



# RAINFOREST WORLD MUSIC FESTIVAL 2022

(17-19 JUNE 2022)

## GREEN EVENT INITIATIVE

In partnership with



**SARAWAK TOURISM BOARD**

## Report and Findings



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**Date** : 1<sup>st</sup> July 2022  
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## 1.0 FOREWORD

Between the amount of waste generated and the carbon emissions created by traveling fans, events like music festivals have a huge ecological footprint to solve for. As Rainforest World Music Festival (RWMF) continues to advocate ecotourism as part of its initiatives, more solutions have been developed in curbing those issues and will create a more positive relationship between the festival experience, the local community, and the planet. One of those solutions involves designing a positive collaboration with WarmingUp to unpack and identify challenges in creating a sustainable event environment and finding new ideas that can be fostered, implemented, and amplified to make a tangible impact on the environment for future events.

Thus, WarmingUp is pleased to share our progress and result of the work we put in into making RWMF 2022 sustainable, which is the Green Event Initiative Report. Contained in this report is the data collected, and processes that goes into the collection and management of recyclable and compostable wastes at the festival. Apart from that, it also discusses the improvements we made, the challenges we faced, and the proposed solutions for making things better next year.

Many thanks to all that have been a part in making and supporting WarmingUp in implementing the green event initiative for RWMF. We would like to thank Sarren Abu, Hisyamudin, Amanda, Anderson, and all other staffs from Sarawak Tourism Board (STB) for making our work smooth and successful.

Finally, a heartfelt thanks to our 23 volunteers and my own colleagues from WarmingUp Green Initiatives for staying positive, for being awesome, for relentless support and hard work in making sure all goes well.

**Fallisca Evon**

Project Manager

WarmingUp Kuching

## 2.0 PROJECT PROFILE

<b>Title of project</b>	Co-operation between Sarawak Tourism Board and WormingUp on Green Event Initiative for Rainforest Music Festival 2022	
<b>Description</b>	Planning was made for better waste management of event by installing several Ecostations and smoking zones throughout the , Sarawak Cultural Village, and volunteers were selected to monitor those stations and waste streams. Grease traps were also installed to protect and conserve waterways from kitchen waste.	
<b>Collaboration parties</b>	<b>Sarawak Tourism Board and WormingUp</b>	
<b>Venue</b>	Sarawak Cultural Village	
<b>Duration</b>	17 <sup>th</sup> June 2022 – 19 <sup>th</sup> June 2022	
<b>Aims of project</b>	<ol style="list-style-type: none"> <li>1. To cultivate civic-minded citizens through them clearing their own waste after using public space</li> <li>2. To educate public on proper waste segregation</li> <li>3. To collect relevant data for sustainable waste management</li> </ol>	
<b>Key project participants</b>	<b>Participants</b>	<b>Role/involvement</b>
	WormingUp team	<ul style="list-style-type: none"> <li>• Brief volunteer on proper waste segregation</li> <li>• Brief public on proper waste segregation</li> <li>• Collect segregated waste everyday</li> <li>• Treatment of organic waste</li> </ul>
	Volunteer	<ul style="list-style-type: none"> <li>• Brief and guide public on proper waste segregation</li> <li>• Spread awareness on food waste issue</li> <li>• Collect and record segregated waste</li> <li>• Educate public on environmental related facts</li> </ul>
	Public	<ul style="list-style-type: none"> <li>• Segregate their own waste for recycling</li> </ul>
<b>Collaborators</b>	<ol style="list-style-type: none"> <li>1. Sarawak Tourism Board</li> <li>2. Sarawak Cultural Village</li> </ol>	

## 2.1 PROJECT BRIEF

The 25<sup>th</sup> Rainforest World Music Festival took place at Sarawak Cultural Village (SCV) from 17<sup>th</sup> to 19<sup>th</sup> June, 2022, in which WarmingUp was entrusted with the responsibility to implement and enforce sustainable practices during the festival. RWMF 2022 sees the sustainable implementation of;

1. Setting up Ecostations
2. Conserving waterways
3. Conducting MOOP
4. Vendor & Volunteer Management

The aim of this project is to cultivate civic minded citizen, educate them on proper waste segregation and put them in action. To achieve the goals, the project is divided in three stages: Awareness Phase, Education Phase and Practice Phase.

For the **Awareness Phase**, RWMF had done its part in promoting the festival as an ecotourism event whereby it highlights the importance of Sarawak's unique culture and nature to be recognised by travellers, photographers, wildlife fans and adventure-seekers – responsible tourists from across the globe who are travelling here to see these natural riches and to contribute to their protection. In addition to that was fostering a collaborative partnership with environmentally conscious brands and establishments known for its sustainability practices.

In **Education Phase**, we conducted briefings and talks with both volunteers and vendors on the importance of their role in incorporating sustainable practices throughout the festival. We trained vendors to comply to the sustainable framework of our RWMF green initiatives. Ecostations were also made visible and within reach of high traffic areas where instructive signages were displayed in each booth to teach festivalgoers on how to properly dispose their waste and volunteers were on standby at each station to assist them in the process.

For the **Practice Phase**, some our staff and volunteers were tasked to monitor the waste stream in each location throughout the venue and check in with food vendors to make sure the compostable and used oils do not end up in the disposal site or waterways.

## 2.2 FOCUS AREAS

In accordance to the UN SDG, we found that the circular approach to running an event is the best starting point for the planning process. Following is a list of the strategies that were carried out to ensure the festival will be conducted in a sustainable manner.

