Zero Waste Guidelines for events and festivals

Let's grow up together
Adriatic IPA
Cross Border Cooperation 2007-2013

ZERO waste
AFTER FUN STILL GREEN

The project is co-funded by the European Union, Instrument for Pre-Accession Assistance

ZERO WASTE GUIDELINES FOR EVENTS AND FESTIVALS

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CONTENT

INTRODUCTION

When people hear the term 'zero waste' for the first time, the common response is to think that it sounds unrealistic. Zero waste however is not so much about a goal as about a philosophy that says waste is never a good thing, so rather than just accept waste as inevitable - let's work towards minimising it. Zero waste is similar to the ideals of 'zero accidents' at work or 'zero defects' in manufacturing. Zero waste is a 'whole system' approach that requires a rethinking of how materials flow through our society, and a redesign of those systems to minimise material requirements and maximise material use. Its main principles are known as the waste management hierarchy, or the 5 Rs of waste management - Reduce waste, Reuse items, Recycle and Recover materials, and Residual disposal in a landfill as the last option[1]. Zero waste takes Nature as its starting point, where there is no waste, because what represents a surplus to one part of a system inevitably becomes food or fuel for another part of the system. Zero waste envisages a society where material is constantly cycled through different systems, adding value at each point of the cycle. Hence, a zero waste approach aims to 'design out' waste from the system. It is not just about managing waste that is created, but about continuously seeking to improve the management of material flows so that eventually there are no materials used in an event that do not have further beneficial use.

1 Environment Canterbury, Regional Council, 5 R's waste management hierarchy. http://ecan.govt.nz/advice/sustainable-living/waste/pages/managing-waste-sustainably.aspx (10.5.2014).

Events and festivals[2] represent a great opportunity to increase visitor flows and offer a variety of entertainment opportunities for local residents and tourists, even outside of the high tourist season. In recent years, the proposals for events and festivals have multiplied, for example: cultural and sports events, food and wine, music or cinema festivals. In the Adriatic area, there are various events that attract thousands of people and in turn have a positive impact on the local economy. At the same time however, these large gatherings produce an increase of water and energy consumption together with waste of food and various other materials. In other words, hundreds or thousands of people may gather to enjoy a festival or other event and in doing so they generate thousands of tonnes of waste – such as empty bottles, used paper plates, plastic cutlery and glasses, unwanted food and drinks, waste water, packaging, general waste, plastic bags – and imply other negative effects to the natural environment.

On a large scale, the waste of products is constantly increasing in the world, even in less industrialized countries (although in different stages of the production chain). Recent research and studies estimate that the food waste in the world has increased by more than 50% since 1974.[3] As already mentioned, events and festivals may produce negative effects, especially in those areas which owe their popularity to being under environmental protection, such as natural habitats or archaeological sites. In light of this, a sustainable tourism policy should be applied with the adoption of "green" actions to lower the negative impact on the environment caused by large gatherings, and to transform the waste originated by visitor flows into a new resource for local communities from both social and economic points of view. The key to transforming waste into a resource is to lower the waste produced at its source and to strengthen the recycling chain. A zero waste event therefore is an event run according to this zero waste philosophy, rather than an event from which there is not a single scrap of rubbish produced. A zero waste approach has implications for virtually all aspects of how an event is designed and managed from the types of activities on site, the supply of materials, education and communication, to waste collection, processing and monitoring.

Therefore, zero waste in festivals and events is a goal to reach. Environmentally friendly planning and organising of events helps to minimise waste going to landfills, while increasing the volume of recycled or biodegradable materials. Event organisers can influence the minimising of waste at events, regardless of whether they are a professional company, a member of the public, staff of a school, the management committee of a sporting organisation, tourist board, or association, etc. In achieving minimum (or even zero) waste produced before, during and after festivals and events, new technologies, especially information and communication technology (ICT), may prove useful. ICT is considered to be a strategic support to face the negative impact of visitor flows by providing tools to public and private actors who organize and manage events and festivals.[4] The creation of a joint ICT infrastructure with a web application and strategies can be the means to favour and share zero waste challenges: new, modern possibilities and technological tools, a broader tourism supply, control of environmental impacts, matching less and more experienced territories, and sustainable economic growth in the Adriatic Area.

All these were the reasons why partners from six countries of the Adriatic area decided to try to support the zero waste idea. They applied for a project called "Zero Waste Adriatic net of events and festivals" (hereinafter: Zero Waste) that was approved for funding by the IPA Adriatic Cross-border Cooperation Programme within Priority 3 - Accessibility and Networks, Measure 3.3 - Communication networks.

2 In the context of this Guidelines, the difference between the festival and the event is that the event is an item in a programme or the programme as a whole and typically lasts for a shorter period of time (e.g. few hours or a day), while festival is a series of thematic events that can last for a longer period (e.g. more than one day). Other meanings could be found in Hawker, S., Cowley, C., Oxford Minireference Dictionary & Thesaurus, Oxford University Press, Oxford, 1997, pp. 206 and 225.

3 Hall, K.D., Guo, J., Dore, M., Chow, C.C., The Progressive Increase of Food Waste in America and Its Environmental Impact, PLoS ONE, 4(11), 2009, e7940. doi:10.1371/journal.pone.0007940 (28.05.2014.)

4 Hasna, A. M., Dimensions of sustainability. Journal of Engineering for Sustainable Community Development: Fall, Vol. 1, No. 2, 2012., 47-57.

List of Zero Waste project partners:

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FB4: Spazio Eventi L.t.d., Italy

FB5: Municipality of Tivat, Mayor's Office, Montenegro

FB6: University of Primorska, Faculty of Tourism Studies – Turistica, Slovenia

FB7: Federal Ministry of Environment and Tourism, Department of Tourism and Hospitality, Bosnia and Herzegovina

FB8: Regional Council of Durres, Department of Regional Development Policies, Albania

The Zero Waste project offers the opportunity to create a network of existing events and festivals in the Adriatic area, thanks to the adoption of green solutions through the use of ICT. Zero Waste exploits the results of experiences carried out by some of the partners on the reduction of waste in economic activities, and aims to benchmark events and festivals from the project area and identify best practices (methodologies and concrete actions included). Zero Waste is also a new cultural approach that, through the use of ICT, may favour the creation of new jobs and new skills in the recycling chain in the partners' countries.

The Zero Waste project aims to create a zero waste web-based network of events and festivals with low impact on the environment. The assumption is to develop a jointly used ICT infrastructure to match environmental and tourism indicators with a new method for communities' involvement and good practice solutions in the organization and management of events/festivals.

The project does not focus on the adoption of trademarks or binding behaviours, but rather its intention is to guide public and private entities in the choice and adoption of the most appropriate modern tools to verify conditions, elements and circumstances that cause waste production in events and festivals. The web tool will promote the match of demand/supply of unused and unsold products and materials by putting them back into the market for social purposes and some specialised tourist packages through cooperative marketing.

Overall objectives:

- Create a permanent ICT application as a tool to exchange expertise and promote accessibility to information and communication services;
- Strengthen the sustainable development capacity of the Adriatic area through the agreed Zero Waste Strategy;
- Lower the negative impact of events and festivals on local resources by converting this impact into an opportunity to strengthen the local economy;
- Promote tourism activities where conservation, recycling and recovery are key words of a new cultural approach by developing integrated and specialised tourist packages;
- Encourage and promote good and neighbourly relations and harmonious sustainable development by matching more and less experienced areas of the Adriatic.

Specific objectives:

- Create a Web-based network of events and festivals in the Adriatic basin that adopt the zero waste culture as a guide for organization and management;
- Enable local actors to have tools and oriented strategies by giving them online guidelines for the management of zero waste events and festivals and a strategic plan to create economic opportunities in the recycling chain (i.e., selection of common methodology and indicators to evaluate the impact of events on the local environment and apply zero waste solutions);
- Promote and disseminate the Zero Waste Network of events and festivals through the creation of modern tools for joint marketing based on tourist packages with selected thematic events;
- Capitalise and develop functionalities of the software created by the project "S.T.A.R – Statistical Network in Tourism Sector of Adriatic Regions" in the section of environmental indicators and create "Zero Waste online", a web application providing the following services:
  - assessment and monitoring of the environmental impact of events and festivals,
  - guidelines on actions/strategies to apply the Zero Waste Strategy to manage events and festivals,
  - matching the demand and supply of green products, materials and services to lower operating cost,
  - social network strategies to involve the local communities and ensure their active participation,
  - map accommodation facilities that agree with and carry out zero waste solutions in tourism events and festivals;
- Contribute to the effective implementation of Zero Waste Strategy with agreements and demonstrative actions.

The agreed objectives are consistent with:

- **Priority 3 – Accessibility and Networks.**
- **Measure 3.3 – Communication networks of the IPA Adriatic Cross-border Cooperation Programme** (European Union Programme).

Running a zero waste concept can have positive benefits for any event. It can:

- Reduce the event's impact on the environment;
- Make the event attractive to sponsors;
- Reduce costs from waste disposal and litter picking;
- Provide a clean, positive environment for patrons;
- Help to increase environmental awareness;
- Meet increasing community expectations to be seen to be green;
- Create good will amongst the team staging the event.

Creating zero waste events in the Adriatic area will help destinations move towards their sustainability objectives by reducing the impact that waste generated at events has on the environment in general. At events large numbers of people congregate and waste can be highly visible. Events, therefore, provide an opportunity to reinforce public education messages, as well as an opportunity for the Adriatic area to display its clean green credentials to residents and visitors.

To gain these benefits, it is necessary to have a common guide that prescribes a common methodology of planning and implementing events. Therefore, these guidelines are intended to serve as a source for organisers and initiators of events in the Adriatic area to help them minimise the quantity of waste generated during events. Working towards zero waste is the first step of the Adriatic area's commitment to delivering sustainable events. These guidelines will therefore provide a foundation for, and will link with, other event sustainability initiatives as they are developed.

These guidelines will be elaborated through the following activities:

- Analysis and selection of indicators and data (to assess the social/economic/ environmental impact of events and festivals in the local context);
- Methodology to assess the impact;
- Monitoring of waste;
- Logistics – organizational solutions (to reduce environmental impacts, recycle materials and products in the local market or in welfare/charity circuits);
- Criteria to select the events' suppliers and to include them in the list of green products and services;
- Strategies to involve stakeholders/key actors;
- Promotional strategies for selected zero waste events and festivals.

These guidelines provide information that will help plan and stage successful zero waste events. It is structured as follows:

1. **Legislative platforms, standardization and best practices;**
2. **Methodology for sustainable event and festival management;**
3. **Guidance notes – setting out the 7 steps to sustainable event and festival management;**
4. **Useful information for zero waste event and festival management.**

The first chapter briefly presents the legislative platforms, standardization and certifications for sustainable events and a review of some of the world's best practices regarding zero waste indicators. The second chapter provides an insight into overall implemented methodology to estimate the level of sustainability for chosen events from the project. Also, summary of the most and least sustainable events/festivals is presented. Guidance notes formulated as 7 steps to sustainable event and festival management make up the third chapter. It is followed with some additional useful information and best practices that can save organizers' time when organising zero waste events (Chapter 4).

Finally, these guidelines will provide few Appendixes. Zero Waste Management Plan Template, Zero Waste Questionnaire for event and festival organisers, and the List of green suppliers can help organizers to make their own plan for an event or festival.


MIRO TARTUFI

1 Legislative platforms, Standards and Best Practices

When drawing up guidelines for zero waste events, it is recommended to follow the accepted norms and regulations in the field of sustainable spatial planning and organizing sustainable events, such as:

- National/regional legislation in the field of environmental and waste management;
- General principles for sustainable spatial planning;
- Environmental standards and standards for organizing sustainable events;
- Environmental certification and labels;
- Examples of good practice in the field of zero waste event.

The purpose of this chapter is to briefly present the legislative platforms, standards and certifications for sustainable events, and give an overview of one of the world's best practice regarding zero waste indicators.

