

SINGING TO A GREENER TUNE

Current status of the music industry
in addressing environmental sustainability

DRAFT



music &
environment
initiative

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Forward

Music is one of the most powerful mediums to communicate environmental messages to billions of people worldwide – irrespective of race, religion, income, gender or age. It is also a multi-billion dollar global industry which has a considerable environmental footprint. How can we capitalize on the very natural connection between the music and the environment and make the industry overall sing to a greener tune?

There are many reasons why the greening of the music industry should happen. Benefits of producing live music events sustainably, being a “green” band, running a sustainable tour, producing a minimal impact CD, operating a “green” venue, could include being a good citizen, staying ahead of regulation, saving money, as well as generating good PR and competitive advantage.

Influencing the greening of the industry and the audiences through music comes down to key players being engaged and convinced. Musicians can be powerful role models, festivals can demonstrate sustainability in action and influence their suppliers, government can put pressure on event organizers, and sponsors and producers can back acts and events with green credentials.

The good news is that the music industry is increasingly concerned about its environmental impact and some bands, events and other industry players are embracing the “green” agenda. However, these efforts are often constrained by lack of buy-in from producers and sponsors, clear regulations and incentives for those going green, and even “greenwash” concerns.

The United Nations Music & Environment Initiative seeks to leverage the power of music to address some of the most pressing environmental problems facing the planet by bringing together leading regional and global partners in order to stimulate dialogue on environmental matters and to find solutions.

We hope that this report will provide the much-needed basis for an informed discussion and action to assist the process of greening of the music industry. There are many inspiring examples to draw upon, not least in the field of sport and the environment, where major events such as the Olympic Games have considerably improved their environmental performance over the past decade with support from the United Nations Environment Programme.

The music industry can become a beacon of sustainability – and, in doing so, also be the music to the ears of our planet’s environment. We look forward to working with you to make this vision a reality.

Angelique Kidjo

Patron of the United Nations Music & Environment Initiative



Contents

Executive Summary	4
About the Initiative	6
Music Industry Stakeholders	7
Impacts of the Music Industry on the Environment	11
Overview of Current Initiatives	15
Sustainable Touring	16
Green Music Events	16
Supporting Environmental Causes.....	17
Audience Engagement	18
Green Venues	19
Green Music Production	19
Ticketing, Wristbanding and Merchandising	22
Overview of Existing Resources	23
Overview of Existing Standards, Regulations and Incentives	25
Standards and certification	25
Music & Environment Regulations.....	26
Sustainability & CSR Reporting	27
Music & Environment Awards	27
Barriers for Greening the Music Industry	28
Opportunities for UN Music & Environment Initiative	29
APPENDIX:	32



Executive Summary

Commissioned by the United Nations Environment Programme (UNEP), this report seeks to provide a state-of-the-art global overview of the music industry's efforts to address environmental sustainability, as well as to identify challenges and opportunities for the United Nations Music & Environment Initiative in assisting the process of "greening" the music industry.

The report is based on desktop research into existing music industry stakeholders and practices, as well as responses from a cross-section of music industry representatives from twelve countries.


The overarching findings, which came through both the respondents' opinions and direct research, revealed that partnering of music and environment is in evidence across many nations, however purposefully established programs to promote environmental issues through music industry activities are mostly initiated out of developed nations, particularly USA and UK.

Some of these campaigns cross national boundaries with international activity. Established programmes, research, resources, solutions providers, and actual greening activities undertaken are mainly clustered in Europe, North America and Australia.

There is disparity between developed, emerging and developing nations in both awareness about environmental issues as a key concern for the music industry, as well as in the availability of knowledge, tools and importantly, in the ready availability of solutions.

The lack of industry-wide regulation in the area of environmental sustainability and few formal external drivers was also often voiced by respondents as a key concern. Any activity in this space is currently undertaken as an ethical, competitive, public relations, or voluntary decision – often in anticipation of potential future regulation.

In addition, insufficient know-how and availability of skilled staff, plus the financial investment needed to undertake a thorough 'greening', were identified as barriers to wide-scale uptake.



As a result, individual companies, musicians, festivals etc are “taking matters into their own hands” by creating their own campaigns and initiatives to promote environmental causes or to “green” their activities and engage their audiences. However, these initiatives are fragmented and not synergetic.

There is potential to expand the existing few industry-led networks and campaigns at the international level. At the same time, the numerous local campaigns and initiatives remain perhaps the most effective and relevant for local audiences.

There was repeated agreement on areas of largest or most visible environmental impacts associated with the music industry: transport (audience, equipment and supplies), energy consumption and waste generation. An increase of consumerism and throw-away culture was seen as having a large effect on the potential for the environmental sustainability of the live performance/festival sector.

In order to tune the industry into ‘going green’ it is necessary to not only identify what the benefits of doing so are, but also what will motivate key industry players into action.

In this regard, there is an opportunity for the United Nations Music & Environment Initiative to:

- **Facilitate networking between existing industry initiatives, mainly in developed countries, and those regions and countries where there are currently none.**
- **Assist in reducing the skills and knowledge gap in “greening” the music industry internationally.**
- **Spearhead or catalyze targeted campaigns to address opportunities for greening of the industry or communicating wide-scale environmental issues through music industry activities.**

About the Initiative

Music is one of the most powerful mediums to communicate environmental messages to billions of people worldwide – irrespective of race, religion, income, gender or age.

The United Nations Music & Environment Initiative aims to use the popularity of music to promote environmental awareness and respect for the environment among the public, especially young people; and to assist in the process of “greening” the music and entertainment industry.

From concert halls to recording labels, and from festivals to musicians, the Music & Environment Initiative brings together individuals and entities in the world of music who want to be part of the solution to climate change, species extinction, freshwater crisis and other environmental challenges.

The Initiative is led by the United Nations Environment Programme (UNEP) in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and other partners.

About the Report

This report provides an overview of the current status of the music industry globally in addressing environmental sustainability issues.

Research has been undertaken to identify current activities or those in development within industry operations, content programming and audience engagement, which address the UN Music & Environment Initiative’s key objectives.

Opinions on opportunities and challenges have been canvassed by a broad cross-section of stakeholders within the music industry globally. This includes musicians, festival producers, promoters, solutions providers, industry organizations, NGOs, recording studios and other music industry stakeholders from across the globe including Asia-Pacific, Europe, Latin America and the Caribbean and North America. In total, 24 responses from 13 countries were received in time for the publication of this report. Additional feedback and involvement from music industry representatives is welcome and will be sought as the UN Music & Environment Initiative progresses.

The following pages provide an overview of music industry sectors, presentation of current activities, and opportunities for development of specific projects in line with the Initiative’s objectives. Highlighted are geographic or content gaps in the pairing of music and environment or where, with support, existing programmes could be expanded or scaled up internationally following industry-wide best practice.

The results of the survey, the content of this report, and ongoing consultations with industry stakeholders will inform the development of a work plan for the UN Music & Environment Initiative.



Music Industry Stakeholders

In order to tune the industry into 'going green' it is necessary to not only identify what the benefits of doing so are, but also what will motivate those key industry players into action. Engaging key stakeholders in the greening process will help to resource the industry with knowledge and solutions.

The music industry represents a diverse group of stakeholders, which include:

- Musicians/Bands/Music Groups
- Record Companies/Record Labels
- Music Industry Organizations, including those focusing on the environment
- Festival and Live Music Event Producers
- Music venues
- Instrument and equipment manufacturers
- Audience
- Regulating, Licensing and Funding Bodies
- Solutions providers
- Tour Promoters and Managers
- Booking Agencies
- Sponsors
- Environmental campaigns and related NGOs
- Music Media Outlets

Music industry stakeholders were asked who they so as the main 'influencers' in greening the music industry. Some of their answers are listed below

"Any act that serves as role models and use their celebrity to support environmental causes, and educate their fans through their websites, on-stage messaging, song lyrics, etc. In addition, their environmentalism would be reflected in their actions as touring musicians." **Lollapalooza, USA.**

"Big productions who demand cleaner technology and invest in this tech." **Lowlands Festival, Holland.**

"...large festivals have the power to put pressure on the firms they co-operate with." **Canal St, Norway.**

"Artists without a doubt and of course the fans. A ground swell from either of these camps can effect massive change." **Global Protection Agency, Australia.**

"Young musicians, the most famous artists, the producers and arrangers behind the music industry." **Studio Incaible, Mexico.**

"Government (legislation), local authorities (licensing), Artist pressure on event organisers." **Firefly Solar, UK.**

"... universities offering Sustainable Event Management Courses..." **Peats Ridge Festival, Australia.**

"Associations of festivals (YOUROPE), also leading festivals, and also good governance models – community or municipality may want to act on these issues and help festivals. Green tourism is becoming a sustainable income of money." **Exit Festival, Serbia.**

Musicians/Bands/Music Groups

For millennia, musicians have been spreading the environmental message, one song at a time. Through song, action and public statements, musicians are in a position to influence the decisions and opinions of their audiences, both on and off stage. They can also play an instrumental role in “greening” the music and entertainment industry as a whole. There are numerous examples of bands, with international, national or even local profile that address both greening of their operations and who use their profile and voice to communicate environmental issues and enact change.

Record Labels/Tour & Concert Promoters/Booking Agencies/Tour managers

Record labels, promoters, bookers and tour management are all influential players in purchasing and operational aspects to a band’s tour and activities. Artists must be motivated to ‘go green’ but it is the industry professionals making daily decisions on anything from printed material in a CD package, to merchandise, venue choice, transport logistics etc, that need to be engaged. Often decisions are taken out of the hands of musicians and into those that run the music business side of operations.

Event/Concert/Tour Producers

Those that organize mass music events, tours and concerts have a major role to play in the visible greening of the industry and in offering their events as conduits to promotion of environmental causes and campaigns.

Music Industry Organizations

General music, festival and concert promoters’ industry associations are taking on environmental sustainability, with distinct programs or projects being established. Alliances and organizations are also being established to focus on environmental issues within the music industry. Work includes research, provision of resources, networking and lobbying to push environmental issues onto the agenda. These organizations work with music industry business and support services, artists and performers, and engage with audiences. Some organizations are working on greening the music industry and others are connecting performers and music with wider environmental issues.

“I feel it's important to try and coordinate across different live entertainment sectors - one of the failings of the environmental movement is the tendency to create silos. I'd encourage bringing together existing efforts as much as possible - and developing as simple a message as possible.” **Live Earth.**

“... there is no united ‘front’ we can be a part of that is relevant to festival production/events. We feel we have a real lack of options for music based initiatives...We would like to see not only a platform developed with appropriate environmental issues identified by committee members, but real, viable plans and solutions to the issues.” **Lollapalooza, USA.**

“More collaboration between regional and global campaigns.” **Hanoi Sound Stuff Festival, Vietnam.**

Details on prominent music industry organisations focusing on environmental impacts, can be found in the appendix.

Environmental Campaigns and NGOs

Those environmental campaigns, projects and organizations which have a presence at a music event or in combination with a band or performer, have an opportunity to influence the uptake of greening within the industry and of course in the presentation of their message. These organizations can become 'greening partners' and active players in greening the industry, rather than just using the industry to promote their own environmental messages.

Venues

As in any built structure, the venue itself has an environmental profile, impact on its surroundings and potential to reduce the same. A venue which is built and operated with environmental sustainability in mind will drastically reduce the potential impacts of live performances. Venue management are key stakeholders in the greening of the industry. The actions they take will affect all bands that perform at their venue and all producers that use venues for their events. Encouraging venue owners to look at retro-fitting for energy and water efficiency, to put in place the best waste management systems possible and to control food and beverage catering impacts is essential. The ability for public transport logistics to work effectively will also sometimes come down to co-operation by the venue owner.

Festivals and Live Music Events

Music festivals and concerts gather large audiences over a short period of time and create a mini village. Instead of being seen as hedonistic and waste-producing, they can become true models of sustainability in action. Producers of live music events and festivals have the opportunity to reduce impacts of their production through adjusting their operations, greening their supply chain along with the purchasing decisions. These festivals also have the opportunity communicate environmental issues through having a captured and most likely engaged and receptive audience. Televised music events, either in-studio or televised live outdoor events have enormous reach and the potential to be successful conduits to disseminating environmental messaging.

Audiences

Audience participation and active engagement in how they can help reduce the impacts of the mass music events and gigs they attend is a major part of the attempt to 'green' a concert, festival or gig. Encouraging the audience to enquire what their favourite music events, festivals and bands are doing to reduce environmental impacts is a good step to enacting change.

Solutions Providers

Engaging participation of the supply chain is a popular technique to green industry operations. Additionally through building demand for 'green' solutions there is the opportunity for new providers to enter the marketplace and offer alternative solutions to the industry.

"... affecting actual change has to come from the people with the most power. That isn't always the musician. Sometimes it's the promoter, sometimes the agent, sometimes the producer. However this has to go beyond the players that people know about. The lighting companies have to get on board, the bus companies, the touring catering companies, etc." **Bonnaroo, USA.**

Licensing, Funding Bodies, Sponsors

Those that give the opportunity either legally or financially for music events to exist can influence their sustainability. There is an opportunity to encourage local councils, arts agencies, environmental agencies and even sponsors, to put additional environmental requirements on music events they fund and regulate.