1. Recycling
2. Composting
3. Have product packaging contribute to environmental causes (recyclable)
4. Capitalise on digital features instead of printed material
5. Inform attendees of our sustainability goals

In tackling the dimensionality of WarmingUp roles in the coming festival, the team carried out several key roles and responsibilities in green-building and coordination.

1. Environmental Management
2. Vendor Management
3. Volunteer Management
4. Awareness Promotion

## 2.3 ASSUMPTIONS

Due to various factors and two parties are involved in this project, some assumptions are made for the factors that will direct impact to the report's result.

The assumptions are as follow:

- a. All the participants involved give 100% commitment to what they responsible for and can complete the task given
- b. No biodegradable, compostable, nor recyclable waste was removed from the collection site. All the data collected and recorded is the total biodegradable waste produced from / within the site only
- c. At least 80% of the biodegradable and recyclable waste produced and segregated at the site will only be collected by WarmingUp team
- d. All partners and collaborators will give 100% cooperation to the team's initiative

## 3.0 INTRODUCTION TO FLY TECHNOLOGY AGRICULTURE (FTA)

### 3.1 WHO WE ARE

Fly Technology Agriculture Sdn Bhd was established in year 2015, founded by a group of young graduates who are passionate about environmental protection and conservation. We advocate for Sustainability Development Goal 12 - Responsible consumption and production.

### 3.2 CORE TEAM



**Ts. Jeff Wee**  
*Managing Director at FTA Group*

*BSc. Resource Chemistry*  
*Sustainability Consultant*  
*Registered Prof. Env. Technologist (MBOT)*  
*Pursuing MSc. in Environmental Science & Project Management Professional (PMP)*



**Tan Pei Chin**  
*Business & Research Development*

*MSc. Entomology*  
*BSc. Resource Biotechnology*  
*HRDF Certified Trainer (TTT)*  
*6 years in insect technology development & field works in Mauritius, China and Malaysia*



**Fallisca Evon**  
*Media & Communication*

*BA. Linguistics*  
*Specialized in Childhood Education*  
*Experienced in translating and proofreading journal articles, social media and dealing with kids*



**Then Yi Yii**  
*Conservation Farming*

*BSc. Plant Science & Management*  
*Specialized in plantation & crop management*  
*Experienced in organic farming, sustainable farming, regenerative farming and conservation projects*



**Carlson Tawi**  
*Education & Special Project*

*MSc. Wood Science*  
*BSc. Plant Science & Management*  
*Specialized in Environmental Conservation*  
*5 years in research and development & capacity building with Bidayuh tribe*



**Collinico Crifew**  
*Operation Head*

*Responsible to oversee operational activities at administrative levels*



### 3.3 WHY WE EXIST

Our main aim is to manage biodegradable waste to avoid improper degradation which would bring negative impacts to our environment. The technology involves entomological process (maggot of black soldier fly) and bio-enzyme composting process. The key concept is to create a virtual loop for recycling nutrients back to nature.

We aim to create a circular economy within the food supply chain where food waste contributes directly to the production of wholly organic foods ensuring the sustainability of our food source whilst ensuring the environment is looked after in the process. Our core activities involve organic waste management, sustainable farming, educational workshops and green event management.

### 3.4 OUR THREE PILLARS



#### **Sustainability Consultation & Training**

We advocate for sustainable concept:

- Upcycling Project Management
- Sustainability Project Management
- CSR Project Management
- Green Event/Program Management
- ISO 14001, EMS, EIA, EMP and EMR
- Publications



#### **Environmental Management & Operations**

The organic waste included:

- Kitchen waste
- Food waste
- Animal carcasses
- Animal waste (faeces)
- Slaughterhouse waste
- Supermarket expired food
- Biodegradable tableware



#### **Responsible & Sustainable Food Supply Chain**

Less pesticides, chemical and pure natural fertilizer for farming by local rural farmers.

Execution on rescue of surplus food into shelf-stable products

Digitalization of the food supply chain

## 4.0 SUSTAINABILITY INDICATORS

Staying true to our commitment towards sustainable development, we measure our sustainability impacts using WormingUp Sustainability Indicators. These indicators are derived based on the United Nations Sustainable Development Goals (SDG) and Targets. Through the Rainforest World Music Festival, we have contributed towards achieving the listed SDGs below:

Since 2017 we have identified on six UN SDG goals to be adopted by RWMF. The six main sustainability goals and its respective indicator determine on which to focus on throughout its planning process and the execution on-site. These categories form the basis for data, gathered, measured, and assessed during the end of the project.

Goals identified:

Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12	Ensure sustainable consumption and production
Goal 13	Take urgent action to combat climate change and its impacts

**To explore further for next RWMF 2022:**



More detailed information on our efforts in achieving these goals is in the next pages.

## 4.1 THE MATERIALITY OF GOALS AND TARGETS

The SDG Goals and Targets identified is considered to be material in regard to the RWMF 2022. While the SDG goals are general and have a large scope, the targets are more specific.

Below are the list of Goals and their level of materiality.

High Materiality Goals (Project Goals):



## 5.0 IMPLEMENTATION PHASE

We managed to minimise the impacts of events that could bring to our environment.

