

# 螢火蟲書屋

- 用螢火蟲點亮城市裡的偏鄉 -

February, 2020

## Save Our Own Mushroom Hometown Project

Mountain City Mushroom, Dream Book House



## Social Return on Investment Forecast Report



## **Acknowledgements**

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**Mountain City Mushroom, Dream Book House**

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A handwritten signature in black ink, appearing to read "Ben Carpenter".

Signed

Mr Ben Carpenter  
Chief Executive Officer  
Social Value International



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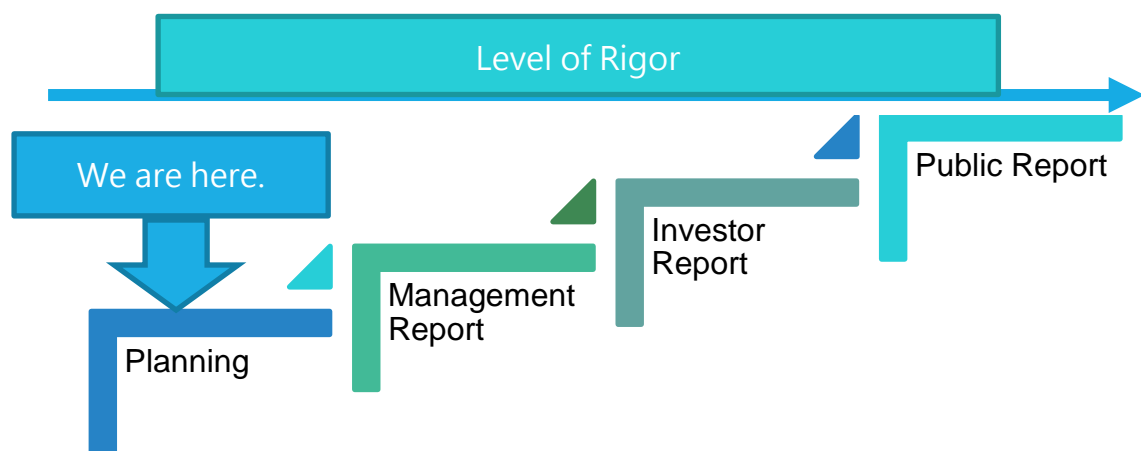
## Report summary

### Project Activities and Report Preparation Goals

The main purpose of the research project is to use it for internal management analysis. In the measurement process, we could understand the parts of the project that can be adjusted and optimized to enhance the overall project effectiveness and impact.

The project activity of “Mountain City Mushroom and Dream Book House” mainly aims to improve the community environment around Shiding, agricultural production technology and encourage children to read through the three core activities. The purpose of preparing this report is to understand the impact and chances of this project activity of “Mountain City Mushroom and Dream Book House ” on relevant stakeholders, and then optimize the project to expand its influence and social value and benefits.

This report is the first SROI report in this field and this event, so it is a predictive SROI report. The main purpose of this report is to test the nature of activities and to propose specific improvement plans for future activities. Therefore, in setting the Level of Rigor, the lower Level of Rigor is used as the benchmark.



*Figure 1 Level of Rigor*

## Research Method

This study uses Social Return On Investment (SROI) for evaluation research and measurement. The research and analysis framework of this report follows the “A Guide to Social Return on Investment” published by the British government (2012 The revised version, hereinafter referred to as “SROI” guidelines) and related supplementary guidelines. Based on the actual data of the interviews with stakeholders during the evaluation period, the changes and impacts of the stakeholders during this period will be used as the basis for evaluating the social impact of the project.

We carried out the research and analysis steps according to the instructions and framework in the SROI guide:

SROI analysis steps	Description
1. Determined the scope and stakeholders	Established report scope and determined stakeholders
2. Described results	Through negotiation with stakeholders, checked out the impact and changes in the project activities
3. Proved results and gave value	Designed indicators to identify whether impacts and changes were actually happening, and again negotiated with stakeholders to select appropriate financial agency variables to measure impacts and changes
4. Built influence	Adjusted the value of influence through the four major influence factors
5. Calculated value	Calculated the net present value of influence at the discount rate and calculated the SROI ratio
6. Disclosure and management	Reconfirmed the measurement results and the SROI ratio with stakeholders, and exposed the final results in the report

## Research Limitations and Risks

Under the framework of SROI, we priced abstract or narrative non-quantitative indicators, and used hypothetical variables as adjustment



factors (such as deadweight factors, drop-off factors, etc.). The value came from the perception of stakeholders, not a traditional predictive financial analysis model. Therefore, the social investment compensation figures calculated in this report are not suitable for comparison with the SROI values of different project properties. In view of the above reasons, in addition to the SROI results, we must be responsible for publicizing the SROI report, explaining the results and the calculation and deduction process in a public manner, and listing the assumptions and sensitivity analysis in the process. It is expected that users of the report can use complete information to understand the event and its social value as a basis for decision-making and judgment on event management and maximizing social value.

In addition, we followed the seven principles of SROI during the research process. The following describes the research limitations and possible risks.

<b>SROI principles</b>	<b>Research limitations and risks</b>	<b>Possible impact and risk on SROI results</b>	<b>Response methods</b>
Stakeholder participation	There were a large number of stakeholders, so sampling errors may fail to correctly reflect the changes of stakeholders	Underestimate / Overestimate	We negotiated different stakeholders in three stages by multiple ways (face-to-face interviews, telephone interviews, workshops, questionnaires, etc.) to effectively reduce sampling errors
Understand change	Officials representing the government may not be able to fully understand the impact and changes of project activities	Underestimate / Overestimate	Matched documents, discussed with experts, and inquired employees working in government agencies



<b>SROI principles</b>	<b>Research limitations and risks</b>	<b>Possible impact and risk on SROI results</b>	<b>Response methods</b>
Give value to things	Most stakeholders cannot give value to things in the first time	underestimate	Discussed with stakeholders many times, and referred to research literature to find the value of the results that best met the stakeholders' feelings
Only important matters should be included	The integrity of including stakeholders' changes	underestimate	Matched the literature, discussed with experts, and finally presented the value in weighted average calculation
Not exaggerated	The influence of few stakeholders was more indirect	Underestimate / Overestimate	If stakeholders failed to explain the affected causality and provide clear supporting evidence for the results (such as could not met the standards set by the scale), this study would not include them in the calculation under the principle of not exaggerated
Information transparency	It was difficult to expose all information due to too much negotiations	NA	In the report, publicize and explain the results and calculation process in detail
The results can be verified	Due to time limitation during our research, only some stakeholders were involved in the confirmation stage	NA	In addition to sampling various types of stakeholders to confirm the results, we also matched the literature and discussed with experts and scholars to confirm

Because this report is the first project activity to collect data in this field, there may be completeness issues in the collection of data. Therefore, we negotiated with stakeholders and discussed with experts in a multiple and batch manner to reduce the integrity of data collection.

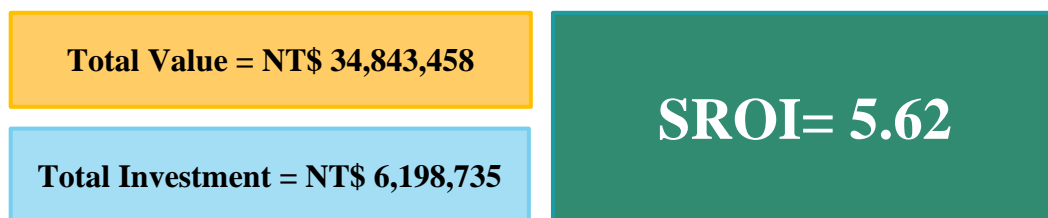
The main purpose of this report is to understand the changes and impacts of stakeholders, so that project activities can optimize social influence through management. Therefore, the changes and achievements of stakeholders under this purpose are the main scope of our inventory and analysis.

### **Area of Research**

- I. Time frame: The time frame evaluated in this report is a period of approximately 2 years from February 2, 2018 to January 31, 2020.
- II. Geographical scope: Field activities focus on the activities that are conceived and executed using the bookstore as the main scope of analysis, which mainly includes the following three types of activities:
  1. Agricultural technology improvement: The founder gathered microbial experts through the bookstore to assist local mushroom farmers in surrounding communities to improve and optimize the production efficiency of soil microorganisms, economic value and sales channels.
  2. Environmental renovation and education: The founders gathered volunteers through the bookstore to perform environmental cleanup activities, environmental conservation lectures and in-depth community tours, etc., and used the environment near the bookstore to raise the environmental awareness of participants and the general public.

3. Child care in the community: Trained teachers in rural areas, provided accompanying reading for children in bookstores, and promoted job opportunities for local residents.
- III. Scope of stakeholders: We focused on the analysis of the stakeholders affected by the three major activities of industrial technology improvement, environmental transformation and education, and child care performed in the bookstore field.

### **SROI analysis results**



*Figure 2 SROI analysis results*

Based on the investigation and analysis of this study, it is found that every NT \$ 1 invested in “Mountain City Mushroom and Dream Book House” project would create a social value of approximately NT \$5.62. The sensitivity analysis results are between 3.93 to 6.18.

After discussing with the stakeholders, it was found that the main influences of this project were to improve the cultivation technology of mushroom crops, improve the land, create a sense of personal self-identification, improve the quality of life and demonstrate the policy benchmarks. The public's understanding of environmental conservation and the care of disadvantaged students in the community have more room for optimization and progress.

We also discussed this result and feedback from stakeholders in the research process to plan the optimization direction. We look forward to

adjusting and revising at any time in the future implementation process, so that the project can expand and maximize the influence and social value and benefits.

## **Chapter I. Mountain City Mushroom, Dream Book House**

### **Section 1: Social Problems in Shiding District**

Shiding District is a municipal district under the jurisdiction of New Taipei City, Taiwan. It is located in the southeastern mountainous area of the Taipei Basin, with many mountains, low development and sparse population.

In the early days, coal mines were the main source of income. Later, when the coal mines were exhausted, the population began to migrate out.



***Figure 3 Shiding District location***

The Shiding district is rainy, with clouds all year round. The climate is not only conducive to the cultivation of tea, but also suitable for the growth of mushrooms. Early ancestors used Duanmu to cultivate shiitake mushrooms, ganoderma lucidum and black fungus, which belongs to a small-scale economy. Today, some farmers in the mountain area around Shibei in New Taipei City continue to grow shiitake mushrooms.

The site of this project activity is the Shiba Chongxi Settlement in Shiding District, New Taipei City. It is an ancestor reclamation settlement between the city and the countryside that takes less than 20 minutes to drive from Taipei 101. This is Wenshan Coal Mine in the five largest mining

areas in Taiwan in the early days. At its peak, there were more than 7,000 miners at one time, and there were many shops such as rice stores and cloth stores.

Ever since the mine fell behind, local young people have moved to work in cities because of the local transportation convenience. “Almost all young people in villages have moved to cities”, as the locals said. With the disappearance of mining, the urbanization caused lots of people in Shiding moved out and the total number of freshmen in four schools had only more than 40 students.

In the village, where Ye Jiahao (the host of Mountain City Mushroom Project) grew up, not only the grocery stores were closed, but also the house of Ye Jiahao family had not been occupied for a long time.

Rural settlements with aging population and migration often produce the following social problems:

1. Waste dumping: Because the land was not under management and was near Taipei metropolitan area, many unscrupulous companies dumped business waste and construction waste on unmanaged land. The dumped waste will make the original land unusable and pollute the surrounding cultivated land, resulting in the pollution of agricultural products.
2. Lack of resources: Because the decline of the population also affects the resources of the government agencies, the people living there cannot obtain sufficient information and resources. Especially for disadvantaged primary school children and old farmers who are not skilled in digital skills, the inability to obtain information and resources through the Internet will make life more vulnerable due to lack of information and resources.

## **Section 2: Introduction of Project Activities**

The idea of "Mountain City Mushrooms and Dream Book House" originated from the activity of Ye Jiahao, the founder of the local Shiding Firefly Bookstore. Because of the discovery of local social problems, he did not want the memory of childhood be buried in the trash. Therefore, he began to pick up garbage to keep the environment sustainable. Although his neighbors often laughed at him as a "fool" at the beginning, day after day, they started to join him. In the end, more than 300 volunteers were formed, attracting more than 1,000 youth manpower groups every year, and 60 to 70 tons of garbage have been picked up so far. Therefore, he wants to solve local social problems through this project activity, and activate the economic development of the local settlement of the 18 Chongxi.

Strategically, the project activity starts with the establishment of a public good, Firefly Bookstore. It became the main activity center for solving community problems with a fixed field.

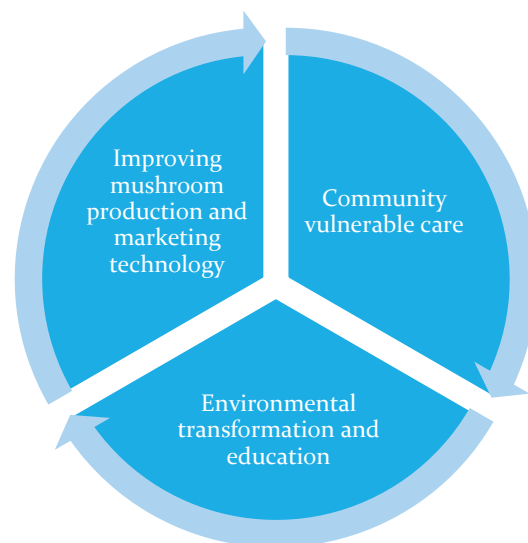
In addition to selling agricultural products directly to the outside world, Shiding Firefly Bookstore also extends the production, processing and sales of the six-level real estate sales feedback sustainable method. He strives to connect the mushroom house with the Shiding legal homestay and the miners restaurant to support the small travel activities of old street community; or further cooperate with the ideal travel agency to develop in-depth small trips from the mushroom producing area to enhance rural value.

In the activities, they were separately launched: garbage removal, promotion of community awareness, improvement of crop planting industry technology, counseling for disadvantaged children, workshops on professional education courses and becoming a benchmark for local government creation demonstrations to resolve local waste dumping,



prevent the fall of unscrupulous industry players, improve farmers' planting efficiency, increase the willingness of mushroom farmers, reduce the difference between urban and rural education resources by after-school assistance with disadvantaged students and increase the willingness of environment protection.

The activities can be simply divided into the following three strategic areas:



### **Improve the production and marketing technology of mushroom production:**

Shiding Firefly Book House starts from the context of Lishan's value to create the context of the regeneration strategy of the mountain city.

In addition to continuing to develop cultural and historical preservation activities as an international volunteer system in the Firefly Bookstore, it also integrates and develops the environmental education conditions for mushroom breeding and mushroom farming in Shancheng.

He found that Shiding has many waters and heavy moisture, and is suitable for growing mushrooms. He learned the techniques of mushroom cultivation from Song Xifu, the godfather of mushrooms in Hokkaido, Japan and Taiwan. A series of local green farmers set up a smart

greenhouse to cultivate *Bassula edodes*, and also promoted the "Shimmer Dream Walker Adoption Plan" to let people adopt mushrooms. If they adopt before the end of each year, they can receive those delicious mushrooms in the next year and it could also improve the soil improvement of microorganisms. As a result, if there are money in the countryside to hire workers to purchase materials, more young people will be willing to return to the co-creation between the city and the village of Shiding.

### **Community vulnerable care:**

The 30% of the revenue from the small depth travel of the 18th Chongxi production site in Wenshan Coal Mine will be used as a fund to repair the nearby Tanlan Mountain Trail and Jingshan Street Sweeping Street.

This is the original intention of returning home, but it is also the most difficult point. We must persevere for a long time to solve the problems facing the community.

The Firefly Book House volunteers did not intend to give up even though they were once faced with windstorms, when they must go to the underground to sell local agricultural products to raise repair funds. This forgotten mine village of the ancient Danlan Road, slowly produced a glimmer.

A group of young people around Taiwan irregularly held parent-child environmental education courses to develop urban family parent-child experience in communicating with nature. Gradually, it shaped each participant's imagination of life in their childhood home.

Along the way, we did see many unforeseen landscapes, such as the Shiding Firefly Book House, which won the trust of local mothers. They gathered rural women to establish a convention and also integrated local

resources to research and develop the health aesthetics herbal medicine soup and afternoon tea visual department kiln baking.

### **Environmental transformation and education:**

The locals worked together to rent an old miner house in 18 Chongxi community and picked up available materials from the rubbish dump to set up a bookstore in the forest—the Firefly Bookstore. This name, on the one hand, illuminates the Shiding children who lack reading resources, On the other hand, it hopes the power of the bookstore could restore the sustainable ecological environment.

The income of growing mushrooms is the lifeblood of the bookstore. The firefly bookstore houses books collected from various places and provides free borrowing for children. They even holding free eco-education and parent-child hand-made courses which caused a highly positive response in the community. The local elders of the Firefly Bookstore worked hard together to regularly hold circular economy or microbiology courses, such as "Observation of the Allusions of Waste Wood Rotting Grass Firefly", "The rotwood raises the three-instar beetle baby's claws", etc. It made the firefly bookstore and the local primary and secondary schools stronger, and became a base for outdoor experience courses.

## Chapter II. Discussion and Classification of Stakeholders

The SROI analysis stage can be summarized into six major steps, and the detailed analysis content is presented in the following chapters.

