquiry.

- **Please answer the following questions:**

5. What impact does being a guide for Plan have on you (e.g., positive impacts: improved interpersonal relationships, increased sense of accomplishment, and increased income; negative impacts: tiredness or fatigue or extra stress of preparation and execution)?

→Improved interpersonal relationships

No.	Question	Purpose of Question
1	<ul style="list-style-type: none"> ➤ Does being a guide for Plan B help improve your interpersonal relationships? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your interpersonal relationships were improved? (For example, being a guide for Plan B gave you an opportunity to communicate with visitors, friends, and employees of TCC, thus improving your interpersonal relationships.) 	- Confirmation of outcomes

→Acquired related knowledge

2	<ul style="list-style-type: none"> • Does being a guide for Plan B help you understand the cement industry and circular economy issues better? What is the degree of understanding? (With a scale indicated) 	- Confirmation of outcomes
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→Increased sense of accomplishment

3	<ul style="list-style-type: none"> ➤ Does being a guide for Plan B help increase your sense of accomplishment? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your sense of accomplishment increased? (For example, you began to have goals or hopes for life because of positive responses and feedback from participants in Plan B, thus feeling that life is meaningful and full of hope.) ➤ 	- Confirmation of outcomes
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→Improved finances

4	<ul style="list-style-type: none"> ➤ Does being a guide for Plan B help improve your finances? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your finances were improved? (For example, you gained a stable income and enhanced the quality of life by being a guide for Plan B.) ➤ Do you feel comfortable sharing your monthly income generated from being a guide for Plan B? 	- Confirmation of outcomes
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→Boosted identification with Heping Village

5	<ul style="list-style-type: none"> ➤ Does being a guide for Plan B help boost your identification with Heping Village? What is the degree of improvement? (With a scale indicated) 	- Confirmation of outcomes
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	<ul style="list-style-type: none"> ➤ What is the reason why your identification with Heping Village was boosted? (For example, you had a better understanding of the local culture and got close with villagers from Heping Village during the Plan B guided tour, thus increasing your affection for Heping Village.) 	
→Improved communication and coordination skills		
6	<ul style="list-style-type: none"> ➤ Does being a guide for Plan B help improve your communication and coordination skills? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your communication and coordination skills were improved? (For example, being a guide for Plan B gave you an opportunity to communicate with the employees of TCC and participants in Plan B, thus improving your communication and coordination skills.) 	- Confirmation of outcomes
→Others		
7	<ul style="list-style-type: none"> ➤ This is the end of the interview. Last question: What are your expectations for the future of Plan B? Are there any areas that require improvement? ➤ Do you have any other feelings that are not mentioned above? 	Collection of additional information

➤ Social Dialogue - Plan B

- **Interviewee**

Employees on the Hoping Plant (Plan B)

- **Executor**

KPMG Sustainability Consulting Co., Ltd.

- **Date of Interview**

January 2021

- **Duration of Interview**

30~40 minutes

- **Method of Interview**

Face-to-face interview (or telephone interview, depending on the situation)

- **Contents of Interview**

I. Background Information of Interviewee

- **Description:**

Questions in the 1st section are to understand the background of the interviewee as a reference for subsequent analyses. These questions are also to have an in-depth understanding of how the relationship between the interviewee and Plan B is established. Such information will serve as a background for the subsequent analysis of outcomes.

- **Please answer the following questions:**

1. In what capacity do you work for TCC?



I. Background Information of Interviewee

2. What occupation/activity did you engage in before becoming a guide for Plan B?
3. Have you ever planned and executed other guided tours?
4. Did you have any contact with circular economy issues before Plan B?
5. Why do you want to be a planner and executor of Plan B?
6. What preparations did you make before Plan B?
7. Were there any changes in the contents/items on display during Plan B?
8. How much time did you spend on related work on average in a week during Plan B?

II. Information on Outcomes

- **Description:**

In the 2nd section, we will ask some questions about the changes brought forth to you by being a planner and executor of Plan B. Please recall from your memory as much as you can and we will explain more during the inquiry.

→Improved interpersonal relationships

No.	Question	Purpose of Question
1	<ul style="list-style-type: none"> ➤ Does being a planner and executor of Plan B help improve your interpersonal relationships? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your interpersonal relationships were improved? (For example, being a planner and executor of Plan B gave you an opportunity to communicate with the staff members, local villagers, and other employees of TCC, thus improving your interpersonal relationships.) 	- Confirmation of outcomes

→Increased sense of accomplishment

2	<ul style="list-style-type: none"> ➤ Does being a planner and executor of Plan B help increase your sense of accomplishment? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your sense of accomplishment increased? (For example, you began to have goals or hopes for life because of responses and feedback from participants and the popularity of Plan B, thus feeling that life is meaningful and full of hope.) ➤ What are the key happenings in the process of planning and executing Plan B that significantly increase your sense of accomplishment? 	- Confirmation of outcomes
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→Boosted identification with TCC