We refer to the following:

1. Air pollution
2. Water pollution
3. Soil pollution
4. Waste generation (especially cigarette butt accumulations)
5. Single-Use Plastics as contaminants

Following are the specific mitigation plans to tackle the above problems were carried out to minimise the impacts and convert the waste products to other products:

1. Place **six EcoStations** throughout the venue for easy access to waste collection & used oil collection from vendors
2. Strategically set up **two smoking zones** throughout the premise and collection of cigarette buds
3. Conserving waterways by installing **four grease traps** at food areas and vendors' washing areas
4. Carried out MOOP line sweeps (in Dayak Tribe Theme) for better clean-up coordination

## 5.1 ECOSTATIONS

### TARGETS ACHIEVED



**4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development



**12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse



**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

We set up waste and weighing stations within the SCV ground near F&B areas and high foot traffic areas. Those waste stations serve as a collection and segregation centre for recyclables, food waste and biodegradable tableware, generated by the festivalgoers and food vendors.



*Image 1: Main Banner Display (8ft x 4ft) - RWMF Green Event Initiative*



*Image 2: Label designs for EcoStation bins*

Volunteers were assigned to each of those waste stations, where they instruct and educate festivalgoers to segregate recyclables and food waste. The volunteers also help with the efforts to lower the amount of contamination and increased the number of recyclables and food waste collected.



*Photos 1 & 2: Display and Designs of Ecostations*

## 5.2 SMOKING ZONES

### TARGETS ACHIEVED



**3.d** Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks



**12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

Two designated smoking areas was constructed for the festival to keep second-hand smoke from effecting children and non-smokers. These zones were provided with cigarette bins with a clear “Smoking Zone” sign. No food or drink were to be sold or served within six feet radius of the perimeter. Volunteers were tasked to monitor these zones to ensure the bins were being properly utilized.



*Photo 3: Smoking perimeter constructed with bamboo and biodegradable hemp rope*



*Photo 4: Signage design for smoking zone*

These structures are makeshift and temporary as they are structured mainly from sustainable products like bamboos, coconut shells, and biodegradable hemp rope.



*Photos 5 & 6: Cigarette bins made from bamboo culms and coconut shells*



## 5.3 WATERWAYS CONSERVATION

### TARGETS ACHIEVED



**6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally



**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Healthy waterways and watersheds are critical to people and wildlife and we work hard to protect them. Apart from collecting vendor's used oils and organic kitchen waste to divert them from ending up into the drainage system, we came up with two other green infrastructure plans to preserve and conserve the waterways – the installation of grease traps and sink strainers.

### 5.3.1 Grease Traps

Four grease traps were brought out to filter food particles and grease from contaminating the waterways.



Grease traps work by trapping the fats, oils, grease and starches (FOGS) that rise to the top from wastewater before it enters the drains. When wastewater enters a grease trap, it slows the water flow down significantly, separating it into solids on the bottom layer, wastewater in the middle, and FOGS on the top.



*Photos 7 & 8: Grease trap placement and installation near vendor's kitchens and food stall areas*

### 5.3.2 Sink Strainers

Six sink strainers were installed in washbasins of main dining area for general washing. Two food barrels – one of leftover waste and the other for vegetative waste – were conveniently placed next to these washbasins so that the waste collected in the strainer baskets can be directly transferred into them.



A sink strainer is a type of perforated metal sieve or mesh strainer used to strain or filter out solid debris in the water system



*All six main washbasins were installed with sink strainers*

## 5.4 MOOP SESSIONS

### TARGETS ACHIEVED



**4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development



**12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse



**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

### 5.4.1 Framework

The first group takes a sweep line that covers secondary paths along the back of the native houses and vendor sites while the red sweep line will take through the front of those structures. The team taking the second sweep line will also have to look out for any waste that the first team might have missed along the path. Both teams are given 45 minutes to complete a full sweep so there is enough time to segregate the waste in 15 minutes once they return to Home Base.

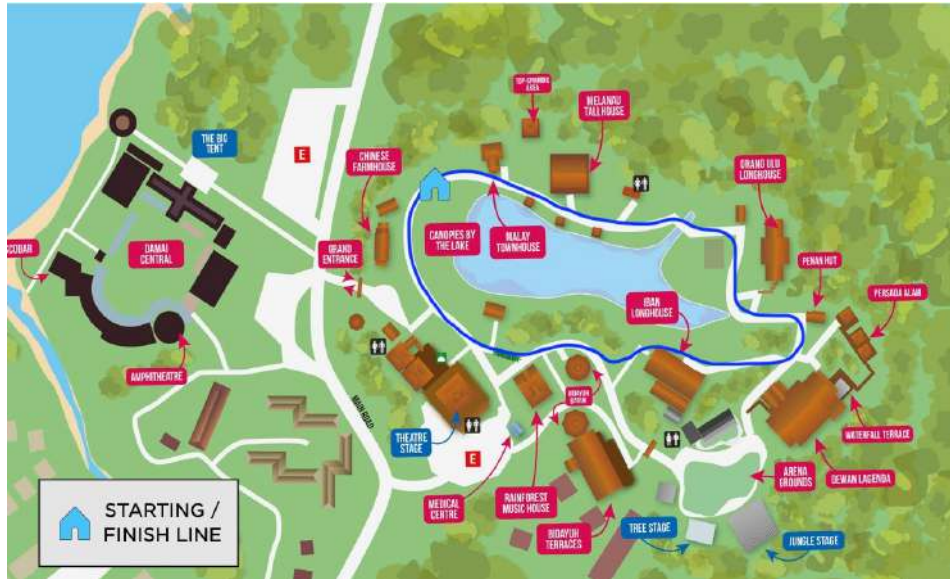


Image 3: Sweep line map showing main routes for moop

#### 5.4.2 Description

The Moop sweep was designed represent the two Dayak tribes of Sarawak. The runner of each group were to wear the traditional head dress of the Dayak tribe based on the designated tribal theme of said group. Handcrafted bamboo tongs were used to replace litter-pickers as it is safer for the environment as well as for the use of the volunteers. We also used traditional rattan baskets (or most commonly known as Tambok by the Dayak community) to collect litter which were lined with reusable gunny sacks in place of biodegradable plastic bags. Each volunteer was also supplied with a pair of biodegradable plastic gloves to keep their hands clean when performing their duty.