### Section 1: Stakeholders Negotiation

#### 1. Identification and Category of Stakeholders

We identified, counted and classified all the people contacted during the execution of the project in a rolling manner based on the targets and objectives of the project activities. We first discussed the impact of the project with the project activity executors, and then with the agricultural government agency of the Council of Agriculture, the competent authority of agriculture. Finally we negotiated with the stakeholders mentioned in the process of negotiation to understand each type of stakeholders' impact on the project. We divided the people involved in "Mountain City Mushroom and Dream Book House" project into two levels, direct and indirect stakeholders:

Stakeholder	Description
Direct object	<ol style="list-style-type: none"><li>1. Individuals or groups directly contacted by events or activities</li><li>2. Individuals or groups that are highly affected by the project</li></ol>
Indirect object	<ol style="list-style-type: none"><li>1. Individuals or groups indirectly affected or touched by the direct object of the event or activity</li><li>2. Individuals or groups affected by the project/the project is relatively low</li></ol>

The order of our contact with stakeholders was: project team, direct stakeholders and then indirect stakeholders. The indirect stakeholders were found from the negotiations with direct stakeholders. We judged the stakeholders of this activity from the context of the project implementation team, government agencies, direct stakeholders' discussions, and

agricultural creation literature<sup>1</sup> and activities. At the preliminary stage of stakeholder analysis, we made the first sub-ethnic judgment of stakeholders who obviously were affected differently by the activity as follows:

Types	Stakeholders	Sub-ethnic group	Description
Direct Stakeholders	Project host		Ye Jiahao was the project initiator and project host
	Government agencies	Agricultural government agency	Funding sponsors, event consultants and assisted in sending experts to assist in the implementation of the event
		Other government agencies	Other government agencies have also used this project activity as a model for rural creation policies
	Farmer		Farmers participating in the courses organized by the host of the project to get some new knowledge about agriculture
	Academic unit	Teacher training students	Academic units cooperating with the project host
		Agricultural technologist	
	Volunteer	General volunteer	Volunteers participating in the activities of the Firefly Bookstore,

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<sup>1</sup> Local Creation, Qi Qi Muxia, translated by Zhang Peiying, published by Fujia: Hiking Culture Issue, April 2017.

Types	Stakeholders	Sub-ethnic group	Description
		Retired teacher	assisting in the operation of the bookstore, and cleaning up the dumped waste in the local area
		Unemployed teacher	
	Community residents	Schoolchildren	Participated in reading activities
		Parents of school children	Let the children come to the bookstore for after-school tutoring
		Community residents guided by the bookstore	Came to the bookstore five times a week to participate in accompanying reading
		Other community residents	Residents who did not belong to the above three but live near the study house
	Community residents with professional skills	Garden Technician	Supported the renovation and operation of the bookstore
		Hydroelectric technician	
		Woodworker	
		Mud Technician	
	Activity experience		Experiencers participating in the activity
	Book donor		Donated books to Firefly Bookstore
	Media		Relevant media reporting the event

Types	Stakeholders	Sub-ethnic group	Description
Indirect stakeholder	The public who get media information		General public contacted with event information
	Friends and relatives of event experiencers		Friends and relatives of event experiencers
	Homestay/restaurant operators		Increase revenue because of volunteers' participation
	Sales Channel		Cooperative channel to sell shiitake mushrooms
	Cooperative Organization		Other organizations cooperating with the project host
	School teacher		School teachers of disadvantaged children being tutored
	Residents around the community		Residents outside Shiding area
	Recyclers		Local recyclers
	Local cleaning team		The cleaning team in charge of local cleanup
	Farmer's family		Farmer's family
	Worker's family		Worker's family

Due to the materiality and the principle of non-exaggeration of SROI, although the activity might have changes or impacts on stakeholders, we would not include those whose impact and changes were not significant. The decision to include or exclude stakeholders was a rolling process. We referred to the literature <sup>2</sup> and the process of negotiation. As the investigation progresses, if we found that the influence of the stakeholders

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<sup>2</sup> AA1000 Stakeholders engagement standards (2015) 3.3.2 Stakeholder Identification.



changed, we would further conclude to include or exclude, also including the sub-ethnic groups that we distinguished among stakeholders. We used two stages as the analysis of the inclusion and exclusion of stakeholders:

In the first stage of the inclusion and exclusion of interests, we referred to the guidelines of AA1000 Stakeholders engagement standards (2015) for the purpose of internal management of this project, and discussed with the project executive team, the agricultural government agency project and external counseling consultants. We started from the AA1000's five major stakeholder judgment aspects, comprehensively considered and discussed the stakeholders that this project might affect and its relevance. Furthermore, we made the following analysis and judgments about the people who directly and indirectly involved in the project:

<b>Principle<sup>3</sup></b>	<b>Description</b>
Influences	It had a direct and significant impact on “Mountain City Mushroom and Dream Book House” project, which was manifested in behavior, attitude, concept and willingness
Responsibility	Possible responsibilities between mountain mushroom cultivation and dream book house activities
Urgency	There was a direct and urgent impact on the social problems that the specially designed in “Mountain City Mushroom and Dream Book House” project
Dependence	Reliance on mountain mushroom cultivation, dream bookstore activities, or activities dependent on the stakeholders
Multiple perspectives	Depends on the needs of “Mountain City Mushroom and Dream Book House” project , and the cooperation process also has related responsibilities and influences

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<sup>3</sup> AA1000 Stakeholders engagement standards (2015) 3.3.2 Stakeholder Identification (p.17)

After initially identifying the scope of possible stakeholders, we set 1-10 points in each impact dimension and asked the project execution team, scholars and experts, external professional consultants, and agricultural government agencies to judge together:

*Table 1 Scoring table of five major judgment aspects of stakeholders*

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
Direct stakeholders	Project host	JiaHao Ye is the project initiator and project host	10	10	5	10	10	<b>45</b>
	Agricultural government agency	Funding sponsors, event consultants and assisted in sending experts to assist in the implementation of the event	10	8	5	8	10	<b>41</b>
	Other government agencies	Other government agencies also using this project activity as a	7	2	3	8	8	<b>28</b>

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
		model for rural creation policies						
	Farmer	Farmers participating in the courses organized by the host of the project and get some new knowledge about agriculture	8	5	8	8	8	37
	Teacher training students	Academic units cooperating with the project host	7	3	7	8	7	32
	Agricultural technologist	Academic units cooperating with the project host	7	3	7	8	7	32
	General volunteer	Volunteers participating in the activities of the Firefly Bookstore, assisting in the	10	7	7	7	8	39

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
		operation of the bookstore, and cleaning up the dumped waste in the local area						
	Retired teacher	Volunteers participating in the activities of the Firefly Bookstore, assisting in the operation of the bookstore, and cleaning up the dumped waste in the local area	10	7	7	7	8	39
	Unemployed teacher	Volunteers participating in the activities of the Firefly Bookstore, assisting in the operation of the	10	7	7	7	8	39

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
		bookstore, and cleaning up the dumped waste in the local area						
	Schoolchildren	Participated in bookstore reading activities	7	6	5	8	8	<b>34</b>
	Parents of school children	Let the children come to the bookstore for after-school tutoring	7	6	5	8	8	<b>34</b>
	Community residents guided by the bookstore	Came to the bookstore five times a week to participate in accompanying reading	8	9	5	5	8	<b>35</b>
	Other community residents	Residents who did not belong to the above three	5	4	4	5	8	<b>26</b>

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
		but lived near the study house						
	Garden Technician	Supported the renovation and operation of the bookstore	8	8	8	8	8	40
	Hydroelectric technician	Supported the renovation and operation of the bookstore	8	8	8	8	8	40
	Woodworker	Supported the renovation and operation of the bookstore	8	8	8	8	8	40
	Mud Technician	Supported the renovation and operation of the bookstore	8	8	8	8	8	40
	Activity experiencer	Experiencers participating in the activity	8	2	3	7	8	28

Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
	Book donor	Book donor	3	2	2	2	2	<b>11</b>
	Media	Relevant media reporting the event	2	5	3	5	5	<b>20</b>
Indirect stakeholder	The public who get media information	General public contacted with event information	1	0	0	0	2	<b>3</b>
	Friends and relatives of event experiencers	Friends and relatives of event experiencers	1	0	0	0	3	<b>4</b>
	Homestay/restaurant operators	Increase revenue because of volunteers' participation	5	0	1	1	5	<b>12</b>
	Sales Channel	Cooperative channel to sell shiitake mushrooms	5	0	0	0	5	<b>10</b>
	Cooperative Organization	Other organizations	7	5	5	1	5	<b>23</b>



Types of stakeholders	Stakeholders	Description	Influence	Responsibility	Urgency	Dependency	Multi-perspective	Total
		that cooperate with the project host						
	School teacher	School teachers of disadvantaged children being tutored	0	0	0	0	1	<b>1</b>
	Residents around the community	Residents outside Shiding area	2	0	0	0	2	<b>4</b>
	Recyclers	Local recyclers	2	0	0	0	5	<b>7</b>
	Local recyclers	The cleaning team in charge of local cleanup	7	7	1	1	1	<b>17</b>
	Farmer's family	Farmer's family	5	0	0	0	5	<b>10</b>
	Worker's family	Worker's family	5	0	0	0	5	<b>10</b>

In the first stage of the judgment of inclusion and exclusion of stakeholders, we let experts and stakeholders participate in the judgment to give each sub-group of stakeholders' different points under the five principles. Finally, we selected stakeholder groups with scores higher than 25 (total score 50) and included them in our analysis. In addition, we were more cautious in the second-stage analysis to judge whether there were groups of stakeholders that should be included but not included.

In the second stage of the analysis of excluding stakeholders, based on the management purpose of this report, the definition of a stakeholder was "a person or organization that has undergone changes due to project activities or that affects project activities"<sup>4</sup>. Under this definition, we discussed the project with direct stakeholders first, and further asked them whether they had contact with other stakeholders. At the same time, we asked the project manager whether there were other stakeholders in this project. Then we focused on indirect stakeholders to make further discussion and judgment (as following table). We also discussed and clarified the relevance and importance of indirect stakeholders in the impact of this project together with direct stakeholders to decide whether to include or exclude them in the calculation of this project.

	<b>Book Donor</b>	<b>Cooperative organization for other activities</b>	<b>School teachers</b>	<b>Recyclers/local cleaning teams</b>	<b>Farmer/worker's family</b>
Do you know or experience this project	Were clear but had no experience	Did not know and had no experience	Most were not clear and had no experience	Did not know and had no experience	Most were not clear and had no experience

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<sup>4</sup> Social value international, standards on applying principle1:Involve stakeholders version 2.0,page 3.

	<b>Book Donor</b>	<b>Cooperative organization for other activities</b>	<b>School teachers</b>	<b>Recyclers/local cleaning teams</b>	<b>Farmer/worker's family</b>
Feedback from other stakeholders	<p>The book donors only provided resources and did not have a clear understanding and experience of the activity.</p> <p>Furthermore, even if they did not donate the bookstore, they would also donate</p>	<p>Other activity cooperation organizations did not know the content of this activity. They only could use the resources of this activity, such as the bookstore field, etc.</p>	<p>The school teachers were not clear about the content of this project. It may reduce the burden of the teacher for the school children to participate in the tutoring.</p>	<p>Recyclers may increase the amount of garbage handled, but because it was a regular job, so it would not particularly feel the difference</p>	<p>The families of farmers and workers in the community may be affected by the changes in the behaviors and attitudes of farmers and workers, but it should not be very significant. The main changes were still in the farmers</p>

	<b>Book Donor</b>	<b>Cooperative organization for other activities</b>	<b>School teachers</b>	<b>Recyclers/local cleaning teams</b>	<b>Farmer/worker's family</b>
	to other organizations				and workers themselves.
Adjusting Factor Causation	May be very high	May be very high	May be very high	May be very high	May be very high
Non – exaggeration principle	Inclusion may cause exaggeration	Inclusion may cause exaggeration	Inclusion may cause exaggeration	Inclusion may cause exaggeration	Inclusion may cause exaggeration
Degree of connection with the project	Medium	Low	Low	Low	Low

	<b>Book Donor</b>	<b>Cooperative organization for other activities</b>	<b>School teachers</b>	<b>Recyclers/local cleaning teams</b>	<b>Farmer/worker's family</b>
Relevant and significant judgment	Low	Low	Low	Low	Low
Whether to be included in the calculation	No	No	No	No	No

In addition, the following stakeholders were being excluded as well because it was difficult to contact with them directly, it was hard to confirm with them directly. Therefore, based on the judgement of project host and *Table 1 Scoring table of five major judgment aspects of stakeholders*, we concluded that these stakeholders were immaterial in our project:

- The general public who received media information
- Homestays/restaurant operators
- Sales channels
- Friends and relatives of event participant
- Residents around Shiding community

We also observed that the excluded stakeholders would not have any negative impact in normal situation from involving in the project , so the exclusion would not cause the overestimation and doubt of over-exaggerated in the SROI results. The stakeholder group not included in the calculation did not mean that the stakeholders were completely separated from the calculation of this project, because under the methodology of SROI, the stakeholders were defined as "changes or influences due to project activities"<sup>5</sup> under this definition. The stakeholder groups excluded from this project only represented that the stakeholder's achievements were not significant or the inclusion of the project results in exaggerated results. The input cost of these stakeholders would still be calculated as the input cost of this project.

In addition, in the process of negotiating with the stakeholders, we would discuss and confirm the rationality of the stakeholder groups we had

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<sup>5</sup> Social value international, standards on applying principle1: Involve stakeholders version 2.0,page 3.

excluded, and further asked them if they had contacted with other stakeholders, so as to follow the principle of “verifiable results” of SROI.

Based on the above, the stakeholders to be included and exclude in this project are organized as follows:

***Table 2 Summary of Stakeholders***

<b>Types of stakeholders</b>	<b>Stakeholders</b>	<b>Subgroup</b>	<b>Include or exclude</b>
Direct stakeholders	Project host		Include
	Government agencies	Agricultural government agency	Include
		Other government agencies	Include
	Farmer		Include
	Academic unit	Teacher training students	Include
		Agricultural technologist	
	Volunteer	General volunteer	Include
		Retired teacher	
		Unemployed teacher	
	Residents	Schoolchildren	Include
		Parents of school children	Include
		Community residents guided by the bookstore	Include



Types of stakeholders	Stakeholders	Subgroup	Include or exclude
		Other community residents	Include
	Community residents with professional skills	Garden Technician	Include
		Hydroelectric technician	Include
		Woodworker	Include
		Mud Technician	Include
	Activity experience		Include
	Book donor		Exclude
	Media		Exclude
Indirect stakeholder	The public getting media information		Exclude
	Friends and relatives of event experiencers		Exclude
	Homestay/restaurant operators		Exclude
	Sales Channel		Exclude
	Cooperative Organization		Exclude
	School teacher		Exclude
	Residents around the community		Exclude
	Recyclers		Exclude
	Local cleaning team		Exclude
	Farmer's family		Exclude
	Worker's family		Exclude

## 2. Stakeholder negotiation

We referred to the AA1000 guidelines to get a preliminary understanding of the potential stakeholders of this project, lock the scope

of the affected stakeholders of this project, and then design different negotiation procedures for the stakeholders. The main reason was that the project was expected to affect the stakeholders in different ways and numbers. In order to improve the reliability of the research, we designed different negotiation procedures for each stakeholder based on our professional judgment on research methods, the management needs of report users, other SROI reports and academic literature. For a relatively large number of stakeholders, we used multiple sampling to reduce sampling errors and increase confidence levels. The total coverage ratio of the three negotiations reached 66% and 100%. For other stakeholders whose number was relatively small, we negotiated in a face-to-face manner with focus groups. The total coverage ratio of the two stages of negotiation reached 100%. The implementation method of negotiation is as follows:

***Table 3 Summary of the numbers of stakeholder negotiation***

<b>Stakeholder</b>	<b>Subgroup</b>	<b>Negotiating Method</b>	<b>Population</b>	<b>Numbers of Negotiation</b>
Project host		Interview	1	1
Government agencies	Agricultural government agency	Interviews and questionnaires	1	26
	Other government agencies	Interviews and questionnaires	1	26
Farmer		Interview	11	11
Academic unit	Teacher training students	Interviews and questionnaires	9	9
	Agricultural technologist		9	9

<b>Stakeholder</b>	<b>Subgroup</b>	<b>Negotiating Method</b>	<b>Population</b>	<b>Numbers of Negotiation</b>
Volunteer	General volunteer	Focus group interviews and questionnaires	60	60
	Retired teacher			
	Unemployed teacher			
Residents	Schoolchildren	Interview	11	4
	Parents of school children	Interview	20	8
	Community residents guided by the bookstore	Interview	32	32
	Other community residents	Focus group interviews, questionnaires	200	200
Community residents with professional skills	Garden Technician	Interviews and questionnaires	3	1
	Hydroelectric technician	Interviews and questionnaires	3	1
	Woodworker	Interviews and questionnaires	5	1
	Mud Technician	Interviews and questionnaires	3	1
Social participant		Interviews and questionnaires	200	35

### 3. Stakeholder Clarification and Focus

Based on the understanding of the types and levels of achievements of each stakeholder in the first and second stages of the negotiation process, we considered whether to classify the stakeholder into sub-groups. Our consideration and identification are as follows:

#### Subgroup identification:

Stakeholder	Possible factors affecting molecular ethnicity	Sub-ethnic classification results
Government agencies	The course of change and the degree of influence are different	Agricultural government agency Other government Agencies
Academic unit	Different results	Teacher training students Agricultural technologist
Volunteer	Different results	General volunteer Retired teacher Unemployed teacher
Residents	The course of change and the degree of influence are different	Schoolchildren Parents of school children Community residents guided by the bookstore Other community residents
Community residents with professional skills	Different professional skills, different pricing of financial agency variables	Garden Technician Hydroelectric technician Woodworker Mud Technician

**Supplement:**

In order to clearly explain the process of stakeholder formation and participation, here we supplement the above process of stakeholder identification, negotiation, and clarification: in the first stage, we first openly discussed the possible stakeholders of this project, and then clarified and focused one by one. The second stage was the in-depth understanding after focusing, and the third stage was verification and confirmation.

After the procedures of diffusion, clarification, focus, and verification, the scope and results of the stakeholders of this project were all completely defined.

