Sustainable Sound: Festival Guide

[Utah Symphony, 2018]

MSUS Culminating Experience Report

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Abstract:

Across the world, music festivals draw in millions of fans and generate billions in revenue (Fesicket Writers, 2018). While the festival scene is extremely popular, stakeholders are beginning to take notice of its negative impacts. When improperly managed, festivals damage natural systems, miss out on opportunities to support and engage with their fans, and exclude local businesses.

The movement for sustainable music festivals has already begun, but it is still far from being the industry norm. Only a select few festivals have embraced sustainability as a core value while many others are still making no effort to mitigate their impacts. Even though many drivers are pushing for the transformation of this industry, the unaddressed barriers are holding organizers back.

Sustainable Sound: Festival Guide has been created to educate organizers on how to plan and operate sustainable music festivals. It is based on tried and true methods to create holistically sustainable events. In this context, a holistically sustainable event is one that does not damage natural systems, protects and engages with its fans, and is economically positive. Various case studies from some of the world's most sustainable festivals will also be highlighted throughout the guide.

According to M3F, The Cosanti Foundation, and ASU's CSSI, *Sustainable Sound* offers important and easy to understand information that festival organizations can use to improve the sustainability of their events.

Introduction and Background:

Music festivals are a multi-billion-dollar global industry (Festicket Writers, 2018). Since Monterey Pop and Woodstock, modern music festivals have grown in scale, popularity, and attendance (Nielson, 2018). Over 32 million individuals attend at least one of the ~800 music festivals that take place in the United States every year (Nielson, 2018). Millennials make up 45% of these attendees (Nielson, 2018). Along with their love of music, these younger fans also bring with them a concern about sustainability. Recently the music festival industry has faced scrutiny over its lack of sustainable practices. A survey of festival attendees found that 62% of fans considered the incorporation of sustainable practices to be their top priority regarding festivals (Ticketmaster, 2018).

Nearly everything required to operate a music festival produces an environmental impact. According to the Bristol Green Event Guide, the associated aspects with the highest environmental impacts are: audience travel, transportation, energy, food and beverage vendors, waste, and event production (Johnson & Cook, 2015, p.4). Audience travel is the largest source of CO2 generation related to music festivals (Johnson & Cook, 2015, p.4). Attendees travel an average of 903 miles every year to go to a festival in the United States (Nielson, 2018). Production transportation, defined as the transit of staff and contractors along with the shipment of supplies and infrastructure, generates the second-highest amount of festival CO2 emissions (Johnson & Cook, 2015, p.4). In addition, producing the energy necessary to power the lighting, stages, vendor stands, and other equipment also emits CO2, unless generated from clean sources such as wind or solar (Johnson & Cook, 2015, p.10).

Another set of environmental impacts is created by the production and transportation of the food and drinks sold at music festivals (p.14). These actions contribute to: land degradation, deforestation, biodiversity loss, water eutrophication, and greenhouse gas emissions (Lubowski et al., 2006, p.3). Furthermore, food and beverage vendors are typically the main source of waste at these events (Johnson & Cook, 2015, p.15). The service items such as plates, utensils, cups, bottles, and straws that vendors supply are traditionally made of single-use plastic. These materials typically end up in landfills creating their own set of dispersed environmental impacts such as: methane emissions,

groundwater contamination, and soil degradation (Newton, 2019, p.1). Lastly, the construction of the infrastructure such as stages, decorations, and walkways deplete finite resources, generate waste, and emits CO2 (Johnson & Cook, 2015, p.23).

Music festivals may also contribute to human health risks. Dr. Lewis Nelson of New York University Langone Medical Center claims that dehydration is one of the major risks faced by festival-goers (Miller, 2016). Dehydration is especially prevalent at events that do not provide free or easily accessible water during the summer months (Miller, 2016). Hot temperatures and hours of dancing cause the body to lose fluids and electrolytes (Miller, 2016). In serious cases, these losses can cause heart arrhythmia and even death (Miller, 2016). Additionally, high rates of substance use such as drugs and alcohol at festivals pose major health concerns. Dance Safe is an organization that uses a scientific approach to educate festival-goers on how to use drugs more safely. However, because some view Dance Safe's activities as promoting drug use, they are often banned from festivals. Uneducated drug use, high temperatures, and lack of easily available water have contributed to festival attendees falling victim to heat-exhaustion and death. According to a study conducted by the University of British Columbia, there are multiple confirmed deaths at music festivals from substance abuse every year (Turris, 2018, p.2).