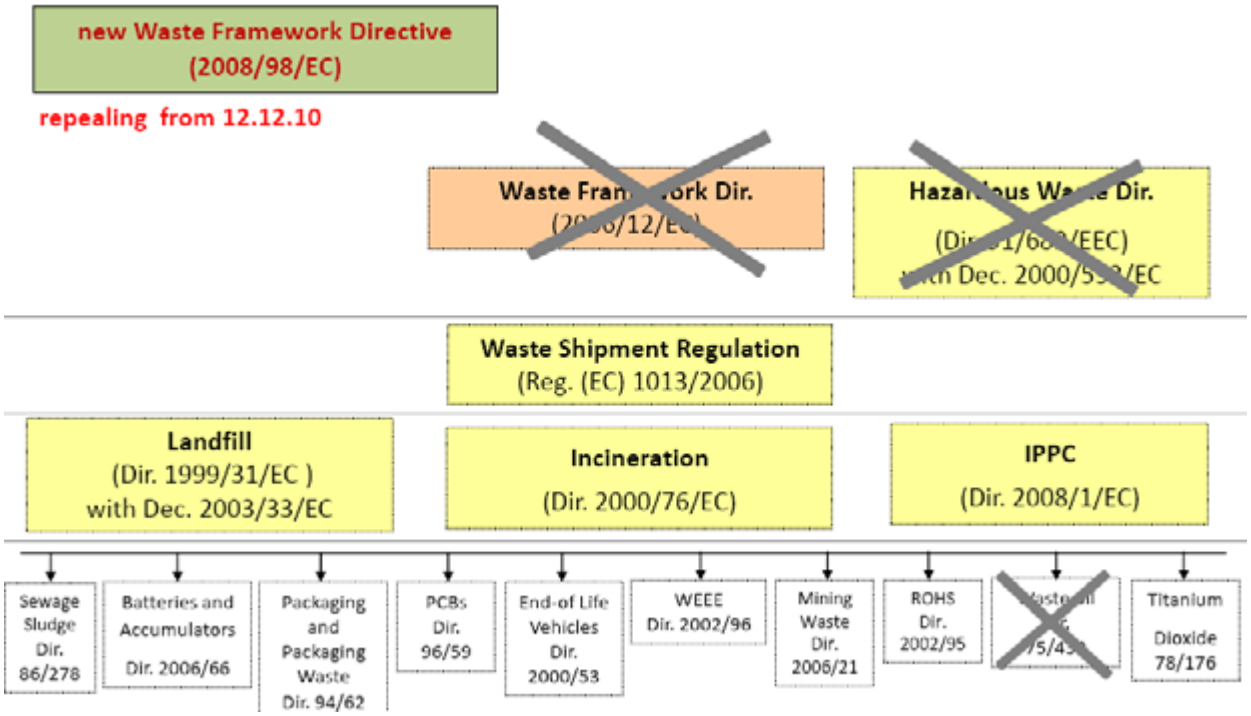
1.1 Legislative platforms

Every country has some legislation in the field of environmental protection; in Europe, national legislations of individual Member States are subject to European directives. The Waste Framework Directive 2008/98/EC specifies the current scope and content of waste management planning obligations.

Figure 1 provides a list of legal documents on waste currently in force at the EU level. The new Waste Framework Directive is a legal framework that entered into force at the end of 2008 and covers the whole waste cycle from generation to disposal. It repeals the old Waste Framework Directive, the Directive on the disposal of waste oils from 1975, and the Directive on the hazardous waste from 1991. Its emphasis is on recovery and recycling.

The legal documents may be divided into four groups, with the Directive on waste (2008/98/EC) constituting the overall EU regulatory 'framework'. Directive 2008/98/EC sets out fundamental definitions, basic principles and overall strategic aims and lays down requirements for all types of waste, unless these are specifically regulated by other directives.

Figure 1: List of legal documents on waste currently in force at the EU level.



Source: Adopted from Preparing a Waste Management Plan: A methodological guidance note, 2012

A number of other directives regulate specific waste streams. A final group of directives regulate waste treatment operations: waste incineration and co-incineration, and the disposal of waste through landfills. The directives on waste provide basic definitions in waste management and determine several environmental protection objectives, including the goal of increasing the reuse and recycling of waste materials (such as - at least - paper, metals, plastic and glass from households and possibly also other sources, if these waste streams resemble household waste) to at least 50 % of total mass by the year 2020.[5] In order to achieve quality recycling and improve processing possibilities, individual fractions of public waste need to be collected separately before they enter the processing stage, if this is technically and environmentally feasible and if it does not cause unproportional costs.
On the basis of the European directives, the Member States have modified (or are still harmonising) their national legislation.

Apart from legislation there are also some general principles for sustainable spatial planning to be followed. Since events and festivals are organized within tourist destinations the guidelines should take into account also the principles of sustainable destination development.

5 European Environment Agency, Diverting waste from landfill, Effectiveness of waste-management policies in the European Union, EEA Report, No 7/2009, Copenhagen, 2009, p. 15.

1.2 Sustainable development of tourism destinations

This chapter is based on the World Tourism Organization's (UNWTO) Guidelines "Indicators of Sustainable Development for Tourism Destinations: A Guidebook"[6], which point out the indicators to be pursued when assessing the level of sustainability of the destination. The guidelines have an emphasis on solid waste as a major source of pollution for the planet. Waste is generated in nearly all activities that humans undertake. To date, the main solution to managing this waste has been to throw it away – most frequently where there is a waste collection system to bury it under the ground in a landfill. Used or waste materials sent to landfills represent a loss of resources, and their replacement will increase greenhouse gases during both their production and transport. In places where there is no system, waste material is frequently just abandoned where it is created, or someone is paid to take it "away".

Due to problems of contamination and negative impacts on both the environment and the image of the destination, it is more and more important for destinations to measure waste production and manage its treatment which is becoming a necessity. The 'out of sight, out of mind' solution has not been very effective and has created a new set of problems that need to be dealt with. Problems with old-style rubbish heaps and landfills include the:

- Production of offensive odours;
- Generation of leachate, which can contaminate nearby waterways;
- Emission of greenhouse gases;
- Attraction of vermin and concomitant disease.

All of this can damage a destination and its tourism. There is a widely recognised hierarchy for minimising waste:

- Reduce;
- Reuse;
- Recycle;
- Residual treatment;
- Residual disposal.

Destinations need to quantify waste volumes, and identify sources and destinations, so effectiveness of future management strategies can be monitored. That is, one needs to measure waste in order to manage it. This can be done at many scales.

A **waste audit** is simply an assessment of waste. It is valuable as it tells you:

- How much waste there is in total;
- What the waste actually consists of and the quantities of each type of material;
- Where the waste was generated;
- Where it ends up (e.g., landfill, composting plants, incineration, etc.).

6 World Tourism Organization, UN Guideline, Indicators of Sustainable Development for Tourism Destinations: A Guidebook, UNWTO, Madrid, Spain, 2004., p. 173-180,

Table 1: Indicators of sustainable development at a destination level

Components of the issue:	Indicators:
Managing total waste collected in a destination	• Total amount of waste collected; • Waste volume produced by the destination (tonnes) pa / Person years pa (by month) à Baseline Indicator; • Waste disposed by different methods (specify, e.g., incinerated, deposited in landfill, etc.); • Waste attributable (by month or season) to tourism.
Reducing waste produced	• Volume of waste recycled (m^3 m^3) / Total volume of waste (m^3 m^3) (specify by different types) à Baseline Indicator; • Number of tourism establishments collecting waste separately, capacity of collecting separated waste from local residents; • Number of tourism establishments recycling their own waste (e.g., composting).
Providing waste collection services	• % of destination area (especially in urban sites) covered by solid waste collection services; •Percentage of tourism establishments covered by waste collection programs.
Hazardous substances (reduction, handling)	• Number and volume of hazardous substances in use (for key substances, volume of use over time); • % of these substances for which appropriate management and disposal policies and programs are in place; • % of employees informed and trained in the use and disposal of the substances they use (e.g., cleaners knowledgeable of how to deal with waste cleaning fluids, engineers trained in emergency spill handling).
Maintaining clean image for the destination	·Quantity of waste collected from public areas and streets; ·Quantity of waste strewn in public areas (garbage counts) à Baseline Indicator; ·Image of cleanliness of destination (questionnaire based).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 174.

Using this information it is possible to target activities and industries (such as tourism) producing significant amounts of waste going to landfill. It also helps to identify where reducing waste at the source is going to be most pragmatic and effective. Waste assessments also identify environmentally viable alternatives to landfill for the waste that cannot be eliminated.

The first step for the destination should be to reduce quantities of materials consumed (including packaging), to then consider reuse, or if not possible, recycle. Consideration should be given to the options that have the best local environmental impact. While on vacation, people tend to use more disposable products than at home; food bought may be heavily packaged. Recycling may not always be the best option (e.g., no local facility) and waste used for energy generation systems may be a better route for some destinations, obtaining both energy and a reduction in the weight of waste disposed. Tourism establishments can also seek means to substitute less wasteful procedures (e.g., serving in edible containers, recyclable bottles, etc.).

Municipal services of waste collection and processing have to be well coordinated with accommodation, catering and other tourism establishments to reduce, reuse and recycle waste.
Recycling and reuse should start at the source of waste (establishments), by collecting different types of waste separately. Tourism establishments can also have their own waste processing facilities (e.g., composting organic waste). Without adequate municipal infrastructure, however, efforts of tourism facilities are diminished. There are examples of hotels with excellent environmental management systems, where the carefully separated waste ends up in the same landfill, due to lack of processing capacity at the local destination. There are also examples where the hotel maintains a good relationship with the local community, and residents reuse specific waste items (e.g., bins, bottles) in their households. For the above reasons, it is also important to collect information on waste generation and processing from tourism establishments as well, and inform them adequately on municipal activities.

As an example here is a list of indicators to be assessed by the venue of an event. As shown in Table 2 the indicators include the size of the facility, the availability of its services, accessibility, safety and security, friendliness and ease to use, and the nearby amenities.

Table 2: Indicators of sustainable development at the facility level

Issues at the scale of the facility	Indicators
Size of facility	• Total maximum capacity; • % utilization (% days/yr.); • Average capacity use (% of maximum).
Range of services available	• Number of conference rooms and their capacity; • Number of restaurant seats available on site; • Number of restaurant seats within 10 minute walking distance; • Number of complaints regarding lack of services.
Accessibility	• Distance to nearest public transport; • Travel time to nearest airport; • Number of parking spaces within 1 km; • % of area of convention centre which is accessible to those with limited mobility.
Facility safety and security (particularly for events likely to attract crowds, hostility)	• Number of reported incidents per year – in facility and nearby involving customers; • Incidents (% of attendees affected).
Friendliness and ease of use for clients and visitors	• Exit questionnaire which measures perceived quality, value for money, reaction to facilities, other key issues (may be done as part of destination exit questionnaire).
Location relative to amenities	• Number of key services in or adjacent to facility (e.g., bank, post office, taxi stand, travel assistance, souvenirs, etc.).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 4 – Destination Application, World Tourism Organisation, Madrid, Spain, 2004, p. 287.

As already shown in Table 1 the best practice zero waste indicators at the destination level are the following:

a) Indicators of waste production
b) Indicators of waste reduction
c) Indicators of adequacy of waste collection services
d) Indicators relating to handling and disposal of hazardous substances
e) Indicators of impact of waste on the destination
f) Indicator of perception of destination cleanliness
g) Indicator of environmental management
h) Other potential indicators

a) Indicators of waste production

Table 3: Indicators of waste production

Indicators
Total amount of waste collected;
Waste volume produced by the destination (tonnes) pa / Person years pa (by month)_Baseline Indicator;
Waste disposed by different methods (specify, e.g., incinerated, deposited in landfill, etc.);
Waste volume attributable (by month or season) to tourism.

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 175.

Indicators relating to consumption of resources and production of waste, which are calculated on a per person per annum basis, need to take into account both the resident and the transient (tourist) populations.

Reason to use these indicators: Used or waste materials sent to landfill represent a loss of resources, and their replacement will increase greenhouse gases during both their production and transport. The first step for the destination should be to look to reduce quantities of materials consumed (including packaging), to then consider reuse, or if not possible, recycle.

Source(s) of data: The information which the destination needs to collect is the weight of solid waste being sent to landfill. This can be done in a number of ways depending on what facilities are available in the area. If the local refuse transfer station has a weighbridge the weight of waste can be sourced from here. If there is no weighbridge, other methods of calculation include calculating the volume of waste being sent to the landfill; this can then be converted to a weight using weight to volume conversion factors depending on the amount of compaction. Where there is no official collection, it may be necessary to survey properties to obtain estimates of volumes, or access private waste audits.