## Chapter III. Input, Output and Outcomes

### Section 1: Input and Output

#### 1. Investment in project activities

The resources invested by the stakeholders to make the project activities happen are listed as follows:

***Table 4 Resources invested in the project***

Stakeholders	Input resource type	Input value (NTD)	Source
Project host	Money	1,220,000	Funds invested by the project host
Agricultural government agency	Money	1,650,000	Budget for subsidizing local creation
Other government agencies	Time	62,000	Time to visit the activity
Farmer	Time	228,000	Farmer participation time
Teacher training students	Time	9,600	Activity internship time
Agricultural technologist	Money	9,000	Income from research and development of agricultural technology
General volunteer	Time	2,125,000	Time to participate in activities
Retired teachers	Time	NA	
Unemployed teachers	Time	NA	
Schoolchildren		NA	

<b>Stakeholders</b>	<b>Input resource type</b>	<b>Input value (NTD)</b>	<b>Source</b>
Parents of school children	Vulnerable families did not invest resources		
Community residents guided by the bookstore	Time	82,160	Time to participate in the guide,
Other community residents	Money	NA	
Garden Technician	Money	175,000	70-day cost of gardening works
Hydroelectric technician	Money	210,000	70-day cost of hydropower project
Woodworker	Money	225,000	75 days of woodwork
Mud Technician	Money	165,000	55-day cost of mud work
Community (environment)	Time	NA	
Social participant	Money	37,975	Total hourly wage
Total investment		6,198,735	

## 2. Project output

The project activities organized by the bookstore are listed below, and the relevant stakeholders are pointed out:

***Table 5 Output of the project***

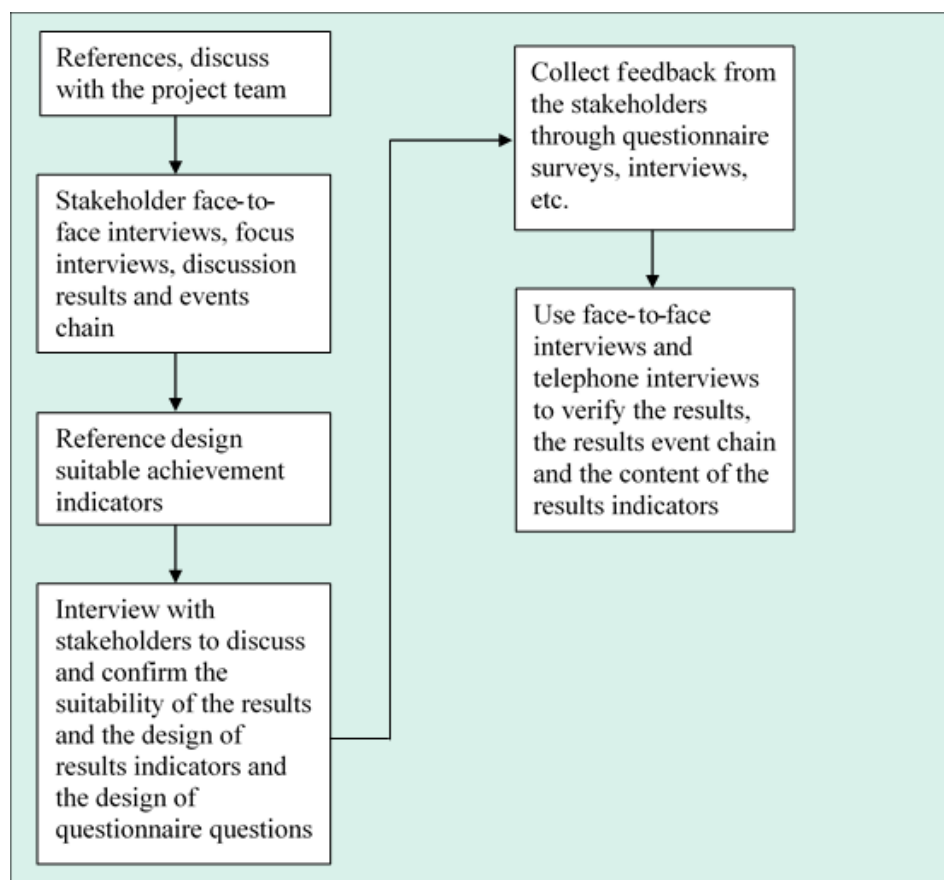
Type of activity		Session	Stakeholder
Agricultural Technology Exchange and Sharing Course		7 lessons	<ul style="list-style-type: none"> <li>• Farmers</li> <li>• Academic Unit: Agricultural Technologist</li> <li>• Volunteers</li> <li>• Founder</li> </ul>
Practice and guidance on agricultural product improvement		100 times	<ul style="list-style-type: none"> <li>• Farmers</li> </ul>
After-school tutoring for disadvantaged students		Monday to Friday, five times a week	<ul style="list-style-type: none"> <li>• Founder</li> <li>• Disadvantaged families: school children</li> <li>• Community residents guided by the bookstore</li> </ul>
Bookstore rural creation activities	Community cleaning activities	100 times	<ul style="list-style-type: none"> <li>• Founder</li> <li>• Government agencies: agriculture and others</li> <li>• Volunteers: general volunteers, retired teachers, unemployed teachers</li> <li>• Event experienter</li> <li>• Social participants</li> </ul>
	Volunteer Service Activities		
	Rural Genesis Initiative Workshop		
	Government agencies policy promotion activities		



## Section 2: Changes and Outcomes

### 1. How to define outcome

The event chain and indicators are based on the feedback and literature of stakeholders. In this report, the results and achievement indicators were measured in both qualitative and quantitative analysis. The qualitative information was based on the content discussed by the stakeholders, and the quantified information was based on the objective data actually occurred. While some indicators were based on objective facts and discussions with stakeholders, they were conducted in a qualitative and quantitative manner. Stakeholders would participate in the discussion at every important stage and, based on the results of the discussion, became an important basis for the next stage of work. The stakeholder participation process is shown in the following flowchart:



**Figure 4** Flow chart of the method for defining outcomes

We would discuss with the stakeholders the feedback from the stakeholders learned after the interviews and questionnaires, and describe the way of the chain of events (Chain of Events), explain the causal relationship between the results, and refer to literatures and professional opinion to define the final outcome (well-defined outcomes)

### **[Selection criteria for the well-defined outcomes& Material Judgment of Results]**

According to one of the seven principles of SROI - "Only include what is material", we must define that in the process of stakeholder change, to measure the value that has increased or decreased<sup>6</sup>. Therefore, we observed and referred to the feedback from the stakeholders, the corroboration of the literature and the social theory and experience rules to judge whether the value of the stakeholders has increased.

We practiced the following 4 steps to select the well-defined outcomes of each stakeholder:

1. Established the level of rigor and detail required for our analysis.
2. Delineated the result event chain of this project, the causal relationship between input, output and result. In this part, we analyzed and researched in a qualitative way.
3. Next, we looked for indicators and evidence for the outcome of the outcome, and used objective and subjective investigation evidence to allow us to verify that the outcome did occur and the extent to which it occurred.
4. Finally, we observed the environment and mentality of the stakeholders, discussed and confirmed the outcome event chain

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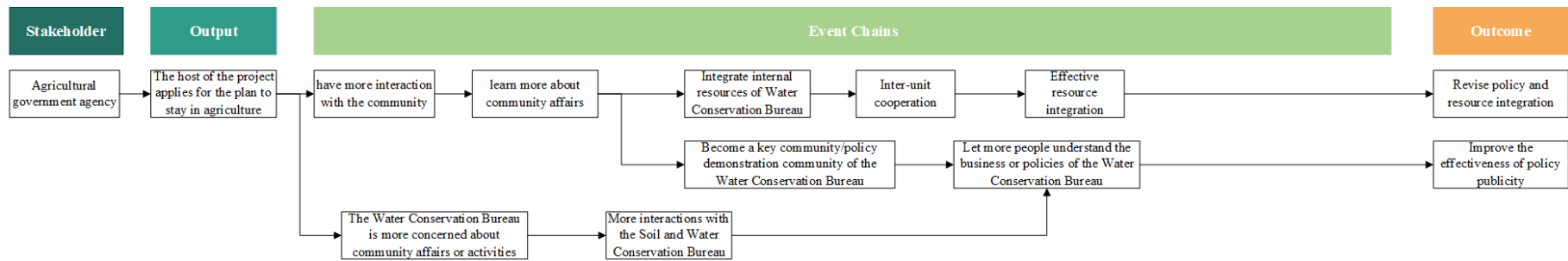
<sup>6</sup> Social value international, understand what change part one :creating well defined outcomes. P6.

and the final outcome indicators with the stakeholders, referred to relevant literature and evidence, and converged to the final results.

In judging the importance of results, we used qualitative and quantitative analysis methods. In qualitative research, we discussed with stakeholders the causality of results from interviews with stakeholders and feedback from focus groups. The mentioned results that were mostly agreed with the stakeholders were used as the qualitative reference basis for whether the significance was included.

## 2. Chain of Events and feedback from stakeholders

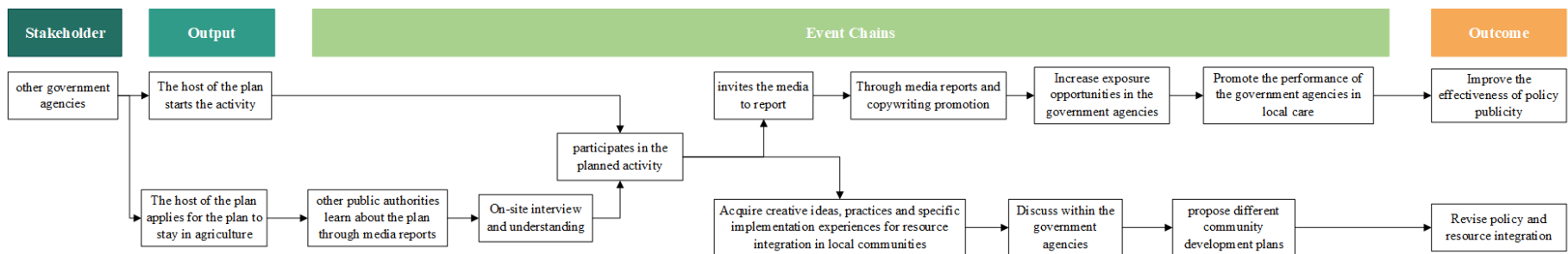
### [Government agencies: Agricultural government agency]



Jiahao's approach is outstanding, allowing the rural three innovations to be realized here

*Evaluation Teacher of Water Conservation Bureau*

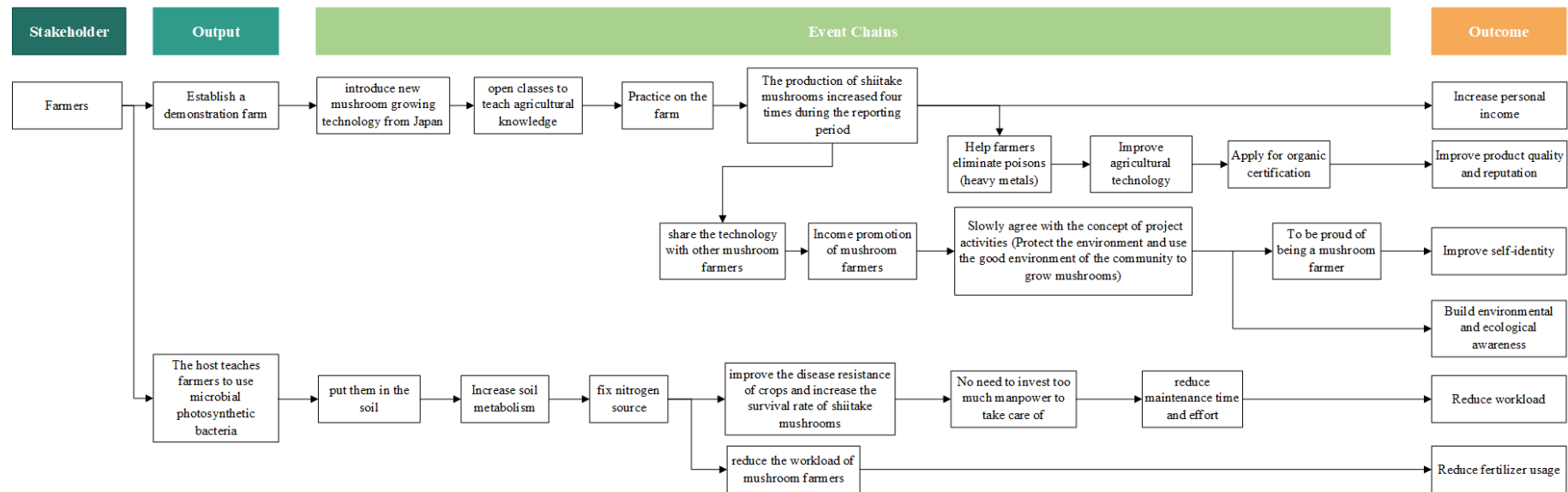
### [Government agencies: other government agencies]



Jiahao's approach gives us a more profound experience of the care and creation of the community

*government*

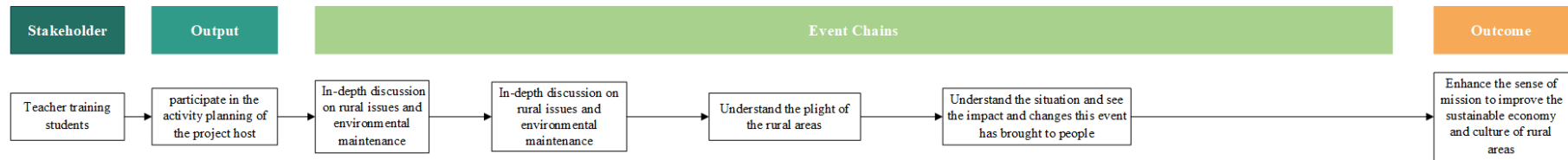
## [Farmers]



The strains provided by Jiahao significantly improved the survival rate of shiitake mushrooms on my farm. Shiitake mushrooms are very difficult to grow. The surviving crops

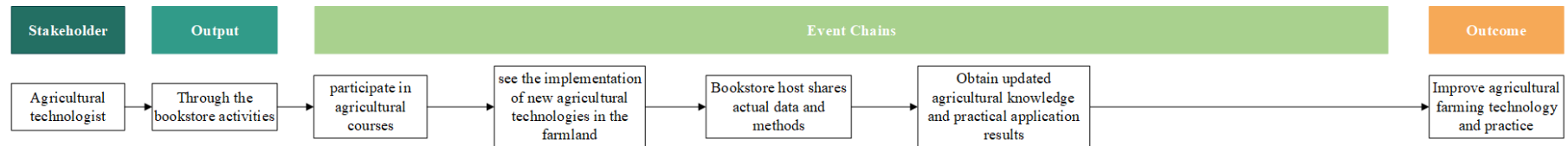
*Farmer*

## [Teacher training students]



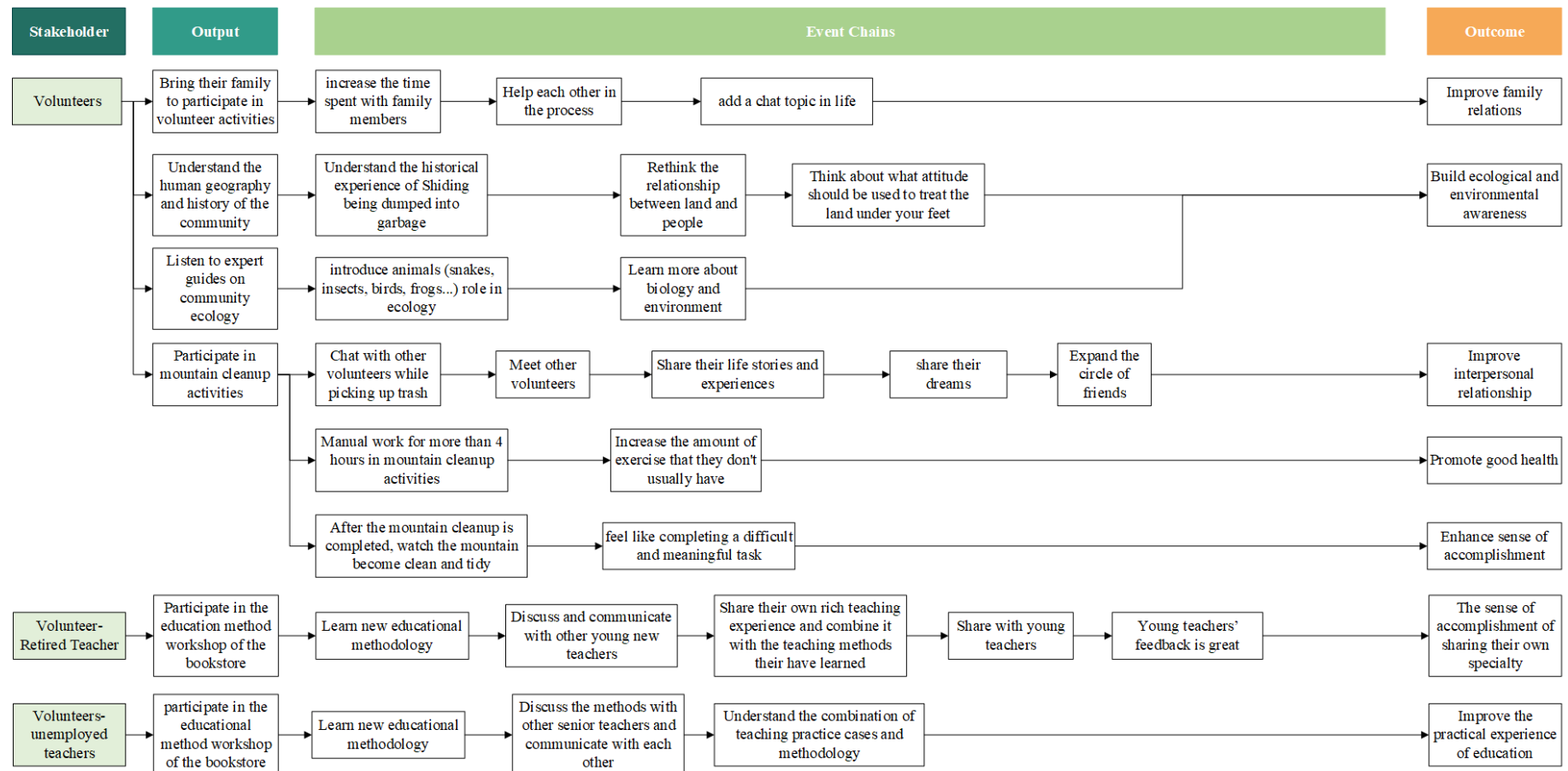
After participating in the event · Let me start thinking maybe I can teach in a remote village  
*Teacher training students*

## [Agricultural technologist]



Jiahao's methods and data let me know many new agricultural technologies  
*Agricultural technologist*

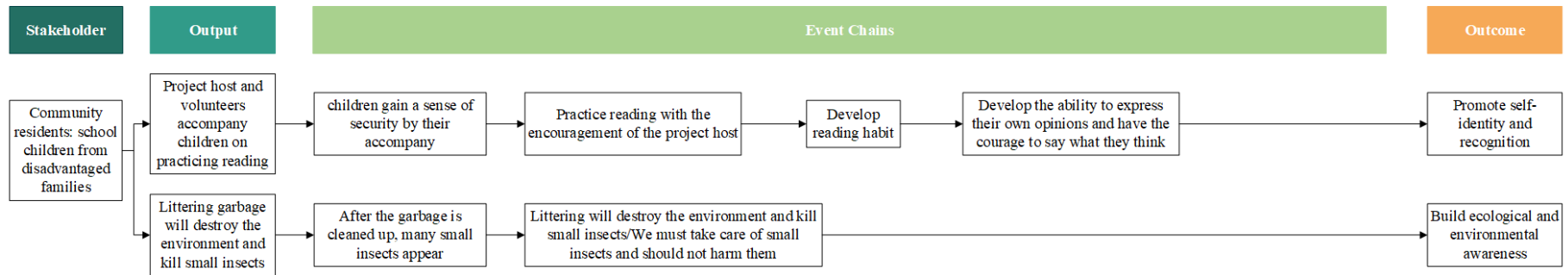
## [Volunteers]



I didn't expect such a beautiful scenery in such a remote place The whole family is very happy, here and will want to come again, It also made me think about the significance of the countryside to the city.