“...the significant shift towards sponsorship of events has seen a huge increase in waste generation - building agreements with sponsors around minimizing product packaging and packaging take back schemes is one option.” **Global Protection Agency, Australia.**

“We would like to work with a City entity, for example, to create an incentive program that is active throughout the year and has relevance to the local community. With our huge fan base, we feel we could help publicize the program, educate our patrons, and partner with the City in a program that would be strengthened by allying with us to produce tangible results.” **Lollapalooza, USA.**

“Also there are quite a few barriers in local government - for example permitted use of grey water and getting composting toilets on site can be a long and arduous if you do not have a forward thinking council.” **Peats Ridge Festival, Australia.**

Music media

From magazines to music television networks, music media has a massive influence over attitudes of the listening audience. Their coverage is often a major part of a band's success and opportunity for instant profile. Certainly the music industry and music media have a very tight relationship, each needing the other to exist. No matter the readership or reason for publication, all music media have a part to play in promoting the greening of the industry and the promotion of environmental issues. Media publications often run their own awards or 'best of' declarations.

TV Talent Shows

Massive artist breakthroughs via reality TV 'talent' shows such as Pop/American Idol are also a phenomenon of the past decade. The number of auditions they receive, the viewership rates enjoyed and the record sales of winners, is a testament to the success of this formula in the mainstream market.

Impacts of the Music Industry on the Environment

Based on the results of the survey, music industry stakeholders are generally aware of the environmental impacts associated with their activities, and many are increasingly concerned with reducing these impacts. While the issue of carbon footprint has received significant attention, many other environmental impacts – such as waste generation or water consumption – have yet to be addressed effectively.

Live events such as festivals with their large audiences have come under increasing scrutiny in recent years, while music equipment producers have to comply with strict international rules governing trade in wildlife.

Audience travel is, undoubtedly, the single biggest contributor to live events' environmental footprint, whereas for music venues energy use is a major source of emissions. Manufacturing of music equipment, CDs and listening devices needs to take into account the full life-cycle of products in order to minimize their environmental footprint.

Accurately measuring and reporting on the environmental footprint of a given activity or product remains a challenge in the absence of common standards or protocols specific to the music industry.

“Waste, water use, local air quality; global: Climate change by use of electricity, transportation, resource use.” **Roskilde Festival, Denmark.**

“Waste, transportation, recycling, power.” **EXIT Festival, Serbia.**

“Transport, production, throw-away-culture, set/décor.” **Vegetable Orchestra, Austria.**

“I think everybody should take responsibility for their own environmental impact and that it is an event's responsibility to promote this to an audience. There is a train of thought that says an event is responsible for offsetting all environmental impacts of patrons attending the event which I completely disagree with. It is every individual's responsibility to reduce their own impact, they can do this by thinking about their transportation choices, considering where their power and food comes from and thinking about their consumption. Developing this mindset in individuals is one of the most important challenges facing the world at present.” **Peats Ridge Festival, Australia.**

The music industry's impact on the environment is broadly associated with the following activities:

- Business operations
- Business Travel
- Recording/Studios
- CD Manufacturing
- Live events
- Venues
- Touring (performance and promotional)
- Merchandise and promotional materials
- Ticketing
- Digital delivery of music content
- Instruments
- Sound & Lighting
- Music listening devices
- Audience Travel

“Waste/throw away culture is a clear waste of resources, not something you change overnight. A long term change in mentality is needed. A big change is possible concerning LED light and other energy savings. And the food served at the festival is something that can be changed relatively easily. Artist riders is difficult to affect, but communication in the riders could be improved.” **Roskilde, Denmark.**

Based on the results of the survey, the following environmental issues were seen as most important and with potential impact on the music industry or affecting the respondent's activities:

- Climate change
- Biodiversity loss
- Deforestation
- Consumerism
- Population growth
- Air Pollution
- Overfishing

Erratic weather patterns which make the festival season risky, was also mentioned as a concern.

The environmental impacts of music industry operations can be summarized as:

- Purchasing & Materials Use
- Energy
- Waste
- Water and Sanitation
- Transport

The recurring answers from industry participants surveyed were that **transport, energy, and waste** are seen as the largest impacts of industry operations.

The opinions of industry stakeholders were surveyed to find what areas of event production they saw as particularly wasteful and that had the potential for immediate change. Wastefulness, a throw-away culture and transport impacts were repeated themes.

"The most wasteful parts are the artists claims for always larger stages, with more and more energy-consuming equipment." **Canal Street, Norway.**

"I think it needs to be addressed by individual promoters. In lots of places promoters will supply the same wasteful crap that they always have no matter whether you ask for it or not. ... It is literally out of your hands as an artist who is turning up in an unfamiliar place for one day." **Xavier Rudd, musician, Australia.**

From a music fan's perspective

Founding research by Claire O'Neil from **A Greener Festival** in 2006 of 649 festival goers and 15 festival organisers, was updated in 2008 with a survey of an additional 1407 music fans. The results include:

- **80% considered noise at festivals had a negative environmental impact**
- **82% thought waste had a negative impact**
- **56% thought festivals had a negative carbon footprint**
- **60% were worried about water**
- **53% were concerned with land damage**
- **84% thought travel and transport had a negative environmental impact.**

In 2006 traffic and waste were the two most worrying environmental impacts with 70% strongly agreeing or agreeing that traffic and 71% strongly agreeing or agreeing that waste had a negative impact. In the 2008 research the **56% worried about CO2 Emissions was an increase of 26% in two years.**

www.agreenerfestival.com

Audience Responsibility

The topic of a shared responsibility for an individual's personal impact when enjoying leisure activities is one that is up for discussion.

"Give up something in their own lifestyle to enable the entertainment industry to continue to provide them with entertainment, ie personal carbon credits." **Greenpeace UK.**

"Radically change the consumer behaviour, recycle, use public transport, car pooling, reduce waste." **Vegetable Orchestra, Austria.**

"... I think it's more important for the event itself to lead the way, suggest solutions and create networks that the audience can connect with. When left to do something personally, most people think it's too much hassle." **Artists Project Earth, UK.**

Measuring and Disclosing Impacts

Much discussion has been had over what impacts should be measured and how, and how to report on the results of these assessments. Different consultancies or organizations are devising their own methodologies and boundaries on what is reported.

Having symmetry across the industry will mean that benchmarking and best practice standards can be established.

Overarching impact measures reported as metrics can be summarized as:

- **Energy** used (kWH for grid and litres fuel for mobile, plus CO₂e)
- **Water** used (cubic metres, plus CO₂e for production)
- **Liquid waste** produced (cubic metres, plus CO₂e for treatment)
- **Transport** (distance, plus CO₂e)
- **Solid Waste** (volume or weight, plus CO₂e for processing)

Within each of the above categories, sub-categories can be defined. An example of how impacts are measured by Julie's Bicycle and many other events in the UK for outdoor music festivals can be found in the appendix.

Industry stakeholders were asked whether they felt the industry should disclose its environmental impacts. Opinions were split;

"Yes, but I don't think they can do it without help. Needs industry standards that are easy to understand, implement, record, cost and comply with." **Greenpeace UK**

"Yes, I did, plus I compared it with the official averages from the regular environmental impact we have. It's very comparable to a city of the same size." **Lowlands Festival, Netherlands.**

"Yes, in an ideal world. However, as a business, the music industry should be held to the same standards of other businesses, and if we are held accountable for releasing environmental impact statistics, all other industries should also be held accountable for public disclosure. Additionally, because there is so much variation between festivals (camping vs. non camping, number of days, location (urban vs. country), we believe environmental impact numbers can be used to unfairly judge a festival and its greening efforts. This needs to be taken into account." **Lollapalooza, USA.**

“I don't think the music industry has more reason to do this than other sectors. If it should be done, there is a need for common reporting systems, since countries have very different ways of reporting.”
Roskilde, Denmark.

“I don't think the music industry has any more responsibility to disclose their impact than say coal companies. I don't really think the music industry can affect real change in the industries that are so crucial to curbing pollution such as coal, oil, and gas companies. What would the standard for disclosure be? How would it be enforced, what would the repercussions be for not complying with standards, etc.”
Bonnaroo, USA.

The **Global Reporting Initiative**¹ is the leading body on developing worldwide accepted measures for reporting sustainability impacts across various industry sectors. Currently an **'Events Sector Supplement'** is being undertaken and this will have some relevant for the Music Industry – namely those producing events.

When this is complete (November 2011) the industry (events – cultural, sports and business) will have a final set of measures (both metrics and descriptive) through which the industry can measure the sustainability impacts and benefits of events. It will provide guidance for public disclosure and reporting on both quantitative impact metrics and qualitative impact descriptions.

In order for the tools available to be truly relevant and useful to the entire industry, the following is required:

- Agreement on what the set of metrics to measure quantifiable impacts will be.
- Agreement on what needs to be reported on in qualitative terms.
- Disclosure of impacts and reporting protocols within the industry.

A listing of proposed measures to report on can be found in the appendix.

¹ www.globalreporting.org

Overview of Current Initiatives

It is difficult to accurately estimate the amount of 'greening' happening within the music industry, and likewise the amount of support music industry players give environmental causes in various countries. However, based on evidence across the music industry in other areas such as touring and festival production, it is likely there would be more activity from 'developed' nations.

It is possible to surmise the amount of greening of the music industry would be directly related to the amount of 'greening' that is occurring at large in their countries or regions.

Conversely, it could be predicted those countries which experience drastic, immediate, and highly visible environmental degradation could quickly harness the power of the music industry in that country to bring attention to various issues.

It may however follow that the actual 'greening' of the music industry's operations in some nations may be impeded by the lack of readily available solutions. However, efforts by music industry stakeholders in these nations could be focused on bringing attention to the environmental issues that need exposure.

Ways in which musicians, music events and the wider industry engages in "greening" solutions is extensive. Examples include:

- Tour greening
- Sustainably produced music events and festivals
- Greening band operations
- Greening venues
- Greening recording facilities
- Active supporting environmental causes on and off the stage.
- Including environmental themes and issues within music
- Promotion of environmental issues or sustainable living at the music event
- Sustainably produced equipment, merchandise, CDs and instruments

Industry stakeholders were asked how they delivered greening within their activities;

"...by proposing a policy change to the board - i.e. turning the festival 'green'." **Akureyri International Music Festival, Iceland.**

"We try to see ourselves as part of sharing responsibility for change, for example when it comes to our travel arrangements. (when possible). We also do our best to recycle and compost when we prepare our concerts/build our instruments." **Vegetable Orchestra, Austria**

"We try, but it is hard. Even recycling in some places is hard to implement which is sad. I built and live in an eco home. (stand-alone solar/worm farm sewerage/rain water etc) so when I go on tour I feel really quite toxic. It's almost like you need the budget to employ someone full time to be advancing creative ways before the dates and then carrying it out upon arrival." **Xavier Rudd, musician, Australia.**

"Organic food sold through the Festivals general store, rebate to any food stall holder that can provide \$2000 worth of organic food receipts." **Peats Ridge Festival, Australia.**



Sustainable Touring

Bands which are touring, (performing live at different geographic locations) have the opportunity to reduce impacts of their activities.

They can reduce the impacts of their own touring operations and they can influence the venues and festivals that they perform at.

Some international tours are coming under scrutiny for the huge 'carbon footprint' estimated in moving gear around the world. Artists are listening and are concerned about the impacts their touring is having. There are numerous examples of bands and tours that have been 'greened'. These have been initiated and managed by the artist and their team, or achieved through the intervention and supervision by green touring consultants and solutions. There are solutions to be had and pioneering bands, both international profile and smaller local bands, are addressing their touring impacts.

It must be noted that there are also many smaller bands touring nationally or locally, who have some impressive DIY greening elements in place. It is likely that innumerable small bands are taking matters into their own hands and doing their own part to green their tours. Examples include bands touring with their own solar power rig, or travelling in vegetable oil or biodiesel buses.

"Trucking HGVs across the globe for each gig is clearly unsustainable. Bands have to use local resources, scale-down their gigs and do more gigs in smaller venues. Think Local is essential. Getting an audience to a centralised gig is also carbon-intensive. Small is Beautiful applies here." **Artists Project Earth, UK.**

"[we would support] getting performers to commit to a reduction in own carbon footprint whilst on the road." **Greenpeace UK.**

Examples of bands touring green can be found in the appendix.

Green Music Events

Most festivals and events that address both greening of the production and using it to communicate environmental issues and enacting change would fit into one of these three examples:

- Music events or festivals which have taken greening into the heart of the event logistics.
- Events and festivals that are produced to promote sustainable living/development and where music is one of the activities programmed.
- Music events where promoting or fundraising for an environmental issue, cause or project is the key reason for the existence of the event.

Most sustainable music event production is happening as common practice is occurring in North America, Europe and Australia. Little pro-active and visible 'greening' of events has been demonstrated in other nations. However in many countries and continents where 'greening' of these music events is not the norm, there are often individual events tackling these issues which stand out as beacons of best practice.

"On my travels over the last 10 years I have seen all of the above increasing slowly at most events. Alternative power is the slowest, talked about a lot but not often in practice." **Xavier Rudd, musician, Australia.**

In contrast to sustainably produced events, music events with environmental issues at the heart of content or programming, do spread across most countries and continents. It is not too difficult to find examples in almost every region of music events which have been staged to promote some environmental cause or other.