Means to use these indicators: These indicators are useful to display trends in solid waste production and allow the destination to monitor and act on their performance. They can sometimes be used as a proxy measure for other stressors, such as total pressures on a particular site, although the relationship is not always easy to show.

Benchmarking: This indicator can be benchmarked in two ways: over time for the individual destination or by using comparative data from other destinations.

b) Indicators of waste reduction

Table 4: Indicators of waste reduction

Indicators
Volume of waste recycled (m3) / Total volume of waste (m3) - Baseline Indicator;
Number of tourism establishments collecting waste separately, capacity of collecting separated waste from local residents;
Number of tourism establishments recycling their own waste (e.g., composting).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 176.

Reason to use these indicators: The first step for the community should be to look to reduce quantities of materials consumed (including packaging), to then consider reuse, or if not possible, recycle. The basis of recycling is separating different types of waste, which is best to start at the source. Therefore, it is important to monitor, whether separate waste collection is conducted at tourism establishments, or if there are facilities (bins) that allow local residents to deposit their waste separately, and subsequently to collect waste separately.

Source(s) of data: The information can be sourced from the data collected during a waste audit. If an audit has not been carried out, information will need to be collected from records from recycle operators, disposal firms and also from the local disposal sites. Tourism establishments can also be good sources of information, especially where waste collection and recycling is not organized centrally at the destination.

Means to use these indicators: This indicator is useful for displaying trends in recycling allowing the destination to monitor and control their performance.

Benchmarking: This indicator can be benchmarked over time for the individual destination or by using comparative data from other sources such as regional or national authorities. Note that waste volumes can also be used as rough indicators to measure levels of activity if there is no direct indicator (in some WTO case applications, the change in number of trucks collected for the destination or for a particular site have been suggested as a potential indicator of tourist volumes in season).

CASE STUDY

Solid waste reduction - Douglas Shire, Queensland, Australia

Douglas Shire is a local authority on the Queensland coast where tourism is a major part of the economy. Douglas Shire Council actively encourages a reduction in the quantity of solid wastes being generated through approaches such as avoiding excess packaging, reuse of packaging where possible, recycling waste where possible and committing waste to landfill only as a last resort. Recycling includes old tires and grease trap waste. Results are monitored.
An integrated waste management project was put into operation in 2002 to provide best practice waste management and aims to reduce landfill by up to 65%. As well, effluent from the sewage facility is used for golf course irrigation The program is targeted at all sectors, with tourism as a major participant.

c) Indicators of adequacy of waste collection services

Table 5: Indicators of adequacy of waste collection services

Indicators
% of destination area (especially in urban sites) covered by solid waste collection services;
Percentage of tourism establishments covered by waste collection programs.

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 177.

Reason to use these indicators: Some destinations do not have waste collection services. Particularly in new destinations or destinations where attractions and accommodation are widely scattered, there may be no local authorities, and therefore little regulation or service provision.

Source(s) of data: Local authorities where they exist, or poll of establishments.

Means to use the indicator: Shows development of waste services, or demonstrates need.

Benchmarking: Ideal is 100%. This may be provided through local authorities or private collection services.

d) Indicators relating to handling and disposal of hazardous substances

Table 6: Indicators relating to handling and disposal of hazardous substances

Number and volume of hazardous substances in use (for key substances, volume of use over time);
% of these substances for which appropriate management and disposal policies and programs are in place
% of employees informed and trained in the use and disposal of the substances they use (e.g., cleaners knowledgeable of how to deal with waste cleaning fluids, engineers trained in emergency spill handling).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 177.

e) Indicators of impact of waste on the destination

Table 7: Indicators of impact of waste on the destination

Indicators
Quantity of waste collected from public areas and streets;
Quantity of waste strewn in public areas (Garbage counts on key sites) - Baseline indicator;
Image of cleanliness of the destination (questionnaire based).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 178.

Reason to use these indicators: Waste that is not managed can accumulate, creating environmental and health issues and also disturbing tourists and affecting the image of the destination.

Source(s) of data: Debris counts in public areas. Measure collection volumes from collectors (loads of waste from streets and public areas).

Means to use these indicators: Can measure both effects of programs to reduce litter and dumping and results of clean-up programs.

Benchmarking: Measure changes over time for one destination or for different sites within a destination. Compare to other sites: - note that some destinations have effectively achieved near zero waste in public areas (e.g., Northern Europe, Canada) through a combination of public education and clean-up programs.

CASE STUDY

Waste management through multi-stakeholder partnership in Side, Turkey

The Tour Operators Initiative (TOI), comprising over 20 inbound and outbound tour operators, organized a workshop in the Municipality of Side in Turkey's Antalya region, where TOI members and their local partners bring approximately 300,000 tourists each year. The meeting was attended by the Mayor of Side, representatives of WWF Turkey, and representatives of the private sector, individual hoteliers, excursion providers and local travel agencies as well as the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Tourism Organization (UNWTO). The meeting gave the participants the opportunity to share their views on the main threats to sustainability in the Side region and ways to address these. Among the three priority actions waste management (with a focus on waste separation and recycling), was identified as an urgent matter. During follow up meetings with local stakeholders, a detailed plan of action was developed, and a locally based coordinator was appointed, financed by the Side administration and the Side Tourism Association (TUDER).
Activities implemented in the two-year program include:
· A waste separation scheme for the municipality of Side. It is in operation, recycling companies have been identified and pick-up times set for participating hotels;
· The local recycling company posts signs on its vehicles to promote the Side initiative, and hotels and restaurants post signs at their entrances;
· The Side Tourism Association has placed containers for collecting used batteries in every Side hotel, in the Ali Ihsan Barut elementary school and in the Tourism Hotel Vocational High School;
· Waste separation bins for organic and recyclable waste have been placed in Side for use by residents and tourists;
· Training sessions on solid waste management and waste separation techniques, organized with technical input and background material from UNEP, were held for managers and staff at hotels, apartment hotels and pensions, Side Municipality sanitation workers, sanitation managers and association presidents; members of the Garment Association and of the Bar and Restaurant Association. Indicators demonstrate the significant progress achieved in waste management:
· Over 100 hotels and all local shops and restaurants participate in the waste separation scheme;

Waste collected during the last seven months of 2003:
· 276 tons of inorganic waste;
· 11,978 batteries collected from hotel desks, hotel technical services and primary school;
· 102 storage batteries collected from hotels.
Moreover, the new landfill area has been identified and approved and it will be in operation in Fall 2004. For more information on TOI and its indicators: www.toinitiative.org quantity of solid wastes being generated through approaches such as avoiding excess packaging, reuse of packaging where possible, recycling waste where possible, and committing waste to landfill only as a last resort. Recycling includes old tires and grease trap waste. Results are monitored.

An integrated waste management project was put into operation in 2002 to provide best practice
aste management and aims to reduce landfill by up to 65%. As well, effluent from the sewage facility is used for golf course irrigation The program is targeted at all sectors, with tourism as a major participant.

f) Indicator of perception of destination cleanliness

Table 8: Indicator of perception of destination cleanliness

Indicators
Image of cleanliness of destination (questionnaire based)

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 180.

Reason to use this indicator: If a destination has a poor reputation for cleanliness, some travelers may avoid it. Reaction to garbage can be very individual, and is related to conditions in the tourists' place of origin. Perception of cleanliness may figure more strongly in the decision regarding whether to return to a destination or recommend it to others than actual conditions.

Source(s) of data: Exit questionnaire

Means to use the indicator: This is an indicator of risk to the destination deriving from tourist reactions to garbage.

Benchmarking: This should be compared over time to exit survey results for the same destination. If there is a strong negative response, further questions should be used to pinpoint problem areas, or specific reasons for negative reactions.

g) Indicators of environmental management

Table 9: Indicators of environmental management

Indicators
% of establishments in the destination with formal certification (In each or all of EMS, ISO 14000, HACCP etc. or national equivalents) (Note, can also be subdivided by class or type of accommodation or type of tourist service)

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 - Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 242.

Reason to use this indicator: The percentage of establishments (of each type or classification) is a good indicator of management effort to take charge of environmental factors and reduce risks. It is inclusive of the other indicators suggested here – as EMS, and ISO 14,000 require these other initiatives as part of certification. Where no formal certification is obtained, (or other certification programs like HACCP – (Hazard Analysis and Critical Control Point programs for the food system) or other specific certifications are obtained, these also require risk analysis, monitoring and consistent management action (including training and reporting).

Source(s) of data: Logs of certification may be kept by national or regional governments, particularly where the promotion of certification is part of the policy of tourism authorities. If this source is not available, hotel associations may maintain such records, or it may be necessary to poll establishments.

Local tourism authorities will normally have a reasonable appreciation of who has received certification.

Means to use the indicator: Individual hotels or other organizations may use certification as a part of their marketing – demonstrating quality assurance. At the destination level, the percentage of establishments certified can also be used to show environmental sensitivity and progress. Where a government or industry association policy is to promote certification, this indicator becomes an important measure of performance for that policy or associated programs.

Benchmarking: Where internationally recognized certifications are attained, direct benchmarking with other destinations is possible. See the Web sites for, e.g., ISO, HACCP.

Note: Only one direct indicator is recommended for this issue. It should be recognized that the results of effective environmental management and risk management will become evident in many other substantive areas – and reflected in other indicators which measure environmental results at the destination level (e.g., water quality, health, visitor satisfaction, etc.) Users of this Guidebook are urged to also refer to the appropriate sections which address the key environmental issues of their destination.

If there is no formal certification program, the following indicators are components of environmental management and can be individually monitored:

- Existence of company policy on environmental and sustainability issues (including revision and reporting mechanisms) (% with policy);
- Existence of designated personnel for environmental management issues at the company (% companies environmental manager);
- Training of staff on environmental issues (% trained by category and level);
- Application of environmentally friendly technologies and techniques (e.g., water, energy saving devices, waste recycling, green purchasing, local sourcing).

Environmental Management

With the emergence of a number of formal management certification standards, most notably those related to ISO 9000 for management, 14000 for environment and the new ISO 18000 series for workplace health and safety, there is strong global support for better management systems to create better outcomes for enterprises and the environments they affect. These systems also help to enhance the degree of control managers have over their operations and impacts. Related programs for risk reduction on, for example, the food chain (Hazard Analysis and Critical Control Points), as well as formal third party certification for tourism companies and destinations, also aim at improving sustainability aspects of tourism operations.

Tourism companies (both larger international companies and smaller local ones) are increasingly aware of the social impacts tourism can bring to any destination community; therefore company policies increasingly reflect social responsibility towards employees and host communities. Certification can also bring recognition from the marketplace by showing responsibility.

Table 10: Indicators of environmental management systems

Components of the Issue	Indicators
Environmental management systems and environmental initiatives	· % of establishments in the destination with formal certification (In each or all of EMS, ISO 14000, HACCAP, etc. or national equivalents); · Existence of company policy on environmental and sustainability issues (including revision and reporting mechanism), % companies with policies; · Existence of designated personnel for environmental and sustainability management issues at the company · Training of staff on environmental issues (% trained) · Application of environmentally friendly technologies and techniques (e.g., water, energy saving devices, waste recycling, green purchasing, local sourcing) - % using.
Social Responsibility	· Existence of company policies aiming at social issues of employment and relation with host communities (e.g., sourcing of employment and supply of goods from local community, staff training, support to community development, etc.) % of companies with policies/programs).

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 – Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 241.

h) Other potential indicators

Table 11: Other potential indicators

Indicators
Whether or not the enterprise or attraction has an environmental management system or a hazardous waste program;
For destinations, percentage of enterprises with toxic waste management programs;
% of hazardous waste generated in the community which is collected in a special waste program.

Source: Indicators of Sustainable Development for Tourism Destinations: A Guidebook, Part 3 – Sustainability Issues in Tourism, World Tourism Organisation, Madrid, Spain, 2004, p. 177.

Reason to use these indicators: Compared to other industries, tourism generates little hazardous waste, although some toxic substances are in use, mainly as cleaners, ingredients in fire control devices, pesticides used on lawns, gardens (and some attractions such as golf courses) and, in some cases, lubricants, fuels, paint, and occasional biologically hazardous materials (for example, waste from clinics in hotels or cruise ships) . It can also include ash from boilers and heating systems and sewage sludge from cesspools and septic systems.