Although music festivals can be lucrative for their organizers, they often fail to share their fortune with their host communities. Many festivals are organized by external companies that are not based in the communities where the events are held. This disconnect often leads them to hire sub-contractors and vendors who are not local to the venue's location. If local businesses such as restaurants, waste management companies, and retailers are not included at these events, much of the money brought into the festival is less likely to remain within the local economy.

To address these negative consequences and satisfy the growing demand for sustainable festivals, I am creating the *Sustainable Sound: Festival Guide*. The purpose of this guidebook is to educate organizers on how to manage a holistically sustainable festival. Although green event guides already exist, the majority of them focus only on environmental sustainability. *Sustainable Sound* will address environmental sustainability,

harm reduction techniques, sustainability education meant to inspire attendees, along with how to support the economies of host communities and ethical supply chains. *Sustainable Sound* is based on the Mair and Jago green event framework, existing green event guides, market-based research, academic articles, interviews with subject matter experts, festival case studies, and firsthand experience working with M3F Fest.

The current project partners of *Sustainable Sound: Festival Guide* are M3F Fest, The Cosanti Foundation of Arcosanti which is involved with Convergence and FORM, and ASU's Campus Student Sustainability Initiatives (CSSI). M3F is a three-day non-profit music festival that takes place in Downtown Phoenix every March. Around 20,000 fans attend throughout the three days. Convergence and FORM are both three-day camping festivals that take place at Arcosanti, Arizona, in October and May, respectively. Convergence and FORM are much smaller than M3F, with attendance numbers ranging from 200 to 2,000. CSSI is a student-run organization that aims to bring sustainable changes to ASU's campus. They are currently working to make all on-campus music events such as Devilpalooza and Infernofest more sustainable. These on-campus events are typically only one day long, but host thousands of students. Although the aforementioned organizations are currently the only ones who have already agreed to adopt the guidebook, *Sustainable Sound* is meant to act as a general framework that can be utilized by any small to mid-sized outdoor festival.

The final client deliverable for this project is going to be the guidebook. However, I am also helping coordinate M3F's sustainability strategy and doing some consulting for the Cosanti Foundation. This not only helps these organizations get a head start on their sustainability transformation, but also provides me with real-world industry experience to base the guidebook on.

Literature Review:

Key Words: Sustainable music festivals, green events, music festival environmental problems, music festival social problems, music festival economic problems, music festival health risks, sustainable tourism

There is a limited amount of research related specifically to sustainable music festivals (Mair & Laing, 2012). The small amount of research that does exist typically uses frameworks related to broader topics such as green event planning or sustainability as a whole (Mair & Laing, 2012). The Mair and Jago Model, Natural Steps Framework, and Sustainability Framework are the typical systems used (Mair & Laing, 2012) (Stettler et al., 2011). Researchers have been able to identify common drivers, barriers, and existing solutions related to sustainable music festivals using frameworks, interviews, and existing literature.

According to the Mair and Jago Model, five main drivers are leading to the advancement of sustainable music festivals (Mair and Laing, 2012). Organizational and personal values were found to be the main reason why festivals try to improve their sustainability (Mair and Laing, 2012). Valuing sustainability can come from any part of an organization (Mair and Laing, 2012). However, to be impactful, it is most common for this drive to come from festival directors or other high-level employees (Mair and Laing, 2012). Competitive advantage is another major driver (Mair and Laing, 2012). Being a reputable green event has been proven to help festivals positively differentiate themselves from their competitors (Mair and Laing, 2012). This differentiation is especially true if festivals have been certified by organizations such as A Greener Festival (Mair and Laing, 2012). Furthermore, being recognized as a green festival has been shown to help organizations acquire sponsors, book talent, and maintain positive stakeholder relationships (Mair and Laing, 2012). Consumer demand also drives festivals to become more sustainable (Mair and Laing, 2012). According to organizers, festival-goers are increasingly expecting certain levels of sustainability at their events (Mair and Laing, 2012). The desire to educate is another significant driver that leads festival organizers to increase the sustainability of their events (Mair and Laign, 2012). Many festival organizers feel that they have the opportunity or in some cases even duty to educate

their attendees about sustainability (Mair and Laign, 2012). The last and least common driver is cost savings (Mair and Laing, 2012). According to some festival organizers they have saved money by implementing sustainable solutions, but this is typically not the main reason why festivals try to be sustainable (Mair and Laign, 2012).