Photo 9: The twelve night shift volunteers carrying out the MOOP



*Photo 10: Moop going smoothly despite the rainy weather*

Raincoats were given to volunteers on the first day when it rained to prevent them from catching a cold and so that the sweep can be conducted smoothly. After the sweep collective amount of waste were then carefully segregated before being weighed and recorded for analysis.



*Photo 11: Segregating the waste post moop for weighing and record*

## 6.0 VOLUNTEER MANAGEMENT AND TRAINING

### TARGETS ACHIEVED



**4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development



**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

### 6.1 E-MEETING & VIRTUAL WORKSHOP

In the implementation of recycling and waste management for RWMF 2022, we engaged with 23 volunteers to assist with the Green Event Initiative. Training session for the volunteers was held on the 13<sup>th</sup> of June to equip the volunteers with the initiative done. The sessions explain their tasks, responsibilities throughout the festival, the importance of recycling, waste management, and smoking zones.

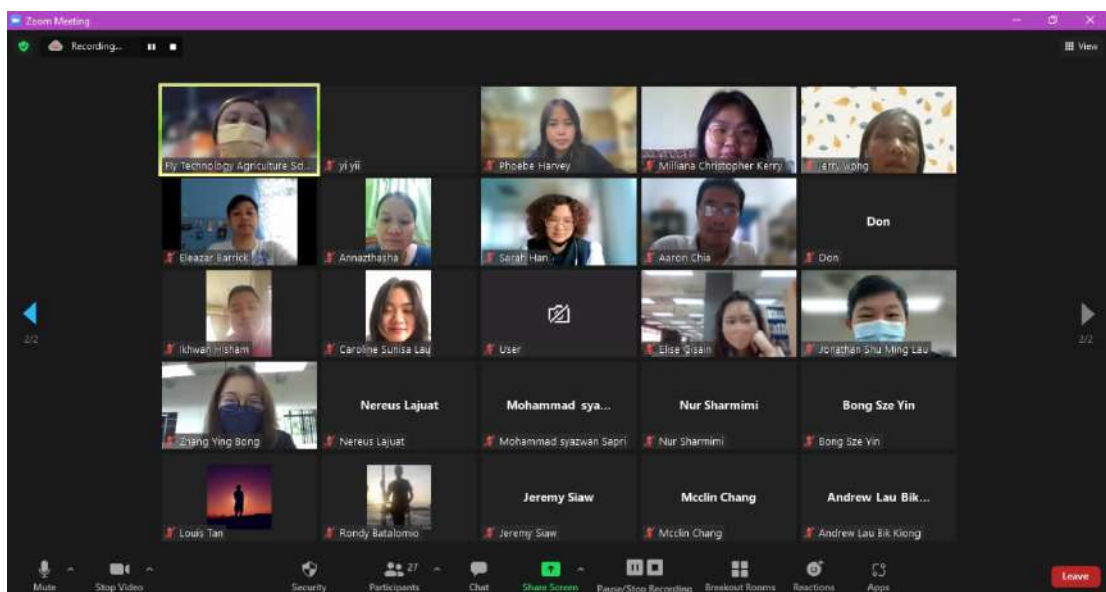
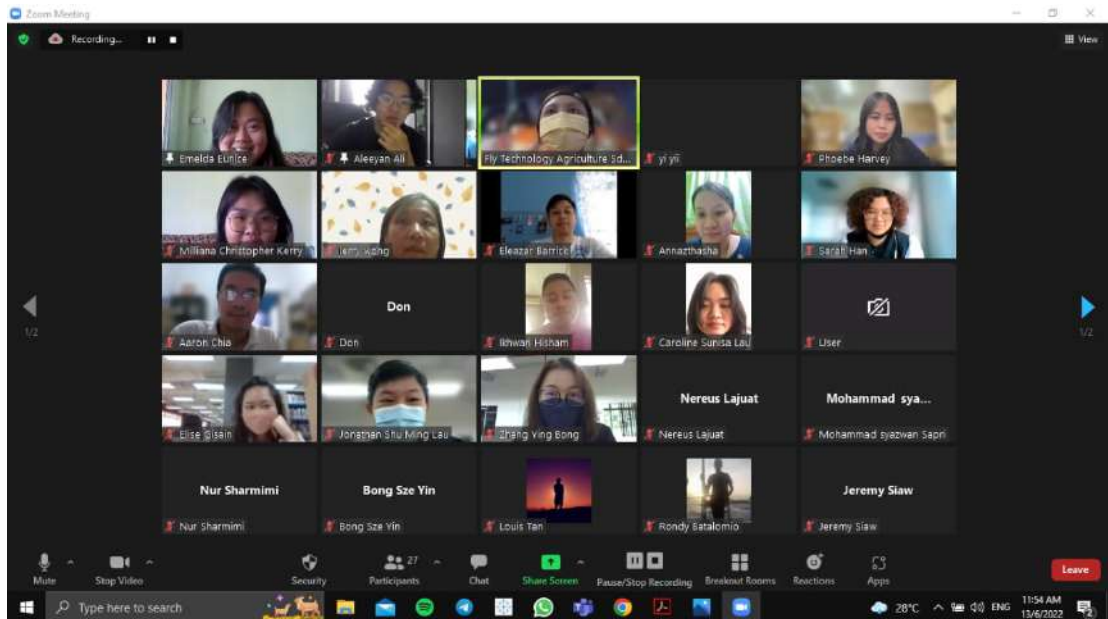