Source(s) of data: The key to waste management of hazardous substances is a thorough inventory of the substances in use or produced. Once a thorough inventory is done, it is possible to monitor (and hopefully reduce through substitution and efficiency) the use of such substances.

Means to use these indicators: These indicators can be used to show compliance with laws and regulations and as a signal of risks.

Benchmarking: Guidelines for hazardous waste management are available from online sources. Specific chemical safety fact sheets for most commonly used toxics are available in many languages online at http://www.cdc.gov/niosh/ipcs/icstart.html.

The wide range of indicators shows how important sustainable development is in a destination. Some destinations are willing and able to make the step forward, and actually start measuring most of the indicators to then get feedback resulting from the comparative analysis of measurements. This way the destination can improve, and so can the initiatiors or organizers of events and festivals. On the other hand, other destinations are not able to run the measurements for most of the indicators due to their public conditions. However, bringing the indicators to light at a lower level (i.e., event organizers) can incourage the destination's authorities to make a step forward, aiming at improving the system of waste monitoring in accordance with sustainable development principles, which can enable the destination or single event initiators to meet the standards of a sustainability orientation.

1.3 Standards and certification for sustainable events

Standards
Standards play a critical role in industry, commerce, technology and the world at large.
In the area of standards of sustainability-oriented events, the following standards may be taken into consideration:

- ***BS 8901 Specification for a Sustainable Event Management System*** – this was introduced in 2007 and has been produced to help organisations facilitate sustainable event management systems. It provides a uniform approach to event management that has been endorsed by many organisations, including the London 2012 Olympics Delivery Authority.

- ***ISO 9001 Quality Management Systems*** – this international standard lays out criteria against which businesses and organisations can design, manage and audit their internal processes to ensure quality is maintained. The environmental impact of an organisation's processes, including those related to events, should be factored into its quality management system.

- ***ISO 14001 Environmental Management Systems*** – this international standard specifies how businesses and organisations should conduct their activities in a manner that minimises negative environmental impacts. Organisations delivering events should consider the environmental impacts of these events within their environmental management system.

- ***ISO 20121 Event sustainability management systems*** – the standard, which was published in 2012, aims to steer and minimise environmental, financial and economic impacts. It adopts a management systems approach requiring identification of key sustainability issues, such as venue selection, operating procedures, supply chain management, procurement, communications, transport, etc. By taking ISO 20121 as their starting point, organizers of events adopt their own system of sustainably-oriented standards in particular areas by using effectiveness indicators.

Ecolabelling and certification
Green or sustainable orientation events can be increased with the use of products and services bearing recognized environmental certification and labels. These encourage the awareness of all stakeholders to use green products and services, while contributing to the prevention of green-washing.

In the EU area an EU Ecolabel is adopted, which ensures that the best decisions for the environment are made at every point of the product's life, while delivering high-performance products and value for money. EU Ecolabelled products produce less waste and pollution when compared to similar items on the market. There are more than 17,000 products and services that display the EU Ecolabel across a breadth of different product types. This includes everything from soaps to shoes and paints to paper. One can even find EU Ecolabelled campsites and hotels. Thus there is a wide range of products that could be suitable for event organisers. Detailed information on EU Ecolabel products and services that meet the ecological criteria of the EU Ecolabel can be found at http://ec.europa.eu/environment/ecolabel/.

It should be noted that at the national level the EU Ecolabel is awarded by national institutions for national products and services (e.g., by the Slovenian Environment Agency in Slovenia).

At the global level, there are many other eco or green certificates. To mention only a few, these are:

- ***Energy Star*** (www.energystar.gov) is the trusted United States government-backed symbol for energy efficiency, helping to save money and protect the environment through energy-efficient products and practices.

- ***Fair-trade*** (http://www.fairtrade.net/) is an internationally recognised approach to trading that aims to ensure that producers in poor countries get a fair deal, including a fair price for goods and services, decent working conditions, and a commitment from buyers to provide reasonable security for the producers.

- ***Forest Stewardship Council*** (www.fsc.org) is a certification system that provides a credible link between responsible production and consumption of forest products, enabling consumers and businesses to make purchasing decisions that benefit people and the environment, as well as providing ongoing business value.

- ***The Green Key*** (www.green-key.org) is an eco-label for tourism facilities that aims to contribute to the prevention of climate change and to sustainable tourism by awarding and promoting good initiatives. It originated in 1994 for hotels in Denmark. From Denmark the Green Key Programme has been adopted by countries in Europe, Africa, Middle East, Asia and the Caribbean. Currently Green Key runs programmes in 30 countries with around 1800 accommodation facilities (in 2011). Different sets of international criteria have also been developed for different categories of tourism facilities, including hotels, camp sites, hostels, conference centres, holiday centres and attractions. In the future there will be international criteria developed for restaurants and amusement parks.

The Zero Waste Europe coalition
It brings together organisations and municipalities committed to work to eliminate waste in Europe. Zero Waste Europe is registered as a Foundation under Dutch Law.

1.4 Best Practices for Zero Waste Events and Festivals

There are many best practices reported for zero waste events and festivals with useful guidelines, but few of them have established ground/basic indicators for measuring the sustainability of events. For this reason we have chosen one best practice with suggested indicators for the best zero waste performance.

Best Practice – Sustainable TEDx Event Toolkit

The Sustainable TEDx Event Toolkit is an initiative of TEDx organizers to help lessen negative environmental impacts. The toolkit includes a seven-step process and sustainability strategies organized under eight themes specific to the needs of TEDx events. Each theme includes key issues, possible objectives, performance indicators and examples.
We list all eight themes with selected objectives, Guidelines, and performance indicators as listed below.

Food & Beverage

Key Issues: Food and beverage choices impact your event's carbon footprint, the health of participants, and their dietary needs.

Table 12: TEDx Event Toolkit – Food & Beverage

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Reduce footprint of food	Provide vegetarian-only meals, source from local, fair-trade, organic, seasonal sources.	% of food sourced
Provide healthy food options	Provide fresh food options, preservative-free foods, and reduce high fat /sugar. Provide healthy snacks to reduce food consumption.	% of healthy food
Manage surplus	Provide foods in bulk rather than individually wrapped. Offer doggy-bags and consider giving surplus back to those in need.	% of food sourced locally % of food surplus redistributed
Use non-bottled water	Provide reusable cups and try to avoid single-use plastic water bottles at all times. If you must use bottled water, try to source it locally and use large water dispensers.	% non-bottled water

Source: TEDx, 2012

Energy

Key Issues: Choice of venue has the largest impact on energy consumed, but you can also consider how to power equipment you bring in, such as audio/visual equipment.

Table 13: TEDx Event Toolkit – Energy

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
"green" venue or "green" management system	Hold your event at a venue that already has a "green" event certification (BS 8901, Green Globe) or in a "green" certified building (LEED, BREEAM). This can reduce waste, water, and energy consumption in areas like heating / cooling, lighting, and use of green energy.	Presence of "green" building certification Presence of "green" event certification
Reduce energy consumption	Consider energy efficient appliances and equipment. Appoint a volunteer during the event to switch off lights, equipment, and air-conditioning in rooms not being used.	kWh of energy consumed

Source: TEDx, 2012

Waste & Materials

Key Issues: Materials are a key component to your event's footprint, and it is easy to reduce or even eliminate the amount of waste from an event. Before your event, choose the right materials to use, purchase, or rent, and understand what happens to them when the event is over. During your event, clearly label recycling, compost, and other bins and actively encourage participants to use them. After your event, ensure that composting, recycling, and reuse is happening, and measure the non-recyclable and non-reusable wastes.

Table 14: TEDx Event Toolkit – Waste & Materials

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Reduce material waste	Define all materials required for and during your events. Determine how they can be reused and recycled. Consider renting rather than buying. Ensure signage is reusable by not adding dates or years.	Kg of waste produced
Reduce food waste	Cook made-to-order meals, connect to composting services, and have dedicated organic waste bins. Give surpluses to charity.	Kg of waste composted
Reduce packaging waste	Reduce food packaging by working with your caterer to avoid individual packaging. Biodegradable bioplastic packaging (requires industrial composting) reduces carbon footprint.	Kg of waste produced
Provide a responsible gift bag	Use recycled materials for gift bags and showcase gifts from organizations that offer innovative and sustainable "tools". Consider eliminating gift bags all together.	% of recycled materials % of "practical" gifts

Source: TEDx, 2012

Travel and Transportation

Key Issues: How your attendees arrive to your city, travel within your city and arrive at your event often has the biggest impact on the environment. Facilitating alternative modes of travel is key to reducing your footprint.

Table 15: TEDx Event Toolkit – Travel and Transportation

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Promote public transportation and other eco-friendly transportation options	Liaise with local transit authorities to enable effective use of public transportation services. Clearly communicate to participants how to take advantage of public transportation. Set up programs that enable the use of bikes, shuttle vehicles, and electric vehicles, and subsidize public transport. Choose a venue that is easily accessible by foot / bike / public transportation and promote nearby hotels.	% of non-automotive travel
Offset carbon emissions for travel	Consider supporting green initiatives by purchasing carbon offsets to balance travel footprint.	% of travel offset

Source: TEDx, 2012

Communications, Education & Outreach

Key Issues: Promote your event while raising awareness of sustainable issues, educating participants and the community on sustainable practices, and executing marketing campaigns with the appropriate use of materials and limited waste.

Table 16: TEDx Event Toolkit – Communications, Education & Outreach

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Practice sustainable marketing and communications	Consider using electronic or paperless communication. Look for suppliers that offer "green" promotional materials such as FSC or recycled paper, environmentally safe printing dyes and banner material. Be careful not to over-promote your "green efforts" (AKA "greenwashing").	Kg of marketing materials used % waste
Educate the community on sustainable efforts	Ensure attendees are aware of your sustainable efforts by ensuring recycling bins are accessible and clearly labelled. Include sustainability considerations in all of your event announcements, correspondences with visiting guests, and on your Web site.	% of communications including sustainability awareness Execution of an awareness campaign
Use green hosting	Choose an internet hosting company that uses green technologies to reduce environmental impact.	Use of green web hosting

Source: TEDx, 2012

Employee and Community Health

Key Issues: TEDx events can have extended impacts on the local community by ensuring local staff are benefitting from the event, and by raising awareness for local charities or community groups.

Table 17: TEDx Event Toolkit – Employee and Community Health

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Hire local staff members / volunteers	Recruit local staff members, volunteers, and speakers from the community.	% of local staff / volunteers
Involve local speakers	Actively search for local speakers with ideas worth spreading, or link an international speaker with a local initiative.	% of local speakers
Contribute to local charity groups	Require sponsors to make a contribution to a local charity group, either through a gift bag or cash donation and/or have collection bins for local charities at your event.	Sponsorship and collection support of local charity group
Provide space for participant diversity	Dedicate space and invite people from a variety of socioeconomic backgrounds from the local community to attend your TEDx event, and help spread great ideas to new audiences.	% of seats saved for local outreach
Provide space for community groups	Provide space at your event for local community groups to promote their work.	% of space provided for local community groups
Ensure your venue is responsible	Hold your event at a venue that has a CSR policy, employee health policy, or "green" certification that includes a social component.	Presence of CSR / occupant and employee health policies

Source: TEDx, 2012

Hotel & Accommodation

Key Issues: By actively supporting sustainable accommodation, you will improve your event's footprint and promote sustainable accommodation in your host city.

Table 18: TEDx Event Toolkit – Hotel & Accommodation

Possible Objectives	How to do it (i.e., Guidelines or Tips)	Key Performance Indicator
Support hotels with a "green" certification	Partner with sustainable and responsible accommodation close to the event. Look for accommodation with "green" building or "green" event certification.	% of sustainable rooms used
Locate guests / speakers in hotels next to the venue	Find hotels near your event, and have all guests / speakers stay at the same hotel. It builds community, creates synergies, and makes it easy to organize activities.	Distance travelled between venue and accommodation
Consider accommodation along public transport / bicycle / walking paths	If there are no hotels or "green" hotels near your venue, then the next best option is for guests / speakers to use public transport, walking, or cycling to get to the venue.	% of guests / speakers taking non-automotive transportation to event
Accommodate guests in homes	Billeting guests in local homes is a great way to spread ideas and reduce impacts.	% of guests staying in homes

Source: TEDx, 2012

An overview of legislative platforms, UNWTO principles of sustainable development of destinations, existing standards and certifications, together with an example of best practice of sustainable events, serve as a sound basis to analyse the state-of-the-art in the field of events and festivals in the IPA Adriatic area. Since the public conditions in the Adriatic countries vary from contry to country, it was necessary to adjust the approach by starting with a research of the existing events from the area. To do so, a specific methodology was designed, taking into consideration the indicators from UNWTO and TEDx as well as from some other documents. The events were then analysed with regard to six attributes.

