

WONDERFRUIT

**Summary: Sustainable Actions
at Wonderfruit 2019**

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Introduction

Wonderfruit is a 4-day celebration of art, music, food and ideas to catalyze positive impact in The Fields at Siam Country Club, Pattaya.

Wonderfruit is produced by Thailand-based Scratch First, which exists to be a catalyst for positive, social change. Wonderfruit, our platform, is an opportunity for diverse communities to come together in Thailand in an environment where innovation, creativity and social impact go hand in hand.

Ethos

We encourage, develop and innovate creative solutions for sustainable living and bring together a global community to celebrate them.

Our Pillars

Wonderfruit is built upon six pillars: Art & Architecture, Music, Wellness, Talks & Workshops, Farm to Feasts, and Family. We think of our pillars as a platform for creativity and culture in which fun and social responsibility can go hand in hand with awe-inspiring adventures: from live music experiences and thought-provoking art installations to alfresco feasts and family fun.

Summary

Between Wonderfruit 2018 and Wonderfruit 2019:

- Total waste generated increased by 7.9% to 35,883kg
- Landfill waste was decreased by 1,488%
- New building materials were reduced, and old materials reused

At Wonderfruit 2019:

- 100% of liquid waste was captured, transported, and treated
- 1,006 tons of travel CO2 emissions were voluntarily offset by attendees
- A zero single-use cup policy was implemented
- 5,456 Wonderfruit cups were purchased, with more than 50% of attendees bringing their own refill cup
- Recycled PET (rPET) fabrics were used for wayfinding and decoration
- 100% of all biodegradable packaging was processed on-site for composting
- Single-use trash bags were replaced by baskets, rice sacks, and reusable materials
- 1,098 fewer glass bottles were issued to bars, through a refill system

Sustainability goals

For Wonderfruit 2019, the headline goal was the reduction of waste diverted to landfill. The target figure was established as 0% of all waste heading to landfill, and this number informed waste management policy.

In emissions, the goal remained to maintain a greater-than neutral carbon emissions result, including attendee travel. This goal resulted in the creation of the Carbon Calculator Tool on the Wonderfruit website, encouraging attendees to measure their individual transport impact and donate to a carbon restoration program in Thailand.

Material selection

Architecture and the built environment are key visual and experiential elements in The Fields, standing as physical reminders of the sustainable intention of Wonderfruit. For Wonderfruit 2019, in addition to an ongoing commitment to bamboo and renewable material, a Scrap Yard was established in the Production Camp. Contractors, designers, architects, and artists were encouraged to make use of existing and leftover materials from previous years, to great effect. Recycled PET (rPET) made its first appearance at Wonderfruit, through partnership with Indorama Ventures. rPET fabrics were used in the decoration of Creature Stage, and for wayfinding signage.

Waste Management

Transition to zero landfill

Challenge

Wonderfruit's waste input comes from a wide range of sources, many outside of the control of a standard event operation. Vendors, contractors, local authorities, workers, and visitors are all sources of external waste being brought to the event site, and the combination of prohibited items and unexpected waste must be factored into onsite efforts to separate, process, and dutifully handle all waste streams.

The event site is much larger than the public, 'active' space, and the operational workforce significantly more spread out. Waste solutions need to be unambiguous, accessible, and recognisable, and handling protocols must consider contaminants, unexpected waste inputs, and the appearance of landfill-only items.

Management approach and solution

To ensure efficient and practical disposal and repurpose of waste materials, Wonderfruit relied on external expertise and partnerships with industrial operators to handle segregated waste streams. The event partnered with food waste management specialists SOS Thailand, and recycling company Fiber Pattana. Through Fiber Pattana, waste is distributed to SCC cement works for processing non-recyclable material for use as refuse derived fuel (RDF), and liquid waste processing plant Thai Only One Manage and Service Limited. Through these partnerships, we established a process by which all waste generated on-site was diverted to be either recycled or repurposed in outside facilities.

Results

The transition process was considered a success with 95.3% of all solid and liquid waste being diverted from landfill, when compared to the 2018 event in which 94% of solid waste was directed to landfill*. Recycling rates have also increased from 2% in 2018 to 48% for 2019.

Waste Management

Zero single-use cup policy

Challenge

Between food vendors and bars, more than 40 points of sale for beverages exist in The Fields, keeping attendees hydrated throughout the full duration of Wonderfruit. Each time a prepared beverage is served, it is served in a cup. Despite a transition to 100% compostable or biodegradable drink cups in previous years of Wonderfruit, cups remain the single largest component of waste at the end of the festival. To reduce more than 200,000 cups entering our compost system, we will enact a total single-use cup ban for all attendees and vendors. Communication is key, so all attendees are aware of the need to bring your own (BYO) cup in advance of arrival. Operationally, bars and vendors need to be prepared for the logistic, hygienic, and behavioural challenge of requiring that all attendees have their own refill cup at all points of sale.

Management approach and solution

The ban required that all attendees brought their own cup, and established a standard 'refill cup', as a cup that is more than 16-ounces (or 473mL) in volume, inflexible when squeezed, made of materials other than glass or ceramics, and designed for reuse. Security enforced the ban at entry control points.

Proper disposal of liquid waste ahead of refill was required, and encouraged, to prevent leftover ice and liquids being poured onto the ground or onto operating surfaces.

Bar operators mixed and made drinks into an intermediary vessel before pouring into the customer's refill cup, to prevent contamination between customers.

Results

As a result of the all-out ban on single-use cups at Wonderfruit 2019, 5,456 or 42.3% of attendees purchased a cup from Wonderfruit. From this, we can infer that more than half of the audience brought their own cup to Wonderfruit, heeding the calls to do so.