3	<ul style="list-style-type: none"> ➤ Does being a planner and executor of Plan B help boost your identification with TCC? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your identification with Heping Village was boosted? (For example, you had a better understanding of TCC's vision, philosophy, and innovation in terms of environmental protection in the process of planning and executing Plan B, thus increasing your affection for TCC.) 	- Confirmation of outcomes
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	<ul style="list-style-type: none"> ➤ What are the key happenings in the process of planning and executing Plan B that significantly boost your identification with TCC? 	
→Improved communication and coordination skills		
4	<ul style="list-style-type: none"> ➤ Does being a planner and executor of Plan B help improve your communication and coordination skills? What is the degree of improvement? (With a scale indicated) ➤ What is the reason why your communication and coordination skills were improved? (For example, being a planner and executor of Plan B gave you an opportunity to communicate with other employees of TCC, guides, and general tourists participating in Plan B, thus improving your communication and coordination skills.) 	- Confirmation of outcomes
→Others		
5	<ul style="list-style-type: none"> ➤ This is the end of the interview. Last question: What are your expectations for the future of Plan B? Are there any areas that require improvement? ➤ Do you have any other feelings that are not mentioned above? 	Collection of additional information



Appendix 4 5th Stakeholder Engagement - Questionnaire⁵

➤ Community Rejuvenation - TCC DAKA Market

Subject - Market Vendors

Description

Executor	Taiwan Cement Corporation and KPMG Sustainability Consulting Co., Ltd.
Purpose of questionnaire	In 2020, the Hoping Plant of Taiwan Cement Corporation (TCC) was open to the public. As an open eco-factory, the Hoping Plant is Taiwan's first cement factory that offers a guided tour via online reservation. TCC DAKA was also set up as an open venue for people to consume knowledge of ecology and local culture. The study aims to evaluate the changes that TCC DAKA brings forth to the units and participants involved. Through this questionnaire, we hope to understand your thoughts on the events of TCC DAKA as a reference for quantifying the outcomes of TCC DAKA.
Length of questionnaire	The questionnaire contains a maximum of 27 questions (skip questions that are not applicable) and will take about 15 minutes to answer.
Event background	Located in Heping Village, the northernmost village in Hualien, Taiwan, TCC DAKA is a 3-in-1 Port, Power Plant, and Factory Hoping Circular Park. With TCC's unique utilization of resources across industries, TCC DAKA aims to reverse the image of the cement industry by launching the Plan B guided tour. TCC was also intent on community rejuvenation by assisting more than 10 villagers from Heping Village and Aohua Village in starting their businesses to promote the characteristics and culture of the Taroko people.
Statement of use	We hereby declare that the data collected in this questionnaire will be provided for KPMG's evaluation of SROI of TCC only. The collected data will not be used for any other purposes, neither will the personal information of the respondents be disclosed internally or externally.

⁵Due to the length of the report, the questionnaires for TCC DAKA market vendors, campus guides, and employees on the Hoping Plant are representative of the questionnaires for respective stakeholders in terms of community rejuvenation, local employment, and social dialogue. The questionnaires for the remaining stakeholders are consistent with this questionnaire in terms of structure and principles. Only the description of questions is adjusted according to the characteristics and outcomes of different stakeholders.



Information on Outcomes

I. Strengthened personal creativity

Question	Answer
1. Did vending in the TCC DAKA market strengthen your personal creativity? (For example, you interacted with tourists to better understand market trends and needs and started to develop new products or customized products.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 10)
2. As stated above, to what degree (on a scale of 1 to 10) did vending in the TCC DAKA market strengthen your personal creativity?	_____ point(s) (out of 1 to 10)
3. How many new products have you designed since vending in the TCC DAKA market?	_____
4. As stated above, was part of strengthened personal creativity derived from other people or things? (For example, you designed new products on a regular basis when vending in the TCC DAKA market, thus strengthening your personal creativity; you took cooking/handicrafts classes on a regular basis that could drive your ability to create new products, which was irrelevant to market visitors.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 6)
5. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
6. If you were not a vendor in the TCC DAKA market, were there other ways in your life that could also strengthen your personal creativity?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 8)
7. As stated above, to what degree (on a scale of 1 to 10) was personal creativity strengthened through other ways?	_____ point(s) (out of 1 to 10)



Question	Answer
8. How long can your strengthened personal creativity by vending in the TCC DAKA market last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
9. Will your strengthened personal creativity by vending in the TCC DAKA market gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