“Separate waste at source, not invisibly down the line. We don’t use fossil fuels (sustainably sourced biofuels and non-consumptive renewable energy only); we recycle and compost as much waste as possible (though not enough!) and work on public messaging about what you bring to the event; waste water we need to do more on, though we again work on participant messaging – we have plans to introduce rainwater harvesting amongst other things to reduce use of clean water; in terms of transport we offer liftsharing forums, coach services (inc. one used cooking-oil fuelled bus), buses from local rail stations, parking charges to encourage liftsharing; cycle racks, cycle hire and a repair service.” **Sunrise Celebration, UK.**

“The industry relies very much on a rental market; absence of alternatives is the biggest hurdle to take. Financial is a choice, you can train staff & production and we did.” **Lowlands Festival, The Netherlands.**

A list of some music events working on sustainable production can be found in the appendix.

Supporting Environmental Causes

Over and above the greening of their actual operations, many bands actively support environmental causes.

The types of music events created specifically to promote environmental causes include:

- Benefit concerts for the purpose of fundraising to support environmental causes.
- Concerts for the purpose of promoting a particular environmental issue or action.
- Compilation CDs sold with profits supporting projects.
- Fundraising drives through sale of merchandise.
- Themed events to both fundraise and/or promote a message.
- Awareness building or fundraising campaign songs.

“...Tasmanian Old growth logging, Sea Shepherd Conservation Society, Save the Kimberly (Nth west WA Gas proposal) and mainly respect for culture and traditional ways of aboriginal people. Integration of aboriginal ways and beliefs and connections to land into modern day society will naturally force people to remember country day to day rather than not even consider it.... I do all sorts of things whatever I can, play benefit shows, spread word through internet and song, give music open to any ideas that float my way.” **Xavier Rudd, performer, Australia.**

Examples of campaigns within the music industry supporting environmental causes can be found in the appendix.

Audience Engagement

Getting the audience into the greening aspects of concerts, tours, festivals and other mass music events along with the being receptive to environmental messaging when at the show, is going to be one of the key drivers to success of any campaigns devised. Talking to people prior to a show, getting them actively involved during it, and sending them home with 'sign up' actions or a way to let them know how successful a particular action was, is important.

Online and new media campaigns are appearing, activated by music companies, bands and festivals. These engage the audience in activities before the event or concert, or just push the whole idea of sustainability at concerts.

Once the audience is at the show, many different techniques are used; incentives, penalties, peer pressure, humour, fun, entertainment, information, participation, rewards etc. The possibilities are infinite and it comes down to the producer of an event or gig to understand what their audience will respond to (along with having identified what needs their involvement.)

Many events engage the audience participation by having green stewards/volunteers to help get their message through in interesting and personal ways. There are many examples of this from standing beside bin stations to creative performance and interaction with the audience.

"A highly media publicized official conference before and/or after the concert with key industry players to debate the objectives and how to reach them." **LAN Music, France.**

"New media and innovative ways to communicate to our market in an environmentally friendly way. "Show – don't tell" is the basis of our environmental communication." **Øyafestivalen, Norway.**

"Make it feel contemporary and cutting-edge. Redefine 'Green' and 'Eco', make them desirable and exciting." **Sunrise Celebration, UK.**

"It's not perceived as cool – and people don't like to be reminded that their leisure activities imperil the planet. I think that the design of music events has to change first so that the audience is inculcated into an environmental ethos though they may not at first realize it." **Artists Project Earth, UK.**

Apart from getting people to participate in schemes to reduce the impact of the show's operations, getting the audience inspired over broader environmental causes is a huge opportunity. Music industry stakeholders were asked what, in their opinion, were the best ways to communicate environmental issues to have a lasting effect on the audience.

"Solidarity concert, public statements, calls to action, raise awareness." **Vegetable Orchestra, Austria**

"... Let your own work talk by leading a change from within." **Akureyri International Music Festival, Iceland.**

"In our opinion the best way to communicate is to show the audience proofs of environmental friendly technologies and action, and to explain these." **Canal Street Festival, Norway.**

"Donating part of the profit to green issues, producing cool merchandise with such topics, collecting signatures for the change of legislation – political initiatives, producing really cool videos." **EXIT Festival, Serbia.**

"Traditional welcomes by traditional owners of land and taking a moment to remember that land before we came." **Xavier Rudd, musician, Australia.**

Green Venues

Permanent venues host live music performances across the globe, in every nation, every day of the year. Somewhere at anytime, people are gathering together in clubs, bars, pubs, concert halls, opera houses, theatres, recital halls, stadiums, school halls, sports centres, cafes, restaurants, clubhouses, recreation centres, hotels, tourist resorts, arenas, and beachside bamboo shelters to listen to live performances of music.

All venues have the potential to be sustainably built, or to be retro-fitted with infrastructural solutions. The operational overlays of venues can also be adjusted to create environmentally sustainable systems. Performing in a built venue inherently produced less environmental impacts than performing at a temporarily event build in a greenfield site. Additionally, involvement by those that work within the venues and their day to day habits can be adjusted to further reduce impacts.

The 'eco-club' phenomenon is starting to gain traction. Several dance clubs with kinetic energy dance floors and other environmentally friendly interventions are in place.

Examples of green venues and building certification can be found in the appendix.

Green Music Production

Green studios

Recording music is more than just the activity within the studio. The process also includes the creative process of developing songs, rehearsals, travel and accommodation of all those involved in the songwriting process, demo and in-studio recording and mastering of the final product.

The overarching considerations when deciding to 'green' the recording process are:

- Location of activities and consequential transport of gear and travel for participants.
- Choice of studio, including its location and the building's environmental profile.

As with music venues and offices, built studios are able to benefit from the wealth of information on sustainable design, retrofitting and systems to reduce their operations impacts.

Professional studios have traditionally been the sole domain for professional recording. However with advances in technology and digitalization of delivery, a DIY recording culture is apparent. There are also boutique studios tucked away in the country side offering eco-accommodation, and solar powered facilities. Bedroom, basement and spare room studios would be in countless homes. Disused industrial and commercial buildings on the wrong side of the tracks are also being converted into studios.

Examples of green studios can be found in the appendix.

CD manufacturing

Aggregate sales of compact disks (CDs), though not what they have been, still will account for significant environmental impacts through raw materials extraction & processing, emissions from energy in production, printing (paper & inks) and transport of every step in the process right through to delivery to the retailer.

CD manufacture is the industry's largest single source of direct emissions with an estimated 30% of the recording and publishing sector and a reported 10% of the total industry.²

The packaging that surrounds the disc comes in many configurations. It is an important marketing tool as it visually represents the artist and their music. According to the research into the carbon impact of CD manufacture completed by Julie's Bicycle, a shift from plastic 'jewel' cases to card cases could reduce emissions from production by up to 95% in the UK.³ Another study undertaken to explore this area is '*The Energy and Climate Change Impacts of Different Music Delivery Methods*'⁴, commissioned by Intel and Microsoft. A key finding is that reductions of between 40% and 80% in carbon emissions are experienced from digital delivery versus CD delivery.

Acknowledged as the first successful environmentally-friendly alternative to plastic, the **PaperFoam** CD tray is designed to replace the plastic tray. It is 100% biodegradable and recyclable with paper and very low CO2 emissions and energy use.

Whether an inlay and booklet to go in a jewel case or printing directly on a card case, the impacts of printing can also be considerable. There is much information available regarding the most environmentally preferable choices for paper stock, inks and wrapping.

Some examples of "green" CDs include the **Flex-Lite** technology, which uses less than 50% of the plastic of a traditional DVD and are 100% recyclable because they use no non-biodegradable bonders (single layer construction). **Earthology CDs** produce inserts printed on 100% post-consumer recycled paper with nontoxic soy ink, packaged in 100% recycled/salvaged jewel cases, CD scraps recycled into milk cartons, shrink wrap made of environmentally benign LDPE⁵, instead of the industry's standard toxic PVC, shipped with recycled packaging, powered by geothermal and wind energy on an organic farm. More information in the appendix.

Digital delivery

The delivery of music to consumers digitally has had a profound impact on operations and profit models of the music industry. Illegal downloading of music and file sharing is an obvious challenge. From an environmental standpoint, the relative impacts of physical versus digital delivery could be compared.

² Impacts and Opportunities Reducing the Carbon Emissions of CD Packaging (Feb 2009)

www.juliesbicycle.com/media/downloads/cd-eexecsummary-final090211.pdf

³ **First Step - UK Music Industry Greenhouse Gas Emissions for 2007**

(Botterill C, Lye G, Boykoff M, Liverman D)

www.juliesbicycle.com/media/downloads/jb-first_step-e-report-revisedjan09-sm.pdf

⁴ Christopher L. Weber, Jonathan G. Koomey, and H. Scott Matthews. Carnegie Mellon University, Department of Civil and Environmental Engineering, Lawrence Berkeley National Laboratory and Stanford University. (2009)

www.intel.com/assets/pdf/general/CDsvsdownloadsreleasecomplete.pdf

⁵ LDPE – Low Density Polyethylene

When assessing direct and indirect environmental impacts of digital delivery of music versus physical delivery, the full lifecycle of all components from file storage to device manufacture should be included in the comparison.

Additionally with digitization come changes in the way people 'consume' their music. User habits such as viewing music as a disposable asset and the continual upgrading of devices and disposal of replaced ones may have an impact.

Instruments and Equipment

The manufacture of musical instruments, sound and lighting equipment and listening devices could have a significant life cycle impact. The 'greening' of this sector of the industry would be achieved through:

- Ethical and environmentally responsible materials sourcing.
- Ethical and environmentally responsible manufacturing processes.
- Reduced energy consumption and renewable energy supply in manufacturing facilities.
- Technological advances to electronic equipment making them lighter, energy efficient, longer lasting and multifunctional.
- Re-using equipment and producing equipment made from recycled materials.

Examples of sustainable instruments and initiatives can be found in the appendix.

For many musical instruments, including guitars, pianos and woodwind instruments, the sourcing of certified timbers and complying with regulations regarding animal and plant materials used in their manufacturing, is the primary concern.

Several initiatives aim at providing alternatives to old-growth and threatened tree species, and there is a good supply available of ethically sourced, fair trade and environmentally friendly instruments.

Again, the main concerns are environmentally responsible sourcing of timber and fair workers conditions.

International agreements like the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) lists a large number of animal and plant species used in the production of musical instruments, including Brazil wood and mpinga tree, and sea turtles and elephants whose shells and tusks had been used in the past for lyres and as piano keys.

Keyboards, synthesizers, guitar amps, pedals and other musical instruments and gear which run on electricity, have two environmental features to be concerned with – the energy consumption in running the gear and their manufacturing process. Buying gear from a company with ISO 14001 certification is a good start. Alternatively, look out for innovations in technology. Companies which reduce and neutralize their carbon emissions through manufacture also should be supported.

Lighting on stages, projections and screens are a major source of energy consumption for live performance. Using low energy consuming equipment is the key. A move from hot burning and high energy consuming 'Par Cans' as stage lighting to low energy LED options or energy conserving lighting is beginning to be seen. Pioneering this currently is Radiohead, whose entire lighting rig is comprised of LED lights.

Ticketing, Wristbanding and Merchandising

Traditionally tickets have been physical printed card, often with tear off portions. In their printed form they can be valued keepsakes of shows attended and good times enjoyed. Certainly some tickets stubs signify certain rights of passage and milestones in many young people's lives. Likewise, coloured wristbands are also treasured keepsakes and mementoes for fans.

Although a relatively small proportion of the overall tour or festival impacts, combined, across the world, the volume of paper to produce the world's tickets would be considerable. However with increases in security technology against forgery and scalping, sophisticated technology is often embedded into the physical ticket, and thus sometimes specialist materials are needed to print them.

One way to get around printing and mailing tickets (whether plain paper or high tech security tickets) is instigate a paperless ticketing system. Here, the tickets are paid for on the phone, online or even in a retail outlet. A confirmation number is supplied (by email, sent to a mobile phone etc). Then the credit card used to purchase the ticket is swiped at the ticketing gates at the show, and either a physical ticket then provided, or that is leapfrogged straight to a wristband or direct entry into the gig.

The concept of Green Tickets is seeing more popularity. The concept is based around a carbon offset aligned with the ticket sale.

Ticketmaster

This is one of the giants in ticketing internationally (recently merged with Live Nation). They offer paperless ticketing. Interestingly, they also have a recycling offer on in the UK. They can recycle mobile phones or iPods with Ticketmaster for credit toward ticket purchases. A recycled Blackberry 9500 Storm receives £106 (about \$166) on a Ticketmaster gift card. A recycled 8-gigabyte first-generation iPod touch will earn you £11 (about \$17) on a Ticketmaster gift card.

Merchandise

Many concerts, tours and festivals produce t-shirts, jackets, hoodies and other products such as beer holders, water bottles, badges, patches, caps, stickers, and all manner of promotional material to sell in association with the gig. As with purchasing production supplies, food, beverage and office supplies, the manufacture of all the branded items for sale can have a significant environmental impact. To ensure that merchandise is as sustainable as possible, appropriate certification should be sought. Rather than traditional t-shirts, hoodies and hats, alternative bespoke merchandise can be commissioned using sustainable or recycled materials and local designers.

