



2023 TOP 100

GOOD PRACTICE STORY

Title: Social-function based waste management

Destination, Country: Nan Old City, Thailand

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In the category: Destination Management Environment & Climate Thriving Communities
 Nature & Scenery Culture & Tradition Business & Marketing

The Story in a picture:

The old square of Nan Old City has been opened as an eatery area for local night market during peak time to expand the capacity of the city to receive high volume of visitors.



Summary:

During high season, Nan old city has encountered 'Overtourism' from time to time especially on public holiday and weekend. With high volume of visitors, Nan municipality has arranged an evening outdoor market at the old square during such time to extend capacity to receive visitors and to maximize benefit to local from this large number of tourists at the same time. However, it has generated unprecedented type and volume of waste. With its limited capacity, the municipality so tried to find a solution to deal with the problem. So, it set up waste separation facilities inside the market to separate the waste into 9 types. However, it still had a problem because to separate waste into 9 types is quite demanding to the visitors. Therefore, the municipality recruited volunteers to position at the waste separation station to help the visitors. It turned out that elderly people are the group that is the most enthusiastic. Hence, the municipality has seen an opportunity to help these people to have an extra activity, and to be able to earn a small income while contributing to sustainable waste management in their spare time. The outcome is very impressive since these people has a strong connection to and appreciation for the city. As per the waste, it can reduce residual waste from the old square from around 1 -1.5 tons per day to around 0.2 tons per day, and the recyclable waste that can be sold to junk shops, can make extra income which has been used as a fund to support volunteer in the market, and also donated to support local needs such as scholarship for poor children.



Good Practice Story:

Destination description

Brief background of the destination.

Nan Old City, often branded as Nan living old city, is a part of the provincial administrative centre of Nan province, located in northern part of Thailand bordering to Lao PDR. Nan old city was the centre of power during its ancient independent kingdom era before became a part of Thailand. Nan old city is well-known due to its values of culture, tradition, religion, and history, inherited from generation to generation. Extensively inherited beliefs, traditions, and norms unify local people on restoring and conserving their valuably cultural heritages such as ancient sites, antiques, and significant religious places, which nowadays reflects on Nan old city's atmosphere and people's way of life and has become known as "The Living Old City". Today, Nan old city is very popular among holiday makers due to its relaxed charm, tranquillity with impressive temples, a good museum, and attractive activities. Some said that staying in Nan, their life is moving slower.

Issues faced

Problems/issues solved with the Good Practice Story.

During its high season, Nan old city is usually packed with holidaymakers, and it results in 'Overtourism' from time to time. However, Nan municipality has considered that local community in Nan still could not maximize benefit from the increasing number of tourists, especially during the night which still has not many tourism activities. It is therefore an opportunity to develop the activities to meet the tourists' demands. Then, Nan municipality then organizes an evening outdoor market every public holiday and weekend at the old square of the old city with lots of street food stalls, opened by local people, to be able to offer more choice of dining for visitors. However, although this solution has been very well successful in term of increasing local's income and economic distribution, it has created new 2 problems at the same time. Firstly, there was huge amount of waste generated from visitors during the time that the municipality did not have mechanism to collect such waste. According to the municipality's report, the amount of waste around the square, mostly food waste and plastic, increased from avg. 149 kg/day in 2019 to avg. 225 kg/day in 2020 (before hit by Covid-19). It created bad scenery and degraded the aesthetics of the old city with a picture of garbage mountain and smelly leachate at the old square of the old city. Secondly, most of the waste is an unfamiliar or 'Alien' waste which are almost entirely different from residential waste. This means the municipality has to find an alternative and more suitable way to manage this unfamiliar waste with its current capacity and resources.

Since the municipality wants to provide economic benefits over the long term through this market, especially during the nighttime, the municipality therefore needs a sustainable waste management system to deal with waste problem in parallel.

However, in solving the waste problem in the market, the municipality attempted various methods, whether increasing waste collection point, increasing the amount of garbage bins, or hiring garbage drivers and garbage collectors during the nighttime, but it was found that although it was effective, it requires a huge budget. Since Nan municipality is a small municipality, therefore, it needs to be creative to find a solution without big budget burden, yet it has to be a sustainable solution.