Photo 12: Screenshot of the volunteers attending the 13<sup>th</sup> June 2022 E-Meeting



*Photo 13: E-meeting on 13<sup>th</sup> June 2022 with the 23 volunteers*

They were educated and trained to assist festivalgoers to segregate their waste properly and promote awareness. If the waste got mixed up at the consumer end, they are to segregate the waste according to the appropriate bins. Our volunteers for this year has gone above and beyond their task, as they had manually segregated and tried to save kitchen wastes and used oils that were not properly disposed of by SCV and vendors.



*Photo 14 & 15: Introduction to the site and the setting up of the Ecostations.*

Some of the volunteers also showed up on June 16<sup>th</sup> 2022 for a walk-about and rehearsal of the MOOP so that they have a better understanding of their duties and the routes of the sweep line needed to be taken on the actual event day. During their visit, they helped set up the WarmingUp Ecostations and were able to identify those locations while also familiarizing themselves with the layouts and innerworkings of the Sarawak Cultural Village.

## 7.0 VENDOR MANAGEMENT

### TARGETS ACHIEVED



**4.7** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development



**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

## 7.1 VENDOR'S MEETING BY CANARD MEDIA

### 7.1.1 POLICY-MATCHING PRODUCTS TO INFRASTRUCTURE

We joined the vendor briefing held by Canard Media, where we were given a slot to engage with the vendors on adopting more sustainable practices in their operations especially the choice of materials to be used for food packaging.



*Presentation slide cover of WarmingUp's vendor management briefing on sustainable business practices during the vendor's briefing by Canard Media.*



Our aim was to establish expectations with food vendors, caterers, and venues in advance prior to the event such as limiting single-use products that cannot be recycled or composted. During the meeting we were able to inform them of the proposed guidelines to be implemented in their business practices.

- Vendors will be advised to limit their use of single-use materials from plastic straws and Styrofoam to decorative items like balloons and vinyl banners.
- As alternatives to said regulations, vendors are encouraged to divert to products certified by the Biodegradable Products Institute (BPI), including bioplastic, compostable, oxo-biodegradable and hydro-biodegradable products to maintain productivity whilst fostering their sustainability.



*Photo 16: Vendor's briefing at Sarawak Cultural Village on 11<sup>th</sup> June 2022.*

### **7.1.2 Procurement of Biodegradable Tableware**

The presence of waxed / plastic lining, biodegradable “look-alike” and sticker on the biodegradable tableware adds complications to waste management systems. This leads to wasted time, redundant work and affect the efficiency of the sustainability initiatives that could have seen a great improvement for this year

## 7.2 FOOD VENDORS AND STALL OPERATORS

Part of WarmingUp’s plan for the food vendor was to have a briefing session to teach them on how to properly dispose of their kitchen waste and the importance of filtering their wastewater with the use of a grease traps or sink strainers. However, since most of the vendors were managed by Canard Media, we were only given a slot to brief them on our Sustainability Initiatives and Guidelines thanks to email invitations forwarded to us by STB.

When observing the booths managed by Canard, we found out that they, too, have provided food barrels for the dining area which were placed alongside ours. It is still unclear to us how they handle the food waste they collected in the barrels, but we informed them of how we transfer the food wastes straight to our farm site in Stakan to be turned into compost and bioprotein for agricultural purposes. We also noticed that we have gathered less food waste compared to them as we prefer to keep our barrels closed at all times to avoid airborne contamination and pollution as they were placed about 3 metres from the dining area. This goes to show that more effort should be put into increasing the awareness level among festivalgoers and teach them to value their surroundings rather than their own conveniences.



*Photo 17: Food barrels (blue barrels); one for vegetative waste and the other for leftovers at one of our Ecostations near the dining area.*

Other than conducting the vendor's meeting, Canard also reached out to us offering to help install the grease traps that we were planning to provide to the food vendors and install at some of the main washbasins. Even with the guidelines we provided, we still insisted on assisting them in installing the grease traps, but they persisted to recruit their own technician for the task. Since we were very busy with preparations, we only kept in touch every now and then to get updates on the grease traps. However, on the second day of event, we found out that no grease traps were installed in the main sinks there. Upon further inspection, we found out only one of the four grease traps were installed causing waste to contaminate the waterways.



*Photo 18 & 19: Three grease traps were uninstalled so we had to source out our materials for installation in the last hour before further contamination can happen.*



*Photo 20: Contamination due to lack of proper drainage system. We plan to install more food barrels next to washbasins in the future.*

One of the grease traps was found damaged due to rough handling but we managed to install the rest of them by the end of the day and they remained functional for the rest of the festival days. Regardless of all these hiccups, we received a lot of support, encouragement and assistance from all parties involved – STB, and RWMF volunteers to ensure the success of this project.