Thirty-plus festival organizations varying in size, genre, and location were interviewed in multiple studies, and similar barriers were identified for all of them. Financial restrictions were found to be the most common barrier preventing festivals from adopting sustainable practices (Mair & Laing, 2012)(Stettler et al., 2011). Many festival organizers felt that sustainable initiatives were too costly or difficult to make a business case around (Stettler et al., 2011). A lack of knowledge about how to implement sustainability practices was the second most prevalent barrier (Stettler et al., 2011). The majority of festival organizers have very limited education related to sustainability, and many are unsure about how to make their events more sustainable (Stettler et al., 2011). Restricted timeframes are another major barrier preventing sustainability initiatives at music festivals (Mair & Laing, 2012). It can be difficult to fit sustainability efforts in with all of the other components necessary to organize a festival (Mair & Laing, 2012). The last common barrier amongst festivals is a lack of attendee engagement (Stettler et al., 2011). Many festivals struggle with how to combine sustainability and entertainment (Stettler et al., 2011). Other less notable barriers include: lack of internal support, infrastructure restrictions, limited local resources, and a lack of government support (Mair & Laing, 2012)(Stettler et al., 2011).

Some festivals are already taking steps to mitigate their negative impacts (Mair & Laing, 2012). Shambala music festival is a shining example of what can be accomplished if an organization chooses to embrace sustainability. In terms of environmental sustainability Shambala has: reduced their carbon footprint by over 80%, completely eliminated single-use plastic from their event, gone meat and fish free, funded a forest restoration project in Africa, started the Energy Revolution charity, and made their company five times carbon positive through renewable energy investments (Shambala Green, 2019). Shambala has also made significant efforts to improve the social and economic sustainability of their festival (Shambala Green, 2019). They have partnered with over 20 global organizations to support "world-changing" work (Shambala Green, 2019).

Lightning in a Bottle (LIB) is another world leader of music festival sustainability (Stettler et al., 2011). LIB offers dozens of classes and workshops every year to inspire festival-goers to make positive changes in their home communities (Lightning in a Bottle Green Event Report, 2018). Additionally, LIB partners with harm reduction organizations to keep their attendees safe and informed (Lightning in a Bottle Green Event Report, 2018). LIB also makes efforts to reduce their energy consumption through: LED stage lighting, solar lights, and compact fluorescents (Lightning in a Bottle Green Event Report, 2018). Shambala and Lightning in a Bottle have both incorporated sustainability at the core of their organizations and publish annual reports on the success of their sustainability efforts (Shambala Green, 2019)(Lightning in a Bottle Green Event Report, 2018).

Based on LIB and Shambala, it is clear that for music festivals to become sustainable, changes must be made throughout the entire organization. Dozens of green event management guides exist to help festival organizers plan their events in a more environmentally friendly manner (Stettler et al., 2011). However, none of the guides incorporate a systemic approach to solving the full scope of sustainability problems related to festivals (Stettler et al., 2011). The guidebook I created guides real systemic change and provides tangible solutions to overcome the identified barriers.

Stettler et al.'s research based on the Mair and Jago Model has identified five strategies on how music festivals can fully incorporate sustainability. Adopting a sustainability framework that includes: visioning, goal setting, making changes in basic operations, innovation, and a restructuring of the organization's business model is the first recommendation (Stettler et al., 2011). This is supported by the second strategy, which is to use a holistic scope rather than trying to use "green add ons" (Stettler et al., 2011). Engaging with attendees through education, design, experience, and transformative learning activities is the third strategy (Stettler et al., 2011). The last two strategies complement each other as they are to share information about sustainability solutions and to cooperate with other festivals to build demand and reduce costs of products related to sustainable music festivals (Stettler et al., 2011).

Project Approach and Intervention Methods:

Research has been the first step in developing the *Sustainable Sound: Festival Guide*. This has involved looking into the problems that music festivals create, barriers to solving said problems, drivers pushing for sustainability at music festivals, existing solutions, and frameworks to guide the transformation process. As I have stated, there is not very much information related to sustainable music festivals. To compensate for that, I am adapting information about general sustainable event management.

Interviewing industry professionals has been another critical component in planning the guidebook. Industry professionals are capable of providing real-world insight into the existing problem and solution scape. By talking with these professionals, I understand what festival organizers need from a sustainable music festival guidebook.

I have conducted multiple subject matter interviews for my project. The first was with John Marler, the Vice President of AEG Worldwide's environmental department. AEG puts on dozens of massive festivals across the world, such as Coachella, Electric Forest, and Firefly. My second interview was with Lee Spivak, the "Zero-Waste Guru" at Waste Management. The Waste Management Open is the world's largest zero-waste event. Lee provided great insight and tips about how to achieve a zero-waste festival. I have also spoken with Phoenix City Officials who are involved in event sustainability, as well as the Director of ASU's Project Cities about a green event certification program. Lastly, I have communicated with multiple festival coordinators from M3F, and Arcosanti about their specific festivals' needs.