Overview of Existing Resources

There are many resources currently available to guide music event producers how to 'go green' and to show bands how to 'tour green'. However, these tools are not centralized, harmonized or accessible in languages other than English.

If events and bands so choose, they can also easily find out about producing 'green' merchandise or printing 'green' promotional material, producing a 'green' CD. Several online guides, checklists and printed guides exist to direct those event producers who wish to 'go green' on how to do so.

There are several specialists (individuals and agencies) who work with festivals and music events to assist them in their green operations and with bands to assist them in greening their tours.

Apart from staff or consultancies there are other ways to achieve sustainable event and tour production. In fact the optimum way is to have the concepts of sustainable management embedded into the production team.

There are many music festivals and events with greening at their core that may not have specific greening staff, but have the sustainability initiatives and operations entrenched in all departments.

At the current stage though, to facilitate a switch from standard production techniques to sustainable ones, a green champion is required.

Options can also include:

Greening Partners: Often events will partner with the local sustainability alliance, university environmental department, environmental action group or similar NGO or agency, to assist with their greening efforts.

Contractor Driven: As waste is a highly visible impact and has multiple levels of management to effectively operate, skilled waste service contractors, local council waste initiatives, or state/territory/country based waste campaigns can often be seen as greening consultants.

Training & Professional Development

As the pairing of sustainable management with event production and touring is a new field, there are limited numbers of experienced professionals available to help progress this throughout the industry. Experienced practitioners are needed who have both hands-on events or touring experience and a deep understanding of environmental sustainability issues as they apply to the industry.

Event Management is a popular degree at many universities, and certainly there are many non-degree courses available worldwide. Courses in music business, music management and tourism are also relevant to be carrying these courses.

Tools & Auditing

There are several tools (internet based) and calculators available which assist the producer of events to do so sustainably, along with measuring the impact of the event.

Event Tools

The following is a list of existing tools for measurement and management of live events. Details of these tools can be found in the appendix.

- **Sustainable Event Management System** – www.sustainableeventsolutions.com.au (Australia & International)
- **Event Footprinter** – www.event.footprinter.com (UK)
- **Event Berry** – www.eventberry.com (UK)
- **IG Tool** – www.juliesbicycle.com (UK)
- **EPA Victoria Carbon And Ecological Footprint Calculator** – www.epa.vic.gov.au (Australia)
- **Sustainable Events Planner** – www.slf.org.au/eventplanner (Australia)

Touring Tools

There seem to be no existing tools (internet based) and calculators available specifically developed for managing and measuring impacts of touring. Environmental auditors may have developed their own measures and indicators for assessing the impact of tours that they have been contracted to.

The most prevalent challenge with current tools is often they are set up to measure slightly different elements of the event, with differing boundaries. In some cases the tools may measure impacts which are too general and in others they measure impacts in too great a detail as to make them untenable for the user.

In addition to these tools and calculators, individual consultants and carbon auditing companies have developed their own methodologies, further confusing the situation.

Details of resources, tools and training can be found in the appendix.

Overview of Existing Standards, Regulations and Incentives

According to the music stakeholders' survey, both a 'carrot' and a 'stick' approach is necessary for the music industry to go green. The need for industry-wide standards and clear regulations, coupled with a range of incentives, was also highlighted.

"Canal Street was certified as a green event four years ago, and has taken steps to reduce our overall environmental impact and will continue to do so. Until now we have focused on recycling, but we are working on a plan to increase the use of public transport for the audience." **Canal Street, Norway.**

"Lack of music-industry environmental standards which are 'self-imposed' and set by our own industry as standard good practice." **Lollapalooza, USA.**

Standards and certification

The creation of best practice, standards and certifications across all music industry sectors is a strategy which will drive the industry to a more sustainable future.

In those countries where environmental management systems are common within industry, there is also prevalence in certification and independent assessment of a product or company's environmental claims. This is naturally flowing onto the music industry, particularly around event production, but also eco-labeled and certified products (CD, merchandise).

International Standards

The international standard ISO 14000⁶ has some relevance in the music industry and various aspects of its operations in relation to the creation of overarching Environmental Management Systems (EMS) for organizations. ISO 14000 standard addresses various aspects of environmental management. ISO 14001:2004 provides the requirements for an EMS and ISO 14004:2004 gives general EMS guidelines. Other standards and guidelines in the ISO 14001 family address specific environmental aspects, including: labeling, performance evaluation, life cycle analysis, communication and auditing.

For the events sector, which in the music industry applies to music festivals and concerts, a new EMS-style ISO is currently under development off the back of the BS 8901. Once developed it will be ISO 20212: Sustainability in Event Management.

Note: Other certifications exist in the events industry within the sporting and meetings sectors.

Eco-Labeling

Eco labels which certify products as environmentally responsible is a popular way of communicating a product's credentials to the consumer. Additionally, an environmentally responsible CD product can be produced by greening the supply chain or choosing suppliers with environmental accreditation in place

⁶ ISO 14000: www.iso.org/iso/iso_14000_essentials

Some individual artists have made claims around their CDs being green – which is very likely to be the case. However a formalized acknowledgment of meeting a minimum set of guidelines or standards which have been independently established and verified, will drive the demand for producing low impact CDs.

While it has been demonstrated the greenest option is to have card CD cases over plastic jewel cases, there are no market drivers, globally, to push this. Certification and eco-labelling may be one way to encourage quick uptake.

Industry Green, CD Packaging

Julie's Bicycle have developed their Industry Green guidance for CD Packaging and accompanying IG Mark for CDs. Industry Green certification for CD packaging assesses whether a CD packaging format is 'lower carbon'. To be eligible for Industry Green status the packaging manufacturing process must be found to produce less than 400g greenhouse gas emissions per unit, at least two thirds less than standard CD packaging (plastic jewel case, booklet and inlay). In addition, the packaging supplier must demonstrate that they are engaged and committed to greenhouse gas emissions reduction and disclosure. Successful packaging formats can carry the IG mark under license. www.juliesbicycle.com/media/igdocs/ig-cd-sep-09.pdf



Music & Environment Regulations

The music industry is of course heavily regulated when it comes to copyright, publishing, royalties etc. Environmental regulation of the music industry's various operational and manufacturing activities come under the relevant Environment Agency of a region or nation. Areas regulated would include;

- Sound levels
- Biodiversity protection
- Emissions to water and land
- Waste and sewage management
- Use of chemical and toxins and disposal methods

Additionally, environmental impacts regulated by local government would include:

- Transport, congestion and traffic flow
- Food handling
- Sanitation requirements

Sustainability & CSR Reporting

Outside of environmental sustainability, the music industry also has a chance to support economic and social sustainability through its engagement with and support of the host community where its activities are undertaken.

The music industry has continually supported the communities which support it – through donations, support of charities, environment, social justice, peace and other concerns. Through a framework for reporting being established by GRI, those producing events can bring focus on the broader sustainability of their undertakings.

The music industry as a whole will be able to take guidance from this sector supplement but can also frame its impacts against basic Corporate Social Responsibility tenants of economic, social and environmental impacts and legacies.

Music & Environment Awards

The music industry has many awards for bands, however it is believed there are few currently with a 'green band' or 'environmental citizen' award.

Music Industry conferences or awards nights put on my media outlets specializing in music, are the prime targets for establishing greening awards. Additionally awards are often seen at industry conferences. If not official awards, then acknowledgements of achievement in this field.

Barriers for Greening the Music Industry

Apart from what is possible to be done, reasons or barriers for greening activities not to be undertaken need to be considered. Industry stakeholders were asked their opinions on possible barriers or challenges to becoming a 'green' band, running a sustainable tour or mass music event and a summary includes:

- Cost (perceived or actual)
- Lack of know-how, available resources, skilled staff and sustainability solutions
- Lack of interest by producers
- No-one to 'report to' other than fans
- No legislation or regulation to enforce change (both in operations or reporting of impacts)
- Bands not having power over their touring operations.

Opinions included:

"Management that disrupt the communication between artists and festivals and stick to their old practices." **Canal Street, Norway.**

"Lack of knowledge and means to solve the problems, plus no dedicated, trained staff to take the actions into effect." **Oya Festival, Norway.**

"The whole environmental approach is very time consuming in my organization. I have very little time left to go to conferences and seminars about this issue unless I think there are new developments where I can learn from." **Lowlands, The Netherlands.**

"I would say that people in my region are not too aware of green issues in general, which is normal considering the economic situation and constant political turmoil." **Exit Festival, Serbia.**

"My experience – financial." **Exit Festival, Serbia**

"Lack of willingness to allocate finance to environmental initiatives." **Firefly Solar, UK.**

"...my research shows the biggest pool of promoters fall into the confused basket and the fact that environmental management is not their core business. They have not been shown how it can be cost effectively integrated into their business model." **Global Protection Agency, Australia.**

"For the festival business the main barrier is the short period of activity which makes most investments unprofitable and much cooperation with suppliers of rented gear is necessary. .. Further it is very important to remember that the most important work of the festival is music and a good, safe experience for the audience and the acts. No environmental projects will be allowed to make the festival experience less safe or allowed to affect the artistic choices at the festival." **Roskilde Festival, Denmark.**

"Financial impact - lack of knowledge of potential cost-savings - lack of a coherent strategy to communicate with audiences about both environmental impacts and ways that events are becoming more sustainable." **Live Earth.**

Opportunities for UN Music & Environment Initiative

The results of this research report illuminate areas of opportunity and further discovery. The United Nations Music & Environment Initiative has the potential to facilitate creation of new projects and programs, assist in expanding existing ones, and importantly to offer access points for initiating projects to network with those already established in other nations.

The following tables give an overview of the opportunities to be explored;

Activating Change	Resourcing those that can pressure change with the tools necessary to do so, could form the basis of some of the Initiative's activities.
	Considering the motivators which will switch on the industry players to going green should underscore the decisions and projects within the Music & Environment Initiative.
	Create a portal through which music events and environmental campaigns can be matched. (Like a music & environment dating service.) Environmental campaigns state their interest in partnering with music events, and music events state their willingness to invite environmental campaigns to participate in the event. Successful relationships can be profiled, and at-event activation explained.
	Further engage with the music media on promoting greening of the industry. Particularly they can influence audiences and fans and have a part to play in informing them of the issues and how they can influence the greening of the music industry.
	Harness the massive communicating power of TV Talent shows, or events such as Eurovision, to highlight music industry greening.
	Encourage the creation of 'green branding' for individual events and touring through showcasing examples of best practice currently in existence.
Resources	Create a set of greening guide info sheets for nations which currently have no such guide written for their unique circumstances.
	Create a portal through which worldwide resources are listed for 'how-to' green festivals and music events.
	Build a solutions portal, which catalogues successful sustainability solutions by various sectors of the music industry.
Festival and Live Music Event Producers	Promotion of Tools, Guides and Resources to assist in sustainable production.
	Develop a program to build capacity within industry professionals and encourage sustainability into event management courses.
	Create a campaign to drive uptake of sustainable event production in regions where it is not currently common practice.
Solutions providers	Encourage development of sustainable solutions.
	Work with sector solutions providers to detail potential cost savings.

Musicians/Bands	Create a toolkit of resources, including a 'green rider' for bands to request appropriate action by the festivals they perform at.
	Encourage bands/tours to 'pledge' to go green and create a website portal for them to 'claim' what they are doing/have done.
	Produce or expanding existing guidelines and tools on touring sustainably.
	Encourage those bands which actively support environmental causes, to turn their attention on their own activities and green them.
	Develop resources for, and a campaign to recognize, high profile green tours and smaller local band's greening and promoting environmental causes.
Consultants	Engage all those working within the field, to network with each other and encourage agreement on performance measures.
	Encourage GRI reporting protocols to be adopted.
Audience	Develop or encourage existing audience-facing programs to resource them on 'going green' at music events.
	Encourage the development of online portals and campaigns targeted at informing and engaging the audience and fans.
	Develop a campaign which encourages the audience to consider the part they play in the environmental impacts of their entertainment recreation, what they can do to reduce it and what they should expect from music event producers and bands.
	Develop a database or resource bank of ideas, templates, tools and concepts to engage the audience. Music events and tours would upload their concepts and results to the website, with their blessing for others to duplicate.
	Encourage green steward/volunteer programs which are successfully operating, to network with new green steward campaigns. Perhaps the UN could develop a youth based music/environment volunteering initiative called UN Green Keepers.
Regulating, licensing and funding bodies	Develop a project to inform and resource these bodies to put additional requirements on live music event producers to meet minimum environmental sustainability practices in producing their event.
	Encourage local government acceptance of minimum practice for music (and other) events as directed by this initiative.
Sponsors	Engage sponsors (corporations, government programs, products) to educate them on the issues.
	Develop a toolkit for sustainable sponsorship of music events.
Environmental Campaigns & Initiatives	Develop a toolkit of ways that environmental campaigns, initiatives and messaging have been included in music festivals and events.
	Develop a website portal through which events where 'pairings' of music and environment can be listed, with the UN M&E Initiative's endorsement.
	Establish a portal through which environmental campaigns can access music events.