**Kudos to Awah Café for taking the initiative to build their own makeshift grease trap. We appreciate the effort it takes to conserve and protect our waterways.**

Moving forward, a clear understanding of the project should be established among all parties involved, prior to the festival days by at least a month. After doing research we do believe for next year we can have one corner for Sustainable or Ethical food sections to give opportunities for food vendors to comply with the Sustainable Guideline.

## 8.0 VOLUNTEER AND STAFF INVOLVEMENT RECORD

### 8.1 VOLUNTEER SCHEDULE

Each volunteer took two shifts out of the three-day event. Most of them took one day shift and one night each, while some took either two day shifts or two night shifts.

**DAY SHIFT** is a 7-hours shift that will start at 10.30 am and end at 5.30 pm after the MOOP session in which they would merge with **SHIFT TWO** where all volunteers would be available for the clean-up.

**NIGHT SHIFT** is a 7-hours shift that will start at 4.30 pm where they will join the MOOP session and end their shift at 11.30 pm after the vendors have cleared out and final waste collection has been carried out.

No.	Name	17 June	18 June	19 June
1	Aaron Chia Yun Zhen	M	-	M
2	Andrew Lau Bik Kiong	-	M	N
3	Annazthasha Isla Jong	N	-	M
4	Batalomio Rondy Anak Banabas	N	-	M
5	Bong Sze Yin	N	-	M
6	Bong Zhang Ying	M	N	-
7	Daphne Ng Siew Ying	-	M	N
8	Eirvia Natrah Binti Burhanuddin	N	-	M
9	Eleazar Barrick Peter	M	N	-
10	Elise Immaculate Elias Gisain	-	M	N
11	Feldon Anak Riket	-	M	N
12	Irfan Nasrullah bin Jafli	-	M	N
13	Jeremy Siaw Yang Sheng	N	-	M
14	Jonathan Lau Shu Ming	-	M	N
15	Louis Tan Jun Bin	N	-	M
16	Meelin Chang Anak Majang	M	N	-
17	Mohammad Aleeyan Taha Bin Ali	N	N	-
18	Muhammad Amir Dzakwan bin Dzulzalani	-	M	N
19	Nereus Lajuat	M	N	-
20	Noor Ikhwan Taqiyoddin	-	M	N
21	Sarah Binti Supahan	M	N	-
22	Shim Lih Ching	-	M	N
23	Wong Jing Lee	M	N	-

<b>MORNING SHIFT (M)</b>	10.30AM-5.30PM
<b>NIGHT SHIFT (N)</b>	4.30PM-11.30PM

## 8.2 STAFF SCHEDULE

17 JUNE	18 JUNE	19 JUNE
<b>9:30am – 6.30pm</b>	<b>9.30am – 11.30pm</b>	<b>9:30am – 6:30pm</b>
Emelda	Emelda	Phoebe
Milliana	Milliana	
	Phoebe	<b>9:30am – 11:30pm</b>
<b>9:30am – 11:30pm</b>	Fallisca	Peter
Peter	Then Yi Yii	Fallisca
Phoebe		Then Yi Yii
Fallisca	<b>3:30pm – 11.30pm</b>	
Then Yi Yii	Sze Hui	<b>3:30pm – 11.30pm</b>
	Bong Ching Tien	Emelda
<b>3:30pm – 11:30pm</b>	Christina	Mill
Eric Anthiony		Milliana
Florina	<b>11:00 pm – 12:00 am</b>	Eric Anthiony
Helda	Ong Ling Ming	Sze Hui
Bong Ching Tien		Helda
Christina		



*Photo 21: Staff members and volunteers from the Green Event Initiative*

## 9.0 DATA COLLECTION AND ANALYSIS

### 9.1 AMOUNT OF WASTE COLLECTED



*Photo 22 & 23: Recording and weighing of wastes at the end of shifts and moop session*

Biodegradable and compostable waste was collected from the waste stations and from the food vendors. Total weight of those waste collected from Rainforest World Music Festival 2022 are food waste, biodegradable material, and used oil as tabulated below per day are as follow:

<b>Date</b>	<b>Types of Waste</b>	<b>Weight (kg)</b>
17/06/2022	Metal	1.4
	Plastic	1.015
	Paper	3.275
	Glass	1.855
	General Waste	5.055
	Food Waste	1.865
18/06/2022	Metal	6.525
	Plastic	4.795
	Paper	8.995
	Glass	55.61
	General Waste	21.915
	Food Waste	9.7
	Food Scraps	1
19/06/2022	Hazardous	0.71
	Metal	4.78
	Plastic	14.037
	Paper	45.685

	Glass	56.81
	General Waste	1.41
	Food Waste	-
	Food Scraps	-
	Hazardous	-
	Used Oil	53.7

Table 1: Types of wastes and the sum of each waste collected on three separate festival days

TYPES OF WASTE	SUM OF WEIGHT (KG)
Food Scraps	1
Food Waste	11.565
General Waste	28.38
Glass	114.275
Hazardous	0.71
Metal	12.705
Paper	57.955
Plastic	19.847
Used Oil	53.7

Tables 2: Cumulated amount of respective wastes from all three days

In summary, approximately a total of 0.3 tonnes of biodegradable waste was collected for the Rainforest World Music Festival 2022.

All the compostable waste (food waste) was sent to WormingUp's Stakan Site Farm, located at for bioconversion and treatment. Bio-proteins will be harvested, and nutrient-rich organic fertilizer will be produced out of this 0.058 tonnes of biodegradable waste.