Methods, steps, and tools applied

Implementation of the Good Practice Story.

1. Study

- The municipality conducted a study to understand the type of waste as well as visitors and merchant behaviour, while measured the amount of waste and how it was generated. The study was

also conducted to find the best way possible to reduce residual waste as much as possible to prevent the overload of the municipal disposal plant's current capacity. At the same time, it tried to find opportunities from this waste as well.

2. Implementation

- Following the result of the study, the municipality immediately decided to ban foam containers usage completely in the market in order to reduce unnecessary waste, and encourage the merchants to use biodegradable paper food container instead.

- The municipality has separated the waste into 9 types namely, (1) food waste (2) plastic water bottle (3) plastic cup (4) plastic straw (5) plastic cutlery (6) plastic bag (7) biodegradable paper food container, (8) wooden chopstick and skewer, and (9) general waste, and provided waste separation point at the market, in order to improve recycling capacity as well as reduce pollution and bad views. Moreover, it will enable the municipal waste collection system by trucks to be performed in their regular shift.

However, Nan municipality recognised that Nan was transitioning to an ageing society with a sizable senior population. (It was estimated that Nan has an elderly population of about 29% which is higher than national average at 21-22%.) Because they have lived here their entire lives, this group of people has a strong connection to and appreciation for the place. These elderly people also have spare time but no income. Hence, the municipality has seen an opportunity to help these people earn a small income and, at the same time, contribute to sustainable waste management in their spare time.

- The municipality established a volunteer team onsite at the waste separation facilities, especially the elderly volunteers who are eager to be involved. So, they can give advice to visitors how to separate waste correctly or can help visitors who need special assistance. Moreover, the municipality set up supporting fund to support volunteers' expense such as meals and transportation. The fund was allocated from a part of rental fee and from recyclable waste that can be sold to junk shops.

Key success factors

Critical elements that led to successfully solving the issues.

1. The elderly people makes the solution relatively sustainable, because they are very bound to the place and they have much free time, and moreover, they may just need to earn additional income for themselves. This is an opportunity to establish the mechanism to manage this "temporarily generated waste" sustainably. This approach is relatively low cost comparing to installing new waste management system. This not only reduces the waste problem, but such saved cost also can be used to increase stability in life for the elderly as well.

2. The strong elderly volunteer staff is another key factor. The staff is usually local people. They will be trained about waste separation first and then go helping visitors for waste separation because each visitor has knowledge about waste separation unequally, and sometimes, in different way. So, it is important to have someone to help visitors onsite to separate the waste effectively. If the waste was not separated correctly as it should be, all efforts would be useless. Furthermore, the volunteer staff also has communication channel to exchange opinion and feedback to make improvements over time.

3. Even though this practice has been undertaken in voluntary based approach initially, to make it sustainable in a long run, it is necessary to find requital for the staff, at least for their transportation cost. To be paid directly by the municipality is not possible due to bureaucratic system. So, the municipality has established a small fund, from selling recyclable waste, to support this personnels' cost. The fund was initially granted by the municipality only once, and after that the fund has been received from the stall's rental fee which is partially cut to support the fund, and from recyclable waste that can be sold to junk shops.

Lessons learned

Challenges faced while implementing the Good Practice and their solutions.

1. In Nan Municipality case, it shows all persons in charge in the project that study or research is a must. Not only information was collected, but also it gave an insight that the municipality could use to design the best solution under its current (limited) resources and capacity.
2. At first, the municipality tried to use its own staff to work and help visitors in the market. However, it was not successful because the market is opened during weekend which is out of office time. Therefore, the municipality's staff sometimes had their personal business and was unable to concentrate. That is why using local volunteers is much favourable.
3. The food stall merchants in the market tend to be more disobedient and resist comparing to the visitors. The municipality so has to enforce regulations effectively. However, a harsh action is not a solution because they all are local people who are familiar in the community. In future, the municipality plans to provide training to local merchant for better understanding about waste problem to gain better cooperation.

Achievements and Results

Direct and indirect results of the Good Practice.