II. Increased sense of accomplishment

Question	Answer
10. Did vending in the TCC DAKA market increase your sense of accomplishment? (For example, you promoted and sold work such as handmade knitting or specialty food and shared the work and its purpose of creation with all kinds of tourists in the TCC DAKA market.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 18)
11. As stated above, to what degree (on a scale of 1 to 10) did vending in the TCC DAKA market increase your sense of accomplishment?	_____ point(s) (out of 1 to 10)
12. As stated above, was part of increased sense of accomplishment derived from other people or things? (For example, your sense of accomplishment increased by working with family members and receiving their recognition rather than by interacting with tourists in the market.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 14)
13. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
14. If you were not a vendor in the TCC DAKA market, were there other ways in your life that could also increase your sense of accomplishment?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 16)



Question	Answer
15. As stated above, to what degree (on a scale of 1 to 10) did the sense of accomplishment increase through other ways?	_____ point(s) (out of 1 to 10)
16. How long can your increased sense of accomplishment by vending in the TCC DAKA market last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
17. Will your increased sense of accomplishment by vending in the TCC DAKA market gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

III. Extra disposable personal income

Question	Answer
18. Did vending in the TCC DAKA market help you obtain extra disposable personal income? (For example, you obtained extra disposable income by promoting and selling your work in the TCC DAKA market.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 26)
19. As stated above, to what degree (on a scale of 1 to 10) did vending in the TCC DAKA market help you obtain extra disposable personal income?	_____ point(s) (out of 1 to 10)
20. Was part of extra disposable personal income derived from other people or things? (For example, you were invited by other units to vend due to exposure to the TCC DAKA market and obtained income accordingly.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 22)
21. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
22. If you were not a vendor in the TCC DAKA market, were there other ways in your life that could also help you obtain extra disposable personal income?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 24)



Question	Answer
23. As stated above, to what degree (on a scale of 1 to 10) was extra disposable personal income obtained through other ways?	_____ point(s) (out of 1 to 10)
24. How long can your extra disposable personal income obtained by vending in the TCC DAKA market last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
25. Will your extra disposable personal income obtained by vending in the TCC DAKA market gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

Basic Information

Question	Answer
26. Did you work in Heping Village before vending in the TCC DAKA market?	<input type="checkbox"/> Yes <input type="checkbox"/> No, I worked in other places. <input type="checkbox"/> No, I never worked before.
27. How much extra time did you spend vending in the TCC DAKA market each week in addition to business hours (including preparing for ingredients, cooking, and producing handicrafts)?	_____ hours

This is the end of the questionnaire. Thank you very much!



➤ **Community Rejuvenation - Local Employment**

Subject - Campus Guides

Description

Executor	Taiwan Cement Corporation and KPMG Sustainability Consulting Co., Ltd.
Purpose of questionnaire	In 2020, the Hoping Plant of Taiwan Cement Corporation (TCC) was open to the public. As an open eco-factory, the Hoping Plant is Taiwan's first cement factory that offers a guided tour via online reservation. TCC DAKA was also set up as an open venue for people to consume knowledge of ecology and local culture. The study aims to evaluate the changes that TCC DAKA brings forth to the units and participants involved. Through this questionnaire, we hope to understand your thoughts on the events of TCC DAKA as a reference for quantifying the outcomes of TCC DAKA.
Length of questionnaire	The questionnaire contains a maximum of 74 questions (skip questions that are not applicable) and will take about 20 minutes to answer.
Event background	Located in Heping Village, the northernmost village in Hualien, Taiwan, TCC DAKA is a 3-in-1 Port, Power Plant, and Factory Hoping Circular Park. With TCC's unique utilization of resources across industries, TCC DAKA aims to reverse the image of the cement industry by launching the Plan B guided tour. TCC was also intent on community rejuvenation by assisting more than 10 villagers from Heping Village and Aohua Village in starting their businesses to promote the characteristics and culture of the Taroko people.
Statement of use	We hereby declare that the data collected in this questionnaire will be provided for KPMG's evaluation of SROI of TCC only. The collected data will not be used for any other purposes, neither will the personal information of the respondents be disclosed internally or externally.

Information on Outcomes

I. Increased sense of accomplishment in work

Question	Answer
1. Did being a campus guide increase your sense of accomplishment in work? (For example, your helped visitors know TCC's sustainability initiatives better, reversed TCC's and the cement industry's negative impression on visitors, and felt that this was the right thing to do.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 9)
2. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide increase your sense of accomplishment in work?	_____ point(s) (out of 1 to 10)



Question	Answer
3. As stated above, was part of increased sense of accomplishment in work derived from other people or things? (For example, you were familiar with or good at guiding for crowds of people and adapted quickly, thus gaining a sense of accomplishment in work, not entirely because of recognition from others.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 5)
4. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
5. If you were not a campus guide, were there other ways in your life that could also increase your sense of accomplishment in work?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 7)
6. As stated above, to what degree (on a scale of 1 to 10) did your sense of accomplishment in work increase through other ways?	_____ point(s) (out of 1 to 10)
7. How long can your increased sense of accomplishment in work by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
8. Will your increased sense of accomplishment in work by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