*Volunteer*

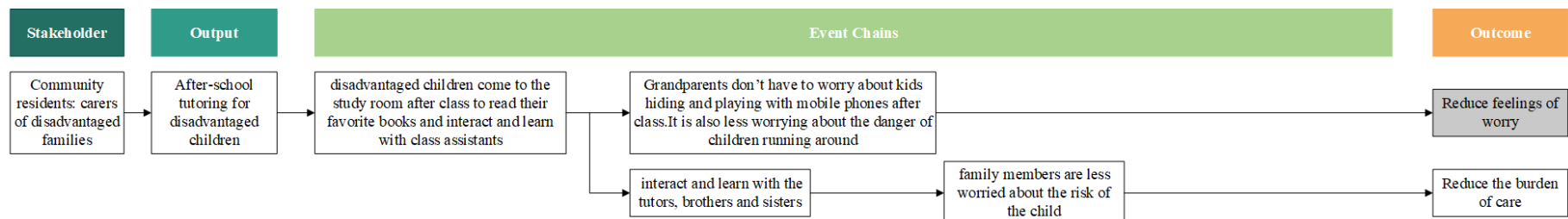
## [Community residents: school children from disadvantaged families]



There is a secret base after school

*School children*

## [Community residents: carers of disadvantaged families]



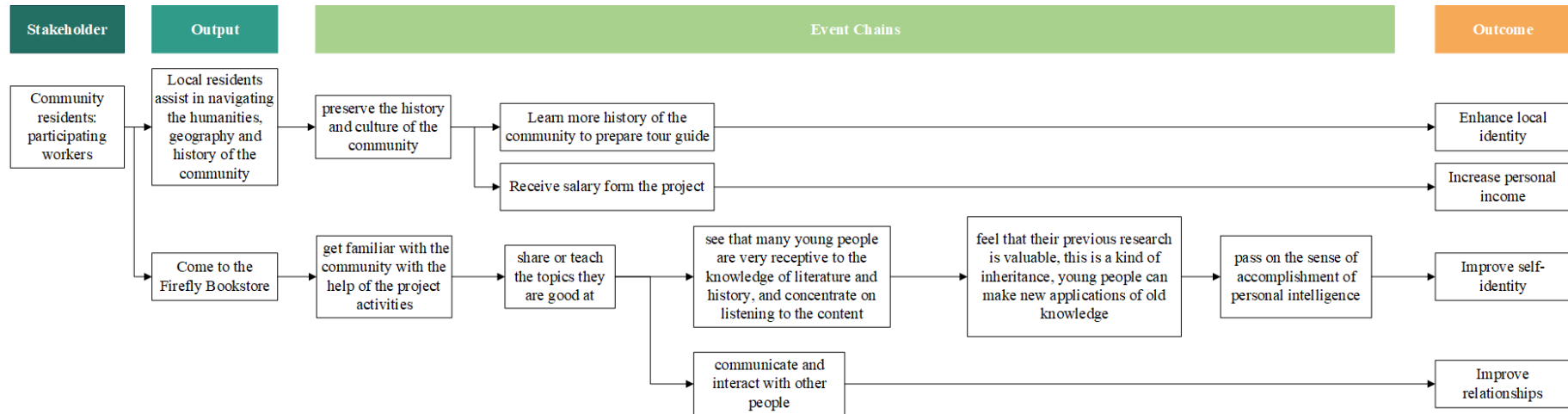
The two outcomes are similar, so one of them is excluded

I can't really afford to pay for the Ancestral Class, but Jiahao's bookstore allows children to have a place to go and learn things, it really helps us a lot

*Family members*



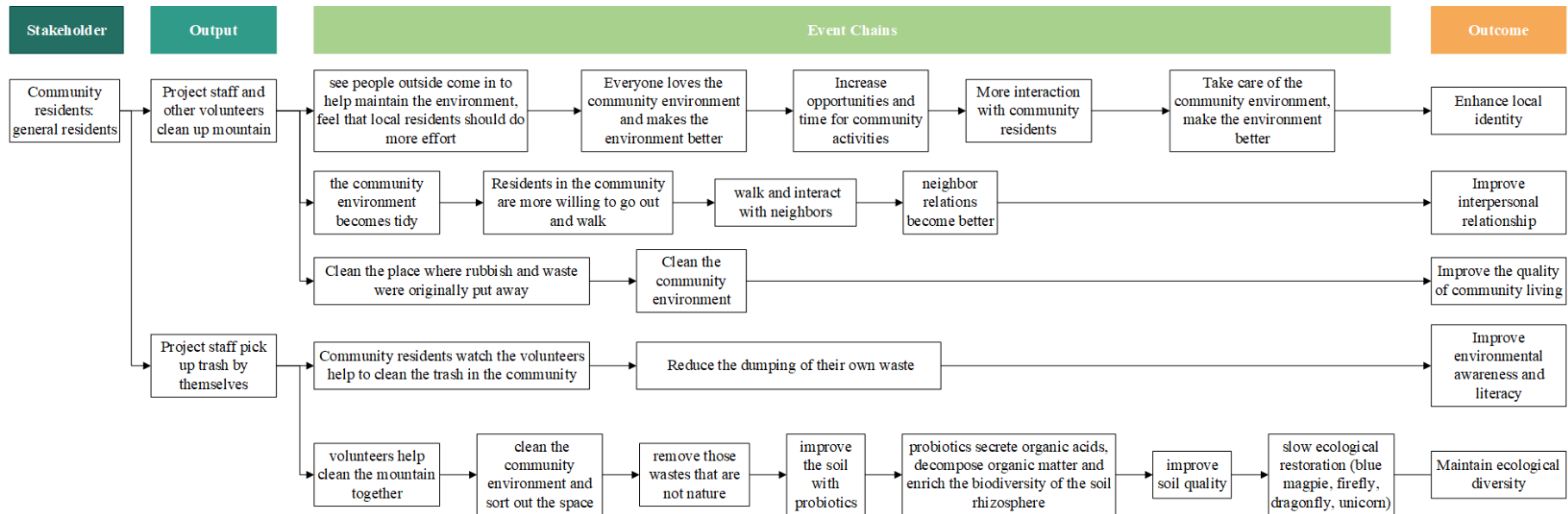
## [Community residents: participating workers]



Unexpectedly, there are still people willing to listen to our old stories

*Community participating workers*

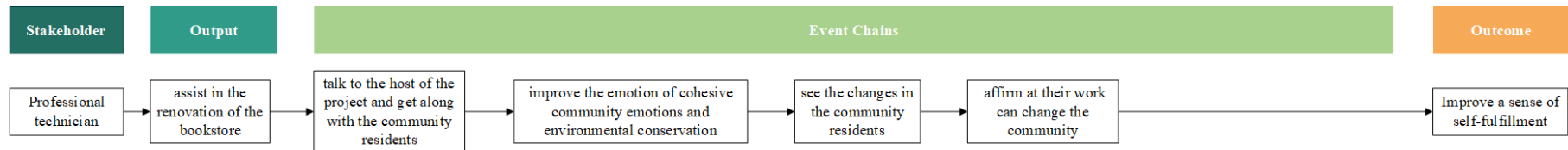
## [Community residents: general residents]



have become clean here, just like before

*Residents*

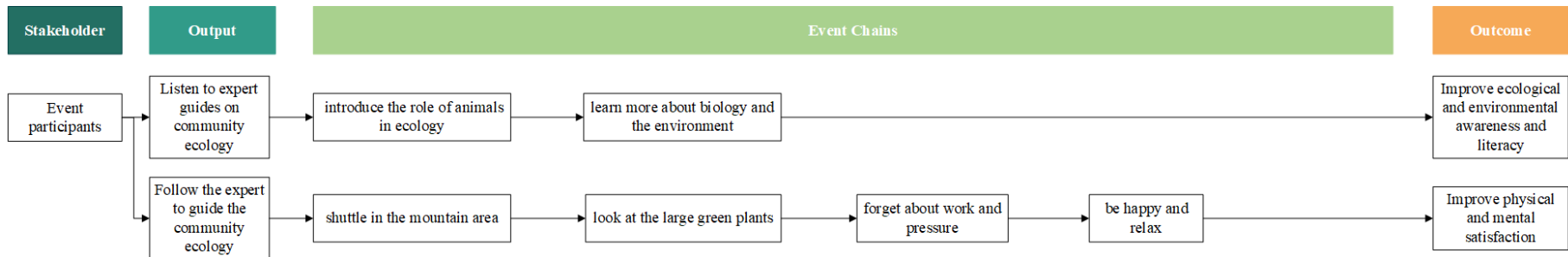
## [Professional technician]



We are proud to contribute to the community

*Professional technician*

## [Event participants]



Participating in the activity has taught me a lot of ecological and environmental knowledge

*Event participant*

### 3. Outcome indicators and incidence

As for the indicators of whether the outcomes had occurred, we referred to the SROI principle and use stakeholders' qualitative feedback or quantitative feedback as indicators for the occurrence of outcomes. Therefore, in qualitative questionnaires at first stage and quantitative questionnaires at second stage, we asked stakeholders to use "before and after quantitative data" as the degree of change in the result, or describe their actual changes in the qualitative process. The qualitative and quantitative feedback indicators were helpful in judging whether the outcome had occurred, the outcome incidence, and the importance of outcomes for stakeholders.

In order not to be highly affected by the qualitative opinions of stakeholders, we referred to Likert scale theory<sup>7</sup> to design a survey of outcome importance score. We took 3 points, the average of the total score of 5 points, as the baseline. If stakeholders gave feedback that the importance score of one outcome was more than 3 points, the outcome was considered is important.

The Likert scale was established by psychologist Rensis Likert in 1932. It is often used in questionnaires. It is currently the most widely used scale in social psychology, psychology, and management behavior surveys. It can assist in answering questions. The person specifically feedbacks his thoughts or feelings.

According to the theoretical framework of the Likert scale, we use a score of more than 3 points as the threshold indicator for designing a subjective attitude category to measure the outcome to support the

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<sup>7</sup> Reference:

<https://zh.wikipedia.org/wiki/%E6%9D%8E%E5%85%8B%E7%89%B9%E9%87%8F%E8%A1%A8>

occurrence and number of outcomes. , Mainly because there are 5 levels of options in the Likert scale, from a value of 1 to indicate a strong disagreement (strongly disagree); intensity 2 (disagree); 3 (neither agree nor disagree); Strongly favorable attitudes such as 4 (agree) and 5 (strongly agree). The scores of 4 and 5 indicate that the stakeholders strongly agree with the change, and they can better distinguish the change.

In addition, the purpose of this project to analyze the subjective attitude of the stakeholders is to inspire and cultivate the environmental literacy and self-realization of the stakeholders. In the design at the beginning of the event, the measurement standards needed are mainly to be able to confirm whether there is or not.

***Table 6 Summary table of outcome indicators***

Stakeholder	Outcome	Index	Index description	Indicator attributes
Government agencies: Agricultural government agency	Revise policy and resource integration	Reply to change or adjust the original policy or implementation method	Because the policy revision process is more complicated, based on feedback from the public sector, this project was often mentioned in different meetings or included in the publicity activities of the agricultural sector, which represents a significant change in the way the public sector operates.	Parallel qualitative and quantitative
	Improve the effectiveness of policy publicity	Media reported more than 3 times	According to the response from the public sector, it was a rare opportunity for a policy or project activity to be reported by different media more than three times in the past.	Parallel qualitative and quantitative
Government agencies: other government agencies	Revise policy and resource integration	Change or adjust the original policy or implementation method	Because the policy revision process is more complicated, based on feedback from the public sector, this project was often mentioned in different meetings or included in the publicity activities of the agricultural sector, which represents	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			a significant change in the way the public sector operates.	
	Improve the effectiveness of policy publicity	Media reported more than 3 times	According to the response from the public sector, it was a rare opportunity for a policy or project activity to be reported by different media more than three times in the past.	Parallel qualitative and quantitative
Farmer	Increase personal income	Increased real money income	The actual increase in income represents the increased degree of economic income, which is the most appropriate	Quantify
	Improve product quality and reputation	Certified organic	The certification of organic shiitake mushrooms is a representative quality and reputation indicator that the stakeholders and the agricultural public sector agree on	Quantify
	Reduce workload	Actual reduction in working hours	Actual reduction in working hours of farmers is a direct and appropriate indicator to reduce the workload	Quantify

Stakeholder	Outcome	Index	Index description	Indicator attributes
	Reduce fertilizer usage	Actual reduced amount of fertilizer used	Taking the actual reduction of fertilizer usage as a direct and appropriate index	Quantify
	Improve self-identity	Likert scale over three points	Self-identity is an abstract cognitive achievement and a kind of psychological response. The evaluation result of Likert scale represents a person's degree of agreement or attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	Parallel qualitative and quantitative
	Build environmental and ecological awareness	Changes in their own behavior are more environmentally and ecologically aware	The establishment of environmental and ecological awareness and behavior changes are the best evidence and proof of degree.	Parallel qualitative and quantitative



Stakeholder	Outcome	Index	Index description	Indicator attributes
			Therefore, behavior change is an appropriate proof to prove the establishment of environmental and ecological awareness, and it also meets the expectations of this activity.	
Teacher training students	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	Likert scale over three points	It is a psychological response to improve the sense of mission in the sustainable economy and culture of the rural areas. The evaluation result of the Likert scale represents the degree of agreement or attitude a person has for each narrative, and it is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
Agricultural technologist	Improve agricultural farming technology and practice	Change or optimize the original farming technology	Improve farming techniques and practical experience, with changes in behavior as the best evidence and proof of degree. Therefore, behavior change is an appropriate proof to prove the establishment of environmental and ecological awareness, and it also meets the expectations of this activity	Parallel qualitative and quantitative
Volunteer	Improve family relations	Likert scale over three points	Improving family relationships is an abstract psychological and interpersonal interaction reaction. The results of the Likert scale represent a person's degree of agreement or attitude towards each narrative, and it is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			proof of the occurrence and extent of the results.	
	Improve interpersonal relationship	Likert scale over three points	Improving family relationships is an abstract psychological and interpersonal interaction reaction. The results of the Likert scale represent a person's degree of agreement or attitude towards each narrative, and it is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	Parallel qualitative and quantitative
	Build ecological and environmental awareness	Changes in their own behavior are more environmentally and ecologically aware	The establishment of environmental and ecological awareness and behavior changes are the best evidence and proof of degree. Therefore, behavior change is an	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			appropriate proof to prove the establishment of environmental and ecological awareness, and it also meets the expectations of this activity.	
	Promote good health	Likert scale over three points	Promoting physical health is an objective factual behavior. We refer to relevant documents <sup>8</sup> to prove that volunteers who have participated in activities for more than 4 hours or who believe that their health has improved subjectively and psychologically are used as the indicator threshold for the occurrence of results.	Parallel qualitative and quantitative
	Enhance sense of accomplishment	Likert scale over three points	Improving the sense of accomplishment is an abstract psychological and interpersonal interaction reaction. The results of the Likert scale evaluation represent a person's degree of agreement or	Parallel qualitative and quantitative

<sup>8</sup> 巴蘇克 ( Shari S. Bassuk ) 、邱契 ( Timothy S. Church ) 、曼森 ( JoAnn E. Manson ) ，運動讓你每個細胞都健康，科學人雜誌，2013/11/27。

Stakeholder	Outcome	Index	Index description	Indicator attributes
			attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	
Retired teacher	Share your sense of professional accomplishment	Likert scale over three points	Improving professional accomplishment is an abstract psychological and interpersonal interaction reaction. The results of the Likert scale represent a person's degree of agreement or attitude towards each narrative, and it is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	
No teacher yet	Improve the practical experience of education	Likert scale over three points	The practical experience of improving education is an abstract psychological and interpersonal interaction reaction. The evaluation result of Likert scale represents a person's degree of agreement or attitude towards each narrative, which is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	Parallel qualitative and quantitative
Residents: School children from	Promote self-identity and recognition	Likert scale over three points	Improving the sense of accomplishment is an abstract psychological and interpersonal	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
disadvantaged families			interaction reaction. The results of the Likert scale represent a person's degree of agreement or attitude towards each narrative, and it is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	
	Build ecological and environmental awareness	Changes in their own behavior are more environmentally and ecologically aware	The establishment of environmental and ecological awareness and behavior changes are the best evidence and proof of degree. Therefore, behavior change is an appropriate proof to prove the establishment of environmental and ecological awareness, and it also meets the expectations of this activity.	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
Residents: Carers of disadvantaged families	Reduce the burden of care	Reduce care time	The main burden of care comes from the care time, so the care time comes	Parallel qualitative and quantitative
Residents: Participating workers	Enhance local identity	Likert scale over three points	It is an abstract psychological and interpersonal interaction reaction.	Parallel qualitative and quantitative
	Improve self-identity	Likert scale over three points	The result of the Likert scale represents a person's degree of agreement or attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5 grade options, it will be used as a proof of the occurrence and extent of the results.	Parallel qualitative and quantitative
	Improve interpersonal relationship	Likert scale over three points		Parallel qualitative and quantitative
	Increase personal income	Increased real money income	It is more appropriate to measure the results of economic income by the actual increase in monetary economic benefits.	Parallel qualitative and quantitative