## 9.2 ANALYSIS OF TOTAL WASTE COLLECTED:

The wastes are then weighed and recorded as five major groups; food waste, biodegradables, recyclables, and used oil. The weight trend of biodegradable waste collected from Rainforest World Music Festival is indicated in Figure 1 as below:



FOOD WASTE (kg)	BIODEGRABLES (kg)	RECYCLABLES (kg)	USED OIL (kg)	TOTAL
11.565	57.955	32.552	53.7	155.772

Table 3: Weight trend of total biodegradable waste collected.

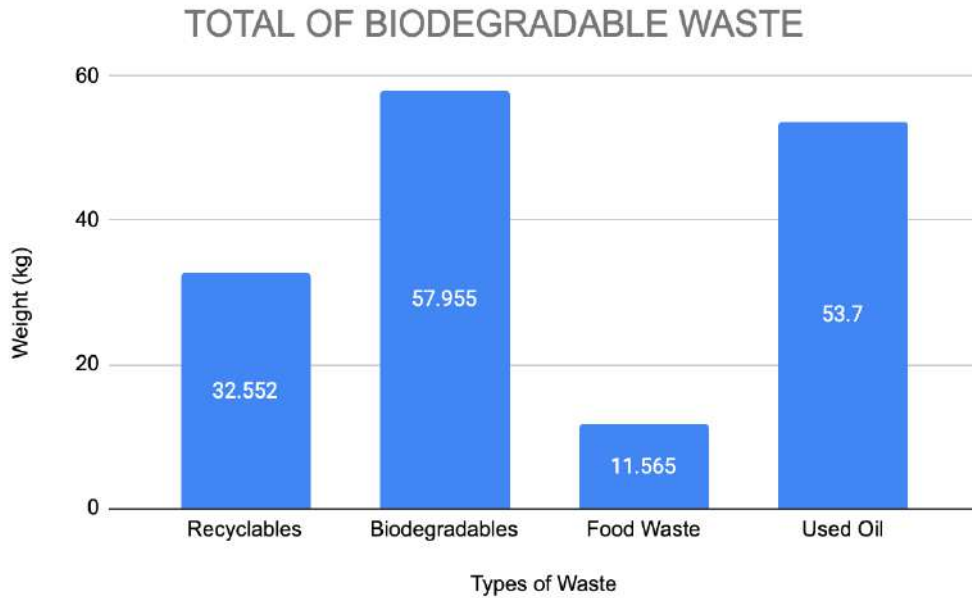


Figure 1: Total weight of biodegradable waste collected from RWMF 2022

### 9.3 AMOUNT OF OTHER WASTE COLLECTED

#### 9.3.1 Scheduled

Scheduled waste was collected from the waste stations and from the food vendors. Total weight of scheduled waste collected is 1kg, which mostly consist of masks and cigarettes. All other waste was sent to a recycling facility located at S/L 6, Lot 1625, Jalan Kuap & Batu 10, Light Industrial Park, 93250 Kuching, Sarawak, to recycle back into paper supply chain.

## 10.0 CHALLENGES AND FUTURE IMPROVEMENTS

### 10.1 CHALLENGES

1. Collaborators were not able to designate transportations specifically for WarmingUp team to commute to the event location

Breakdown of issues:

- the staff had to resort to using their own transports to pick up team members from the police checkpoint at One Hotel Santubong (a more than 3km walking distance) or from directly the city for their shift
  - some volunteers had to resort to using their own transport to commute to the venue which led to parking difficulties that delays them for their shifts
  - staff members had to carpool with volunteers to their homes when their shift exceeds the pickup time for the last free bus commute (past 11.30pm)
2. Trash bins given to the team did not meet the specifications of the suggested 35 units of 60-120 litre rolling bins meant for segregation.



*Photo 24: Utilising used paint buckets to make up for lack of proposed rolling bins.*

3. Some volunteers pulled out in the last hour or did not show up on the day of their shift so therefore forfeited their commitment fee of RM50 and other entitlements.
4. Negligence from other collaborators to install grease traps at some washing stations caused the items to be unused and damaged due to rough handling of said item.



*Photo 25: An approximately 15cm crack (half of the height) causing the item to be defective and unable to use.*

5. Food barrels were not fully utilised at dining area due to other parties neglecting to use them.
  - Other parties managing the vendor site and dining area have already brought in their own barrels to be used and are placed more strategically for the use of patrons, pushing ours aside so therefore the barrels were mostly neglected.
  
6. Ecostations and booth were not fully constructed nor supplied as agreement
  - There was no electricity until the second day of duty and furniture (table and chairs) were not supplied during the first day
  - Some Ecostations and smoking zones were cancelled a day before the event when the items prepared for setup of said booth were already on standby for use

## **10.2 CONTINGENCY PLANS FOR FUTURE IMPROVEMENTS**

1. Designate extra transportations for ease of commute in case event host is unable to provide such facility before the last moments of preparation.
2. Prepare blue barrels and empty paint buckets from Stakan farm in case the rolling bins are not fully supplied
3. Incur a stricter and more effective action plan in case of volunteers bailing out during and before their shift.
4. Take photographic evidence (before and after) of items before sending them off to other parties offering to install them.
  - Be in constant communication and monitor their progress to avoid any mis-installation or damage to said item
5. Make sure other parties are aware of the function and purpose of each Ecobins, especially used oil containers and food barrels, to avoid mishandling or under-utilisation of those items

## **10.3 IMPROVEMENTS MADE**

### **10.3.1 Volunteers**

The 23 volunteers on-ground exceeded their job scope by segregating the trash left out by site workers. Our volunteers also did their part in picking litter around the site throughout the duration of their duty instead of monitoring designated stations. Without these volunteers, the green initiative would not have run as smoothly.