II. Boosted identification with TCC

Question	Answer
9. Did being a campus guide boost your identification with TCC? (For example, you felt proud to be TCC employees and recognized and identified with TCC's sustainability initiatives more.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 17)
10. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide boost your identification with TCC?	_____ point(s) (out of 1 to 10)



Question	Answer
11. As stated above, was part of boosted identification with TCC derived from other people or things? (For example, family members recognized by TCC gave more support to you, thus boosting your identification with TCC.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 13)
12. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
13. If you were not a campus guide, were there other ways in your life that could also boost your identification with TCC?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 15)
14. As stated above, to what degree (on a scale of 1 to 10) was your identification with TCC boosted through other ways?	_____ point(s) (out of 1 to 10)
15. How long can your boosted identification with TCC by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
16. Will your boosted identification with TCC by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

III. Improved oral and physical expression skills

Question	Answer
17. Did being a campus guide improve your oral and physical expression skills? (For example, you noticed that different crowds of people understood the explanation differently and guided in a simple and clear way for different crowds of people.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 26)
18. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide improve your oral and physical expression skills?	_____ point(s) (out of 1 to 10)
19. What was the rate of positive feedback you	_____ %



Question	Answer
received with improved communication and coordination skills by guiding for Plan B (80% if 8 out of 10 guided tours were praised by tourists or given positive feedback)?	
20. As stated above, was part of improved oral and physical expression skills derived from other people or things? (For example, you improved oral and physical expression skills by sharing experiences and points for attention with other guides rather than by guiding for Plan B and interacting with tourists.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 22)
21. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
22. If you were not a campus guide, were there other ways in your life that could also improve your oral and physical expression skills?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 24)
23. As stated above, to what degree (on a scale of 1 to 10) were your oral and physical expression skills improved through other ways?	_____ point(s) (out of 1 to 10)
24. How long can your improved oral and physical expression skills by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
25. Will your improved oral and physical expression skills by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year



IV. Acquired knowledge of cement manufacturing

Question	Answer
<p>26. Did being a campus guide help you acquire knowledge of the cement industry? (For example, you came into contact with colleagues from different departments such as mine, port, and power plant and consumed knowledge of TCC's other mining processes.)</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 36)</p>
<p>27. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide help you acquire knowledge of the cement industry?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>28. What additional knowledge could you acquire by guiding for Plan B? (Check all that applies)</p>	<p><input type="checkbox"/>Cement mining and transportation <input type="checkbox"/>Port transportation and marine conservation <input type="checkbox"/>Recycling <input type="checkbox"/>Operation of eco-friendly power plant <input type="checkbox"/>Cement manufacturing <input type="checkbox"/>Others, please specify: _____ <input type="checkbox"/>None (if none of the above is checked)</p>
<p>29. If you have a budget at your disposal, how much are you willing to pay to acquire knowledge of the cement industry equivalent to guide training?</p>	<p><input type="checkbox"/>Less than NT\$1,000 <input type="checkbox"/>NT\$1,000~NT\$2,000 <input type="checkbox"/>NT\$2,000~NT\$3,000 <input type="checkbox"/>NT\$3,000~NT\$4,000 <input type="checkbox"/>More than NT\$4,000, please specify: NT\$ _____</p>
<p>30. As stated above, was part of acquired knowledge of the cement industry derived from other people or things? (For example, you acquired knowledge of the cement industry from TCC's training rather than totally from interaction with colleagues from different departments.)</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 32)</p>
<p>31. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>32. If you were not a campus guide, were there other ways in your life that could also help you acquire knowledge of the cement industry?</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 34)</p>



Question	Answer
33. As stated above, to what degree (on a scale of 1 to 10) was knowledge of the cement industry acquired through other ways?	_____ point(s) (out of 1 to 10)
34. How long can your acquired knowledge of the cement industry by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
35. Will your acquired knowledge of the cement industry by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

V. Strengthened family relations

Question	Answer
36. Did being a campus guide strengthen your family relations? (For example, you got a long-term, stable job opportunity to work locally, took care of family members without having to go far, and obtained tranquility of life.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 45)
37. How much extra time could you spend with your family members because of being a campus guide?	_____ hours per week
38. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide strengthen your family relations?	_____ point(s) (out of 1 to 10)
39. As stated above, was part of strengthened family relations derived from other people or things? (For example, the reason for strengthened family relations was that being a campus guide for TCC was recognized by your family members; it was not totally because that you could take care of family members without having to go far.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 41)
40. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people	_____ point(s) (out of 1 to 10)

Question	Answer
or things?	
41. If you were not a campus guide, were there other ways in your life that could also help you strengthen family relations?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 43)
42. As stated above, to what degree (on a scale of 1 to 10) was family relations strengthened through other ways?	_____ point(s) (out of 1 to 10)
43. How long can your strengthened family relations by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
44. Will your strengthened family relations by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