Conducting on-site research at music festivals has been another method of data collection for my project. I have attended multiple festivals to see first hand what sustainability efforts they are/aren't implementing, observe how they affect the fan experience, and search for unutilized leverage points. Since beginning the project, I have attended M3F, Deadbeats and Lightning in a Bottle. In addition to the aforementioned festivals, I have been to many other music festivals in the past. As a sustainability professional, I have been keeping a mental log about what festivals have been doing from a fan's perspective for years now.

Lastly, I am working with M3F to understand first hand what the festival planning process is like. I am working closely with their head of operations and marketing team to create their 2020 sustainability strategy. M3F's sustainability goals include: zero waste, carbon neutrality, sustainability education through marketing and signage, local vendors that use sustainable practices, sustainability reporting, charitable donations, and becoming certified as a green event through the Sustainable Cities Network. In addition, I am providing some consulting to the Cosanti Foundation about how they can increase attendee engagement using gamification and off-set their carbon emissions by funding reforestation projects.

While working with M3F Fest, I created *Sustainable Sound*, which adopts the Mair and Jago framework. The Mair and Jago Model is a green event planning framework that other researchers have already related to music festivals. I chose to use this framework because it uses a systemic approach that is straightforward, thorough, and easy to follow. I want anyone to be able to pick up the guide and understand its methods. Specifics on the Mair and Jago Model and how it relates to sustainable music festivals can be found in the literature review.

The *Sustainable Sound: Festival Guide* will be the main deliverable of this project. Festival organizers will be able to use it to reinvent their organizations and sustainably manage their festivals. Anyone who is planning to organize a music festival may implement it as a guide. I anticipate that if planners use the guide, the environmental impacts of their festivals such as waste, emissions, water, and resource depletion will be reduced. Additionally, the guide will help festival organizers improve the experience and safety of their fans. I hope that fans will feel proud for having partaken in a sustainable event, and leave the festival feeling cared for, inspired, and educated. Lastly, the guide will also help to support and educate local business owners, encouraging organizers to include them at their events.

Outcomes/Findings:

A comprehensive guidebook is now available to advance the sustainable music festival industry. Although green festival guides already exist, *Sustainable Sound* is the first and only guide to address environmental sustainability, attendee engagement, harm reduction, and ethical business practices from a systems perspective. The guide contains an introduction and five sections. *Part I: Planning for Sustainability* provides strategies to create a sustainability vision, and to set sustainability goals. Strategies to reduce the impacts of audience travel, energy, waste, water, production, and food and drinks comprise *Part II: Operation Changes. Part III: Attendee Engagement*, includes lessons about gamification, workshops, design, and harm prevention. Details concerning marketing, annual reporting, and data collection exist in *Part IV: Information Sharing*. Lastly, *Part V: Collaboration* expresses the importance of connecting with: municipalities, underserved communities, green festival organizations, other festivals, and schools.

Sustainable Sound: Festival guide is free and available for download on the Sustainability Connect website. In the future, the guidebook will also be available on a separate webpage. This site will require users to enter their information to download the guide. Through this, it will be possible to request feedback from those who have downloaded the manual.

Sustainable Sound has already been reviewed and adopted by M3F Fest, The Cosanti Foundation, and ASU's CSSI. Moreover, all of the organizations filled out a twenty-question survey on the guidebook, exact responses to which are being withheld to protect the privacy of the project partners.

Two of the three organizations ranked each topic in Sustainable Sound 5/5 points for being essential and easy to understand. When asked if any additions to the guide would help the organizational process, one of the partners responded that they would like access to someone with prior sustainable festival experience. To address this, I have included my contact information at the end of the guide.

Compared with the other two festival organizations, one client provided significantly more feedback. One of their concerns was that the waste section did not specifically address non-industrial composting, or how some cities do not recycle certain types of plastics. While these are valid observations, I did not address traditional composting methods for multiple reasons. Industrial composting methods are needed to process almost all compostable service items. Additionally, food waste, such as meat, garlic, and onions cannot be traditionally composted. For pragmatic reasons, the waste strategies in the guide do not address specific issues related to the recycling industry. However, it instructs organizers on how to communicate with their waste management companies to ensure landfill diversion. Furthermore, some items that the project partner requested to be added are already contained within the guidebook. An example of this is that they requested advice on how to conserve water used in backstage operations. However, the water section of the guide already promotes organizers to use bulk water taps in the back of the house and encourages artists to use sustainable rider options. Lastly, this partner also recommended adding a section related to land preservation and festival ground history. Unfortunately, because I received this feedback so late into the project process, there was not enough time to adequately cover this topic. While this client may have provided several critiques, they still gave the guide an overall 4.87/5 rating.