A small quantity of single-use bagasse cups were seen in the venue, and in the compostable waste streams, due to the offering of cups by some vendors. This was remedied at each instance, and the remaining single-use cups were collected.

With further enforcement at the point of sale with vendors, we can achieve zero single-use cup use at Wonderfruit.

Waste Management

Food waste and food containers treated on-site

Challenge

Volume, storage, and separation of food waste present immense challenges during a twenty-four hour event operation in which food plays a significant programming role.

In high temperature environments like The Fields, food waste will quickly degrade, attracting pests and discouraging use.

A large audience consumes a large quantity of food, resulting in high food waste and food container output.

Implementation and management approach

To reduce the overall volume of food waste, and the edible portion of that waste, the food waste bins were made smaller than other waste streams, and attendees were educated about food waste to encourage complete consumption.

The waste management team organised around more frequent visits to clear and empty food waste bins due to volume. All waste needed to be separated by hand to ensure food waste did not contaminate other waste streams.

As composting is not our area of expertise, Wonderfruit partnered with SOS Thailand for their knowledge in managing food surplus and composting food waste. Their role was to assist Wonderfruit with planning, live date operations, and data compilation of waste.

Results

No organic waste was sent to landfills, resulting in 2,047.9kg of food waste and 591.9kg of food containers being composted on-site inside festival grounds. The compost generated from the composting process will be used to nurture trees growing in The Fields.

Waste Management

Treatment of wastewater from food waste and drinks

Challenge

Wastewater from attendees and vendors is a combination of beverages, soups, ice, and sauces. This wastewater mix cannot be poured onto the ground, due to containing contaminants and organic matter.

With alcohol drinks forming part of the wastewater composition, the contents can become acidic, and can't be incorporated into compost on-site.

Implementation and management approach

Wastewater tanker was used to drain the wastewater from the storage container and transported to a wastewater treatment facility.

Results

No wastewater from food waste was discharged at the site and is properly treated.

Waste Management

Standard operating procedure for waste separation

Implementation and management approach

In operating a full waste stream audit and separation system, efficiency is the ultimate goal. Keeping the process streamlined, effective, and accurate should not come at the expense of worker health and safety. At Wonderfruit 2019, a ground-up rebuild of the waste collection and separation process, communication, and structure resulted in the establishment of a standard operating procedure (SOP) for Wonderfruit. This included the standardization of worker equipment and personal protective equipment (PPE) from previous years, and the exclusion of single-use plastic bags from collection.

Results

Streamlining the waste collection and separation process made for an efficient, highly accurate operation during Wonderfruit 2019. All waste was collected, removed from the live spaces, separated, weighed, recorded, and either composted on-site or transported off-site—24 hours a day.

Standardization of protective equipment, such as rubber boots, face masks, rubber gloves, and aprons ensured that all workers were able to complete their tasks in a safe working environment.

Effective communications sitewide encouraged high uptake of bins and separation, resulting in less on-ground litter than previous years.

The introduction of a single-use cup ban also had the positive flow-on effect of reducing single-use waste in The Fields.

Carbon offset

Certification of carbon emissions and offset

Implementation and management approach

Since 2017, Wonderfruit has been certified carbon neutral by Thailand Greenhouse Gas Management Organization (TGO), through an accredited carbon credits offer. For 2019, along with mitigation efforts and voluntary offset initiatives, Wonderfruit will again offset more than the festival generates in carbon emissions to ensure a net positive atmospheric effect from the operation of the event.

Results

Audit results and carbon credits will not be officially issued until July.

Carbon offset

Voluntary offset program

Challenge

Explaining and simplifying the concept of carbon off-set is difficult. Getting attendees to participate is also very challenging.

Implementation and management approach

For 2019, Wonderfruit partnered with Mae Fah Luang Foundation under Royal Patronage (MFLF) to create a campaign encouraging voluntary donations towards a carbon restoration program under the MFLF remit in the north of Thailand. Attendees were given prompts at online POS, and directed through social media, to calculate the individual carbon emission impacts of their travel to Wonderfruit. The calculator used figures sourced from MFLF to determine the approximate monetary value of offsetting their emissions, and this was donated by the attendee. The money raised from this initiative will purchase carbon credits from MFLF's Doi Tung project, which will be used to maintain existing plantations and restore fire-damaged growth in the region.

Results

The total amount of money collected was 200,650.65 Thai Baht to offset a total of 1,003.25 tons of CO₂ emissions. Voluntary donors were 49.4% Thai and 50.6% foreign.

Carbon offset

EcoSpirits

Challenge

Across Wonderfruit's many bars and points of sale, bottled spirits form a large component of alcohol sales and operations. Bottling, packaging, storing, and transporting spirits generates high quantities of carbon emissions, and accounts for the majority of glass and cardboard waste on-site.

Implementation and management approach

For the first time, Wonderfruit was a testing ground for the EcoSpirits system via partnerships with Proof & Company and Bootleggers, two independent distributors of premium spirits. EcoSpirits functions as a refill system, shipping spirits in large, reusable containers instead of individually packaged bottles. At the festival, spirits were shipped in these containers and bars were issued with refillable, unmarked bottles of the spirits. When inventory ran out, the bars could bring empty bottles to be refilled throughout the festival.

Results

Every bottle of spirits worldwide generates ~550g of CO₂ through its lifespan. Through the use of EcoSpirits at Wonderfruit, 1,908 fewer glass bottles were shipped to the festival, saving a total of 1,049.4kg of CO₂ emissions throughout the event.

The Wonderfruit Model

Following the success of Wonderfruit's waste management goals, and the ongoing collaborations undertaken to reduce the impact of waste within the event, Wonderfruit is now developing a scalable, shareable method for event waste management.

The manual and materials will be freely available to all event coordinators in Thailand, and supported by the Wonderfruit team.