Awards	Network with relevant music awards to encourage them to present green awards to festivals as part of their process.
	Encourage development of country/region specific awards where none currently exist.
	Encourage existing environmental awards to actively seek nominations from bands for existing categories, or create a new category.
	Encourage bands to nominate their tours or work for environmental awards.
Tools & Auditing	Produce a complete list of tools and measurement devices currently in existence.
	Develop agreed measures for touring impacts and for the creation of a tool for the industry's use. (Either freely available or commercially developed.)
	Facilitate the uptake of public disclosure and sustainability reporting within the GRI framework for various sectors of the music industry.
	There is an opportunity for the music industry to develop agreed measurement protocols for environmental impacts of its activities.
	There is an opportunity to develop a position paper on protocols for claiming carbon neutrality within the Music Industry.
	Encourage disclosure to be the norm to pressurize sustainable production of events.
Certification, Best Practice, Eco-Labeling	Consider defining best practice for festival and music event production. 'Sign up' or 'Pledge' for events to agree to minimum practice, and development of an 'endorsement' brand, icon or symbol through the UN Music & Environment Initiative.
	Encourage development of event and touring certification in regions where none currently exist.
	Consider the development of a program around green venue labeling or certification.
	Identify and articulate 'best practice' for printing within the music industry.
	Identify and articulate 'best practice' for merchandise sourcing.
	Consider a UN M&E endorsed green merch mark.
	Support and promote the uptake of choosing low impact CDs versus traditional jewel cases, amongst bands and labels.
	Develop a Green Studio promotion or 'eco-labelling' program. The campaign would be based around building greening specifications, but would also include operational systems such as recycling and composting.
Consider defining best practice for recording studios, offices, home offices and venues.	
Music Delivery	There is an opportunity to further investigate the environmental impacts of digital music, particularly around listening devices (materials, manufacture, carbon intensity, disposal).
	There is scope to further research the energy intensity of data storage and to forecast impacts in the coming years as digital delivery increases in popularity.
Venues	Create a venue campaign for sustainable energy supply, switch to green tariffs, purchasing RECs.
	Create a coalition of green venues.
	Create or support existing resources for venue greening.



APPENDIX: SUMMARY OF ACTIVITIES

DRAFT

Music Industry Organizations

Music industry organizations set up to specifically address environmental impacts of the industry:

- A Greener Festival (UK)
- Club van 30 (Netherlands)
- Environmental Media Association (USA)
- Green Music Alliance (USA)
- Green Music Group & Reverb (USA)
- Green Music Initiative (Germany)
- Green Music World (China)
- Green Nordic Festival Alliance (Scandinavia)
- Julie's Bicycle (UK)
- Music Wood Coalition (International)
- Sound Emissions (AUSTRALIA)
- VVEM foundation of 'event-makers' (Netherlands)

Industry associations which also address environmental impact of music industry operations:

- Association of Independent Festivals (UK)
- APRA, Australian Performing Rights Association (Australia)
- India Youth Climate Network (India)
- Sustainable Event Alliance (International)
- YOUROPE European Festival Association (Europe)

Following is an overview of some of the key organizations working within the music industry on environmental issues.

A Greener Festival (UK)

An early instigator in this field is the website and awards program 'A Greener Festival'. An online portal, it was established in 2006 to promote and facilitate the greening of music festivals. Founding in the UK, its reach quickly spread to other nations. 'A Greener Festival Award' has also been established. Festivals submit themselves for scrutiny and are independently assessed.

www.agreenerfestival.org

Julie's Bicycle (UK)

This organization is established as the music industry authority on climate change impact in the UK. Its initial work was to produce the 'First Step' report which researched the climate/carbon impact of the UK Music Industry. Since the formation of this organization they have conducted detailed research in CD packaging, audience travel, digital delivery, and have produced the Mayor of London's **Green Music Guide**, amongst many other important and effective initiatives. A list of research undertaken can be found here: www.juliesbicycle.com/research and in relevant sections of this report. They are currently undergoing a **Touring** research project. Julie's Bicycle has also developed the **Industry Green (IG) Framework**, an inclusive approach to emissions reductions and environmental planning for the creative industries. This carries across CD Manufacture, Venues, Festivals/Events, and Offices. The IG Mark is awarded as a certification when measured reductions in carbon emissions is apparent. A **benchmarking framework** for measuring and reporting music industry impacts and are creating a certification system for the same. www.juliesbicycle.com

Green Music Alliance (USA)

The Green Music Alliance is an organization founded in 2008 for music industry companies and artists who agree that it is time for us to examine the way we do business, create products, promote music, sell music and influence our fans. Also, the Green Music Alliance is for music fans who want to know what they can do for the planet. Members of the Green Music Alliance strive to reduce the carbon footprint of their companies and raise awareness within our businesses and fans about how to reduce our impact on the environment. www.greenmusicalliance.org

Reverb / Green Music Group (USA)

Reverb has worked to green over 80 major music tours and 1,300 events, hosted 1,700 non-profit organizations in their Eco-Villages, reduced over 67,000 tons of CO2, and has reached over 10 million music fans to date. **The Green Music Group** (GMG) is a project of the non-profit organization Reverb. GMG is a large-scale, high-profile environmental coalition of musicians, industry leaders and music fans using our collective power to bring about widespread environmental change within the music industry and around the globe. www.reverb.org, www.greenmusicgroup.org

Green Nordic Festival Alliance

Green Nordic Festival Alliance is a initiative started by Roskilde Festival (dk), Way Out West (se) and Øyafestivalen (n) to share knowledge and experience in the environmental area.

Sound Emissions (Australia)

This Australian music community website has been developed to assist artists, fans, band managers, festival producers, tour promoters and record companies tackle Climate Change. Sound Emissions provides tools, tips and information to avoid, reduce and offset carbon emissions associated with gigs, tours and festivals across the country. www.soundemissions.com.au

Green Music World (China)

Established by a German based consultant, Green Music World aims to engage the swiftly growing music industry and festival scene in China with sustainable production. It plans to undergo training and capacity building workshops with the industry. Additionally, as much of the world's music instruments and equipment are manufactured in China, it aims to be the conduit through which the greening of this supply chain can occur. www.greenmusicworld.com

Artists Project Earth (UK)

APE is comprised of artists, scientists, journalists, environmentalists, film makers and authors. APE has supported 178 projects worldwide all of which are addressing issues of climate change mitigation and awareness. We work with small NGOs such as Plane Stupid or OneMinute Films as well as with bigger organizations such as Greenpeace and Friends of the Earth. We are committed to funding grassroots initiatives that are dedicated to the maxim that 'A Better World Is Possible' www.apeuk.org

Artfulchange (USA)

Artfulchange is a collaboration of artists and environmentalists. We seek to construct thoughtful alliances in hopes of solving some of the world's most pressing environmental problems. We utilize the arts as a catalyst for social change. Our aim is to provide opportunities to everyone to incorporate activism into their lives in the framework we have constructed. www.artfulchange.org



Environmental Media Association (USA)

The Environmental Media Association believes that through television, film and music, the entertainment community has the power to influence the environmental awareness of millions of people. EMA mobilizes the entertainment industry in educating people about environmental issues, which in turn, inspires them to take action. A pioneer in linking the power of celebrity to environmental awareness, it was EMA who invented the 'green carpet,' launching the concept of taking a hybrid or alternative fuel vehicle - not a limo - to high profile awards events and bringing the concept of alternative automotive technology to millions of previously unaware households. www.ema-online.org

Sustainable Event Alliance (international)

This organization is a practitioner and stakeholder network for those working to produce events sustainably. Its aim is to convene chapters in nations all around the world. As the USA and UK is saturated with industry associations and initiatives, it is not attempting to establish chapters in these countries. www.sustainable-event-alliance.com

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Music Industry Promoting Environmental Issues

Organizations or initiatives working with musicians and industry to promote environmental issues:

- 10:10 Campaign (UK)
- All At Once/Jack Johnson Initiative (USA)
- Artful Change (UK)
- Artists Project Earth (UK)
- Climate Neutral Network (UNEP)
- Fieldcore (International)
- Greenpeace (UK)
- Green Train Project (USA)
- Hard Rain Project (Global)
- MUSE Musicians United to Sustain the Environment (USA)
- MUSE Musicians United for Safe Energy (USA)
- Music for Acton (USA)
- Music for Relief (USA)
- Rock the Earth (USA)
- Save the Earth Artrock Auction (USA)
- WWF (International)

Music for Action (USA)

The goal of Music for Action is to give musicians and their fans a greater voice in the worldwide conversation about climate change. Music for Action is a joint initiative by HeadCount and the NRDC Action Fund that encourages action on climate change by giving away a free "Best of Bonnaroo" download compilation. It marks the first time ever that free music has been used to prompt Americans to contact their elected officials. www.musicforaction.org

All At Once/Jack Johnson Initiative (USA)

All At Once is a social action network members can discuss issues and events, explore non-profit groups, and take action to make positive change in their local and world community. An individual action, multiplied by millions, creates global change. All At Once are present at Jack Johnson shows. www.allatonce.org

10:10 Campaign (UK)

Reducing UK carbon emissions by 10% in 2010 is the aim of this campaign. It has aligned with 10 prominent music festivals in the UK who have signed up to aim to achieve a 10% reduction. Additionally they will be onsite at the festivals aiming to sign up audiences to also reduce their emissions by 10% in 2010. www.1010uk.org

Hard Rain Project (International)

The Hard Rain Project was established as a charity in 2009 to support educational programs for schools, universities and colleges, and public exhibitions that campaign for realistic solutions to the interlinked problems of climate change, poverty, the wasteful use of resources, population expansion, habitat destruction and species loss. They have developed a short film with Bob Dylan to show during band changes and 2 exhibitions which show the issues and solutions.



Green Train Project (USA)

Train touring across the US, stopping at various towns and cities and putting on a concert promoting environmental issues. www.greentrainglobal.org

Music for Relief (USA)

Music for Relief is artists, music industry professionals, and fans working together to create positive change. The mission is to support disaster relief and reduce global warming. A compilation CD is for sale (pay to download). The program also asks directly for cash donations and re-directs funds to specific projects. Started in 2005 by Linkin Park. www.musicforrelief.org

Save the Earth (USA)

Save the Earth Artrock Auction - memorabilia is donated, auctioned and funds are used for environmental initiatives. www.savetheearth.net

Pearl Jam: Carbon Portfolio Strategy

The Carbon Portfolio Strategy is the newest component of the band's ongoing efforts to advance clean renewable energy and carbon mitigation. Pearl Jam donated \$100,000 to nine organizations doing innovative work around climate change, renewable energy, and the environment. www.pearljam.com/activism/carbonportfolio

Climate Neutral Network

UNEP has developed the Climate Neutral Network where organizations can sign up to pledge their commitment to reducing their climate impact. By signing up to the Climate Neutral Network organizations can show their commitment to reductions and working as hard as they can, towards the ultimate goal of being Climate Neutral. www.unep.org/climateneutral

Musicians

High profile artists promoting environmental causes include:

Alanis Morissette	Jack Johnson	Pearl Jam
Angelique Kidjo	John Butler Trio	Perry Farrell
Avril Lavigne	John Legend	Phish
Barenaked Ladies	Jose Carreras	Ragheb Alama (Lebanon)
Ben Harper	Joss Stone	Sarah Harmer
Bjork	Juliani (Kenya)	Serj Tankian
Bob Dylan	KT Tunstall	Sigur Ros
Bonnie Raitt	Linkin Park	Sting
Bono	Ludacris	The Roots
CAKE	Maná (Mexico)	Thom York
Cloud Cult	Melissa Etheridge	Tokiko Kato (Japan)
Coldplay	Midori Goto (Japan)	Vienna Vegetable Orchestra
Chrissie Hynde	Missy Higgins (Australia)	Willie Nelson
Dave Matthews Band	Moby	Xavier Rudd
Green Day, Guster	Neil Young	Youssu N'Dour
Incubus	Niels Lan Doky and The Earth Project	

Note: this is not an exhaustive list.

Pearl Jam: From fighting deforestation in Madagascar to promoting environmental education for children, Pearl Jam is committed to the environmental. They are particularly committed to offsetting the carbon impact caused by their touring, taking strides to “tour green.” Pearl Jam works closely with environmental groups including EarthCorps and Conservation International, which does conservation and awareness work in over forty countries.

Linkin Park founded Music for Relief an organization which, aside from disaster aid, empowers the music community to assist in environmental education programs concerning global climate change. Linkin Park has worked closely with American Forests’ Global ReLeaf program, addressing global warming concerns by fighting deforestation worldwide. Music for Relief also has a partnership with Habitat for Humanity, securing funds to build green, eco-friendly housing for needy families in the greater Los Angeles area. www.musicforrelief.org

Alanis Morissette: An avid vegan, Morissette is also committed to increasing public education about environmental issues, including global warming. To this end, she has narrated documentaries such as PBS’s 2005 presentation Global Warming: The Signs and the Science and 2006’s The Great Warming. She works with Reverb to green her tours.