In addition to the guidebook, the consulting work I provided to M3F will be implemented in March 2020. M3F is currently on track to achieving over 90% landfill waste diversion. This will be accomplished by carefully managing the materials which are allowed to enter the festival, working closely with their waste management companies, and having bin guards ensure that the waste ends up in the proper containers. Additionally, M3F is piloting a carbon offset program. When customers buy tickets on the festival's website, they have the option to purchase a $3 carbon offset. This money will fund a carbon-sequestering reforestation program. It is still too early to tell, but M3F has the potential to become Arizona's first carbon-neutral festival. I have also provided M3F with an outline of sustainability topics for their marketing and attendee education efforts. Lastly, M3F will become a certified green event through the

Sustainable Cities Network. I have gone through the requirements of the green event certification. M3F will likely achieve a platinum ranking.

Recommendations:

Sustainable Sound details all of the recommendations that I have created for my clients. In *Part I: Planning for Sustainability*, the guide advises that organizers involve the entire festival team during the visioning process to ensure shared buy-in. The goal-setting section in Part I also challenges organizers to grow their sustainability goals each year. *Part II: Operation Changes* speaks to how organizers can mitigate adverse environmental and social impacts involved in running a festival. *Part III: Attendee Engagement* provides tips on how organizers can use gamification, workshops, design elements, and harm prevention organizations to improve the fan experience. The need for organizers to be public and transparent about their sustainability efforts are located in *Part IV: Information Sharing*. Furthermore, organizers are encouraged to explain their efforts in a way that is instructive to the general audience. As sustainability is an ever-evolving field, *Part V: Collaboration* encourages festival teams to reach out to external organizations to generate new ideas.

Before one can understand how to effect sustainable change through music festivals, a knowledge of the current parameters is vital. Crucial areas to focus on include: best practices, drivers, barriers, knowledge gaps, and market demands. The majority of this research is available online. However, interviewing subject matter experts can provide valuable information and can potentially lead to connections within the industry. Additionally, interviewing festival organizers allows project managers to understand the capabilities of festival organizations and assess what areas require the most assistance. Researchers should also attend music festivals and other similar events to experience the culture first hand.

This research should then be used to develop a thorough but flexible project proposal and presentation. These materials will lend the project direction and can be used to pitch the idea to potential clients. It is imperative to clearly explain what the value proposition of the project will be for a festival. In my case, I convinced M3F that working

with me would improve the festival's sustainability at no extra cost and would provide them with a valuable guidebook.

Lastly, after establishing a client partnership, I strongly recommend creating a written contract to cover the expectations of both parties. A document like this can help prevent scope creep and maintain accountability. Not having a defined scope of work with M3F, quickly lead me to assume more responsibilities than I had initially intended. These responsibilities included creating vendor requirements, sourcing compostable service items, and organizing meetings with city officials. I did not require my partners to sign an agreement to review my guide by a specific date. This led to one of my partners submitting their feedback almost a month after I had initially requested it. Significantly, I would suggest holding interim reviews with project partners. My partners reviewed my guidebook upon the completion of its first draft. However, it would have been beneficial to have had the guidebook outline reviewed, as well. Doing so, I would have known that one of my partners wanted a section pertaining to land preservation while I still had time to accomplish this. Lastly, I highly recommend setting regular and reoccurring meetings with project partners. I met with M3F every three weeks, and it helped keep my project on track.

Conclusion:

The original mission for the project was to create a guidebook that would enable festival organizers to plan sustainable events. *Sustainable Sound* is just that. However, the journey to create the guide was not as straightforward as initially anticipated. Much research had to be adapted to address the topic of sustainable music festivals. For example, the Mair and Jago model is an insightful and credible green event framework. Still, it lacks specifics about operation changes and attendee engagement strategies. Existing guides and interviews were relied upon to find the necessary information to alter the framework.

Another student is already continuing one aspect of this project. Meghan Marrin, a current MSUS student, is assisting M3F in their green event certification process. Additionally, students can use this guide to advise other festival organizations. Doing so could help to evaluate the quality of the guide. Based on the feedback regarding its use, students could revise *Sustainable Sound*. Land history and preservation, noise/light pollution, and soil degradation could be topics to cover in future revisions. I see no reason why future students should not regularly test and improve upon this guidebook. There are plenty of music festivals that require assistance, as the field of sustainability continues to expand.

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