VI. Acquired information on local people and culture from other parts of Taiwan

Question	Answer
45. Did being a campus guide help you acquire information on local people and culture from other parts of Taiwan? For example, you got an opportunity to interact and share information with all kinds of tourists.	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 55)
46. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide help you acquire information on local people and culture from other parts of Taiwan?	_____ point(s) (out of 1 to 10)
47. What type of information accounted for the largest percentage of the information acquired? (Choose all that applies)	<input type="checkbox"/> Politics <input type="checkbox"/> Economy <input type="checkbox"/> Society <input type="checkbox"/> Life <input type="checkbox"/> Sports/Entertainment <input type="checkbox"/> Others, please specify: _____
48. How many pieces of information could you acquire as a campus guide?	_____ pieces per week on average
49. As stated above, was part of acquired information on local people and culture from other parts of Taiwan derived from other people or things? (For example, you	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 51)



Question	Answer
acquired such information from daily communication with other guides, not entirely from interaction with tourists.)	
50. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
51. If you were not a campus guide, were there other ways in your life that could also help you acquire information on local people and culture from other parts of Taiwan?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 53)
52. As stated above, to what degree (on a scale of 1 to 10) was information on local people and culture from other parts of Taiwan acquired through other ways?	_____ point(s) (out of 1 to 10)
53. How long can your acquired information on local people and culture from other parts of Taiwan by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
54. Will your acquired information on local people and culture from other parts of Taiwan by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

VII. Improved ability to improvise

Question	Answer
55. Did being a campus guide improve your ability to improvise? (For example, you faced and dealt with different cleaning emergencies, thus improving your ability to deal with different emergencies.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 64)
56. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide help you improve your ability to improvise?	_____ point(s) (out of 1 to 10)
57. What was the rate of success in improvisation that you could achieve as a campus guide? (80% if 8 out of 10 incidents/problems were successfully solved)	_____%



Question	Answer
or tackled on-site)	
58. As stated above, was part of improved ability to improvise derived from other people or things? (For example, guides shared experiences with each other, thus improving their ability to improvise.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 60)
59. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
60. If you were not a campus guide, were there other ways in your life that could also improve your ability to improvise?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 62)
61. As stated above, to what degree (on a scale of 1 to 10) was your ability to improvise improved through other ways?	_____ point(s) (out of 1 to 10)
62. How long can your improved ability to improvise by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
63. Will your improved ability to improvise by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

VIII. Obtained personal income

Question	Answer
64. Did being a campus guide help you obtain personal income (e.g., stable income)?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 73)
65. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide help you obtain personal income?	_____ point(s) (out of 1 to 10)
66. Do you feel conformable sharing your monthly income generated from being a guide for Plan B?	NT\$ _____
67. Was part of obtained personal income derived from other people or things? (For	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 69)



Question	Answer
example, you obtained extra financial aids from family members when working locally.)	
68. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
69. If you were not a campus guide, were there other ways in your life that could also help you obtain personal income?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 71)
70. As stated above, to what degree (on a scale of 1 to 10) did your personal income obtained through other ways?	_____ point(s) (out of 1 to 10)
71. How long can your obtained personal income by being a campus guide last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
72. Will your obtained personal income by being a campus guide gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

Basic Information

Question	Answer
73. How much extra time did you spend on affairs associated with the campus guide each week on average in addition to working hours?	_____ hours
74. Did you work in Heping Village before being a campus guide?	<input type="checkbox"/> Yes <input type="checkbox"/> No, I worked in other places. <input type="checkbox"/> No, I never worked before.

This is the end of the questionnaire. Thank you very much!



➤ **Social Dialogue - Plan B**

Subject - Employees on the Hoping Plant

Description

Executor	Taiwan Cement Corporation and KPMG Sustainability Consulting Co., Ltd.
Purpose of questionnaire	In 2020, the Hoping Plant of Taiwan Cement Corporation (TCC) was open to the public. As an open eco-factory, the Hoping Plant is Taiwan's first cement factory that offers a guided tour via online reservation. TCC DAKA was also set up as an open venue for people to consume knowledge of ecology and local culture. The study aims to evaluate the changes that TCC DAKA brings forth to the units and participants involved. Through this questionnaire, we hope to understand your thoughts on the events of TCC DAKA as a reference for quantifying the outcomes of TCC DAKA.
Length of questionnaire	The questionnaire contains a maximum of 37 questions (skip questions that are not applicable) and will take about 15 minutes to answer.
Event background	Located in Heping Village, the northernmost village in Hualien, Taiwan, TCC DAKA is a 3-in-1 Port, Power Plant, and Factory Hoping Circular Park. With TCC's unique utilization of resources across industries, TCC DAKA aims to reverse the image of the cement industry by launching the Plan B guided tour. TCC was also intent on community rejuvenation by assisting more than 10 villagers from Heping Village and Aohua Village in starting their businesses to promote the characteristics and culture of the Taroko people.
Statement of use	We hereby declare that the data collected in this questionnaire will be provided for KPMG's evaluation of SROI of TCC only. The collected data will not be used for any other purposes, neither will the personal information of the respondents be disclosed internally or externally.