Stakeholder	Outcome	Index	Index description	Indicator attributes
Residents: General residents	Enhance local identity	Likert scale over three points	It is an abstract psychological and interpersonal interaction reaction. The result of the Likert scale represents a person's degree of agreement or attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholder, when the stakeholder chooses 4 and 5 options, it will be used as a proof of the occurrence and degree of the result	Parallel qualitative and quantitative 并行
	Improve interpersonal relationship	Increase the time to interact with community residents	In the interpersonal relationship promoted by community residents, the main content is the interaction and emotional connection between community residents. Therefore, after the stakeholders' feedback and our observations, we will use whether to increase the interaction	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			time between community residents to prove that abstract interpersonal relationships are promoted. It will be more appropriate.	
	Improve the quality of community living	Increase the time spent out and staying	Because the original community environment was messy, community residents were less willing to spend time out in the community. Therefore, the quality of the community's living environment is improved, and it will be a suitable indicator to increase the stay time of the community residents.	Parallel qualitative and quantitative
	Improve environmental awareness and literacy	Improve environmental awareness and literacy	The establishment of environmental and ecological awareness and behavior changes are the best evidence and proof of degree. Therefore, behavior change is an appropriate proof to prove the establishment of environmental and ecological awareness, and it also	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			meets the expectations of this activity.	
	Maintain ecological diversity	Ecological species actually reproduced	The indicator of ecological diversity in this project is the observation and restoration of ecological species. In this project, a total of observations and records of fireflies from Taiwan, red-breasted black-winged fireflies, small red-breasted black-winged fireflies, and big end black fireflies have never been observed.	Parallel qualitative and quantitative
Garden Technician	Improve self-fulfillment	Likert scale over three points	It is an abstract psychological and interpersonal interaction reaction.	Parallel qualitative and quantitative
Hydroelectric technician	Improve self-fulfillment	Likert scale over three points	The result of the Likert scale represents a person's degree of agreement or attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of the stakeholders, when the stakeholders choose the 4 and 5	Parallel qualitative and quantitative
Woodworker	Improve self-fulfillment	Likert scale over three points		Parallel qualitative and quantitative
Mud Technician	Improve self-fulfillment	Likert scale over three points		Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			grade options, it will be used as a proof of the occurrence and extent of the results.	
Event participants	Improve ecological and environmental awareness and literacy	Changes in their own behavior are more environmentally and ecologically aware	The establishment of environmental and ecological awareness and behavior changes are the best evidence and proof of degree. Therefore, behavior change is an appropriate proof to prove the establishment of environmental and ecological awareness, and it also meets the expectations of this activity.	Parallel qualitative and quantitative
	Improve physical and mental satisfaction	Likert scale over three points	It is an abstract psychological and interpersonal interaction reaction. The result of the Likert scale represents a person's degree of agreement or attitude towards each narrative. It is currently the most extensive measurement tool. We distinguish 5 grades based on the theory of Likert scale. In order to highlight the degree of change of	Parallel qualitative and quantitative

Stakeholder	Outcome	Index	Index description	Indicator attributes
			the stakeholder, when the stakeholder chooses 4 and 5 options, it will be used as a proof of the occurrence and degree of the result	

*Table 7 Outcome incidence*

Stakeholder		Outcome	Outcome incidence	Number of Outcome <sup>9</sup>
Subgroup	Population			
Government agencies: Agricultural government agency	1	Revise policy and resource integration	100%	1
		Improve the effectiveness of policy publicity	100%	1
Government agencies: other government agencies	1	Revise policy and resource integration	100%	1
		Improve the effectiveness of policy publicity	100%	1

<sup>9</sup> The number of results is the number/quantity of the results confirmed by negotiation with stakeholders (qualitative and quantitative methods), and has been confirmed with other stakeholders who have “not” given the results, and the stakeholders clearly gave back Feeling of the achievement, or the degree of it does not meet the criteria for inclusion in the calculation (eg, the Likert scale has changed more than 3 points) °

Stakeholder		Outcome	Outcome incidence	Number of Outcome <sup>9</sup>
Subgroup	Population			
Farmer	11	Increase personal income	9%	1
		Improve product quality and reputation	100%	11
		Reduce workload	100%	11
		Reduce fertilizer usage	100%	11
		Improve self-identity	100%	11
		Build environmental and ecological awareness	100%	11
Teacher training students	9	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	100%	9
Agricultural technologist	9	Improve agricultural farming technology and practice	100%	9
Volunteer	60	Improve family relations	50%	30
		Improve interpersonal relationship	100%	60
		Build ecological and environmental awareness	100%	60
		Promote good health	100%	60
		Enhance sense of accomplishment	100%	60

Stakeholder		Outcome	Outcome incidence	Number of Outcome <sup>9</sup>
Subgroup	Population			
Retired teacher		Share your sense of professional accomplishment	100%	60
No teacher yet		Improve the practical experience of education	100%	60
Residents: School children from disadvantaged families	11	Promote self-identity and recognition	36%	4
		Build ecological and environmental awareness	36%	4
Residents: Carers of disadvantaged families	20	Reduce the burden of care	40%	8
Residents: Participating workers	32	Enhance local identity	100%	32
		Improve self-identity	25%	8
		Improve interpersonal relationship	100%	32
		Increase personal income	3%	1
Residents: General residents	200	Enhance local identity	100%	200
		Improve interpersonal relationship	100%	200
		Improve the quality of community living	1%	1
		Improve environmental awareness and literacy	100%	200

Stakeholder		Outcome	Outcome incidence	Number of Outcome <sup>9</sup>
Subgroup	Population			
		Maintain ecological diversity	1%	1
Garden Technician	3	Improve self-fulfillment	33%	1
Hydroelectric technician	3	Improve self-fulfillment	33%	1
Woodworker	5	Improve self-fulfillment	20%	1
Mud Technician	3	Improve self-fulfillment	33%	1
Event participants	200	Improve ecological and environmental awareness and literacy	17%	33
		Improve physical and mental satisfaction	18%	35



### **Section 3 Outcomes Evaluation**

#### **1. Financial agency variables**

The financial agency variable is to find a reasonable financial conversion value for the change results of each stakeholder. This research used three stages (qualitative and quantitative) to measure the outcome of discussions with stakeholders. At the same time, we also referred to relevant literature, such as other educational SROI certification reports, or financial agency variables with similar results, to understand possible financial conversion methods, and discussed with the stakeholders to determine how the stakeholders understand the conversion. After discussing with the stakeholders, we found that the stakeholders more easily realized the ways in which the same degree of results can be obtained, or the direct cost/fee/amount conversion method and thought these conversion methods were closer to their feelings and thoughts, so we used these methods to discuss with stakeholders the appropriate conversion methods and options for each outcome

In each outcome, we found 1~4 outcome substitutes that stakeholders gave in questionnaires and interviews, or directly used the saved cost/fee/amount as the financial agency variable. We then looked for the local average prices in Taiwan of possible alternatives or services and set different frequency or degree of every financial agency variable, ranked from low to high. Finally, we verified with stakeholders the price of substitutes or labor services chosen by them to make sure the value of was not too far away from the changes and results experienced.

In certain financial agency variables stakeholders chose, we found that there was not much difference between each stakeholder. Therefore, for outcomes with objective factual value, such as the actual increase in revenue and costs, we calculated their average value.

Because it was the first analysis of the alternative analogy method or willingness to pay method, we would not like to miss all possible value comparisons. Therefore, we set larger price range in our interviews and questionnaires to analyze the actual value range the stakeholders thought. Under the same change process, nearly all stakeholders chose on certain outcome value. According to our first evaluation report and the setting of level of rigor, this result should be acceptable.

In future evaluations, we will provide more value choices so that stakeholders can distinguish value sub-groups in their judgment of values.

**Table 8 Financial agency variables**

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
Government agencies: agriculture related departments	Revise policy and resource integration	850,000	Department/year	The effect is similar to the budget needed to successfully train a local creative team.	Agriculture Committee Youth Staying in Agriculture Program <sup>10</sup>
	Improve the effectiveness of policy publicity	990,000	Department/year	Bidding budget for external publicity of agricultural policy.	Agriculture Committee Bidding Network <sup>11</sup>
Government agencies: other government agencies	Revise policy and resource integration	1,000,000	Department/year	New Taipei City Government Industry Innovation Subsidy Program Budget.	New Taipei City Government Economic Development Bureau website <sup>12</sup>

<sup>10</sup> <https://return.swcb.gov.tw/>

<sup>11</sup> <http://pcc.mlwmlw.org/tender/%E8%A1%8C%E6%94%BF%E9%99%A2%E8%BE%B2%E6%A5%AD%E5%A7%94%E5%93%A1%E6%9C%83%E6%9E%97%E5%8B%99%E5%B1%80/tfbc-1090103>

<sup>12</sup> <https://www.economic.ntpc.gov.tw/Custom/sbir>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
	Improve the effectiveness of policy publicity	560,000	Department/year	New Taipei City Government invites reporters to the government budget for field interviews.	New Taipei City Government Bidding Website <sup>13</sup>
Farmer	Increase personal income	1,140,000	Per farmer/year	The average real income increased by each farmer using the new agricultural method for a year.	Participating farmers provide
	Improve product quality and reputation	780,000	Per farmer/year	The additional costs and organic certification-related expenses that each farmer has to pay from the customary farming method to the organic farming method are close to the value of the brand's intangible assets.	Organic vegetable production structure paper and certification body website <sup>1415</sup>
	Reduce workload	420,000	Per farmer/year	After applying the Japanese organic farming method, each	Participating farmers provide

<sup>13</sup> <https://www.taiwanbuying.com.tw/ShowCCDetailOri.ASP?RecNo=3670239>

<sup>14</sup> <https://book.tndais.gov.tw/RBulletin/70-8.pdf>

<sup>15</sup> <https://blog.xuite.net/im918260/twblog/131273889>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				farm will be able to reduce about one part-time personnel expenses per year.	
	Reduce fertilizer usage	26,100	Per farmer/year	The actual chemical fertilizer reduces the usage cost.	Participating farmers provide
	Improve self-identity	7,500	Per farmer/year	The cost of community guide training courses is like the recognition and pride of one's hometown after receiving professional guide training.	Extracted from the education and training course website, verified and selected by farmers <sup>16</sup>
	Build environmental and ecological awareness	12,400	Per farmer/year	The lectures and daily practical exchanges are similar to the organic and ecological balance courses taught in the annual Taoyuan Agricultural Improvement Farm course.	Taoyuan Agricultural Improvement Farm <sup>17</sup>

<sup>16</sup> <https://communitytaiwan.moc.gov.tw/Item/Detail/>

<sup>17</sup> <https://www.tydares.gov.tw/>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
Teacher training students	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	66,250	Person/year	The impact is as profound education program. One credit NT\$1,325 x 25 credits x 2 semester= NT\$33,125.	University Education Credit Fee <sup>18</sup>
Agricultural technologist	Improve agricultural farming technology and practice	440,000	Person/year	The total cost of learning how to use agricultural microorganisms and practices in Japan.	Lion Travel Agency <sup>19</sup>
Volunteer	Improve family relations	4,320	Per volunteer/year	Participating in volunteer services with your family is similar to the cost of participating in a day's outdoor parent-child environmental education activities.	Daytime parent-child trail regular class course <sup>20</sup>

<sup>18</sup> <https://cructe.pccu.edu.tw/files/11-1175-3088-1.php?Lang=zh-tw>

<sup>19</sup> <https://www.liontravel.com/category/zh-tw/idx>

<sup>20</sup> <https://www.beclass.com/rid=2343b155e44bf32a17fd>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
	Improve interpersonal relationship	15,000	Per volunteer/year	Because volunteers come to the bookstore to participate in activities on a regular basis, just like a local creation course in a community college to meet and communicate with classmates. Calculated with a credit fee of NT\$4,500 per credit for three credits of agricultural courses.	National Taiwan University Promotion Education Center <sup>21</sup>
	Build ecological and environmental awareness	13,600	Per volunteer/year	The experience of volunteers on the field is similar to the ecological conservation content learned in the environmental conservation education personnel certification course.	Environmental Protection Department Training Institute for Environmental Conservation Staff <sup>22</sup>

<sup>21</sup> <https://www.ntuspecs.ntu.edu.tw/specs/tc/classCreditListContent.aspx?cid=33&id=446&chk=bd27ef3d-52de-4145-a72c-oda988ece70c>

<sup>22</sup> [https://eets.epa.gov.tw/EPTI\\_C-1-1.aspx?Type=C](https://eets.epa.gov.tw/EPTI_C-1-1.aspx?Type=C)

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
	Promote good health	6,000	Per volunteer/year	Volunteers share their exercises and feelings in the outdoors, just like participating in gymnastics or external alchemy classes.	Fagushan College of Arts and Sciences, Degui Academy <sup>23</sup>
	Enhance sense of accomplishment	20,000	Per volunteer/year	The sense of accomplishment comes from the sense of accomplishment of tidying up a huge field. It is as if I have learned a challenge in an unfamiliar field, so the one-year tuition fee of the inter-shop skills course is relatively close.	Jujiang Computer official website <sup>24</sup>
Retired teacher	Share your sense of professional accomplishment	33,500	Per retired teacher/year	Older teachers believe that there is such a field that allows them to share years of teaching experience and practice, so	Ministry of Education official website <sup>25</sup>

<sup>23</sup> <http://dilataw.blogspot.com/>

<sup>24</sup> <https://www.pcschool.com.tw/>

<sup>25</sup> [https://depart.moe.edu.tw/ED4200/News\\_Content.aspx?n=82Co377ABB8CBDE3&sms=7947BFBC4B622A7D&s=7D18D5797E007F1C](https://depart.moe.edu.tw/ED4200/News_Content.aspx?n=82Co377ABB8CBDE3&sms=7947BFBC4B622A7D&s=7D18D5797E007F1C)



Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				that they can feel the value of being needed and regain their sense of accomplishment. Retired teachers often feel the sense of accomplishment of being hired back to the university to teach, and most of them are priced at NT\$670 lecture fee for 50 hours and 1 hour a year.	
No teacher yet	Improve the practical experience of education	13,600	Per teacher/year	Young teachers believe that they have absorbed many different educational practical experiences and knowledge of environmental education, just like the ecological conservation education skills learned by participating in the environmental conservation education personnel	Environmental Protection Department Training Institute <sup>26</sup>

<sup>26</sup> [https://eets.epa.gov.tw/EPTI\\_C-1-1.aspx?Type=C](https://eets.epa.gov.tw/EPTI_C-1-1.aspx?Type=C)

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				certification course.	
	Promote self-identity and recognition	25,000	Per student/year	After discussions with family members of school children and observations by the school, students generally become willing to speak and confront their peers, which is similar to the effect of the curriculum that helps students build self-confidence.	Carnegie Self-Confidence Course for Children <sup>27</sup>
	Build ecological and environmental awareness	4,320	Per student/year	The impact of schoolchildren on ecological awareness and environmental literacy will be reflected in the behavior of life, and the effect of environmental education courses with parents and children is similar °	Daytime parent-child trail regular class course <sup>28</sup>

<sup>27</sup> <https://www.carnegie.com.tw/course-online-reg.php?sales=&cid=8722>

<sup>28</sup> <https://www.beclass.com/rid=2343b155e44bf32a17fd>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
Community residents: carers of disadvantaged families	Reduce the burden of care	83,200	One family/year	The school children were sent to the Firefly Bookstore, allowing caregivers of disadvantaged families to lighten the burden of caregivers. The school children were sent to the Firefly Bookstore, allowing caregivers of disadvantaged families to lighten the burden of caregivers. It's like asking a sister to play with her for a year. NT\$158 x 5 days x 2 hours x 52 weeks = NT\$83,200	Taiwan minimum hourly wage
Community residents: participating workers	Enhance local identity	24,000	Per resident/year	Every time I visit my hometown for out-of-towners or school children, I have a love and recognition for my hometown. It is generally believed that the hourly salary of national park guides is the	Official website of Kenting National Park Educational Interpretation <sup>29</sup>

<sup>29</sup> [https://reservapions.ktnp.gov.tw/question\\_view.aspx?ID=6](https://reservapions.ktnp.gov.tw/question_view.aspx?ID=6)

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				financial proxy variable. Once a month NT\$ 2,000 x 12 months = NT\$24,000	
	Improve self-identity	33,500	Per resident/year	Residents believe that they have become environmental professors in their hometowns, teaching courses to the outside world many times a year, so that they have a full sense of accomplishment and self-identification, just like a university lecturer is teaching at school. The price is calculated based on the salary of NT\$670 lecturer fee for teaching 50 hours and 1 hour a year.	Ministry of Education official website <sup>30</sup>

<sup>30</sup> [https://depart.moe.edu.tw/ED4200/News\\_Content.aspx?n=82Co377ABB8CBDE3&sms=7947BFBC4B622A7D&s=7D18D5797E007F1C](https://depart.moe.edu.tw/ED4200/News_Content.aspx?n=82Co377ABB8CBDE3&sms=7947BFBC4B622A7D&s=7D18D5797E007F1C)

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
	Improve interpersonal relationship	15,600	Per resident/year	Because community workers participate in bookstore activities every week, it's like the cost of gathering with friends every week is about NT\$300 x 52 weeks = NT\$15,600.	Willingness to pay
	Increase personal income	22,500	Per resident/year	Annual actual remuneration given to workers	Provided by Firefly Bookstore
Community residents: general residents	Enhance local identity	2,000	Per resident/year	The sense of accomplishment and identity gained after participating in the in-depth tour of my hometown is similar.	Official website of Kenting National Park Educational Interpretation <sup>31</sup>
	Improve interpersonal relationship	8,000	Per resident/year	Similar to the increase in community interpersonal relationships obtained by organizing table dinners with	The average cost per person for the table plan in the rice field <sup>32</sup>

<sup>31</sup> [https://reservapions.ktnp.gov.tw/question\\_view.aspx?ID=6](https://reservapions.ktnp.gov.tw/question_view.aspx?ID=6)

<sup>32</sup> <https://play.niceday.tw/supplier/5>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				community residents every season. NT\$2,000 x 4 seasons = NT\$8,000	
	Improve the quality of community living	360,000	Community/year	The quality of living is due to the reduction of waste and the safer community, which is like hiring a dedicated community security and cleaner to clean and repair. about NT\$30,000 a month, NT\$360,000 a year salary.	Human Resources Website <sup>33</sup>
	Improve environmental awareness and literacy	57,600	Per resident/year	Let community residents be willing to reduce the amount of garbage and waste generated, and reduce the habit of littering. By analogy, it is close to	Phone inquiries about the price of garbage collectors