### **10.3.2 MOOP**

Well received feedback and audience engagement

- We suggest that the MOOP to be mentioned in the programme booklet, gaining interests of festivalgoers to take part in the sweep.
- From the Line Sweep, we've learned the festivalgoers' littering habits and could pinpoint better locations to place our Ecostations for the next festival

### **10.3.3 Local Recyclables Collection Vendors**

Able to recycle soiled paper and separate vegetative waste from leftover waste (processed, half-eaten consumables) for composting purposes.

### **10.3.4 Sustainable Practices (Biodegradable tableware usage)**

Biodegradable tableware usage among food vendors has improved compared to previous years

### **10.3.5 Level of Cooperativeness**

- Medium level of cooperativeness from Canard.
- Low level of cooperativeness from SCV.
- High level of cooperativeness from food vendors, especially Awah Café
  - We also learned that some food vendors took their own initiative to sell their used oils to be repurposed / recycled and donated their surplus food

## **10.4 WHAT CAN BE IMPROVED**

### **10.4.1 Sustainable Guidelines**

Giving the food vendor strict guidelines and agreement on sustainable event practices before selecting them as a vendor; and upon selection is important.

- We suggest that the next partners to manage the vendors should send us the list of vendors taking part in the next festival, so we are able to send them the necessary Sustainable Guidelines for our initiative.
- Contaminations of recyclables were due to the negligence of food vendors and SCV even after several reminders
- Food vendor was still using a paper-based product that has plastic lining or wax.
- Food vendor dumping used cooking oils down the drainage
- Single-use banners or marketing materials to be donated to WorningUp

As a case study, next year would be great to have a sustainable food area/zone. Where food vendor uses local/fresh product, serving vegan/vegetarian food, ethically sourced food and adhere to the sustainable practice. We can start with 4 to 5 food vendors.

#### **10.4.2 The alternative to disposal tableware**

Vendors could be asked to use reusable tableware and cutleries which can be returned either to them after use or to volunteers assisting the vendors to wash to be reused. Finally, vendors could use catering serveware or reusable containers to serve their food or to store their foods. This will avoid the usage of cling wraps, or individually packed food while still maintain good display of product.

#### **10.4.3 Work Ethics**

Common ethics and courtesy from the food vendor and SCV staff when engaging with the volunteers and WormingUp Team. Even after multiple reminders and speaking in-person, they did not segregate waste (recyclables/food waste) and discarded their trash in the Ro-ro bins provided.

#### **10.4.4 Local Recyclables Collection Vendor**

A key point to note on plastic recycling is that not all kinds of plastic are accepted at recycling centres to be sold. Thus, we aim to separate clean plastic items from contaminated ones so that we can upcycle them to create eco-bricks or ecocrafts. Hence, it is important for us to teach festivalgoers what plastic items can go into the Ecobins especially food packagings as those are often stained with oil. With that, we will be able to offer more comprehensive recycling solutions at RWMF 2022. Transparency of what can be recycled and where the recyclables would end up should be improved Rainforest World Music Festival 2022.

#### **10.4.5 Redundancy of Bins**

Reducing the black bins (provided by SCV) and 1000-litre bin (provided by Trienekens) around the festival ground, having them defeat the purpose of the waste stations and the sustainable efforts done. Recyclable, biodegradable tableware, and food waste did go into the trash especially when these bins are placed much closer or at the eating areas, and within 6 meters along the pathways that diverts festivalgoers from bringing their waste to the Ecostations. Alternatively, removing these bins altogether will increase the collection of recyclables, and compostables to be saved from landfills and foster a better image for the festival as an ecotourism event.



*Photo 26: Unnecessarily oversized bins near vendor area*

#### **10.4.6 Location of Ro-ro bins**

One of the major hiccups this year was the procurement of Ro-Ro bins for both trash and recyclables. The contamination starts when food vendors and SCV staff get confused about which is the exact Ro-ro bins to be used. We suggested that 35 bins with the estimated capacity of at least 60 litres to be provided for segregation of wastes as the paint barrels we used to replace these bins were not suitable especially during wet climate.

## 11.0 END NOTE

As we all known, the Rainforest World Music Festival is an annual event hosted by the Sarawak Tourism Board. Sustainable waste management is crucial to be implemented in reducing the unnecessary/avoidable waste channelled to landfill during these large events as well as act as a platform to inculcate citizens on civilized mindset. This year's project, in conclusion, is a great example to do better and put more efforts into mastering the planning and execution part of those initiatives. Though there were challenges during the festival, we see them as learning curves to improve upcoming RWMF 2023.

Throughout the Rainforest World Music Festival 2022 – Green Event Initiative collaboration project, the results indicate proper waste management, and awareness promotion and education is effective and may serve to be impactful in event-related projects or other collaborations to come.

The initiatives continued to gain positive feedback from festival goers as well. Cooperation received from all parties – STB, SCV, vendors, festival goers - was much appreciated because they were the backbone of these initiatives. Once again, thank you!

WormingUp is looking forward to work with you on RWMF 2023 and take RWMF higher up in the sustainable events ranking.