Information on Outcomes

I. Increased sense of accomplishment in work

Question	Answer
1. Did supporting Plan B increase your sense of accomplishment in work? (For example, your helped visitors know TCC's sustainability initiatives better, reversed TCC's and the cement industry's negative impression on visitors, and felt that this was the right thing to do.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 9)
2. As stated above, to what degree (on a scale of 1 to 10) did supporting Plan B increase your sense of accomplishment in work?	_____ point(s) (out of 1 to 10)
3. As stated above, was part of increased sense	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 5)



Question	Answer
<p>of accomplishment in work derived from other people or things? (For example, you were familiar with or good at guiding and adapted quickly, thus gaining a sense of accomplishment in work, not entirely because of recognition obtained.)</p>	
<p>4. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>5. If you did not support Plan B, were there other ways in your life that could also increase your sense of accomplishment in work?</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 7)</p>
<p>6. As stated above, to what degree (on a scale of 1 to 10) did your sense of accomplishment in work increase through other ways?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>7. How long can your increased sense of accomplishment in work by supporting Plan B last?</p>	<p><input type="checkbox"/>Less than 6 months <input type="checkbox"/>6 months~1 year <input type="checkbox"/>1~2 year(s) <input type="checkbox"/>2~3 years <input type="checkbox"/>3~4 years <input type="checkbox"/>4~5 years <input type="checkbox"/>More than 5 years</p>
<p>8. Will your increased sense of accomplishment in work by supporting Plan B gradually diminish in the next few years? What is the degree of diminution?</p>	<p><input type="checkbox"/>0% <input type="checkbox"/>20% per year <input type="checkbox"/>40% per year <input type="checkbox"/>60% per year <input type="checkbox"/>80% per year <input type="checkbox"/>100% in the following year</p>



II. Boosted identification with TCC

Question	Answer
9. Did supporting Plan B boost your identification with TCC? (For example, you felt proud to be TCC employees and recognized and identified with TCC's sustainability initiatives more.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 17)
10. As stated above, to what degree (on a scale of 1 to 10) did supporting Plan B boost your identification with TCC?	_____ point(s) (out of 1 to 10)
11. As stated above, was part of boosted identification with TCC derived from other people or things? (For example, family members recognized by TCC gave more support to you, thus boosting your identification with TCC.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 13)
12. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
13. If you did not support Plan B, were there other ways in your life that could also boost your identification with TCC?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 15)
14. As stated above, to what degree (on a scale of 1 to 10) was your identification with TCC boosted through other ways?	_____ point(s) (out of 1 to 10)
15. How long can your boosted identification with TCC by supporting Plan B last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
16. Will your boosted identification with TCC by supporting Plan B gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year



III. Improved oral expression skills

Question	Answer
17. Did supporting Plan B improve your oral expression skills? (For example, you noticed that different crowds of people understood the explanation differently and guided in a simple and clear way for different crowds of people.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 26)
18. As stated above, to what degree (on a scale of 1 to 10) did supporting Plan B improve your oral expression skills?	_____ point(s) (out of 1 to 10)
19. What was the rate of positive feedback you received with improved communication and coordination skills by supporting Plan B (80% if 8 out of 10 guided tours were praised by tourists or given positive feedback)?	_____ %
20. As stated above, was part of improved oral expression skills derived from other people or things? (For example, you improved oral expression skills by taking TCC's training courses rather than by guiding for Plan B.)	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 22)
21. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?	_____ point(s) (out of 1 to 10)
22. If you did not support Plan B, were there other ways in your life that could also improve your oral expression skills?	<input type="checkbox"/> Yes <input type="checkbox"/> No (Go to Question 24)
23. As stated above, to what degree (on a scale of 1 to 10) were your oral expression skills improved through other ways?	_____ point(s) (out of 1 to 10)
24. How long can your improved oral expression skills by supporting Plan B last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
25. Will your improved oral expression skills by supporting Plan B gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year