Green Day: Green Day’s most important environmental contribution is probably their support of the alternative fuels movement. They have a partnership with the Natural Resources Defense Council and are currently encouraging fans to demand Congress support the creation of “green” jobs that contribute to energy conservation and alternative fuel sources. The band also makes an effort to educate their fans on responsible green living, including promoting green products. www.greendaynrndc.com



Dave Matthews Band: The list of actions that DMB undertake to green their activities is extensive and includes biodiesel fuelled touring fleet, promotion of fan carpool, recycling, green cleaning, recycled loo roll, reusable water bottles for band and crew, compostable catering serveware, local and organic food backstage, eco-friendly merchandise, offsetting fleet, hotel and venue energy emissions, working with venues to become greener, and inclusion of NGOs at their concert's eco villages. www.reverb.org/project/dmb

Touring

Initiatives or action within sustainable touring:

- 'Turning the Tide in Global Touring', panel session, ILMC, 2010
- Julie's Bicycle – currently undergoing touring research.
- Reverb – tour greening (USA)
- Sustainable Touring – tour greening (UK)
- A Greener Festival – produced a 'green rider' for touring bands to supply to venues and festivals.

High profile green touring artists include:

Sheryl Crow, Dave Matthews Band, Jack Johnson, Radiohead.

Artists of note which have measured and released carbon impacts of their operations:

- Pearl Jam: Carbon Portfolio Strategy
- Jack Johnson: produced a report on the carbon impact of his 2008 tour.
- Radiohead: Carbon impact study on their 2003 and 2005 tours.

Many music festivals offer a 'green ticket' or opt-in to buy an offset along with the ticket.

It must also be noted that on a local level, the list of NGOs, organizations and music groups focusing on environmental issues is extensive and it would not be possible to list them all.

Julie's Bicycle are currently undergoing a current research project to assess the GHG impacts of Bands, Orchestras and Theatres touring the UK and internationally. The research will analyze up to 100 samples ranging from small club artists, chamber orchestras and small touring companies to stadium tours, symphony orchestras and major west end productions. Building on this research, this year's **International Live Music Conference** in London will feature cross-industry panel '**Turning the Tide in Global Touring**'. (March 13). www.ilmc.com

A Greener Festival has developed a template of a green rider that can be used by bands when requesting certain environmental requirements from venues or promoters.

www.agreenerfestival.com/pdfs/A_Greener_Rider.pdf

Jack Johnson produced a report on the carbon impact of his 2008 tour. 'Every effort has been taken to reduce the CO2 emissions of Jack Johnson's 2008 World Tour-including powering buses, coaches and generators with bio diesel, recycling at venues, and more. The tour is offsetting all of its remaining emissions and is striving to be 100% carbon neutral.'

www.jackjohnsonmusic.com/greening



Music Festivals

The following is a list of music festivals which have taken an active role in reducing the environmental impacts and/or in promoting environmental messages.

2000 Trees Festival, UK	Green Apple Festival, USA	Reeding/Leeds, UK
AIM Festival, Iceland	Greenfest, Australia	Rheinkultur, Germany
Bestival, UK	Hanoi Sound Stuff, Vietnam	Rock Party, Sweden
Big Chill, UK	High n Dry Festival, Australia	Roskilde Festival, Denmark
Big Day Out, Australia	Hove Festival, Norway	Rothbury Festival, USA
Big Green Gathering, UK	Ilosaarirock Festival, Finland	ROTHBURY Festival, USA
BluesFest, Australia	Kokua Festival, Hawaii	Ruis Rock, Finland
Bonnaroo, USA	Lake of Stars Festival, Malawi	Sarawak Rainforest Festival, Malaysia
Boom Festival, Portugal	Latitude Festival, UK	Shambala Festival, UK
Burning Man, USA	Live Earth (international)	South by Southwest, USA
Canal Street Festival, Norway	Lollapalooza, USA	Southbound Festival, Australia
Clearwater Festival, USA	Lovebox Weekender, UK	Splore Festival, New Zealand
CO2PENHAGEN Festival, Denmark	Lowlands Festival, Netherlands	Summer Sundae Weekender, UK
Corinbank Festival, Australia	Meredith Music Festival, Australia	Sunrise Celebration, UK
Croissant Neuf Summer Picnic, UK	Meredith Music Festival, Australia	The Big Tent Festival, UK
Das Fest, Germany	National Folk Festival, Australia	The Green Apple Festival, USA
Download, UK	Øya Festival, Norway	The Green Man Festival, UK
Electric Picnic, Ireland	Paleo Festival, Switzerland	Think Green-World Music Festival, USA
Falls Festival, Australia	Peats Ridge Festival, Australia	Waverock Weekender, Australia
Frequency Festival, Austria	Phish Festival, USA	WOMAD, UK
Fuji Rock Festival, Japan	Pink Pop, Netherlands	Woodford Folk Festival, Australia
Glastonbury Festival, UK	Provinssi Rock, Finland	York Green Festival, UK
Golden Plains Festival, Australia	Rainforest World Music Festival, Malaysia	

Audience Engagement

“For younger crowds it would obviously be tech based while older fans would respond to more traditional forms of communication.” **Global Protection Agency, Australia.**

“... Any digital technology – texting/Myspace/Youtube/blogs and Twitter etc. A combination of information and entertainment I call ‘Infotainment.’ Provide a service that will be needed and appreciated.... Participation in an activity so that it will be remembered.” **Greenpeace UK.**

“They have to be interactive and incentivized.” **Bonnaroo Festival, USA.**

Examples of programs initiated to engage the audience in reducing environmental impact of live performance or to engage them in environmental issues:

- A Seed Japan Fuji Rock Festival (Japan)
- Bin Your Empties, Electric Picnic (Ireland)
- Carpoolchella, Coachella Festival (USA)
- Eco Zone, Paleo Festival (Switzerland)
- EcoBound, Southbound Festival. (Australia)
- EnergyFACTORY/Energy Playground, Global Inheritance (US)
- Face Your Elephant, C-Change (UK)
- Fan Tags, Lollapalooza (US)
- Fluid Druids, Woodford Festival (Australia)
- Green Big Ideas, A Greener Festival (UK)
- Green Challenge, Sunrise Celebration (UK)
- Green Footsteps, Roskilde Festival (Denmark)
- Green Police, Glastonbury Festival (UK)
- Green Tickets Big Day Out (Australia)
- Green tickets, Splendour in the Grass (Australia)
- MOOP, Burning Man ‘matter out of place’ campaign. (USA)
- Mug Jugglers, National Folk Festival (Australia)
- Natur og Ungdom (Nature and Youth) & Øyafestivalen (Norway)
- Øyafestivalen, Facebook Application (Norway)
- Reading, Leeds and Latitude Festival Green Messengers (UK)
- Recycling Rocks, Live Nation
- Respect Your Festival Website (global)
- Reverb Eco-Village, various tours (USA)
- Rock & Recycle, Lollapalooza (USA)
- ROTHBURY Festival Green Team (USA)
- So Much To Save – Dave Matthews Band
- TRASHed, Coachella, Global Inheritance (US)
- Warped Eco Roadie (USA)

It must be noted that the list of activities and initiatives by individual festivals, bands, tours and concerts is extensive and not possible to list completely here.

“Yes, we already utilize digital marketing and communication outlets (i.e. website, subscriber-based newsletters, social media platforms such as Facebook and Twitter, and mobile messaging). We feel that using these platforms to broadcast information about the impact of our and our patrons’ environmental efforts (for example, relaying our goals for waste and recycling percentages and reporting the results for an event) has tremendous potential. We also feel that messaging should not only point out the issues, but include solutions that everyone can incorporate in their daily lives throughout the year.”

Lollapalooza, USA.

Green Footsteps (Denmark)

Roskilde Festival encourages festival goers to take green footsteps on their way to the event such as carpooling and buying a green ticket. They then are rewarded by being allowed to camp in a special eco-camp for green footstep participants. www.roskilde-festival.dk

Warped Eco Roadie (USA)

An online and onsite gaming challenge that will save our Oceans and win everyone fun surprises in the process. The bands and groups are set challenges to compete such as kicking the water bottle habit, DIY low flush loos retrofit, supporting sustainable seafood and organic food production, doing a cleanup campaign etc. www.warpedecoroadie.com

Respect Your Festival (global)

Website encourages festival attendees to go ‘undercover’ and report (with photos and footage) on examples of both good and bad examples of environmental impacts and practices at festivals.

www.respectyourfestival.com

Øyafestivalen – Facebook Application (Norway)

In 2009 they launched a Facebook application that allowed the audience to take environmental choices and post them on Facebook. This application peaked during the festival with more than 2000 new users. www.oyafestivalen.com

Recycling Rocks

Live Nation, arguably the world’s largest music company, has produced the ‘Recycling Rocks’ website and competition. The Recycling Rocks Sweepstakes will be reactivated in 2010. www.promo.livenation.com/recrocks/

Carpoolchella, Coachella Festival (USA)

This program is a carpooling initiative that rewards people for driving to the venue with 4 or more people in a car. Attendees that do this put signs on their windshield that says “Carpoolchella”. A few times a day, a representative walks around the parking lot and chooses a car at random to reward with special prizes. Apart from congestion and emissions reductions Carpoolchella creates excitement about the festival before people even enter the grounds. www.coachella.com

Lollapalooza: Fan Tags (USA)

Festival attendees are encouraged to buy a \$5 Lollapalooza BeGreen™ Fan Tag to offset their festival travel. In 2008, 8,500 Lollapalooza fans bought a Fan Tag, helping to avoid 5.5 million tons of CO2. www.lollapalooza.com

Green Ghetto Camping (Netherlands)

At Lowlands Festival the people that like a clean camping promise to keep it clean before they set up camp in the Green Ghetto. (separate the clean campers from the dirty ones) www.lowlands.nl



“Face to face is best – and it has to be light touch – stage announcements are no use at all, printed material defeats the object. The best way really is to ENGAGE with the audience – show them what to do – exhibit new technology, have eco-art installations, use only local produce, have a Greenfield etc – or run a campaign like Oxfam’s ‘blue face’ campaign in 2009 or the 10:10 campaign.”

A Greener Festival.

“When it comes to get a message out the most effective way is the web page and printed music program followed by screens. On very specific areas stage announcements may work, but it depends very much on the subject and who delivers the message. Basic messages about environmental behaviour is effective from stages, whereas some political messages is taken positively and others negatively. The way to make it positive is to avoid professional politicians, announce the speech in the program and keep it short and concise.” **Roskilde Festival, Denmark.**

“We use renewable power at events and this in itself proves to our audiences that renewable power is a real alternative and works.” **Firefly Solar, UK.**

lastonbury Green Police (UK)

These theatrical pranksters get around the festival site ‘intervening’ in eco-crime. They particularly focus on urination in bushes and streams and in flicking cigarette butts. www.savetheworldclub.org



Natur og Ungdom & Øyafestivalen (Norway)

Natur og Ungdom (Nature and Youth) the biggest environmental organization for young people work closely with our festival, their role is to handle the waste management systems, they are also present at the festival giving information and campaigning on environmental issues. www.oyafestivalen.com



ROTHBURY Festival Green Team (USA)

This festival has a work exchange program and the Green Team is created by volunteers. They are mainly hands-on waste focused. Staffing bin stations, as well as actually collecting and sorting waste. www.rothburyfestival.com



Reading Festival Green Messengers (UK)

These volunteers work on the tent and camping gear recovery program. Firstly they talk to people about the waste of leaving or trashing camping gear, and then they staff donation points and do hands on salvage. www.readingfestival.com



Live Earth (International)

The Live Earth events held in 2007 across the world had volunteers involved in communicating the issues around energy conservation, climate change and importantly, the actual recycling operations at the events. www.liveearth.org



A Seed Japan

Uses youth culture such as music and animation as a forum for raising awareness about environmental issues. They work with Fuji Rock Festival in Japan to implement their zero rubbish policy ‘Gomi Zero Navigation’. www.aseed.org



Campaigns Promoting Environmental Causes

“Sign petitions and similar. Also, it is good if the event is in favor of some particular issue – that can be changed immediately after the event. Like Live Aid concert.” **Exit Festival, Sebja.**

“If it is clear with the ticket sales that attendees are committing themselves to an ‘environmental’ event” **UNESCO.**

So Much To Save – Dave Matthews Band (USA)

This program educates and motivates fans to recycle, save energy, and reduce their environmental impact. Fans look for the SO MUCH TO SAVE volunteers and recycling bins in the concert parking lots and recycle at one of the SO MUCH TO SAVE stations or with a volunteer and they receive a card with a unique code. Use the code to download the SO MUCH TO SAVE 2009 album - for free. www.somuchtosave.org (run in conjunction with Reverb, as part of Green Bama Project.)