2 Methodology for sustainable event and festival management

This chapter presents the methodology implemented to estimate the level of sustainability for chosen events from the project area.

2.1 Project approach to sustainable events and festival management

As any other EU project, Zero Waste will achieve its purposes following IPA requirements and EU projects methodology:

1. Well organized management/coordination structure
2. Creative, innovative strategy for disseminating the project, involvement of target beneficiaries/ stakeholders, create consensus for the project's prosecution
3. Comparison of the situation, best practices exchange and adoption of shared strategies solutions (guidelines)
4. Core project: accessible network, tangible new ICT instruments providing services affecting the project's challenges
5. Development of concrete actions to involve beneficiaries; favour policy renovation, the project's replication and effective implementation after its closure.

What's more, Zero Waste capitalises the experiences of the S.T.A.R project by exploiting the results of environmental indicators of the STAR software and the competences of FBs in the sustainable management of events.

Considering the above, the Zero Waste project foresees the following working plan:

- Cross-border Project Management and Coordination (WP1);
- Communication and Dissemination (WP2);
- Cooperative Study and guidelines for events and festival organization (WP3);
- Zero Waste online (WP4);
- Pilots: Application and promotion of the Zero Waste Adriatic Net of Events and Festivals (WP5).

WPs are coherent with one-another and with the objectives of the project.

Cross-border Project Management and Coordination (WP1) will ensure the technical & financial management of the project for the overall duration, resulting in a well-managed project reaching its objectives, without serious conflicts between FBs, with smooth reporting to the programme & in agreement with IPA rules. Zero Waste will ensure close cooperation among FBs, enabling even the less experienced ones to achieve the same technological/organizational levels. All FBs will be involved according to their objectives and expertise. Meetings and constant communication flows will ensure balanced cooperation which will also be monitored through Internal Assessment activities. WP1 activities will be realised through the following actions: 1.1. Start-up; 1.2. Day-to-day management and reporting; 1.3. Transnational meetings; 1.4. Internal assessment.

Communication & Dissemination (WP2) is a strategic and horizontal WP that will last throughout project duration. WP2 aims at promoting a wide dissemination of the project objectives and of the achieved results. It will develop several coordinated activities aimed at a wide group, composed of decision makers, national/regional/local administrators, tourist operators/enterprises, NGO, associations, business organisations, citizens. Dissemination actions will be mainly realised through the following communication tools and actions: 2.1. Communication plan and promotional materials; 2.2. Zero Waste Website; 2.3. Promotional events; 2.4. Media communication.

Cooperative Study and guidelines for events and festival organization (WP3) aims to create solid, shared knowledge thanks to the exchange of local experiences and good practices concerning the management of annual events and festivals organized in partners' countries. The exchange of experiences aims to identify best practices which will, together with the selected indicators and the zero waste solutions identified by FBs, compose the Guidelines for the management of events and festivals to reach the Zero Waste goal. Actions: 3.1. Know-how exchange and best practices selection; 3.2. Model of Zero Waste events and festivals; 3.3. Zero Waste Guidelines.

Zero Waste online (WP4) aims to create a Web application supporting the organization and management of events and festivals toward the Zero Waste goal. The Zero Waste Web application will be created transferring the Guidelines developed in WP3 and will promote the net of Zero Waste events and festivals and the hosting territories through promotional tourist packages. It will be opened to include and promote future events respecting the Zero Waste Strategy. The contribution of ICT in reducing environmental impacts and waste is goal-oriented; in fostering the exchange of experiences and knowledge, it is process-oriented, and in supporting policies for sustainable tourism in the Adriatic Area, it is is context-oriented. Actions: 4.1. Zero Waste on line; 4.2. Workshops to promote and apply Zero Waste strategy; 4.3. Logo of Zero Waste events and festivals.

Through the Web application developed in WP4, the aim of **Pilots (WP5)** is to apply the Guidelines to the selected seven events and festivals and thus create the real Adriatic Zero Waste network of events and festivals. Partners will formally engage key actors involved in the organization of the seven selected events and festivals by signing an agreement that defines the "road map" to reaching the Zero Waste goals. The events and festivals that have applied the majority of the principles of the Guidelines will be awarded the Zero Waste logo. Actions: 5.1 Agreements for Zero Waste Guidelines application; 5.2 Carrying out events & festivals, and awarding of the Zero Waste logo; 5.3 Creation and promotion of tourist packages Zero Waste; 5.4 Project's closure and Future.

The project's specific and operational WPs are WP3 (Cooperative Study and guidelines for events and festival organization), WP4 (Zero Waste online) and WP5 (Pilots: Application and promotion of the Zero Waste Adriatic net of events and festivals). According to the project's time plan, WP3 is the first key specific activity in accomplishing Zero Waste objectives. Before the elaboration of the Guidelines, which is the last action within WP3, some research activities have been conducted:

1. Know-how exchange and best practices. Elaboration of common methodology and criteria to collect information and select good practices of 45 locally significant events analysed.
2. Best practices identification and (potentialities) highlighting potentials in the sustainable management of events and festivals.
3. Selection of one annual event or festival (cultural, wine, sports, food) per region on the basis of selected criteria.
4. Multi-parametric modelling and use of DEXI expert system. A multi-parametric model is a hierarchical structure, represented by a tree of attributes that shows the decomposition of the decision problem into sub-problems, which are smaller, less complex and possibly easier to solve than the complete problem (Bohanec, 2011).
5. Building of a model of "Zero Waste Events and Festivals" on the basis of seven annual events and festivals.

Below, a more detailed review of the multi-criteria decision-making method and use of the DEXI expert system will be presented.

2.2 Multi-parametric modelling for "Zero Waste Management of Eventsand Festivals"

Methodology and the use of DEXi programme enabling multi-parametric modelling

Multi-parametric models are used for solving complex decision-making problems (Saaty, 1990) and can be used when options must be evaluated according to various criteria, aims, values, etc. They have a basis in restructuring a problem into smaller problems. When trying to solve a problem, the first step is to accurately identify the problem. Once the problem has been defined and the goal set, criteria to be used must be selected. From these, alternatives can be evaluated.

For each criterion, it's necessary to determine whether it can define all possible conditions. Then we need to ascertain whether it can define its value on the basis of available information. Brainstorming and experts' decisions can be used for gathering possible criteria.

Finally, the model must be evaluated, proving whether it can correctly evaluate all criteria. Usually model grades should be compared with the evaluators' grading. Now it is possible to continue with the identification of criteria that have the strongest influence on the selection of the most effective sustainable elements.

Attribute selection

Criteria should be defined and used as a basis for evaluating variants and composing the structure of a decision-making model. Following a principle of wholeness (Bohanec, M. Rajkovi?, V, 1995), it is important not to overlook any criteria which might influence the decision. Other factors must also be taken into consideration: good structuring, non-redundancy and measurability of criteria (Bohanec, 1991). The basic criteria are listed randomly and not in order of importance for an event. There are six basic criteria and from these basic criteria a criteria tree of sustainability–oriented events is created, ranking their importance in the common evaluation of zero waste elements for the events.

As mentioned above, six basic criteria were defined on the highest level:

1. Environmental criterion
2. Transport criterion
3. Social criterion
4. Cultural criterion
5. Sustainability criterion
6. Economic criterion.

Based on the data collected by each Zero Waste project partner on five events organized in their area, we carried out an analysis to rank the importance of the six basic criteria. Since these were evaluated with different ranges of grades, the estimates were standardized in order to be comparable. The results are shown in the order from the most important to the least important.

Table 19: The overall ranking of basic attributes

Criteria	Average Ranks	St.dev.of Ranks	KV of Ranks
Social	2.42	1.08	44.42
Economic	2.42	1.00	41.37
Transport	2.46	1.06	43.15
Environment	2.90	1.19	40.90
Sustainable work	2.91	0.96	33.15
Cultural	3.97	1.93	48.55

Source: Authors' research

Table 19 shows the average ranking for each criterion as a whole. The attribute with the lowest rank is the most important to the organizers. We can notice that economic and social criteria still play a crucial role when organizing an event or festival. According to the opinion of the evaluators, financial and staff issues should be considerd first. After that, attention should focus on solving issues related to transport, environment, and sustainability. The least important turned out to be the cultural aspect, suggesting this one is somehow taken for granted.

Each attribute (basic criterion) is divided into sub-attributes and all sub-attributes are ranked according to their importance, where 1 represents the most important sub-attribute.
The environmental attribute has seven sub-attributes: minimization of waste quantity, separate collection of waste, minimization of resources, minimization of water consumption, minimization of waste water, biodiversity preservation and reuse of resources.

Table 20: Environmental criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Environmental	Minimization of waste quantity	To which extent does the selected event seek to prevent excessive waste production (total waste volume)?
	Separate collection of waste	To which extent does the event facilitate the separate collection of waste and garbage?
	Minimization of resources	To which extent does the event apply prevention to the production of waste (e.g., by using recyclable materials, etc.)?
	Minimization of water consumption	To which extent is the event applying the prevention to the consumption of water (e.g. by using water fountains instead of plastic bottles)?
	Minimization of waste water	To which extent does the selected event seek to prevent excessive waste water production? (plastic bottles)
	Biodiversity preservation	To which extent does the event management seek to preserve the biodiversity of the event area?
	Reuse of resources	To which extent does the event reuse products which are already considered waste (recycled materials)?

Source: Authors' research

All sub-attributes of the environmental criterion (attribute) are ranked according their importance from 1 to 7, where 1 represents the most important sub-attribute and 7, the least important sub-attribute.

This criterion leads towards event excellence and zero waste in general. At the event management level, minimization and reuse of resources show that event organizers and their partners are aware of balanced resource consumption. With biodiversity preservation, they show their awareness of nature protection.

Based on analysis, environmental sub-attributes are presented in the order from the most important to the least important. For each sub-attribute, mean and mode are calculated. The importance is listed based on the average value for each sub-attribute.

Table 21: Results of environmental criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Environmental	Minimization of waste quantity	To which extent does the selected event seek to prevent excessive waste production (total waste volume)?	2.95	2
	Separate collection of waste	To which extent does the event facilitate the separate collection of waste and garbage?	3.67	2
	Minimization of resources	To which extent does the event apply prevention to the production of waste (e.g., by using recyclable materials, etc.)?	3.77	1
	Minimization of water consumption	To which extent does the event apply prevention to the consumption of water (e.g., by using water fountains instead of plastic bottles)?	3.95	2
	Minimization of waste water	To which extent does the selected event seek to prevent excessive waste water production? (plastic bottles)	4.28	3
	Biodiversity preservation	To which extent does the event management seek to preserve the biodiversity of the event area?	4.46	7
	Reuse of resources	To which extent does the event reuse products which are already considered waste (recycled materials)?	4.71	6

Source: Authors' research

The second criterion is transport. Transport solutions on the level of event managers show awareness of nature protection as well as biodiversity preservation (see above). Other sub-attributes are: accessibility of the venue, accessibility for disabled people, and transport solutions (VIP transport). The importance is listed based on the average value for each sub-attribute.

Table 22: Transport criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Transport	Transport solutions (event managers travel)	How much does the event management consider lessening the number of trips or commuting together or with public transport during organizing the event?
	Accessibility of the venue	To which extent is the event management considering the venue based on its accessibility by all means of transport (incl. public transport)?
	Accessibility for disabled people	To which extent is the event management taking into account the possibility of access for disabled?
	Transport solutions (VIP transport)	To which extent the event management considers to "green up" the transport of event's VIP guests or participants, e.g., by collective shuttles, using hybrid cars, etc.?

Source: Authors' research

All sub-attributes are ranked according their importance from 1 to 4, where 1 represents the most important sub-attribute and 4, the least important sub-attribute. The importance is listed based on the average value for each sub-attribute.