IV. Acquired knowledge of the cement industry

Question	Answer
<p>26. Did supporting Plan B help you acquire knowledge of the cement industry? (For example, you came into contact with colleagues from different departments such as mine, port, and power plant, shared expertise with colleagues from different departments, and consumed knowledge of TCC's other mining processes.)</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 36)</p>
<p>27. As stated above, to what degree (on a scale of 1 to 10) did being a campus guide help you acquire knowledge of the cement industry?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>28. What additional knowledge could you acquire by supporting Plan B? (Check all that applies)</p>	<p><input type="checkbox"/>Cement mining and transportation <input type="checkbox"/>Port transportation and marine conservation <input type="checkbox"/>Recycling <input type="checkbox"/>Operation of eco-friendly power plant <input type="checkbox"/>Cement manufacturing <input type="checkbox"/>Others, please specify: _____ <input type="checkbox"/>None (if none of the above is checked)</p>
<p>29. If you have a budget at your disposal, how much are you willing to pay to acquire knowledge of the cement industry equivalent to the guided tour?</p>	<p><input type="checkbox"/>Less than NT\$1,000 <input type="checkbox"/>NT\$1,000~NT\$2,000 <input type="checkbox"/>NT\$2,000~NT\$3,000 <input type="checkbox"/>NT\$3,000~NT\$4,000 <input type="checkbox"/>More than NT\$4,000, please specify: NT\$ _____</p>
<p>30. Was part of acquired knowledge of the cement industry derived from other people or things? (For example, you acquired knowledge of the cement industry from TCC's training rather than totally from interaction with colleagues from different departments.)</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 32)</p>
<p>31. If yes, to what degree (on a scale of 1 to 10) was the outcome derived from other people or things?</p>	<p>_____ point(s) (out of 1 to 10)</p>
<p>26. If you did not support Plan B, were there other ways in your life that could also help you acquire knowledge of the cement industry?</p>	<p><input type="checkbox"/>Yes <input type="checkbox"/>No (Go to Question 34)</p>



Question	Answer
27. As stated above, to what degree (on a scale of 1 to 10) was knowledge of the cement industry acquired through other ways?	_____ point(s) (out of 1 to 10)
28. How long can your acquired knowledge of the cement industry by supporting Plan B last?	<input type="checkbox"/> Less than 6 months <input type="checkbox"/> 6 months~1 year <input type="checkbox"/> 1~2 year(s) <input type="checkbox"/> 2~3 years <input type="checkbox"/> 3~4 years <input type="checkbox"/> 4~5 years <input type="checkbox"/> More than 5 years
29. Will your acquired knowledge of the cement industry by supporting Plan B gradually diminish in the next few years? What is the degree of diminution?	<input type="checkbox"/> 0% <input type="checkbox"/> 20% per year <input type="checkbox"/> 40% per year <input type="checkbox"/> 60% per year <input type="checkbox"/> 80% per year <input type="checkbox"/> 100% in the following year

Basic Information

Question	Answer
30. What department do you work in?	_____
31. Which parts of the Plan B guided tour are you responsible for?	_____

This is the end of the questionnaire. Thank you very much!



Appendix 5 Excerpts from Interviews with Key Stakeholders

Community Rejuvenation		
Interviewee	Key Feedback	Corresponding Outcome
TCC project leader	<ul style="list-style-type: none"> I came into contact with local villagers with different educational backgrounds and learned to communicate with them differently. 	Had a better understanding of local culture of the indigenous peoples
	<ul style="list-style-type: none"> I endeavored to understand the local culture of Heping Village and indigenous peoples in the process of executing the project. 	Improved personal communication and coordination skills
Head of Heping Village	<ul style="list-style-type: none"> I never trained cleaners before. As a former police officer, I have my ways of managing personnel. I would treat employees with care and check how they did their work and communicate with them in person. 	Improved communication and coordination skills
	<ul style="list-style-type: none"> Not many local job opportunities were available locally, so economically disadvantaged villagers were employed mainly to improve their family finances. Therefore, the employees cherished the job opportunities and worked hard. They even won a prize in recognition of their cleaning work last year. 	Attained spiritual fulfillment
	<ul style="list-style-type: none"> Different from my past work experience, the types of cleaners were more diverse and different in nature. Sometimes I had to deal with crises. 	Improved capability of crisis management
Campus cleaners	<ul style="list-style-type: none"> Praises from users pushed me to work even harder. I cleaned the venue as my home, making me feel a sense of accomplishment. 	Increased sense of accomplishment in work
	<ul style="list-style-type: none"> I came into contact with people from all walks of life. Sometimes I got to chat with visitors. 	Improved interpersonal relationships
	<ul style="list-style-type: none"> Long-term, stable employment close to home allowed me to take care of family members without having to go far. 	Obtained tranquility of life
	<ul style="list-style-type: none"> TCC has long been giving back to Heping Village. We thank TCC for its endeavors, including offering us job opportunities. 	Boosted identification with TCC
Campus guides	<ul style="list-style-type: none"> Working close to home allowed me to spend more time with family members. 	Strengthened family relations
	<ul style="list-style-type: none"> Different from temporary work in the past, I can now earn money with stable employment. 	Obtained personal income
	<ul style="list-style-type: none"> Before guiding for Plan B, we took training courses by turns within the factory (e.g., mining, shaft operation, material feed, nuclear power plant power generation, and port operation) to consume cement-related knowledge. 	Acquired knowledge of cement manufacturing