1. According to the municipality's report, it suggested that the waste separation practice can reduce residual waste from the old square from around 1 -1.5 tons per day to around 0.2 tons per day.
2. As per the separated waste, (1) food waste will go for feeding livestock or making organic fertilizer or bio gas; (2) plastic water bottles will be sold to junk shops; (3) plastic cups, plastic straws, and plastic cutlery will be given to elderly group/club in local community to make a handiwork to sell to visitors; (4) plastic bags will be cleaned and sent to refuse-derived fuel (RDF) process; (5) biodegradable paper food containers will be sent to municipality's facility and ground into very small pieces, then put in an specifically arranged area landfill; (6) wooden chopstick and skewer will be sold to make wood coal; and (7) general waste will go to the Nan's landfill as a residual waste.
3. As per the waste that can be sold, such extra income will partially go to the fund for the volunteer staff as well as for improving waste separation equipment. Moreover, the income from the waste will also partially go to donations supporting local needs such as scholarship for poor children.
4. Now, the waste management of Nan municipality has become a study site for benchmarking as a good practice for other local administrative organization in Thailand.

Tips for other destinations

Suggestion for other destinations wishing to implement the same or a similar solution.

1. Waste management may depend on the context of each destination. In this case, Nan municipality has focused on running the waste project only in the old square, but it is assured that the waste here is almost 100% generated from tourists and tourism activities. Most types of waste are different from residential waste that the municipality is familiar with. However, Nan is a small city, and its municipality doesn't have much budget to invest or upgrade into high technology of waste management. Therefore, the municipality has to look for the most suitable way to manage and reduce waste according to the current capacity of the city.
2. For destination where its visitors tend not to have good understanding or be familiar about waste separation, or waste separation is not required by law, having volunteers onsite at the waste separation facilities can help a lot. They can give advice to visitors how to separate waste correctly, or can help visitors who need special assistance, and, moreover, can indirectly give pressure to visitors to behave as it is expected.

3. For a small city like Nan old city, waste can be valuable if it is properly managed. In this case, the municipality has decided to separate the waste into 9 types because each type of waste can be able end up in different way. Many of them can be sold to junk shops or recycling plants. Such extra income can be established in the form of fund to support the volunteer and help local community. It can turn negative impact (waste) into benefit (fund) for local resident.

Recognitions and Additional references

Recognitions and awards the Good Practice received and supporting evidence.

- 1st runner-up of Sustainable Environment City 2021 by Department of Environmental Quality Promotion (DEQP)
- Winner of ASEAN CLEAN TOURIST CITY STANDARD and ASEAN ESC Award
- ASEAN ESC Award 2017 by ASEAN Secretariat and Ministry of Development Brunei Darussalam
- Research articles: Motivation Behaviour and Attitude of Tourist and Seller at Nan Walking Street : The Impact Factors to Frame Guideline for Environmental Impact Reduction:
<https://1drv.ms/b/s!AqA9BrZUxci7g4AheelbraLk1f3EDA?e=CN9Nlk>
- Progresss report of the implementation of sustainable environment city project by Nan Municipality: <https://1drv.ms/b/s!AqA9BrZUxci7g4Aj-7BBhsJSvHVMgQ?e=5Cpck>
- Survey results: Green tourism, environmental management and waste management in Nan: <https://1drv.ms/b/s!AqA9BrZUxci7g4Aiih0-e84tldL-Pw?e=J3p93U>
- The report of waste management by Nan Municipality: <https://1drv.ms/b/s!AqA9BrZUxci7g4A89BhETp-6yCVRjQ?e=UgcdC5>
- Presentation of waste management by Nan Municipality: https://1drv.ms/b/s!AqA9BrZUxci7g4AkCH5_fcvlvHUHwg?e=U9bVoN
- VTR: Good Management and Good Governance of Nan Municipality 2021): <https://www.youtube.com/watch?v=hkXjSWVYCLc>
- VTR: Good Management and Good Governance of Nan Municipality 2022 <https://www.youtube.com/watch?v=j0TuV1MswAQ>
- VTR: The solution of waste problem in Nan walking street https://www.facebook.com/watch/?v=286511368985195&extid=CL-UNK-UNK-UNK-IOS_GK0T-GK1C&mibextid=l2pjGR&ref=sharing