Reverb Eco-Village (USA)

Reverb, the group which greens tours and festivals in USA set up an Eco-Village in the concession area of tours and events. Fans can; Check out green technologies, Win autographed prizes, Speak to local non-profit groups, Neutralize car emissions, Sample eco-friendly products, Pick up the Eco-Concert Program. They solicit for volunteers prior to each show to help run it. www.reverb.org

EnergyFACTory/Energy Playground (USA)

Highlights renewable energy sources and showcases the power of wind, solar, manmade, biodiesel and ethanol. Activities include recharge cell phones by riding specially outfitted bike, Make It Yourself Biodiesel demonstrations, Ask The Energy Experts areas, the conversion of a fuel car to electric, a wind-powered light box, solar-powered misters, hand powered DJ booths. www.globalinheritance.org

Eco Zone, Paleo Festival (Switzerland)

In this interactive zone the audience can participate in eco-entertainment while also learning about the greening initiatives at the festival. www.paleo.ch

Venues

Venue or venue initiatives to focusing on environmental impacts of operations:

Green Pubs (Australia)

Creative Environment in Australia has created a project to green music venues. They do energy and water audits and create a work plan for retrofitting and ongoing operations. The Corner Hotel saved an estimated \$9,000 a year annually on electricity and maintenance (nearly \$5,000 on electricity alone) Over 50 tonnes of CO2e will be saved annually from the venues operations through this intervention. www.creative-environment.com.au

Sustainable Dance Club & Floor (Netherlands)

This initiative began in Rotterdam in The Netherlands. It is a kinetic energy dance floor which through the movement of the dancers, produces energy. The Sustainable Dance Floor is the main element of the Sustainable Dance Club and it is being toured around the world to showcase the opportunity for foot powered kinetic energy. www.sustainabledanceclub.com

Club For Climate (London)

This venue waives the cover charge if patrons walked or cycled to the club. Plus a kinetic energy dance floor. www.club4climate.com

Greenhouse (NYC)

This venue is L.E.E.D. certified, uses LED light bulbs, is wind powered, uses waterless urinals and low flow toilets. Walls and floors are bamboo. Uniforms are made from organic cotton. www.greenhouseusa.com

Industry Green, Venues (UK)

Industry Green status for venues assesses the environmental impact of the management and performance of a venue. In addition, it considers how the venue management company is engaged with and committed to greenhouse gas reduction and disclosure.

www.juliesbicycle.com/media/downloads/ig-guidance-venues-v2-june2009.pdf

Green Venue Auditing (India)

Creative Environment Enterprises in Australia has received a development grant from the Australia India Council to undertake skills development training focusing on energy efficiency auditing in entertainment venues in India. www.creative-environment.in

Studios

Recording studios running sustainably or supporting environmental campaigns include:

Brushfire Records (USA)

100% solar energy powered studio by Jack Johnson. Bands signed to Brushfire Records are able to record their albums and create zero emissions at the same time.

Studio A – The Premises (UK)

Studio A at The Premises in London is fully solar powered - the first in Europe - and was built using a high level of recycled materials. All equipment, including air conditioning, operates on low energy supplies. www.premisesstudios.com/studio-A.html

CAKE – Solar powered band studio

American band CAKE has converted their recording studio in Sacramento to a solar powered building. They are currently producing their sixth album of original songs. All the tracks will be recorded using 100% solar energy. www.cakemusic.com/solar.html

It is likely there are many small studios running on solar power, signed up to the relevant green power scheme or in a building which has green building certification:

Sunpower Studios is a recording studio powered entirely by the sun with straw-bale and log construction. www.sunpowerstudios.com.au

Grace Recording Studio (Hawai'i) The recording studio and entire facility uses photovoltaic solar panels, harnessing the sun's energy to generate 100% of its own electricity. www.gracerecordingstudio.com

CDs

Sustainable CD Manufacture products or initiatives:

- Eco-Pack (card packaging)
- Flex Lite Discs
- PaperFoam CD Tray

Julie's Bicycle has undergone research into the carbon impact of Jewel case versus card case CD packaging. There are CD manufacturers who have set themselves up as 'green' suppliers.

Flex Lite Discs

The Flex-Lite technology uses less than 50% of the plastic of a traditional DVD. This translates into a 71% lower carbon footprint energy balance in production and a 50% lower carbon footprint in transport. In addition to using less plastic the Flex-Lite discs are 100% recyclable because they use no non-biodegradable bonders (single layer construction).

www.proactionmedia.com/flex-lite-disc.htm

Julie's Bicycle has completed significant research into the carbon impact of CD manufacture. The resulting study indicates a shift from plastic 'jewel' cases to card cases could reduce emissions from production by up to 95% in the UK. They also report that CD manufacture is the industry's largest single source of direct emissions with an estimated 30% of the recording and publishing sector and a reported 10% of the total industry.

www.juliesbicycle.com/media/downloads/cd-eexecsummary-final090211.pdf

PaperFoam CD tray

Acknowledged as the first successful environmentally-friendly alternative to plastic, the PaperFoam CD tray is designed to replace the plastic tray. It is 100% biodegradable and recyclable with paper and very low CO2 emissions and energy use. Results of a study done by the University of Utrecht / Copernicus Institute show that the PaperFoam trays have only a fraction of CO2 emissions and energy use compared with Jewel boxes and Digi trays. www.paperfoam.com

Earthology CDs

Inserts printed on 100% postconsumer recycled paper with nontoxic soy ink, packaged in 100% recycled/salvaged jewel cases, CD scraps recycled into milk cartons, shrink wrap made of environmentally benign LDPE, instead of the industry's standard toxic PVC, shipped with recycled packaging, powered by geothermal and wind energy on an organic farm.

www.earthology.net/environmentally_friendly_cds.htm

Digital Delivery

Julie's Bicycle has written a position paper on 'The Carbon Impacts of Recorded Music Production in a Time of Transition.' This paper is a position piece in response to the small number of research documents that examine energy use and carbon reduction associated with recorded music, with an emphasis on digital. The primary recommendation is that further research into downloading and streaming is required.

www.juliesbicycle.com/media/downloads/Carbon_impacts_of_recorded_music.pdf (2009)

One study undertaken to explore this area is 'The Energy and Climate Change Impacts of Different Music Delivery Methods', commissioned by Intel and Microsoft. A key finding is that reductions of between 40% and 80% in carbon emissions are experienced from digital delivery versus CD delivery.

www.intel.com/assets/pdf/general/CDsvsdownloadsreleasecomplete.pdf

'Digital Music Behavior and Music Perceptions of Carbon Impacts' was written by Tim Chapman from Cranfield University in collaboration with Julie's Bicycle. Using quantitative analysis it explores the common preconception that physical music delivery has a greater carbon impact than that of digital music. It also evaluates the extent to which user perception of carbon impacts influence listening choice.

www.juliesbicycle.com/media/downloads/digitalmusicandcarbonwholetthesisfinal.pdf

DRAFT

Instruments

Made from timber, the sourcing of certified timbers is the primary concern. Branded 'green' instruments and accessories are appearing:

Music Wood Coalition, a coalition between 'tonewood' suppliers and guitar makers, their aim is to move alternative certified wood sources through the chain, forcing out old-growth and tropical wood deforestation. A Greenpeace initiative. www.musicwood.org

Rainforest Alliance Smartwood Gibson Guitars

When guitarists take possession of a Gibson guitar containing wood certified by the Rainforest Alliance under the standards of the Forest Stewardship Council, they are joining Gibson's commitment to the environment, as the final link in a chain of responsibility that extends back through Gibson's manufacturing process, through the wood vendors, all the way back to the harvesting and milling of mahogany trees. www.gibson.com

Bamboo Guitar

The Bambusa guitar's body and neck are constructed of bamboo, one of the fastest growing plants in the world, and an uncommonly renewable resource. In its processed state, bamboo is harder than maple, making it a supreme-sounding and killer-looking substitute for high quality tonewoods. The guitar also has a water-based natural matte finish, and uses food safe glue. www.firstact.com

Cyclotron guitars have bodies made from recycled plastics. www.simonleeguitars.com

The **Sound & Fair** campaign aims to realise a sustainable trade in African blackwood through a fully-certified chain of custody linking village communities in Tanzania to woodwind instrument musicians in the UK. www.sustainableblackwood.org

Green Line Instruments

BUFFET CRAMPON broke tradition by creating a new line of wind instruments. The revolutionary material is composed of ebony powder (95%) and carbon fiber (5%), considerably reduces the risk of cracking while simultaneously providing the same acoustical qualities as those of wood.

www.buffet-crampon.com

World Rhythm Percussion demands that all raw materials are sustainable and legal. No poached or endangered woods are to be used and only sources products from local artists, communities and craftsmen. www.worldrhythm.co.uk

Yamaha keyboards offers customers the option to purchase an eco-friendly AC power adapter that consumes far less electricity than a standard adapter. Any Yamaha keyboard using the PA 150 power adapter will significantly reduce its power consumption while the instrument is not in use and turned off.

The Dragonfly is an all-analog effects pedal with an eco-friendly twist: it's made from 80% recycled computer components. It's also energy-conscious, requiring little power to run and featuring a rechargeable 9-volt battery. www.flytrapgear.com

Splaff offers guitar straps made from 100% recycled bicycle inner tubes. Each two-inch strap is hand-crafted and produced in a 100% waste-free process in which all leftover materials are reused or recycled. www.splaff.com

Equipment

Lighting, video, desks, and front of house PAs all have the opportunity to be made with environmental sustainable production processes and importantly, to be increasingly energy efficient.

“A change in culture of technical production practice of doubling power allocations as a ‘safety precaution’ will also have (a reducing) effect as will a move away from the recent culture of leaving equipment on overnight which means generators cannot be switched off.” **Firefly Solar, UK.**

In 2009 **Festival Republic** undertook a research project with De Montfort University to monitor energy consumption of the main stages at Latitude and Leeds Festivals. This included the full Radiohead set. Lights used were analyzed on a minute by minute comparison with generator energy output, and thus each band’s lighting configuration and energy consumption can be reviewed. At the end of it all, only a reduction in the generator size will lead to carbon emissions reductions.

Ticketing

Printing of tickets is the main environmental impact. Therefore ticketless systems are a greener option. Additionally, some ticketing outlets and concerts/festivals are adding a ‘carbon’ fee onto their tickets as an offset.

Green Tix

This ticketing company also offers a \$2 offset ticket to purchases. They run their office operations on green power, print their tickets on 100% post consumer recycled paper with vege inks. They also offer to measure and offset emissions of the total event. www.greentix.com.au

Ticketmaster

This is one of the giants in ticketing internationally (recently merged with Live Nation). They offer paperless ticketing. Interestingly, they also have a recycling offer on in the UK. They can recycling mobile phones or iPods with Ticketmaster for credit toward ticket purchases. A recycled Blackberry 9500 Storm receives £106 (about \$166) on a Ticketmaster gift card. A recycled 8-gigabyte first-generation iPod touch will earn you £11 (about \$17) on a Ticketmaster gift card.

Merchandise

Producing tour, concert, band and festival merchandise often comprises of clothing. Sustainable merch looks at materials used and fair labour policies. Examples of apparel companies specializing in ethical clothing for the music industry include:

Ethical Threads is a fair trade company based in the UK and supplies t shirts and other merchandise to the live events industry. They are committed to ensuring that their products are sourced from manufacturers who comply with the core International Labour Organization conventions. www.ethicalthreads.co.uk

EarthPositive® Apparel Products

100% Organic T-shirts, polo shirts and hoodies with 90% reduced carbon footprint. GOTS certified organic product, Soil Association licensed, full traceability, equitable trading and ethical manufacturing audit, innovative product design, sustainable production, , pioneering lifecycle footprinting research (PAS2050). www.earthpositiveonline.com

Melsville is giving retired pianos new life by reusing the ‘action’ – the parts of a piano that work together to produce sound – to make jewellery and accessories.’ www.etsy.com/shop/melsville

“The Festival merchandise is also green-friendly, and includes organic options, with all merchandise placed in biodegradable bags. The festival also has a ban on plastic bags throughout the grounds, most especially in the art market. And all volunteers (over 300) wear t-shirts made of organic cotton.”
Lollapalooza, USA.

Certification

A Greener Festival: Assesses music festivals on commitment to sustainability and practical successes. www.agreenerfestival.com

BS8901: (currently undergoing ISO process)

Guidance on sustainable event management system. This is an overarching EMS style standard and one which can be used as a basis for a certification. www.bsigroup.com

Eco-Logo Events (North America)

Certification for producing events sustainably. www.ecologo.org

ECO-OK (India)

In development for green events in India. www.eco-ok.in (in development)

The **Fairtrade** label is a product label and initiative of Fairtrade Labelling Organisation International. Fairtrade works under the premise that the guarantee of a fair price paid creates opportunities for economically disadvantaged producers or those marginalised by the conventional trading system and empowers them to economic self-sufficiency, becoming stakeholders in their own enterprises. Produce and MUSIC INSTRUMENTS. www.fairtrade.net

Fair Wear Foundation supports and promotes good labour conditions in garment production. Fair Wear Foundation verifies whether companies comply with the Code of Labour Practices. www.fairwear.org

Forest Stewardship Council (FSC). Other certification programs include the Sustainable Forestry Initiative, Canada's Standards Association's National Sustainable Forest Management Standard, Programme for the Endorsement of Forest Certification (PEFC) and the Rainforest Alliance.

Good Environmental Choice Australia: In development for green events in Australia.

The **Green Building Council Australia** has the 'Green Star' rating scheme, a great tool to measure a building's sustainability. The **U.S. Green Building Council** has the 'Leadership in Energy and Environmental Design (LEED) Green Building Rating System™'. In the UK and Europe, the **Energy Performance Certificate** (EPC) for commercial buildings.

Industry Green (UK): Certification awarded for demonstrated carbon reductions. CDs, Festivals, Venues, Offices www.juliesbicycle.com

Miljøfyrtårn: This national eco-label for Norway, certifies events. www.miljofyrtarn.no

Oeko-Tex® Standard 100 The label allows consumers to assess the human ecological quality of textiles and it gives a uniform safety standard for textile and clothing companies.