<sup>33</sup> <https://www.careerjet.tw/%E7%A4BE%E5%8D%80-%E4%BF%9D%E5%85%A8%E5%B7%A5%E4%BD%9C/%E6%96%B0%E5%8C%97%E5%B8%82-221884.html>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
				household garbage removal costs. NT\$4,800 x 12 months = NT\$57,600.	
	Maintain ecological diversity	900,000	Community/year	Jiahao convened volunteers and community residents to maintain the environment and landscape, helping the government save a lot of budgets.	New Taipei City Shenkeng District Environmental Beautification Project Amount <sup>34</sup>
Garden Technician	Improve self-fulfillment	131,250	person/year	The amount of wage discount that technicians are willing to sacrifice for improving community creation.	Provided by professional technicians
Hydroelectric technician	Improve self-fulfillment	157,500	person/year		
Woodworker	Improve self-fulfillment	168,750	person/year		

<sup>34</sup> <http://pcc.mlwmlw.org/tender/%E6%96%B0%E5%8C%97%E5%B8%82%E6%B7%B1%E5%9D%91%E5%8D%80%E5%85%AC%E6%89%80/108045>

Stakeholder	Outcomes	Financial agency variables	Calculation basis	Compilation of feedback and explanations from stakeholders	References
Mud Technician	Improve self-fulfillment	41,250	person/year		
Event participants	Improve ecological and environmental awareness and literacy	8,000	Person/time	All-day course fees in the environmental education field	Taijiang Park Environmental Education Field Fee Standard <sup>35</sup>
	Improve physical and mental satisfaction	300	Person/time	One day farmer's experience course	One Day Farmer Experience Camp website <sup>36</sup>

<sup>35</sup> <https://www.tjnp.gov.tw/NewListsDetailC002100.aspx?Cond=45a792db-c035-471a-829e-0d22a4e4dd5c>

<sup>36</sup> <https://www.beclass.com/rid=223f0d85c0b5a4ccbf30>



## 2. Stakeholder's influence factors

In order to follow the principle of SROI “Not to exaggerate”, we excluded the impacts that were not part of this evaluation project. The impact factors we considered were divided into four, which are explained as follows:

Influence factors	Description
Deadweight factor	It refers to the proportion of changes that will occur regardless of whether the project is executed or not, and the chance that a certain result will also occur, that is, the proportion of failures that will occur. The deadweight factor of this project is based on interviews and questionnaires, and is calculated by the weighted average of replies from stakeholders.
Displacement factor	Refers to the proportion of the project's results that transfer the problem to other places or exclude others. This factor has no obvious transfer problem in this project, but considering the principle of not exaggerating SROI, it is planned to discuss with sensitivity analysis and not included in the calculation of results.
Attribution factor	It refers to the proportion of the change in the outcome of the project that is attributed to the contribution of other factors, that is, the proportion of this outcome that is not my credit. The attribution factor of this project is based on interviews and questionnaires, and is calculated by the weighted average of the replies of stakeholders.
Attenuation factor (Drop-off)	Refers to the proportion of the results that the results decrease over time, that is, the proportion of the results produced by the project whose benefits decrease year by year. The attenuation factor of this project is based on interviews and questionnaires, and is calculated by the weighted average of the replies of stakeholders.

In the part of the influence factors, because the concept is relatively complex, we had to use many examples to discuss with the stakeholders. During the interview, we discussed with the stakeholders examples so that the stakeholders could understand the influence factors well.

Although the stakeholders could understand the concept of the four influence factors through our explanations, they could not accurately provide the proportion of their influence. Therefore, in our discussion, we also referred to the design of the Likert scale, by which the stakeholders could respond effectively with a five-level method. For example, when we asked event participants about the deadweight factor of the results of "improving physical and mental satisfaction", we asked them "if there was not such activity, whether there was also a high chance that you would join another activity that would bring you the same level of "enhanced physical and mental satisfaction". The participants could responded with five levels: very high chance, high chance, ordinary chance, low chance, and very low chance, which represent the numerical meaning of 100%, 75%, 50%, 25%, and 0% respectively. In terms of calculation, we use a less biased weighted average method as the calculation method, so that the responses of all stakeholders could be reflected in the proportion of the four major influence factors.

**Table 9 Deadweight factor and attribution factor**

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
Government agencies: agriculture related departments	Revise policy and resource integration	90%	There are many teams for agricultural creation and high substitution	50%	The agricultural public sector should have a 50% contribution
	Improve the effectiveness of policy publicity	25%	Less use of agricultural technology to combine volunteering, cleaning and bookstores	75%	Agricultural Corporation Department-led policy Propaganda
Government agencies: other government agencies	Revise policy and resource integration	20%	There is less opportunity to produce similar fields and achieve similar effects in places	40%	Plan for local government the benefits mainly come from the plan itself
	Improve the effectiveness of policy publicity	20%		40%	This project is a publicity case often cited by local governments
Farmer	Increase personal income	0%	Without the introduction of photosynthetic bacteria, the increase in yield and quality will not be achieved	25%	The technology of photosynthetic bacteria is mainly taught and introduced by the project host, and it is very simple to implement
	Improve product quality and reputation	0%		25%	
	Reduce workload	50%	The agricultural authorities have encouraged organic farming and technological farming in recent years, so	25%	The reduction in workload and fertilizer use mainly comes from the
	Reduce fertilizer usage	50%		25%	

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
			there is a chance to get help from the agricultural authorities in the existing environment to reduce the workload and fertilizer usage.		contribution of photosynthetic bacteria, which are promoted and implemented by this project
	Improve self-identity	10%	This project is sponsored by farmers. Activities and plans from the perspective of farmers are rare. It is difficult to encounter activities that can enhance farmers' self-identity.	10%	The improvement of self-identity makes farmers feel that they are high-tech planting mainly from this activity, and the main contribution comes from the project activity
	Build environmental and ecological awareness	25%	For eco-friendly farming methods and teachings, less from the perspective of environment and ecological conservation, most from the perspective of consumers	50%	Because of the identity of the farmer, he is already familiar with ecology and environmental conservation. Both the project and the farmer themselves contribute to the results.
Teacher training students	Enhance the sense of mission to improve the sustainable	17%	It is not very common in cities to have this opportunity to get such a	30%	For the sense of mission in urban and rural areas, Most of them come from the experience of the activity,

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
	economy and culture of rural areas		complete ecological environment education.		but also slightly related to their own interests.
Agricultural technologist	Improve agricultural farming technology and practice	11%	The agricultural technology shared in this project activity is the essence of the project host's long-term learning experience in Japan. At present, there are not many opportunities to contact relevant courses.	30%	Although he is a researcher of agricultural technology, because the technology is too novel, the main gain comes from activities.
Volunteer	Improve family relations	50%	Not too many volunteer activities can participate with family members.	50%	The survey found that stakeholders who are willing to participate in volunteer activities are more likely to get close to family and interpersonal because of their background and environment, and they have a good ecological awareness and awareness of physical health.
	Improve interpersonal relationship	75%	Without this activity, they will still participate in volunteer activities related to nature, ecology and the environment.	50%	
	Build ecological and environmental awareness	75%		50%	
	Promote good health	75%		50%	
	Enhance sense of accomplishment	50%	The volunteer activities of this project are of special	25%	The source of accomplishment

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
			nature. After cleaning up the community, they will have a sense of accomplishment. It is not a common activity. It is not easy to find similar activities in daily work and study life.		lies in the innovation and content of the activity itself, so the contribution of the activity itself is greater.
Retired teacher	Share your sense of professional accomplishment	50%	Half of the chance can participate in similar education sharing camp activities.	25%	Sharing the sense of accomplishment mainly comes from the stage and the audience quality of the event.
No teacher yet	Improve the practical experience of education	50%	About half the chance	25%	Sharing from senior teachers design of experience and activities Is the main contribution of the event source.
Community residents: school children from disadvantaged families	Promote self-identity and recognition	25%	In remote communities, it is less likely to encounter similar opportunities	50%	In addition to the activities in the bookstore, you also need to be willing and willing to open your heart to the outside world.
	Build ecological and environmental awareness	10%		10%	

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
Community residents: carers of disadvantaged families	Reduce the burden of care	0%	Because of economic factors, the community has no public welfare teaching aids, and there are no other alternative opportunities.	0%	The main contribution comes from the bookstore, parents did not participate much during the activity
Community residents: participating workers	Enhance local identity	50%	The community has held community symposiums and other activities to build community consensus	25%	Mainly because of the cleanliness of the environment and teaching the preparation of teaching materials, which led to the promotion of local identity, therefore activities accounted for a larger contribution
	Improve self-identity	25%	There are few such activities in the community	10%	Because the activity makes myself have this opportunity to teach the disadvantaged kids, so the activity is the main contribution.
	Improve interpersonal relationship	50%	Because of the geographical relationship of residence, there are usually opportunities to interact with residents	50%	I am willing to love to interact with residents
	Increase personal income	25%	There are few similar activities in the community	0%	Main source of income from activity

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
Community residents: general residents	Enhance local identity	10%	Few people are willing to clean the community for free and take the initiative to increase the community's sense of identity	10%	Mainly because of the environment clean, and lead to the promotion of local identity, therefore, activities account for a larger contribution
	Improve interpersonal relationship	25%	There are few similar activities in the community	50%	
	Improve the quality of community living	10%	The living quality of the community has been poor for a long time, and almost no one will enthusiastically clean up their hometown before there are no activities.	0%	Did not participate in the activity, pure beneficiary
	Improve environmental awareness and literacy	75%	There are quite often related government activities that promote environmental protection or hold competitions	50%	Own background affect environmental literacy change
	Maintain ecological diversity	10%	The living quality of the community has been poor	10%	Ecological restoration is mainly from the bookstore work



Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
			for a long time. Before there are activities, almost no one will eagerly clean up their hometown. If no one cleans up their hometown and protects the environment, there will be no ecological restoration.		
Garden Technician	improve self-fulfillment	50%	There should be other opportunities to participate in public welfare contributions	20%	Main contribution because the bookstore is in the community It is a very well-known field. Recognize this field and share with others The contribution of the field is the main The source of the results, a small number of sources have their own background.
Hydroelectric technician	Improve self-fulfillment	50%		20%	
Woodworker	Improve self-fulfillment	75%	Very often involved in related public welfare activities	20%	
Mud Technician	Improve self-fulfillment	0%	There is no other opportunity in life to participate in related charity activities and contributions	20%	
Event participants	Improve ecological and environmental awareness and literacy	30%	Relatively few activities on the market	30%	In addition to his own background and in addition to the influence of the dating environment, the main contribution is coming from the

Stakeholder	Results	Deadweight factor	Stakeholder feedback and explanation outline	Attribution factor	Stakeholder feedback and explanation outline
	Improve physical and mental satisfaction	30%		30%	bookstore.

**Table 10 Transfer factor and drop-off factor**

<b>Stakeholder</b>	<b>Results</b>	<b>Transfer factor</b>	<b>Stakeholder feedback and explanation outline</b>	<b>Drop-off factor<sup>37</sup></b>	<b>Stakeholder feedback With description outline</b>
Government agencies: agriculture related departments	Revise policy and resource integration	0%	Because the budget is independent, there will be no crowding out effect. No spillover of negative effects was found.	20%	Policy modification or adjustment flexibility and benefits decrease by about 20% annually
	Improve the effectiveness of policy publicity	0%		0%	Will be held every year in different places promotion and endorsement, so it will not decrease
Government agencies: other government agencies	Revise policy and resource integration	0%		50%	Marginal benefit in the second year decrease by about half
	Improve the effectiveness of policy publicity	0%		50%	
Farmer	Increase personal income	0%	The whole activity is to help farmers, and does not crowd out existing resources, vested interests, or have a negative impact on others.	0%	Economic value is objective facts, so it won't be reduced.
	Improve product quality and reputation	0%		0%	Product quality improvement is objective
	Reduce workload	0%		0%	Reduce workload is objective facts, so it won't reduce utility

<sup>37</sup> The reduction rate is calculated based on "year". If it is based on month, the impact amount is too small. In consideration of significance, "year" is used as the benchmark.

Stakeholder	Results	Transfer factor	Stakeholder feedback and explanation outline	Drop-off factor <sup>37</sup>	Stakeholder feedback With description outline
	Reduce fertilizer usage	0%		0%	Reduce fertilizer usage objective facts, so not reduced utility
	Improve self-identity	0%		25%	Over time, because of the inertia in my heart role, second year dating 25% discount.
	Build environmental and ecological awareness	0%		25%	Over time, because of the inertia in my heart role, second year dating 25% discount.
Teacher training students	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	0%	Come during holiday time, no sacrifice or negative impact on family	50%	The impact in the first year is relatively large, and with the passage of time, due to the inertia in the heart, the appointment in the second year is reduced by 50%.
Agricultural technologist	Improve agricultural farming technology and practice	0%	Improving agricultural technology is harmless to oneself, and because it is an agricultural researcher, it will not compete with others.	50%	Because there is a year of implementation experience, so the second year the learning curve has slipped slightly 50%
Volunteer	Improve family relations	0%	The purely beneficial activities do not crowd out other resources or have an impact on others.	25%	Annual event though different but still will slightly diminish the benefits
	Improve interpersonal relationship	0%		25%	Although I will meet every year different people but there will still be opportunities for duplication.

Stakeholder	Results	Transfer factor	Stakeholder feedback and explanation outline	Drop-off factor <sup>37</sup>	Stakeholder feedback With description outline
	Build ecological and environmental awareness	0%		10%	Because the theme will change, so the decline in the second year the ratio is small.
	Promote good health	0%		25%	Over time, Because of the inertia in the heart, the date of the second year is reduced by 25%.
	Enhance sense of accomplishment	0%		25%	Over time, Because of the inertia in the heart, the date of the second year is reduced by 25%.
Retired teacher	Share your sense of professional accomplishment	0%	The purely beneficial activities do not crowd out other resources or have an impact on others.	25%	Over time, because of the inertia in the heart, the date of the second year is reduced by 25%.
No teacher yet	Improve the practical experience of education	0%	The purely beneficial activities do not crowd out other resources or have an impact on others.	25%	Over time, Because of the inertia in the heart, the date of the second year is reduced by 25%.
Community residents: school children from	Promote self-identity and recognition	0%	A pure benefit activity will have a negative impact on others without participating in the activity.	50%	The impact in the first year was relatively large, and the learning and feelings in the second year diminished.

Stakeholder	Results	Transfer factor	Stakeholder feedback and explanation outline	Drop-off factor <sup>37</sup>	Stakeholder feedback With description outline
disadvantaged families <sup>38</sup>	Build ecological and environmental awareness	0%	Purely beneficial activities, there is no squeeze or negative impact transfer	10%	Because the theme will change, so the rate of decline in year 2 Smaller.
Community residents: carers of disadvantaged families	Reduce feelings of worry	0%	Help take care of the children and study, and there is no other place in the community, so there is no negative spillover or transfer of negative effects to others.	75%	After the second year Habit, so feeling no longer strong
	Reduce the burden of care	0%		75%	
Community residents: participating workers	Enhance local identity	0%	Give yourself the opportunity to contribute to your strengths, and this job opportunity is created out of thin air, and there is no opportunity or resources to exclude others.	50%	The impact in the first year was relatively large, The second year of study and feeling diminishing.
	Improve self-identity	0%		25%	The second year because it's already A little used to it, so a little bit decline a little benefit.
	Improve interpersonal relationship	0%		75%	Because it is already cooked, Interpersonal relationship in the second year It's not so obvious enhance.
	Increase personal income	0%		0%	Economic value is objective Fact, so it won't be reduced utility.

<sup>38</sup>The feedback from school children mainly comes from teachers, parents and community residents.

Stakeholder	Results	Transfer factor	Stakeholder feedback and explanation outline	Drop-off factor <sup>37</sup>	Stakeholder feedback With description outline
Community residents: general residents	Enhance local identity	0%	Community residents are mainly the beneficiaries of the activities, and there is no resource crowding or substitution effect on neighboring communities or other areas	50%	The impact in the first year was relatively large, and the marginal feeling benefit diminished in the second year.
	Improve interpersonal relationship	0%		50%	Because it is already cooked, interpersonal relationship in the second year there is no such obvious improvement.
	Improve the quality of community living	0%		50%	Benefits of cleaning in the first year the most obvious, because already become clean, so benefit it's not so obvious.
	Improve environmental awareness and literacy	0%		10%	Closer to objective facts according to the research conducted by the field survey, the rate of decline in the second year is relatively small.
	Maintain ecological diversity	0%		10%	
Garden Technician	Improve self-fulfillment	0%	Because it uses free time on holidays, there is no negative impact of resource crowding or transfer	50%	No value in the second year, not applicable
Hydroelectric technician	Improve self-fulfillment	0%		50%	

Stakeholder	Results	Transfer factor	Stakeholder feedback and explanation outline	Drop-off factor <sup>37</sup>	Stakeholder feedback With description outline
Woodworker	Improve self-fulfillment	0%		50%	
Mud Technician	Improve self-fulfillment	0%		50%	
Event participants	Improve ecological and environmental awareness and literacy	0%	There is no resource crowding or transfer of negative effects or receiving response	50%	Probably every year half the benefits
	Improve physical and mental satisfaction	0%		50%	



## Chapter IV. SROI Calculation and Sensitivity Analysis

### Section 1: Present Outcome Value

We calculated the influence of the aforementioned results negotiated with the stakeholders, and the calculation method the value of each result is as follows:

$$\text{Outcome value} = \text{Number of results} \times \text{outcome pricing} \times (1 - \text{deadweight factor}) \times (1 - \text{transfer factor}) \times (1 - \text{attribution factor}) \times (1 - \text{drop-off factor})$$

The total investment in the project is NT\$6,198,735, and the total value of the outcomes is NT\$34,843,458 (discounted value), which means that every NT\$1 invested, about NT\$5.62 social value created.