Table 23: Results of transport criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Transport	Transport solutions (event managers travel)	How much does the event management consider lessening the number of trips or commuting together or with public transport during organizing the event?	1.87	1
	Accessibility of the venue	To which extent is the event management considering the venue based on its accessibility by all means of transport (incl. public transport)?	221	1
	Accessibility for disabled people	To which extent is the event management taking into account the possibility of access for disabled?	2.38	2
	Transport solutions (VIP transport)	To which extent the event management considers to "green up" the transport of event's VIP guests or participants, e.g., by collective shuttles, using hybrid cars, etc.?	3.23	4

Source: Authors' research

The third criterion is the social criterion with the following parameters: participation of local community, safety and security (visitor and staff health and safety), educational content, actions of social inclusion and "waste" donations.

Table 24: Social criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Social	Participation of local community	How much is the local community involved in the organization of the event?
	Safety and security (visitor and staff health and safety)	How much are the principles of safety and security applied at the selected event (in terms of actions in the case of accidents – medical teams, fire departments, are the event visitors or staff sufficiently protected from dangers and threats like theft, terrorism, and vandalism)? To which extent does the event take care of the employees' health and safety during all stages of organizing the event?
	Educational content	To which extent is the event promoting educational activities and materials issued for the event?
	Actions of social inclusion	To which extent is the event promoting the cooperation of the unemployed or people from other socially disadvantaged groups?
	"Waste" donations	To which extent are the recyclable materials used for the event donated to other institutions?

Source: Authors' research

All sub-attributes are ranked according their importance from 1 to 5, where 1 represents the most important sub-attribute and 5 the least important sub-attribute. The importance is listed based on the average value for each sub-attribute.

Table 25: Results of social criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Social	Participation of local community	How much is the local community involved in the organization of the event?	1.95	2
	Safety and security (visitors and staff health and safety)	How much are the principles of safety and security applied at the selected event (in terms of actions in the case of accidents – medical teams, fire departments, are the event visitors or staff sufficiently protected from dangers and threats like theft, terrorism, and vandalism)? To which extent does the event take care of the employees' health and safety during all stages of organizing the event?	2.13	1
	Educational content	To which extent is the event promoting educational activities and materials issued for the event?	2.31	3
	Actions of social inclusion	To which extent is the event promoting the cooperation of the unemployed or people from other socially disadvantaged groups?	3.31	4
	"Waste" donations	To which extent are the recyclable materials used for the event donated to other institutions?	4.85	5

Source: Authors' research

The fourth criterion is the cultural criterion with the following parameters: local tradition preservation, heritage preservation and inclusion, traditional events and multicultural character.

Table 26: Cultural criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Cultural	Heritage preservation and inclusion	To which extent is the event paying respect to preserving the local heritage (incl. the potential for local people to retain/exercise their traditions)? To which extent is the local heritage included in the event theme and/or how much does it influence the organizing of the event?
	Local tradition preservation	To which extent does the selected event demonstrate sensibility towards local customs and tradition?
	Traditional events	To which extent does the event management strive for the existence and development of "sustainable" traditional events?
	Multicultural character	Multicultural dimension of selected event and aspect of multiculturalism included as a part of the event programme.

Source: Authors' research

All sub-attributes are ranked according their importance from 1 to 4, where 1 represents the most important sub-attribute and 4 the least important sub-attribute. The importance is listed based on the average value for each sub-attribute.

Table 27: Results of cultural criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Cultural	Heritage preservation and inclusion	To which extent is the event paying respect to preserving the local heritage (incl. the potential for local people to retain/exercise their traditions)? To which extent is the local heritage included in the event theme and/or how much does it influence the organizing of the event?	2,15	2
	Local tradition preservation	To which extent does the selected event demonstrate sensibility towards local customs and tradition?	2.31	1
	Traditional events	To which extent does the event management strive for the existence and development of "sustainable" traditional events?	2.62	3
	Multicultural character	Multicultural dimension of selected event and aspect of multiculturalism included as a part of the event programme.	2.62	4

Source: Authors' research

The fifth criterion is sustainability with the following parameters: sustainable responsibility, quality for event participants, promotion of respect of the environment, and supporting sustainable expertise.

Table 28: Sustainability criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Sustainability	Sustainable responsibility	To which extent is the event management trying to be responsible for the "sustainable" turn-out of the event in relation to other aspects of the event organizing?
	Quality for event participants	How much do the "sustainable" solutions of the event management increase the quality for event participants?
	Promotion of the respect of the environment	How much is the event management/event letting the visitors and staff know of the importance of environmental awareness?
	Supporting sustainable expertise	How much is the expertise on organizing "sustainable" events considered by the event management?

Source: Authors' research

All sub-attributes are ranked according their importance from 1 to 4, where 1 represents the most important sub-attribute and 4 the least important sub-attribute. The importance is listed based on the average value for each sub-attribute.

Table 29: Results of sustainability criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Sustainability	Sustainable responsibility	To which extent is the event management trying to be responsible for the "sustainable" turn-out of the event in relation to other aspects of the event organizing?	2.10	2
	Quality for event participants	How much do the "sustainable" solutions of the event management	2.23	3
	Promotion of the respect of the environment	How much is the event management/event letting the visitors and staff know of the importance of environmental awareness?	2.64	4
	Supporting sustainable expertise	How much is the expertise on organizing "sustainable" events considered by the event management?	2.87	3

Source: Authors' research

The economic criterion can contribute a lot to sustainable events. If the local economy is strengthened, then the employment of local labour services and green jobs are secured, local goods consumed, permaculture principles implemented, and heritage preserved. This criterion complements the criterion of local decision-makers, who define event tourism policies and who should evaluate event attractiveness.

Table 30: Economic criterion

Attribute	Sub-attributes	Explanation of sub-attributes
Economic	Strengthen the local economy (inclusion of local labour services and of local goods)	To which extent does the event support local business / local providers?
	Event attractiveness (evaluation of event)	How much attention is paid to the budget plan and its realization, as well as to other economic indicators, and occupancy rate? How much attention is paid to the evaluation of the event (i.e., questionnaires, etc.)? As well as to which extent are the visitors satisfied or are returning to the event in relation to previous events?
	Local decision-makers	How much do local decision-makers influence or get involved in the organization of the event (schedule, themes, permits, etc.)?
	Implementation and use of permaculture principles	The extent to which the event supports and promotes the offering of fresh local food.
	Possibility to create new "green jobs"	Possibility of the event to create new "green jobs" in relation to other events and festivals.

Source: Authors' research

All sub-attributes are ranked according their importance from 1 to 5, where 1 represents the most important sub-attribute and 5 the least important sub-attribute. The importance is listed based on the average value for each sub-attribute.

Table 31: Results of economic criterion (attribute) analysis

Attribute	Sub-attributes	Explanation of sub-attributes	Average	Mode
Economic	Strengthen the local economy (inclusion of local labour services and of local goods)	To which extent does the event support local business / local providers?	1.85	1
	Event attractiveness (evaluation of event)	How much attention is paid to the budget plan and its realization, as well as to other economic indicators, and occupancy rate? How much attention is paid to the evaluation of the event (i.e., questionnaires, etc.)? To which extent are visitors satisfied or are returning to the event in relation to previous events?	2.49	2
	Local decision-makers	How much do local decision-makers influence or get involved in the organization of the event (schedule, themes, permits, etc.)?	2.92	4
	Implementation and use of permaculture principles	The extent to which the event supports and promotes the offer of fresh local food.	3.08	2
	Possibility to create new "green jobs"	Possibility of the event to create new "green jobs" in relation to other events and festivals.	4.18	5

Source: Authors' research

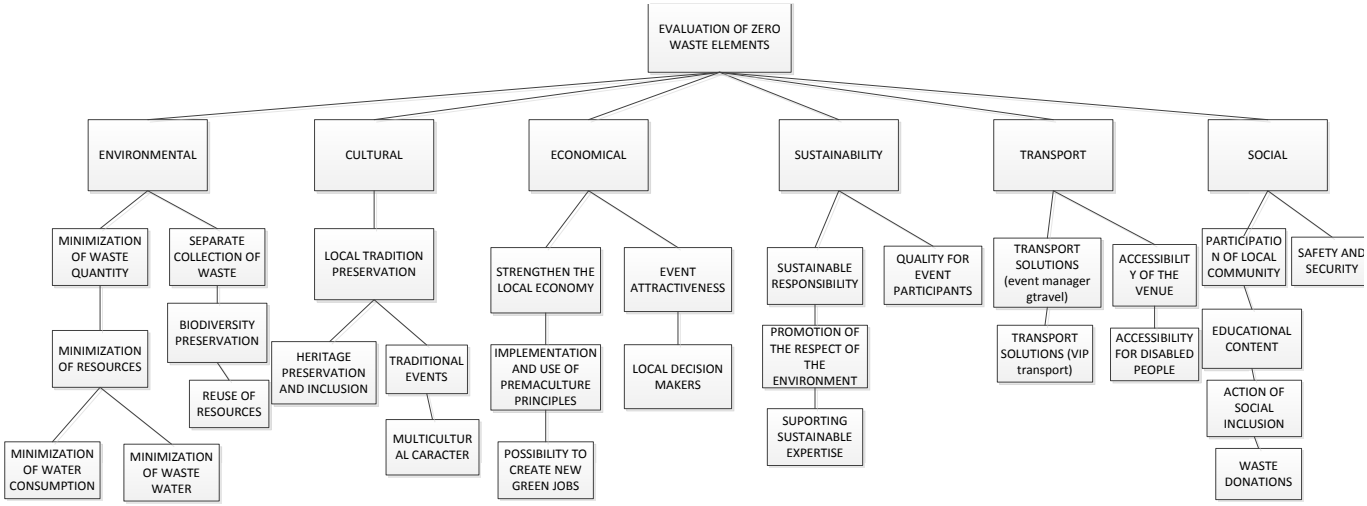
The tree of criteria of sustainability-oriented events ("Zero Waste Events and Festivals") designed in the programmeDEXi is presented in Scheme 1.

Scheme 1: The whole criteria tree of "Zero Waste Events and Festivals"

- **Environmental criterion**
  - Minimization of waste quantity
    - Minimization of resources
      - Minimization of water consumption
      - Minimization of waste water
    - Separate collection of waste
      - Biodiversity preservation
        - Reuse of resources
- **Transport criterion**
  - Transport solutions (event managers travel)
    - Transport solutions (VIP transport)
  - Accessibility of the venue
    - Accessibility for disabled people
- **Social criterion**
  - Participation of local community
    - Educational content
      - Actions of social inclusion
        - "Waste" donations
  - Safety and security (visitors and staff health and safety)
- **Cultural criterion**
  - Local tradition preservation
    - Heritage preservation and inclusion
    - Traditional events
      - Multicultural character
- **Sustainability criterion**
  - Sustainable responsibility
    - Promotion of the respect of the environment
      - Supporting sustainable expertise
  - Quality for event participants
- **Economic criterion**
  - Strengthen the local economy (inclusion of local labour services and of local goods)
  - Implementation and use of permaculture principles
    - Possibility to create new "green jobs"
  - Event attractiveness (evaluation of event)
    - Local decision-makers

Based on these criteria, the tree of attributes is designed (Scheme 2). The tree represents the hierarchical structure, i.e., the decomposition of the decision problem.

Scheme 2: The tree of criteria



The criteria are structured according to their correlation and logical link. Based on the responses of participants, the attributes and sub-attributes are hierarchically distributed, from the most to the least important. The criteria are based on the six main elements of zero waste: environmental, cultural, economic, sustainable, social and transport elements, which are further divided into sub-elements (sub-attributes) based on the importance which is assigned to them by participants through the questionnaire.

Measures scales: sets of symbolic values assigned to attributes

DEXi is an interactive computer programme using qualitative (symbolic) attributes instead of quantitative ones (Bohanec, 1995). In our case, only words are used. We evaluated zero waste events by using a four-level scale.

The values we found appropriate for the event(s):

1. *Environmental attributes*: low, medium, high, highest
2. *Transport attributes*: low, medium, high, highest
3. *Social attributes*: worse, medium, better, excellent
4. *Cultural attributes*: low, medium, high, highest
5. *Sustainable work attributes*: unacceptable, acceptable, good, excellent
6. *Economic attributes*: worse, medium, better, excellent

2.3 Summary of the results of analysis for events and festivals

Table 32 represents the summary of the most and least sustainable events/festivals. The events were evaluated according to all six main criteria: environmental, cultural, sustainable, social, economic, and transportation.