Rainforest Alliance Smartwood (International)

Sound & Fair campaign, certified African blackwood timber, woodwind instruments (International) www.sustainableblackwood.org



Awards

MIDEM Green Award (International)

The international music industry conference in Cannes, France, established in 2008 a Green Award. This award recognizes personalities or companies raising environmental challenges awareness or working to implement innovative strategies and solutions. It has previously been awarded to Kevin Wall (Live Earth), Daniel Rossellat (Paleo Festival), Henrik Rasmussen (Roskilde) and Michael Eavis (Glastonbury).

Green Music Award (Germany)

The GREEN MUSIC INITIATIVE awards the GREEN MUSIC AWARD for outstanding achievement for a climate-friendly music and entertainment industry. The award recognizes artists, companies or ideas in terms of CO2 reduction exemplary strategies have been successfully implemented. www.greenmusicinitiative.de

A Greener Festival Award (International, UK Based)

A Greener Festival website has established a system in the UK to assess the sustainability performance of festivals. They have a checklist which they measure events against. If they meet their standards, the festival is awarded the 'Greener Festival Award'. www.agreenerfestival.com

Yourope Clean & Green Award (Europe)

Green'n'Clean Award for festivals that achieve a defined number of criteria in terms of environmental measures. www.yourope.org

Tools and Auditing

Online measurement and management tools include;

Global Reporting Initiative (GRI)

Is currently undertaking a Sector Supplement into the events industry. When this is complete (24 months from November 2009) the industry (events – cultural, sports and business) will have a final set of measures (both metrics and descriptive) through which the industry can measure the sustainability impacts and benefits of events.

Industry Green (UK)

Julie's Bicycle has created the Industry Green (IG) framework which aims to have the music industry measure, reduce and report their carbon emissions. It is a 24mth program through which time measured emissions reductions should be achieved. An 'IG' Mark is awarded as a certification to stamp it as a carbon reducing activity/organization. www.juliesbicycle.com

IG Tool (UK)

Created by Julie's Bicycle as part of their IG Framework, it is a carbon calculator and accompanying information sheets on reducing the environmental impact of festival production.

www.juliesbicycle.com

EPA's Carbon and Ecological Footprint Event Calculator (Australia)

Helps organisers plan a low footprint event by highlighting the main environmental impacts of an event, helping to identify actions to avoid and reduce the impacts – for organisers, delegates, host venues and exhibitors, and helping organisers plan and achieve a carbon neutral event. The Calculator measures the ecological and carbon footprint of an event. It uses life cycle assessment to estimate the carbon equivalents produced as a result of the event.

www.epa.vic.gov.au/ecologicalfootprint/calculators/event/introduction.asp

Sustainable Events Planner (Australia)

The Sustainable Living Foundation is a community-based not-for-profit organization committed to creating major platforms to help accelerate the uptake of sustainable living. The Sustainable Event Planner aims to assist event organisers and their visitors make sustainability the main event. www.slf.org.au/eventplanner

Sustainable Event Management System (International)

SEMS is a sustainability tool designed for the production of events. It measures sustainability results by event type and industry. Mention you heard about it in this book for a discount on your subscription.

www.sustainableeventsolutions.com.au

Event Footprinter (UK)

Best Foot Forward, based in the UK, has developed an online footprinting tool for events. For those event organisers who feel they need to establish a footprint, perhaps to report to a client or to consider offsetting, this can be a useful tool. www.event.footer.com

EventBerry (UK)

Helps manage sustainability and takes them through the process of BS8901 compliance in easy, manageable chunks. www.eventberry.com



Greening Guides

Environmental Handbook, For Festivals and Outdoor Events (Norway)

Written by Hanne Bjørseth (Oya Festivalen) in conjunction with GRIP Norway.

www.environmental-handbook.com

Green Music Guide (London)

Julie's Bicycle produced a document for the Mayor of London on greening the music industry. The Green Music Guide is a 'how-to' for music companies and individuals interested in greening their activities – from touring to offices, recording studios to festivals. www.juliesbicycle.com

Live Earth Green Event Guidelines (International)

Originally written in line with the 2007 Live Earth concerts, this guide has been updated in 2010.

www.liveearth.org

Sustainable Event Management: A Practical Guide (International)

A step by step guide to sustainable event management, it takes the reader through all areas of event management and their environmental impacts. Includes case studies, checklists and how to guides. Written by the consultant, Meegan Jones, author of this research report.

www.sustainableeventguide.com

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Greening Consultants/Organizations

- **Creative Environment** – Event greening and impact auditing, music industry (Australia) www.creative-environment.com.au
- **Eco Productions** – Music festival greening (Australia). www.ecoproductions.com.au
- **Global Inheritance** – Event and music festival greening initiatives (USA). www.globalinheritance.org
- **Global Protection Agency** - Music festival greening (Australia). www.globalprotectionagency.com.au
- **GreenShoot Pacific** (Australia) – Event, film and tour greening (Australia) www.greenshootpacific.com
- **Reverb** - Event and music festival greening, tour greening (USA). www.reverb.org
- **Spitfire Agency** - Event and music festival greening initiatives (USA) www.spitfireagency.com
- **Sustainable Event Solutions** – Event greening across all sectors (Australia) www.sustainableeventsolutions.com.au
- **Sustainable Production** - Event and music festival greening (UK) www.sustainableproduction.co.uk
- **Sustainable Touring** - Tour greening (UK) www.sustainabletouring.co.uk

This of course is not an exhaustive list. There are also agencies which work in the sporting, business and meetings sectors, who would sometimes take on music events.

Individual Practitioners and Specialized Staff

There are individuals who contract seasonally directly to events and then undertake other projects in the non-festival season and those that are permanent employees. There has been specialist knowledge developed in these pioneering days in the following festivals which are significant and directly impacted by the individuals that have developed solutions. Here are some leading examples.

- **Boom Festival**, Portugal (greening by Dr Andre Soares, Eco Centro Brazil)
- **Boonaroo**, USA (greening by Laura Sohn)
- **Roskilde**, Denmark (greening by Thomas Neibuhr)
- **Oya Festival**, Norway (greening by Marte Sotholtet and Linnea Svensson)
- **Burning Man**, USA (greening by Tom Price)
- **Sunrise Celebration**, UK (greening by Aylin McNamara & Dan Hurring)
- **Festival Republic**, UK (greening by Meegan Jones)
- **Live Nation**, UK (greening by Andrew Haworth)

Education & Professional Development

Educational facilities or organizations currently teaching music/event and environment.

- Agderforskning (Agder University), Norway
- Bucks New University (UK)
- Leeds Met University (UK)
- Denmark's Technical University (Denmark)
- Department of Natural Resources, Minnesota State University (USA)
- GreenShoot Pacific (Australia)
- Sustainability Advantage (Australia)
- CEEEd – Creative Environment Education Program (India)

Additionally 'green sessions' are often seen as break-out workshops at industry conferences and professional development sessions.

Bucks New University, A Greener Festival & Julie's Bicycle – Workshops (UK)

These three organizations are working together to deliver a twice yearly professional development session for festival professionals.

GreenShoot Pacific – Workshops (Australia)

GreenShoot Pacific has devised capacity building workshops for organizations and event producers. For example the Department of Environment, Climate Change and Water's Sustainability Advantage program will run these workshops for those businesses in NSW which run events. The workshops are being put into a self paced online training module. The content is internationalized and thus is relevant across most nations. www.sustainableeventsolutions.com.au

Research

Research which has been undertaken on environmental impacts of the music industry.

A Greener Festival

Environmental impacts of music festivals and audience opinions. (2006)

Radiohead

Commissioned an impact study for their 2003 and 2006 tours. Their current lighting rig is made up entirely of LED lights (right). Fan travel and consumption made up 86% of the Theatre tour and 97% of the Amphitheatre tour. Of the band's touring impact – Travel and energy use accounted for 60% (Theatre tour) and ~40% (Amphitheatre tour). International travel accounted for a further 34 – 40% of impacts. www.radiohead.com/radiohead_bff.zip

Julie's Bicycle

Julie's Bicycle has undertaken research into the carbon impact of the Music Industry in the UK. This can be read in their **First Step** report produced in 2007. The report identified that annual audience travel to music events accounts for 43% (231,000 t CO₂e) of GHG emissions from the UK music industry. Of this, music festivals contribute 24% of all music audience travel emissions – that is 68% of the festival sector's total emissions. (note: you must register with the website in order to have access to the full report.)

First Step - UK Music Industry Greenhouse Gas Emissions for 2007

(Botterill C, Lye G, Boykoff M, Liverman D)

www.juliesbicycle.com/media/downloads/jb-first_step-e-report-revisedjan09-sm.pdf

Jam Packed; Part 1: Audience Travel Emissions from Festivals (2009)

(Botterill C, Jones M, Papageorgiou S)

www.juliesbicycle.com/media/downloads/jb-TravelReport-sm-may09.pdf

The Carbon Impacts of Recorded Music Production in a Time of Transition

www.juliesbicycle.com/media/downloads/Carbon_impacts_of_recorded_music.pdf

Impacts and Opportunities: Reducing the Emissions of CD Packaging

www.juliesbicycle.com/media/downloads/CD-eReport-FINAL-feb09.pdf

Cranford University with support by Julie's Bicycle, Master's Thesis

Digital Music Behavior and Music Perceptions of Carbon Impacts

(Chapman TR)

www.juliesbicycle.com/media/downloads/digitalmusicandcarbonwholetthesisfinal.pdf

Note: You must register with the Julie's Bicycle website in order to have access to the full reports.

Music Media

Music media consists of:

- Weekly and monthly magazines
- Streetpress
- Music columns in other magazines
- Radio
- Music television networks
- Music television shows on standard networks
- Newspapers
- Music industry publications & trade journals
- Websites
- Blogs
- Social networking sites
- Mobile phone content
- Books
- Film
- Music videos

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Measuring Outdoor Mass Music Event Impacts (metrics)

The following is the set of indicators established by UK based Julie's Bicycle. Summarized from: www.juliesbicycle.com/media/downloads/4-benchmark-FESTIVALS-mar09.pdf

Energy Impact

This can then be converted into CO2e emissions depending on your country's emissions factors.

- **MAINS/GRID POWER:** Total energy used to power the event.
GENERAL: Kilowatt Hours
100% RENEWABLE: Kilowatt Hours
- **MOBILE POWER GENERATION:** Total fuel used to power your mobile power generators.
DIESEL: Total litres of fuel.
BIODIESEL: Total litres of biodiesel
PURE PLANT OIL: Total litres of pure plant oil.
- **ZERO EMISSIONS ENERGY PRODUCTION:** Total zero emissions energy production.
SOLAR: Total Kilowatt Hours
WIND: Total Kilowatt Hours
PEDAL: Total Kilowatt Hours
HYDROGEN FUEL CELL: Total Kilowatt Hours

Transport Impact

This can then be converted into CO2e emissions depending on your country's emissions factors.

- **PRODUCTION TRANSPORT:** Total distance travelled during pre-production.
PRE-EVENT: The total distance and mode of travel for production staff in pre-event planning.
MAJOR CONTRACTORS: The distance travelled for major contractors.
SITE TRANSPORT: The distance travelled at the event for onsite transport.
- **ARTIST/PARTICIPANT TRANSPORT:** Total distance travelled by artists, performers or participants.
AIR: Total distance travelled by air for all performers.
GROUND: Total distance and mode of travel for all performers at the event.
- **AUDIENCE TRANSPORT:** Distance travelled and mode of transport.
MODE OF TRANSPORT: Percentages of audience taking each mode of transport.
AVERAGE DISTANCE: By each mode.

Waste Impact

This can then be converted into CO2e emissions depending on your country's emissions factors.

- **GENERAL WASTE:** Total weight of residual waste sent to landfill or incineration.
 - LANDFILL: The amount of waste sent directly to landfill.
 - INCINERATION: The amount of waste burnt through traditional incineration.
 - WASTE TO ENERGY: The amount of waste burnt and turned into heat & energy.
- **RECYCLED WASTE:** Total weight of materials recycled. Report by type or by total mixed recycling.
- **BIODEGRADABLE WASTE:** Total weight of biodegradable waste sent for composting or biogas production.
 - COMPOSTED: Total volume or weight
 - ANAEROBIC DIGESTION: Total volume or weight
- **SALVAGE:** Total weight of residual waste that is salvage and sent for repurposing or donation.
 - MATERIALS: Sent for re-use or re-purposing offsite which would otherwise have been landfilled or incinerated.

Water Impact

This can then be converted into CO2e emissions depending on your country's emissions factors.

- **CLEAN WATER:** Total water used and processing CO2e emissions.
 - CLEAN WATER: Cubic metres of potable water used from mains.
 - BULK WATER: Cubic metres of potable water used from bulk storage.
- **GREY WATER:** Total volume of grey/waste water produced.
 - PRODUCED: Total cubic metres of grey water produced.
 - RECYCLED: Total cubic metres of grey water re-used at the event.
- **BLACK WATER:** Total volume of brown (catering sullage) water or black (sewage) water produced.
 - SEWAGE: Total cubic metres of sewage and catering waste water produced.