**Table 11 Outcome value calculation table**

Stakeholder	Population	Outcome	Outcome ratio	Number of results	Unit result pricing	Duration	Outcome value				
							Discount not considered				Discount Rate
							Outcome pricing [before adj.]	Four factors Adjustment ratio	Outcome value [after adj.]	Outcome value Subtotal	Outcome value Discounted value
Agricultural government agency	1	Revise policy and resource integration	100%	1	850,000	2	1,700,000	4.00%	76,500	447,750	445,468
		Improve the effectiveness of policy publicity	100%	1	990,000	2	1,980,000	18.75%	371,250		
	1	Revise policy and resource integration	100%	1	1,000,000	2	2,000,000	24.00%	720,000	1,123,200	1,119,309

Stakeholder	Population	Outcome	Outcome ratio	Number of results	Unit result pricing	Duration	Outcome value				
							Discount not considered				Discount Rate
							Outcome pricing [before adj.]	Four factors Adjustment ratio	Outcome value [after adj.]	Outcome value Subtotal	Outcome value Discounted value
Other government agencies		Improve the effectiveness of policy publicity	100%	1	560,000	2	1,120,000	24.00%	403,200		
Farmer	11	Increase personal income	9%	1	1,140,000	2	2,280,000	75.00%	1,710,000	18,466,782	18,370,993
		Improve product quality and reputation	100%	11	780,000	2	17,160,000	75.00%	12,870,000		
		Reduce workload	100%	11	420,000	2	9,240,000	37.50%	3,465,000		
		Reduce fertilizer usage	100%	11	26,100	2	574,200	37.50%	215,325		
		Improve self-identity	100%	11	7,500	2	165,000	60.75%	116,944		
		Build environmental and ecological awareness	100%	11	12,400	2	272,800	28.13%	89,513		
Teacher training students	9	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	100%	9	66,250	2	1,192,500	29.05%	519,632	519,632	517,832
Agricultural technologist	9	Improve agricultural farming technology and practice	100%	9	440,000	2	7,920,000	31.15%	3,700,620	3,700,620	3,687,802
General volunteer	60	Improve family relations	50%	30	4,320	2	259,200	18.75%	56,700	1,313,625	1,307,684
		Improve interpersonal relationship	100%	60	15,000	2	1,800,000	9.38%	196,875		
		Build ecological and environmental awareness	100%	60	13,600	2	1,632,000	11.25%	193,800		

Stakeholder	Population	Outcome	Outcome ratio	Number of results	Unit result pricing	Duration	Outcome value				
							Discount not considered				Discount Rate
							Outcome pricing [before adj.]	Four factors Adjustment ratio	Outcome value [after adj.]	Outcome value Subtotal	Outcome value Discounted value
Retired teachers		Promote good health	100%	60	6,000	2	720,000	9.38%	78,750		
		Enhance sense of accomplishment	100%	60	20,000	2	2,400,000	28.13%	787,500		
		The sense of accomplishment of sharing their own specialty	100%	60	33,500	2	4,020,000	28.13%	1,319,063	1,319,063	1,313,188
		Improve the practical experience of education	100%	60	13,600	2	1,632,000	28.13%	535,500	535,500	533,115
Schoolchildren	11	Promote self-identity and recognition	36%	4	25,000	2	200,000	18.75%	56,250	82,844	82,518
		Build ecological and environmental awareness	36%	4	4,320	2	34,560	72.90%	26,594		
Parents of schoolchildren	20	Reduce the burden of care	40%	8	83,200	2	1,331,200	25.00%	832,000	832,000	830,271
Community residents guided by the bookstore	32	Enhance local identity	100%	32	24,000	2	1,536,000	18.75%	432,000	938,325	934,920
		Improve self-identity	25%	8	33,500	2	536,000	50.63%	316,575		
		improve relationships	100%	32	15,600	2	998,400	6.25%	156,000		
		Increase personal income	3%	1	22,500	2	45,000	75.00%	33,750		
Other community residents	200	Enhance local identity	100%	200	2,000	2	800,000	40.50%	486,000	5,337,000	5,317,049
		Improve interpersonal relationship	100%	200	8,000	2	3,200,000	18.75%	900,000		
		Improve the quality of community living	1%	1	360,000	2	720,000	45.00%	486,000		

Stakeholder	Population	Outcome	Outcome ratio	Number of results	Unit result pricing	Duration	Outcome value				
							Discount not considered				Discount Rate
							Outcome pricing [before adj.]	Four factors Adjustment ratio	Outcome value [after adj.]	Outcome value Subtotal	Outcome value Discounted value
		Improve environmental awareness and literacy	100%	200	57,600	2	23,040,000	11.25%	2,736,000		
		Maintain ecological diversity	1%	1	900,000	1	900,000	72.90%	729,000		
Garden Technician	3	Improve self-fulfillment	33%	1	131,250	1	131,250	20.00%	52,500	52,500	52,500
Hydroelectric technician	3	Improve self-fulfillment	33%	1	157,500	1	157,500	20.00%	63,000	63,000	63,000
Woodworker	5	Improve self-fulfillment	20%	1	168,750	1	168,750	10.00%	33,750	33,750	33,750
Mud Technician	3	Improve self-fulfillment	33%	1	41,250	0.3	12,375	40.00%	33,000	33,000	33,000
Event participants	200	Improve ecological and environmental awareness and literacy	17%	33	8,000	2	528,000	24.50%	194,040	201,758	201,059
		Improve physical and mental satisfaction	18%	35	300	2	21,000	24.50%	7,718		

Total present value	34,843,458
Total investment	6,198,735
<b>Social Return on Investment (SROI) <sup>39</sup></b>	<b>5.62</b>

<sup>39</sup>SROI=total present value/total input



## Section 2: Sensitivity Analysis

Since the calculation of SROI monetizes non-quantitative information such as qualitative and narrative information, it involves many assumptions and estimates. In order to quantify and verify the results, the SROI standard requires that sensitivity analysis must be included and disclosure in each report.

The influence factors and financial agency variables in this analysis report were calculated based on the weighted average or actual costs/expenses incurred. We added or subtracted 10% from the original calculated SROI results, and four types of influence factors that all results were less than 10% Adjusted to 10% and 30% respectively. The results of farmers' economic income, which accounted for the largest share, were reduced, and the results of the changes made by the project host themselves were added to the calculation.

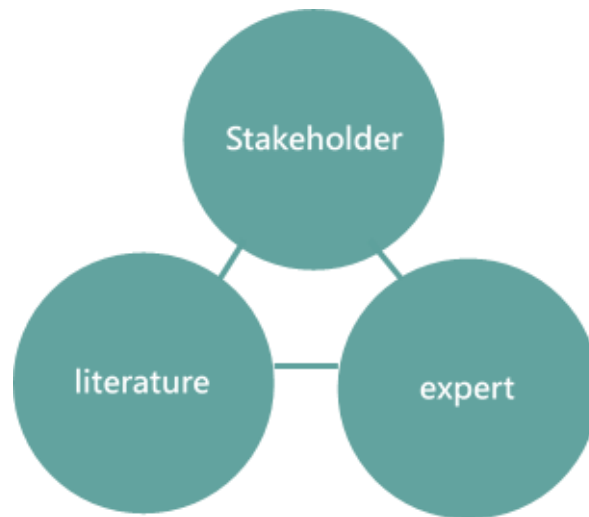
***Table 12 Sensitive analysis***

SROI	Adjustment item	Adjust content	Description
6.18	SROI	Up 10%	Because this assessment is based on different assumptions and it is the first evaluation report, so an adjustment of 10% up or down is used as the adjustment of the error range.
5.06	SROI	Down 10%	
5.37	Senseless factor (Deadweight)	<10% adjusted to 10%	In this evaluation, the evaluation parameters, deadweight factor, attribution factor, transfer factor and drop-off factor, are the most difficult item for stakeholders to understand. Therefore, in order to comply with the
4.63	Senseless factor (Deadweight)	<30% adjusted to 30%	
5.60	Attributed to factor (Attribution)	<10% adjusted to 10%	
5.26	Attributed to factor (Attribution)	<30% adjusted to 30%	

SROI	Adjustment item	Adjust content	Description
5.47	Attenuation factor (Drop-off)	<10% adjusted to 10%	principle of not over-exaggerating, this report is adjusted for the four factors.
5.11	Attenuation factor (Drop-off)	<30% adjusted to 30%<30%	
5.06	Transfer factor (Displacement)	0% adjusted to 10%	
3.93	Transfer factor (Displacement)	0% adjusted to 30%0%	
5.35	Deduct the most significant results	Adjust farmers' economic income to zero	Because this activity mainly hopes to produce environmental and social benefits, “increased farmer’s income”, which is the most beneficial outcome, was deducted as a stress test.

### Section 3: Verification Results

In the third stage of the negotiation process of verifying the results, we confirmed all the results and analysis content face-to-face and telephone interviews with stakeholders. In addition, during the negotiation process, we also referred to relevant documents<sup>40</sup> and closely contacted and discussed with experts to confirm the overall the research and analysis results are in line with actual and reasonable conditions. The verification content is as follows:



#### 1. Confirm the event chain

We confirm the outcome event chain drawn after interviews and questionnaire surveys with various stakeholders. Because the outcome event chain captures the feedback from various stakeholders, most stakeholders agree with the event chains in the verification stage. In addition, in the first and second phases of the negotiation results, the stakeholders did not give any negative results, so we discussed and confirmed this situation with the stakeholders in the third phase. Finally, there were no negative results.

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<sup>40</sup> The references are listed in the section “References”



*Table 13 Summary of number of stakeholders involving in verification stage*

Stakeholders	Subgroup	Population	Amount
Government agencies	Agricultural government agency	1	1
	Other government agencies	1	1
Farmer		11	3
Academic unit	Teacher training students	9	5
	Agricultural technologist	9	5
Volunteer	General volunteer	60	15
	Retired teacher		
	Unemployed teacher		
Residents	Schoolchildren	11	4
	Parents of school children	20	20
	Community residents guided by the bookstore	32	4
	Other community residents	200	10
Community residents with professional skills	Garden Technician	3	1
	Hydroelectric technician	3	1
	Woodworker	5	1
	Mud Technician	3	1
Social participant		200	35

## 2. Confirm that the results are not double-counted

The event chains were the feedback content of the stakeholders, so in the verification stage, most of the stakeholders agreed with the achievement history drawn on the event chain. We especially traced the course of each result, including different causes and result paths, to avoid double counting of the same or similar results.

At this stage, we especially confirmed the results that were easily be confused and double-calculated by the stakeholders. For example, it is recognized that an increase in revenue is an increase in total revenue, and

a decrease in cost is a reduction in individual costs, rather than concepts such as net revenue.

### 3. Confirm the calculation result

We explained the calculation logic and its meaning to the stakeholders, and further confirmed the importance of the results to the stakeholders and the degree of occurrence to determine whether the results were consistent with the final calculation results. Finally, the confirmation results show that the stakeholders agreed with our calculations and the results were consistent with its feelings and feedback.

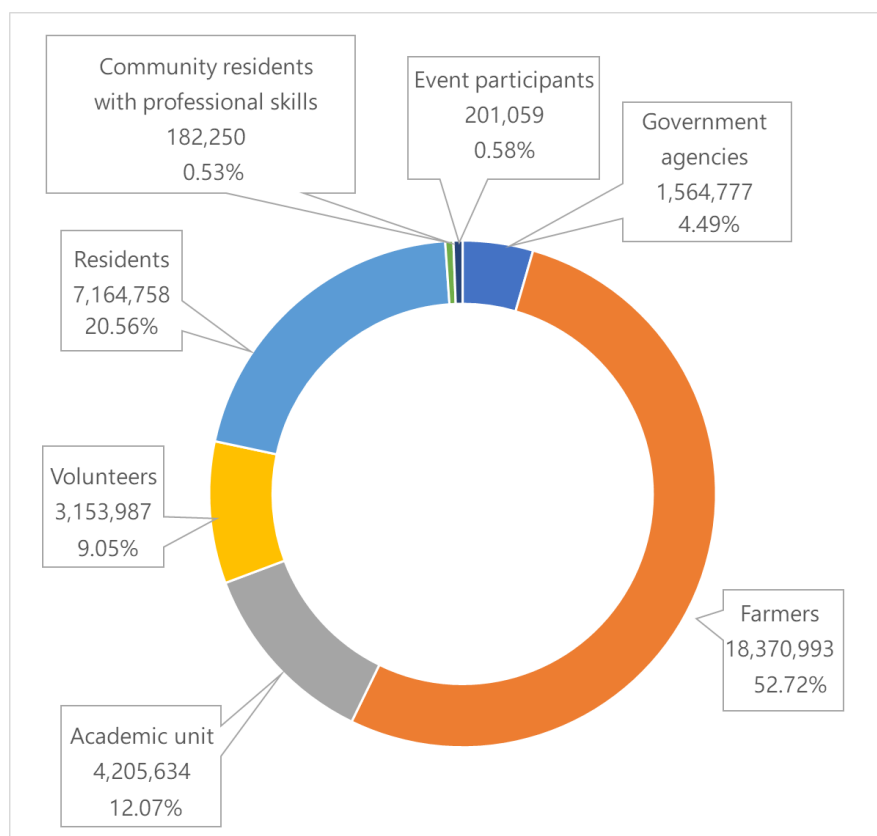
### 4. Verification conclusion

After the calculation, negotiation and verification processes, the project management team believed that there was no clear evidence showing that other people's calculation of this project activity would be materially different from this calculation result.

## Chapter V. Achievement Verification and Disclosure

### Section 1: Outcome Analysis

In the analysis of this report, it can be found that the value distribution of the results of the stakeholders is as follows:



**Figure 5 Outcome value ratio map**

**Table 14 Proportion of outcome value in the project**

Stakeholder	Sub-ethnic group	Outcome value	Percentage of total results
Government agencies	Agricultural government agency	445,468	1.28%
	Other government agencies	1,119,309	3.21%
Farmer		18,370,993	52.72%
Academic unit	Teacher training students	517,832	1.49%

Stakeholder	Sub-ethnic group	Outcome value	Percentage of total results
	Agricultural technologist	3,687,802	10.58%
Volunteer	General volunteer	1,307,684	3.75%
	Retired teacher	1,313,188	3.77%
	Unemployed teacher	533,115	1.53%
Community residents	Schoolchildren	82,518	0.24%
	Parents of school children	830,271	2.38%
	Community residents guided by the bookstore	934,920	2.68%
	Other community residents	5,317,049	15.26%
Community residents with professional skills	Garden Technician	52,500	0.15%
	Hydroelectric technician	63,000	0.18%
	Woodworker	33,750	0.10%
	Mud Technician	33,000	0.10%
Activity experience		201,059	0.58%
Total		34,843,458	100.00%

Among the achievements, farmers' achievements accounted for the largest number, followed by community residents, which is consistent with the purpose of this project to lead the local creation of mushroom industry. However, the changes to volunteers and social participants did not seem to be as expected. After discussions with stakeholders, the reason may be that the background of the project executor is a professional mushroom farmer, so he can think about improving the welfare of farmers and designing more influential activities, but not for other stakeholders.

## Section 2: What Will be Done

This report is for the first year SROI analysis report of the Dream Book House project. Prior to this, there was no analysis and research on the same field, so the involved stakeholders did not establish an appropriate basis for measurement before the project was changed. Therefore, we define this project report as a predictive SROI report, and establish an appropriate measurement basis in this project report. The next SROI report will focus on the following items to optimize and refine the method of future negotiation and analysis:

Item	Description
Stakeholder's negotiation method	The stakeholder negotiations in this report are mainly conducted through interviews and questionnaires after the event. In the future evaluation, we will conduct analysis and comparison both before and after.
Optimization of indicators	After the first assessment, we have had a preliminary idea about the context and direction of the change of stakeholders. Therefore, in the future, we will review the indicators determined by our assessment and seek more representative indicators.
Judgment of negative outcomes	In the process of analysis, we carefully pay attention to whether there is a negative impact on the stakeholders or the stakeholders outside the scope of the analysis, and use interviews and open questionnaires to ask the opinions of the stakeholders in the analysis and the stakeholders outside the analysis. After a comprehensive judgment, the stakeholders with feedback mostly emphasized "how to make the activity better" rather than "I think it has a negative impact on me". In the future, when we hold events, we will give feedback to the stakeholders in the results of this survey to check the possibility of negative results. In addition, the scope of investigation will be expanded to the neighbourhood to see if there will be any negative effects of transfer.

Item	Description
Elaboration of evaluation options	Because it is the first analysis, and to make it easy for the stakeholders who are in contact for the first time to judge. In this evaluation, the price range is widened in the selection of the willingness to pay value method and the alternatives analogy method. The purpose is to understand the stakeholder's attitude towards prices and the possible range. In the future evaluation design, we will start with this and design more refined evaluation options.

### Section 3: Research Risk and Professional Judgment

This report is analyzed by the SROI method. We have followed the seven principles to prepare this report. However, because it is the first time to evaluate the benefits of the event in this field, the collection of relevant data is limited and must be based on certain basic assumptions. Therefore, we have made different professional judgments in the following stages:

<b>Professional judgment project</b>	<b>Description</b>
Inclusion and exclusion of interested parties	The inclusion and exclusion of stakeholders affects the scope of the calculation of the entire report. Although we follow the stakeholder judgment scale as the basis, we still have to integrate the opinions of stakeholders and experts in the end, and use professional judgments to choose the stakes Inclusion and exclusion of people.
Final judgment of results	According to the explanation of the "understand what changes" supplementary guidelines, we practiced the four main steps and discussed with the stakeholders, and finally judged the final results of the stakeholders in the outcome event chain. These judgments mainly focus on the subjective results of the stakeholders.
Judgment of negative outcomes	We carefully pay attention to whether there are any negative impacts on stakeholders or stakeholders outside the scope of the analysis. We use interviews and open questionnaires to ask the opinions of stakeholders inside the analysis and those outside the analysis. After a comprehensive judgment, the stakeholders with feedback mostly emphasized "how to make the activity better" rather than "I think it has a negative impact on me".
Selection of evaluation methods	The evaluation method provides different evaluation methods in the guide "Value the things that matter". We refer to the opinions of experts for different results, and select the appropriate one for each result when the stakeholders are clear and objective. Evaluation method.