Festivals/events which were evaluated as generally more sustainability-oriented are events for which all six criteria were graded the highest. The results show that most of the events/festivals with the best scores see their organizers devoting the most attention to the cultural criterion, but unfortunately, the least attention to the environmental criterion. However, the low score of the environmental criterion does not necessarily mean that in this regard there are not enough solutions to environmental problems compared to other organizers. The results also showed that the organizers of events/festivals that turned out to be the least sustainability-oriented attached the least attention to the environmental criterion, but approximately equal attention to other criteria.

Table 32: A summary of the results of analysis for events and festivals

PROJECT PARTNER	BEST EVENT	CRITERIA	WORST EVENT	CRITERIA
ERVET, Italy	Prodotti & sapori dell`europa – Cervia (Forl?-Cesena)	The highest: cultural The lowest: economic	Notte d 'oro (Ravenna)	The highest: social The lowest: environmental
Province of Romini, Italy	Paganello - Rimini	The highest: sustainability The lowest: cultural	Ilaria Alpi Journalistic Television Award - Riccione	The highest: transport The lowest: cultural
Federal Ministry of Environment and Tourism, Bosnia and Herzegovina	Tasting of early wine - ?itluk	The highest: cultural The lowest: transport	International River Sava Tour – kayak tour	The highest: cultural The lowest: transport
Municipality of Tivat, Mayor's Office, Montenegro	Tivat`s cultural summer	The highest: economic / cultural The lowest: environmental	Bowling Olympiad	The highest: cultural The lowest: environmental / sustainability
Regional Council of Durres, Albania	Earth Day Event	The highest: sustainability The lowest: social	Games Festival	The highest: sustainability The lowest: environmental
Faculty of Tourism and Hospitality Management, Opatija	U?karski sajam (Ucka market)	The highest: sustainability The lowest: environmental	Festival mjuzikala (Musical Festival)	The highest: transport The lowest: environmental
City of Opatija Mayor's Office	Karneval i balinjerada (Carnival and carnival race of vehicles on ball bearings)	The highest: cultural The lowest: environmental	Dani vatrometa (Fireworks Festival)	The highest: economic The lowest: environmental
Spazio Eventi L.t.d., Italy	Masserie sotto le stelle	The highest: cultural The lowest: environmental	Festival dell`innovazione / innovabilia	The highest: sustainability The lowest: cultural
University of Primorska Faculty of Tourism Studies- Turistica, Portorož, Slovenia	The Ljubljana Marathon	The highest: social The worst: cultural	Pilgrimage path Sladka Gora - Tinsko - sv. Rok	The highest: environmental The lowest: transport

Source: Authors' research

The following pages present the most sustainable and the least sustainable event for each project partner, as selected by the DEXi program.

2.3.1 Ervet, Italy

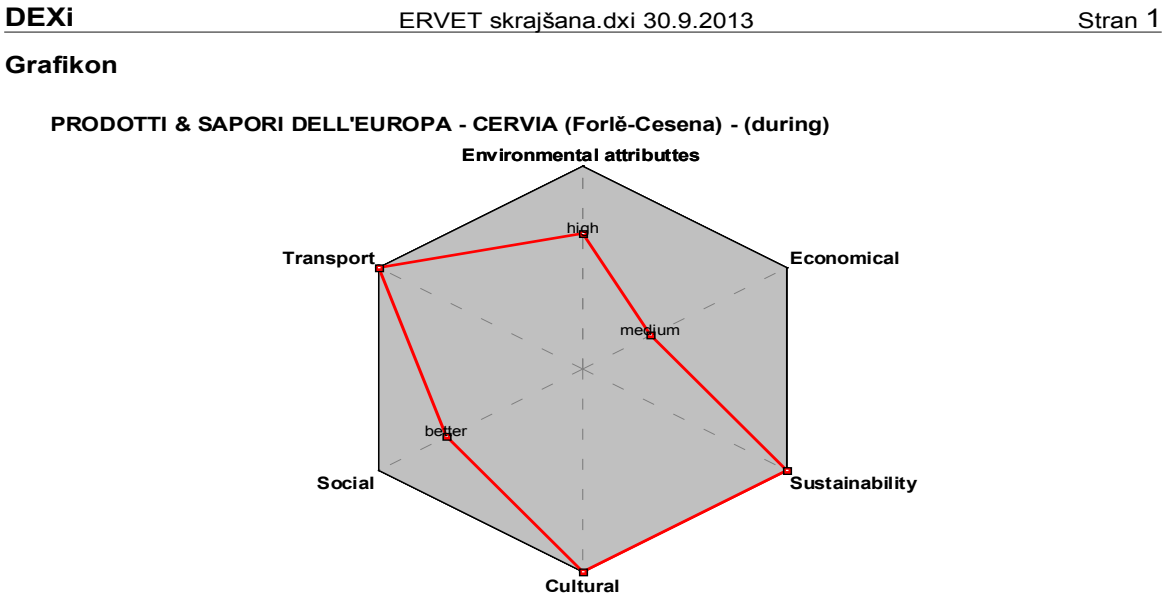
The project partner *ERVET - Emilia Romagna Economic Development Agency L.t.d.* evaluated the following events:

1. Run tune up (Bologna)
2. Prodotti & sapori dell`europa – Cervia (Forli-Cesena)
3. Fiera di San Lazzaro, San Lazzaro di Savena (Bologna)
4. Notte d`oro (Ravena)
5. Internazionale (Ferrara).

Using the DEXi programme it was determined that the most sustainable event is "Prodotti & Sapori dell `Europa - Cervia (Forlì-Cesena)", which has a weak point in the economic attribute, as shown in Graph 1. Within the economic criterion, the least attention is given to the elements "possibility to create new green jobs" and "local decision–makers".

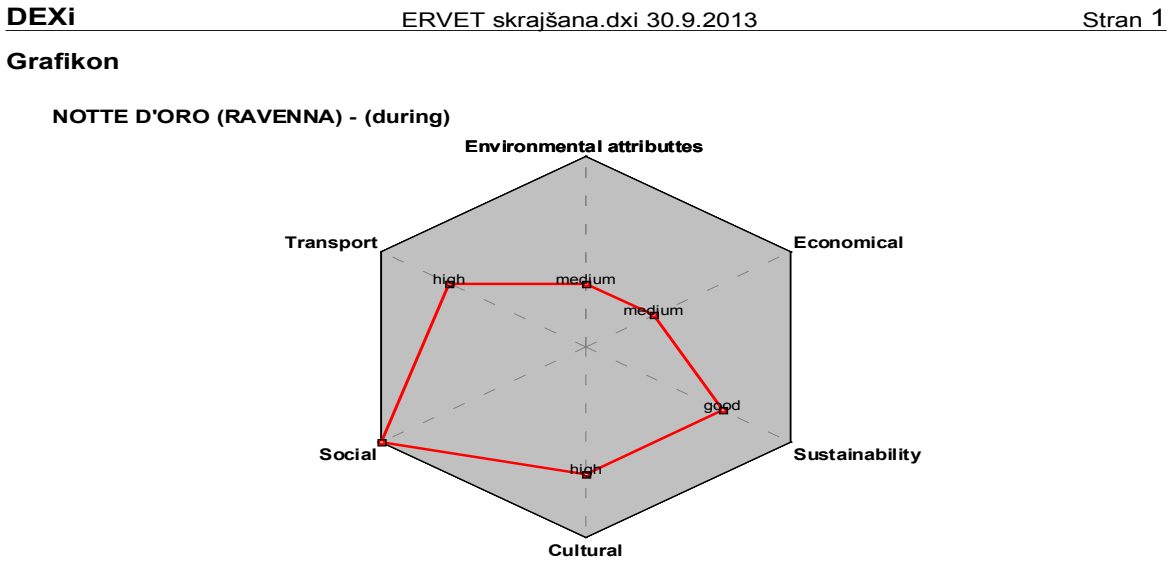
"Notte d'oro (Ravenna)" was rated as the least sustainable event. Although the social criterion was highly ranked, the event is lacking in environmental and economic actions (Graph 2). It should be added that ERVET gave all events a very high ranking and between them there are no significant differences.

Graph 1: Sustainability criteria for the event „Prodotti & Sapori dell` Europa"



Source: Authors' research

Graph 2: Sustainability criteria for the event "Notte d`oro" (Ravena)"



Source: Authors' research

2.3.2 *Province of Rimini, Italy*

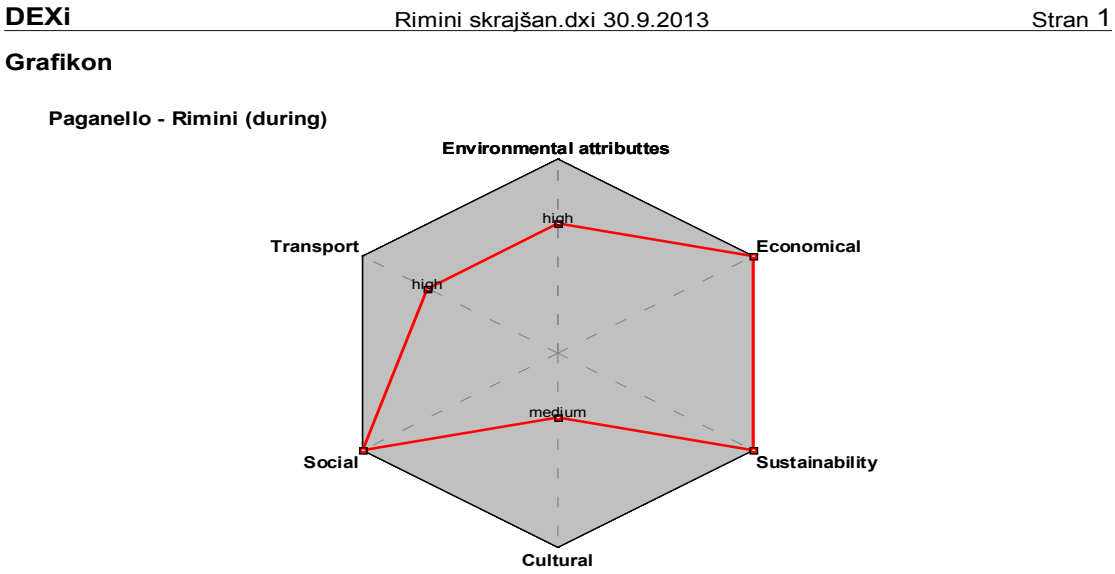
The project partner *Province of Rimini: office Agenda 21/Sustainable Development* decided to evaluate the following five events:

1. Festival degli artisti di strada – Pennabilli
2. Paganello – Rimini
3. Palio del Daino – Mondaino
4. Verucchio Festival – Verucchio
5. Ilaria Alpi Journalistic Television Award – Riccione.

Their highest-rated event is "Paganello – Rimini". Graph 3 shows that this event is very strongly represented in the economic, social and sustainability criteria, while a little less in the environmental and transport, and even worse in the cultural criterion.

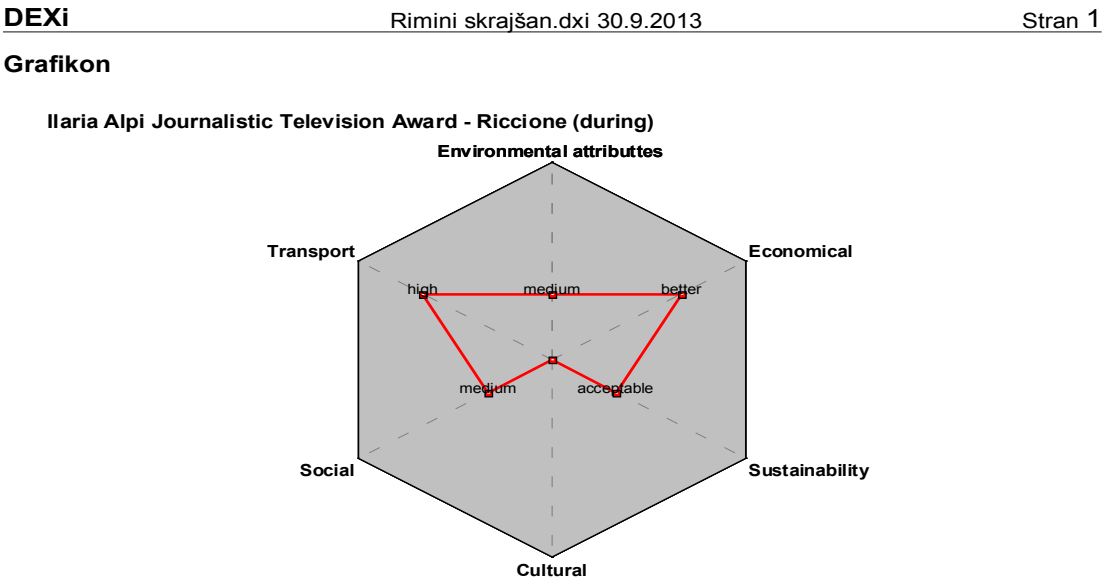
The lowest-rated event was "Ilaria Alpi Journalistic Television Award – Riccione". All the sustainability attributes of this event are very low-rated, the worst among them being the cultural criterion, as can be seen Graph 4. In the cultural criterion, the least attention is given to the sub-attributes "local preservation and inclusion", "local tradition preservation" and "traditional events".