	<ul style="list-style-type: none"> I felt exhilarated and relieved after achieving success in the first guided tour. Feedback was given between the guides to increase the sense of accomplishment in work. 	Increased sense of accomplishment in work
	<ul style="list-style-type: none"> Thank TCC for offering job opportunities and making other contributions to the local community. 	Boosted identification with TCC
	<ul style="list-style-type: none"> I consumed the content of the guided tour in my own way and made strides towards guide skills based on feedback from tourists and other guides, thus making my guide full of personal style. 	Improved oral and physical expression skills
	<ul style="list-style-type: none"> Here I met tourists from all over the world and acquired all kinds of information during the guided tour and interaction with tourists. 	Acquired information on local people and culture from other parts of Taiwan
	<ul style="list-style-type: none"> I had to deal with tourists who accidentally activated the alarm bell and learn how to manage utilities and other affairs (including medical care, water dispensers, spare parts, and learning systems) in addition to the guided tour. 	Improved ability to improvise
Market vendors	<ul style="list-style-type: none"> I got to know the market trends and needs when chatting with customers and started to roll out new and useful products in the TCC DAKA market. 	Strengthened personal creativity
	<ul style="list-style-type: none"> We used to run a food cart, and some customers had difficulty locating us. Vending in the TCC DAKA market allowed us to promote homemade meals and share them with more people. I love making things by hand and sharing them with others. I gained a sense of accomplishment after making handicrafts and sharing them with others. My sense of accomplishment increased further by intriguing other females in the tribe. 	Increased personal fulfillment
	<ul style="list-style-type: none"> We used to be housewives. Now we have some extra pocket money to use. 	Extra disposable personal income
Families of the market vendors	<ul style="list-style-type: none"> After retiring from Taipei, I came back to help my sister vend in the TCC DAKA market, which strengthened our interaction. 	Strengthened family relations
	<ul style="list-style-type: none"> Children know how to deal with customers better. I feel that they are able to do many things on their own like grown-ups. I no longer have to worry about them. 	Obtained a sense of gratification
	<ul style="list-style-type: none"> I gained extra income by helping family members vend in the TCC DAKA market. 	Extra disposable personal income
Villagers assisting the market vendors	<ul style="list-style-type: none"> Because of this platform (TCC DAKA market), I kept thinking over new patterns and creations to improve my knitting ability. 	Strengthened personal creativity
	<ul style="list-style-type: none"> What I care about is that my creations can be seen by others 	Increased personal fulfillment



	<p>through the TCC DAKA market. Whether they are sold or not is not the point. It is what drives my creativity and increases my personal fulfillment.</p> <ul style="list-style-type: none"> Although not many, products sold through this platform (TCC DAKA market) were the source of my extra income. 	Extra disposable personal income
Social Dialogue		
Interviewee	Key Feedback	Corresponding Outcome
Employees on the Hoping Plant (Plan B)	<ul style="list-style-type: none"> Persuading tourists to change their stereotypes increased my sense of accomplishment in work. I have seen coral reefs for many years during work and found them normal. After I started to introduce coral reefs to tourists, they were amazed at the beauty of coral reefs and clear water. I felt proud and gained a sense of accomplishment in work. 	Increased sense of accomplishment in work
	<ul style="list-style-type: none"> I was a witness to TCC's environmental actions and initiatives during the guided tour, thus identifying more with TCC. 	Boosted identification with TCC
	<ul style="list-style-type: none"> My expertise correlates more to environmental impacts. During the guided tour, I learned to think and communicate from the public's perspective. I met different types of tourists and encountered different occasions during the guided tour, which improved my ability to control the situation and respond to tourists. 	Improved oral expression skills
	<ul style="list-style-type: none"> My job responsibility is not in direct relation to cement manufacturing. During Plan B, I had an opportunity to learn the business activities and know-how of other departments. 	Acquired knowledge of the cement industry
Participants in Plan B (general tourists)	<ul style="list-style-type: none"> I had a better understanding of cement and learned how a mined rock turns into cement. 	Acquired basic knowledge of the cement industry
Participants in Plan B (competent authorities)	<ul style="list-style-type: none"> The road to the venue was rocky but did not cause fatigue. We saw mines, shafts, and conveyor belts, all of which could bring people closer to the cement industry. 	Acquired know-how about cement mining and transportation
	<ul style="list-style-type: none"> As an industry cluster, TCC has created an ecosystem in line with the government's environmental policies. In terms of circular economy, I learned how carbon dioxide is converted into algae cultivation and industrial waste into useful things. 	Acquired knowledge of how the circular economy works