<b>Professional judgment project</b>	<b>Description</b>
Selection and judgment of indicators	Different results need different indicators to prove. The indicators of various results are sometimes intuitive, such as economic income. Others require professional judgment, such as ecological diversity and sense of accomplishment. For indicators that require professional judgment, we start from the level of rigor in this report, discuss with experts, refer to literature, and interview with stakeholders to confirm that they are applicable and clearly understood, and then select suitable for some results (mostly subjective) index of. For example, the Likert scale commonly used in this report is determined during the judgment process.
Investigation method of influence factor	The influence factor is challenging to communicate with stakeholders in terms of observation of evidence. Therefore, we finally decided to divide the degree of influence factor into 5 equal parts on the basis of the level of rigor in this report, and seek a more suitable evaluation number if the stakeholders can fully understand the situation.
Determination of discount rate	Because Taiwan is in a relatively stable political and economic society, we use the one-year fixed deposit period of the post office as the discount rate, which represents the opportunity cost of capital for investors.



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## Appendix 1. Interview Question Outline and Questionnaire

### ➤ Interview Question Outline

Project	Interview topic
Results	After cooperating with/participating in mountain city mushroom cultivation and dream book house activities, what changes have been made to you, the group you represent or the people and things around you (including: thoughts, behaviors, cognition, mood, etc.)? Are there any negatives? Change and influence?
Deadweight factor	If you don't cooperate with/participate in the mountain city mushroom cultivation and dream bookstore activities, is the above change still possible?
Attribution factor	Are there other factors that contribute to the above changes?
Transfer factor	Do the results of the activity transfer the problem to other places?
Attenuation factor/duration	How long did these changes last? Will they gradually decrease over time?
Importance	Please rank the above changes according to their importance to you
Pricing	Are there other channels that can be the same as the changes caused by this plan? What is the approximate cost of these channels?

Other	Are there any unexpected changes? Please explain do you have any other ideas or suggestions regarding the activities of Jishancheng mushroom cultivation and dream book house?
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➤ **Sample questionnaire (take farmers for example)**

1. *Your gender:*

- A. Male
- B. Female

2. *Your age:*

- A. 18-25
- B. 26-35
- C. 36-45
- D. 46-55
- E. 56-65

3. *What kind of activities did you mainly participate in in “Mountain City Mushroom, Dream Book House” project (Hereinafter referred to as “bookstore activities”)? (multiple choices)*

- A. Environment protection/ Mountain cleanup
- B. Courses/lectures/workshops

- C. Community cultural guidance
- D. Parent-child reading
- E. After-school counseling for children in the community
- F. Others\_\_\_\_\_

4. *How long have you worked in government agencies?*

- A. Less than 3 years
- B. 3-7 years
- C. 8-15 years
- D. 16-25 years
- E. 26-35 years
- F. Over than 35 years

5. *Will your participation in the bookstore activities affect and change your thinking, attitude, and behavior in the future?*

- A. Yes
- B. No ( The end of the questionnaire )
- C. Other, please give a brief explanation

6. Following question 5, if you chose yes, which one of the following descriptions is more suitable for you? Please use 0-5 points to represent your degree of changes. (0-5 represent no change to significant change)

0 point : I did not change after participating in bookstore activities

1 point : I have changed a little after participating in bookstore activities

2 point : I have changed partially after participating in bookstore activities

3 point : I have changed after participating in bookstore activities

4 point : I have changed a lot after participating in bookstore activities

5 point : I have changed significantly after participating in bookstore activities

	0 point	1 point	2 point	3 point	4 point	5 point
Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake						

mushrooms increased fourfold during the reporting period → increase personal economic income						
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply for organic certification → improve product quality and reputation						
The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil → increase soil metabolism → fix nitrogen source → improve the disease resistance of crops and increase the survival rate of shiitake mushrooms → no need to invest too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers						

Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage→ save cost						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → to be proud of being a mushroom farmer→ improve self-identity						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the						

concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness						
Other, please give a brief explanation						

7. *Are there any negative effects and results in your participation in the bookstore and farm activities?*

- A. Yes
- B. No
- C. Other, please give a brief explanation

8. *If there is a negative impact, which of the following descriptions is closer to your negative impact?*

- A. learning will not be new technology frustration and sense of loss.
- B. It feels like the competition in the industry is fierce.
- C. The overall toil increased
- D. others, added

9. *Please answer the following question for each outcome in the table below:*



- ( 1 ) Please sort the following outcomes by your importance. 1 is the most important and then 2, 3... and so on)
- ( 2 ) Please value each outcome, choose one you think is the most suitable.

Results	(1) Importance Rank	(2) Outcome Evaluation				Description
Increase personal income		(A) My actual increased income is X dollars a year (Please answer Question 10)				
Improve product quality and reputation		(A) The actual application fee for organic certification is X dollars (Please answer Question 10)	(B) I am willing to exchange X dollars for such results in 1 year (Please answer Question 10)	(C) The results bring me benefits like Y's services or goods to achieve the same results for 1 year	(D) Other, please give a brief explanation	

				(Please answer Question 11)		
Reduce workload		(A) My actual reduced working time is X days a year, which is equivalent to X dollars monthly salary (Please answer Question 10)	(B) I am willing to exchange X dollars for such results in 1 year (Please answer Question 10)	(C) The results bring me benefits like Y's services or goods to achieve the same results for 1 year (Please answer Question 11)	(D) Other, please give a brief explanation	
Reduce fertilizer usage		(A) The actual cost of fertilizer I reduced is X dollars a year (Please answer Question 10)				

Improve self-identity		(A) I am willing to exchange X dollars for such results in 1 year (Please answer Question 10)	(B) The results bring me benefits like Y's services or goods to achieve the same results for 1 year (Please answer Question 11)	(C) Other, please give a brief explanation		
Build environmental and ecological awareness		(A) I am willing to exchange X dollars for such results in 1 year (Please answer Question 10)	(B) The results bring me benefits like Y's services or goods to achieve the same results for 1 year (Please answer Question 11)	(C) Other, please give a brief explanation		

*10. Following question 9(2), if you chose A, please offer an actual or approximate amount of X and give a reference of the amount.*

11. Following question 9(2), if you chose B, please choose the best description for Y (as listed below) and offer an actual or approximate amount of Y and its reference.

Results.	Option 1	Option 12	Option 3	Option 4	Option 5	Option 6	Option 7
Increase personal income	N/A. It should be the actual number of increased income.						
Improve product quality and reputation	Ask the spokesperson to speak for your own agricultural products	Participate in agricultural products related exhibitions	Place marketing products	Shoot product image ads	Ask the Internet celebrities to shoot promotional videos and try out agricultural products	Other, please give a brief explanation	

Reduce workload	Purchase agricultural technology textbooks for self-study	Go to Japan to learn the whole set of agricultural technology	Transfer a new technology from the Agricultural Research Institute	Go back to the College of Agriculture to study agricultural technology for university credits	Participate in a workshop on agricultural technology	Obtained a degree in Taiwan Agricultural Technology Program	Other, please give a brief explanation
Reduce fertilizer usage	N/A. It should be the actual number of decreased cost.						
Improve self-identity	Purchase agricultural technology textbooks for self-study	Go to Japan to learn the whole set of agricultural technology	Transfer a new technology from the Agricultural Research Institute	Go back to the College of Agriculture to study agricultural technology for	Participate in a workshop on agricultural technology	Obtained a degree in Taiwan Agricultural Technology Program	Other, please give a brief explanation

				university credits			
Build environmental and ecological awareness	Purchase agricultural technology textbooks for self-study	Go to Japan to learn the whole set of agricultural technology	Transfer a new technology from the Agricultural Research Institute	Go back to the College of Agriculture to study agricultural technology for university credits	Participate in a workshop on agricultural technology	Obtained a degree in Taiwan Agricultural Technology Program	Other, please give a brief explanation

12. For each of the following results, is this a rare opportunity for you? Please give scores from 1-5

	1 point This is an easy- to-reach opportunity	2 point This is a somewhat accessible opportunity	3 point Generally speaking, such opportunities	4 point This is not an easy opportunity to access	5 point This is a rare opportunity

			are not too difficult		
Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake mushrooms increased fourfold during the reporting period → increase personal economic income					
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply for organic certification → improve product quality and reputation					
The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil → increase soil metabolism→ fix nitrogen source→ improve the disease resistance of crops and increase the survival rate of shiitake mushrooms→ no need to invest					

too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers					
Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage → save cost					
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → to be proud of being a mushroom farmer → improve self-identity					
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers →					



income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness					
Other, please give a brief explanation					

*13. For each of the following results, are there other factors that will achieve the same result for you?*

	I also often self-study and develop new agricultural technologies	I also often exchange new agricultural technologies and knowledge with my colleagues	I also often go abroad to learn agricultural technology and new knowledge	I also often participate in agricultural research activities	My practical work experience makes it easier for me to achieve the results of this activity	Other factors, please specify
--	-------------------------------------------------------------------	--------------------------------------------------------------------------------------	---------------------------------------------------------------------------	--------------------------------------------------------------	---------------------------------------------------------------------------------------------	-------------------------------

Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake mushrooms increased fourfold during the reporting period → increase personal economic income						
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply for organic certification → improve product quality and reputation						
The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil → increase soil metabolism → fix nitrogen source → improve the disease resistance of crops and increase the survival rate of shiitake						

mushrooms→ no need to invest too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers						
Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage→ save cost						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → to be proud of being a mushroom farmer→ improve self-identity						

Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness						
Other, please give a brief explanation						

*14. For each of the following results, will there be any degree of crowding out or negative impact on you or other people you think about?*

	will result in very serious resource crowding or	will have a serious resource crowding or	There are often general resource exclusions	will have a resource exclusion or negative	will have a very slight resource crowding or	Other, please explain
--	--------------------------------------------------	------------------------------------------	---------------------------------------------	--------------------------------------------	----------------------------------------------	-----------------------

	negative impacts	negative impact	or negative effects	impact that is not too severe	negative impact	
Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake mushrooms increased fourfold during the reporting period → increase personal economic income						
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply for organic certification → improve product quality and reputation						
The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil →						

increase soil metabolism→ fix nitrogen source→ improve the disease resistance of crops and increase the survival rate of shiitake mushrooms→ no need to invest too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers						
Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage→ save cost						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the						

community to grow mushrooms) → to be proud of being a mushroom farmer → improve self-identity						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness						
Other, please give a brief explanation						

*15. How long do you think the results promoted or enhanced by participating in the bookstore activities can last?*

	1 month	6 month	1 year	2 year	3 year	Other, please explain
Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake mushrooms increased fourfold during the reporting period → increase personal economic income						
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply for organic certification → improve product quality and reputation						



The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil → increase soil metabolism→ fix nitrogen source→ improve the disease resistance of crops and increase the survival rate of shiitake mushrooms→ no need to invest too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers						
Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage→ save cost						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the						

concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → to be proud of being a mushroom farmer→ improve self-identity						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness						
Other, please give a brief explanation						

*16.If you do not continue to maintain and participate in similar activities, do you think the improved or enhanced results will have a declining effect after one year?*

	Will, will be very serious decline and reduce efficiency	will, will seriously decline and reduce the benefits	Will, will decline and reduce the efficiency	There will be a slight decline and reduction in benefits	Will, there will be a slight decline and reduced benefits	Other, please explain
Establish a demonstration farm → introduce new mushroom growing technology from Japan → open classes to teach agricultural knowledge → practice on the farm → the production of shiitake mushrooms increased fourfold during the reporting period → increase personal economic income						
Establish a demonstration farm → introduce new Japanese mushroom growing technology → start a class to teach agricultural knowledge → practice on the farm → help farmers eliminate poisons (heavy metals) → improve agricultural technology → apply						

for organic certification → improve product quality and reputation						
The host teaches farmers to use microbial photosynthetic bacteria → put them in the soil → increase soil metabolism→ fix nitrogen source→ improve the disease resistance of crops and increase the survival rate of shiitake mushrooms→ no need to invest too much manpower to take care of → reduce maintenance time and effort → reduce the workload of mushroom farmers						
Use microbial photosynthetic bacteria → put into the soil → increase soil metabolism → fix nitrogen source → reduce fertilizer usage→ save cost						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the						

environment and use the good environment of the community to grow mushrooms) → to be proud of being a mushroom farmer→ improve self-identity						
Introduce new mushroom growing technology from Japan → technical improvement of project activities, four times the production of shiitake mushrooms → share the technology with other mushroom farmers → income promotion of mushroom farmers → slowly agree with the concept of project activities (protect the environment and use the good environment of the community to grow mushrooms) → build ecological and environmental awareness						
Other, please give a brief explanation						

## Appendix 2. Achievement value calculation table (each year)

Stakeholder		Outcome	Number	Duration (year)	Outcome pricing (NT\$)	Deadweight factor(%)	Attribution factor(%)	Displacement factor(%)	Attenuation factor(%)	Outcome value	
Subgroup	Population of every subgroup									Discount Rate	1.05%
										1 <sup>st</sup> year (After the event)	2 <sup>nd</sup> year
Agricultural government agency	1	Revise policy and resource integration	1	2	850,000	90%	50%	0%	20%	42,500	33,647
		Improve the effectiveness of policy publicity	1	2	990,000	25%	75%	0%	0%	185,625	183,696
Other government agencies	1	Revise policy and resource integration	1	2	1,000,000	20%	40%	0%	50%	480,000	237,506
		Improve the effectiveness of policy publicity	1	2	560,000	20%	40%	0%	50%	268,800	133,003
Farmer	11	Increase personal income	1	2	1,140,000	0%	25%	0%	0%	855,000	846,116
		Improve product quality and reputation	11	2	780,000	0%	25%	0%	0%	6,435,000	6,368,135
		Reduce workload	11	2	420,000	50%	25%	0%	0%	1,732,500	1,714,498
		Reduce fertilizer usage	11	2	26,100	50%	25%	0%	0%	107,663	106,544
		Improve self- identity	11	2	7,500	10%	10%	0%	25%	66,825	49,598
		Build environmental	11	2	12,400	25%	50%	0%	25%	51,150	37,964

Stakeholder		Outcome	Number	Duration (year)	Outcome pricing (NT\$)	Deadweight factor(%)	Attribution factor(%)	Displacement factor(%)	Attenuation factor(%)	Outcome value	
Subgroup	Population of every subgroup									Discount Rate	1.05%
										1 <sup>st</sup> year (After the event)	2 <sup>nd</sup> year
		and ecological awareness									
Teacher training students	9	Enhance the sense of mission to improve the sustainable economy and culture of rural areas	9	2	66,250	17%	30%	0%	50%	364,421	171,411
Agricultural technologist	9	Improve agricultural farming technology and practice	9	2	440,000	11%	30%	0%	50%	2,467,080	1,220,722
General volunteer	60	Improve family relations	30	2	4,320	50%	50%	0%	25%	32,400	24,048
		Improve interpersonal relationship	60	2	15,000	75%	50%	0%	25%	112,500	83,498
		Build ecological and environmental awareness	60	2	13,600	75%	50%	0%	10%	102,000	90,846
		Promote good health	60	2	6,000	75%	50%	0%	25%	45,000	33,399

Stakeholder		Outcome	Number	Duration (year)	Outcome pricing (NT\$)	Deadweight factor(%)	Attribution factor(%)	Displacement factor(%)	Attenuation factor(%)	Outcome value	
Subgroup	Population of every subgroup									Discount Rate	1.05%
										1 <sup>st</sup> year (After the event)	2 <sup>nd</sup> year
		Enhance sense of accomplishment	60	2	20,000	50%	25%	0%	25%	450,000	333,993
Retired teachers		The sense of accomplishment of sharing their own specialty	60	2	33,500	50%	25%	0%	25%	753,750	559,438
Unemployed teachers		Improve the practical experience of education	60	2	13,600	50%	25%	0%	25%	306,000	227,115
Schoolchildren	11	Promote self- identity and recognition	4	2	25,000	25%	50%	0%	50%	37,500	18,555
		Build ecological and environmental awareness	4	2	4,320	10%	10%	0%	10%	13,997	12,466
Parents of schoolchildren	20	Reduce the burden of care	8	2	83,200	0%	0%	0%	75%	665,600	164,671
Community residents guided by the bookstore	32	Enhance local identity	32	2	24,000	50%	25%	0%	50%	288,000	142,504
		Improve self- identity	8	2	33,500	25%	10%	0%	25%	180,900	134,265
		improve relationships	32	2	15,600	50%	50%	0%	75%	124,800	30,876



Stakeholder		Outcome	Number	Duration (year)	Outcome pricing (NT\$)	Deadweight factor(%)	Attribution factor(%)	Displacement factor(%)	Attenuation factor(%)	Outcome value	
Subgroup	Population of every subgroup									Discount Rate	1.05%
										1 <sup>st</sup> year (After the event)	2 <sup>nd</sup> year
		Increase personal income	1	2	22,500	25%	0%	0%	0%	16,875	16,700
Other community residents	200	Enhance local identity	200	2	2,000	10%	10%	0%	50%	324,000	160,317
		Improve interpersonal relationship	200	2	8,000	25%	50%	0%	50%	600,000	296,883
		Improve the quality of community living	1	2	360,000	10%	0%	0%	50%	324,000	160,317
		Improve environmental awareness and literacy	200	2	57,600	75%	50%	0%	10%	1,440,000	1,282,533
		Maintain ecological diversity	1	1	900,000	10%	10%	0%	10%	729,000	-
Garden Technician	3	Improve self- fulfillment	1	1	131,250	50%	20%	0%	50%	52,500	-
Hydroelectric technician	3	Improve self- fulfillment	1	1	157,500	50%	20%	0%	50%	63,000	-
Woodworker	5	Improve self- fulfillment	1	1	168,750	75%	20%	0%	50%	33,750	-
Mud Technician	3	Improve self- fulfillment	1	0.3	41,250	0%	20%	0%	50%	33,000	-

Stakeholder		Outcome	Number	Duration (year)	Outcome pricing (NT\$)	Deadweight factor(%)	Attribution factor(%)	Displacement factor(%)	Attenuation factor(%)	Outcome value	
Subgroup	Population of every subgroup									Discount Rate	1.05%
										1 <sup>st</sup> year (After the event)	2 <sup>nd</sup> year
Social participant	200	Improve ecological and environmental awareness and literacy	33	2	8,000	30%	30%	0%	50%	129,360	64,008
		Improve physical and mental satisfaction	35	2	300	30%	30%	0%	50%	5,145	2,546
Present value over the years										19,901,641	14,941,817

Total present value	\$34,843,458
Total investment	\$6,198,735
Social Return on Investment (SROI)	5.62