Graph 3: Sustainability criteria for the event „Paganello – Rimini"



Source: Authors' research

Graph 4: Sustainability criteria for the event "Ilaria Alpi Journalistic Television Award – Riccione"



Source: Authors' research

2.3.3 Federal Ministry of Environment and Tourism, Bosnia and Herzegovina

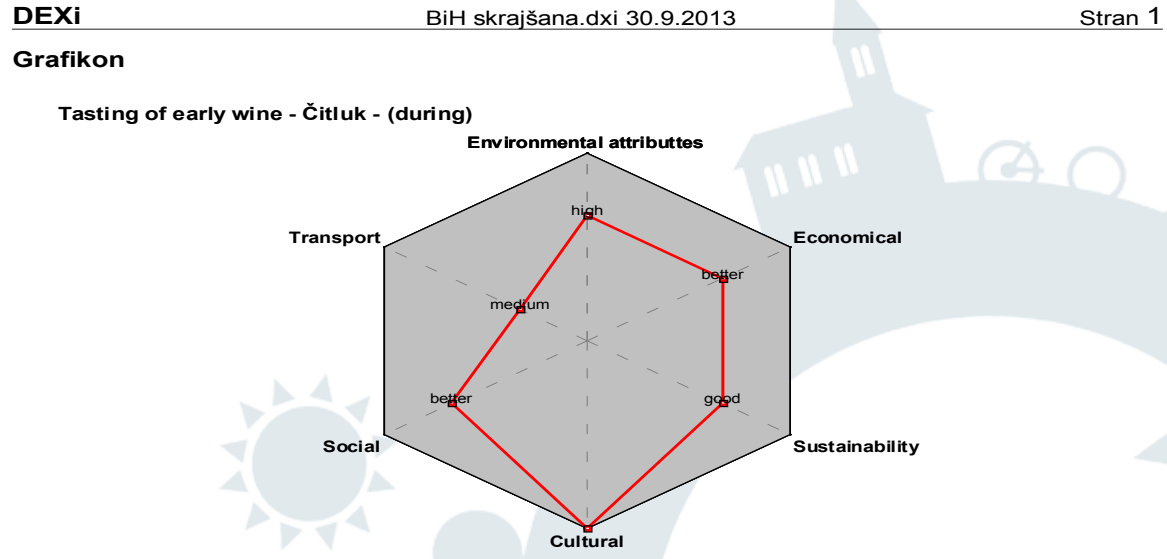
The project partner *Federal Ministry of Environment and Tourism, Department of tourism and hospitality (B&H)* chose the following events for evaluation:

1. International tourist event UNA regatta,
2. Jump from Old Bridge – Mostar,
3. International River Sava Tour- kayak tour,
4. Tasting of early wine – Čitluk and
5. Folk Festival – NEUM.

For this partner the most sustainable event is "Tasting of early wine – Čitluk" and the least sustainable "International River Sava Tour-kayak". Graph 5 shows that at the event "Tasting early wine – Čitluk" the transport attribute is poorly rated, the cultural attribute is rated as the best, while all other attributes are represented equally.

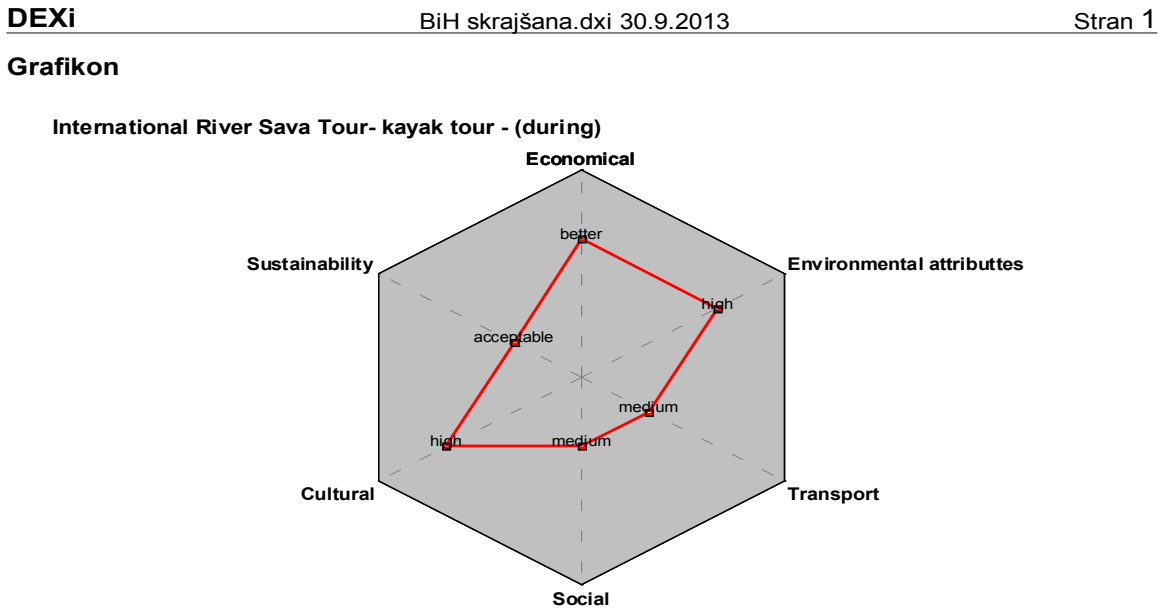
The cultural and environmental criteria stand out in the event "International River Sava Tour-kayak", while the event's other criteria are relatively balanced (Graph 6).

Graph 5: Sustainability criteria for event "Tasting of early wine – Čitluk"



Source: Authors' research

Graph 6: Sustainability criteria for the event "International River Sava Tour- kayak"



Source: Authors' research

2.3.4 Montenegro – Municipality of Tivat

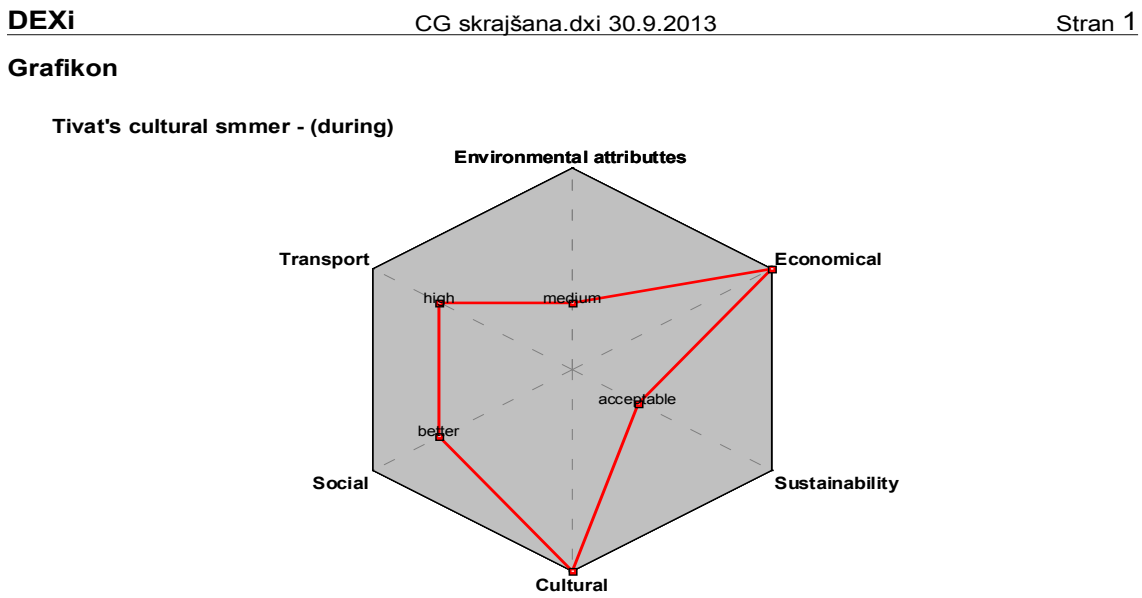
The next project partner *Municipality of Tivat, Mayor's office (MNE)* provided the data for the following events:

1. Traditional Lastva Carnival
2. 25 May - Day of Youth
3. Tivat's Cultural Summer
4. Feast of Carob
5. Bowling Olympiad.

Among the selected events, the most sustainable is "Tivat's Cultural Summer", which is strongly represented by the cultural, economic and transport criteria, while other attributes are of the mean value (Graph 7).

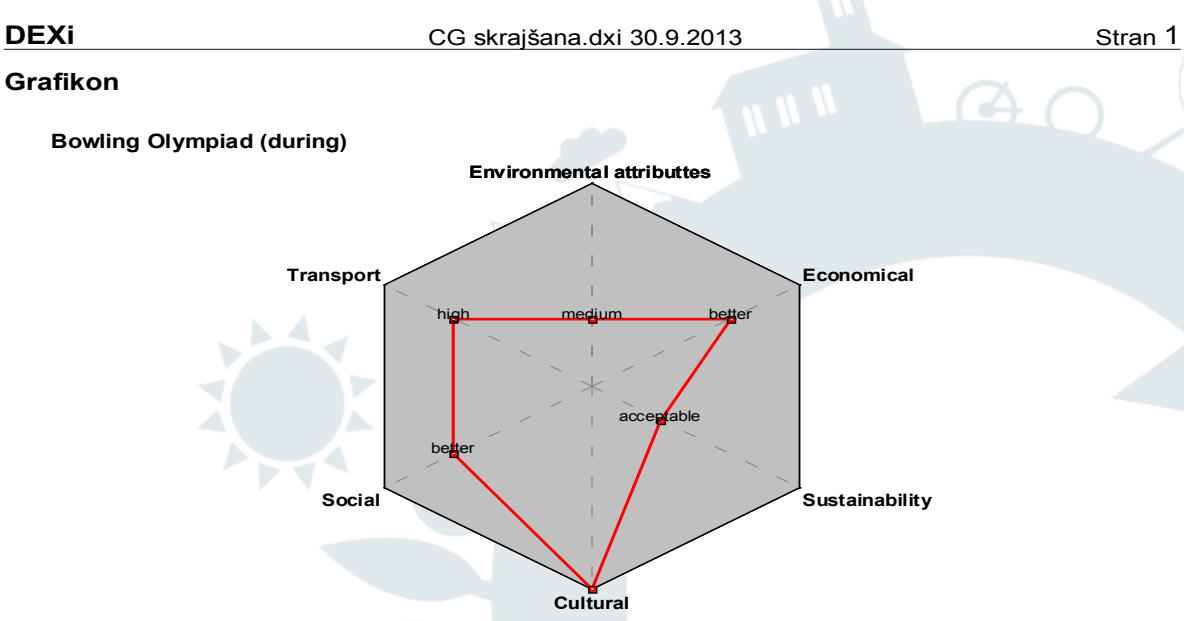
The least sustainable event for the Montenegrin partner is the "Bowling Olympiad", where the attention is paid to the cultural and economic criteria as well as to transport, but much less to the environmental and sustainability criteria (Graph 8). Similar to the partner ERVET, Montenegro has also given all five events a very high ranking and their differences, if any, in terms of the sustainability of these events, are very small .

Graph 7: Sustainability criteria for the event "Tivat's Cultural Summer"



Source: Authors' research

Graph 8: Sustainability criteria for the event "Bowling Olympiad"



Source: Authors' research

2.3.5 Regional Council of Durres, Albania

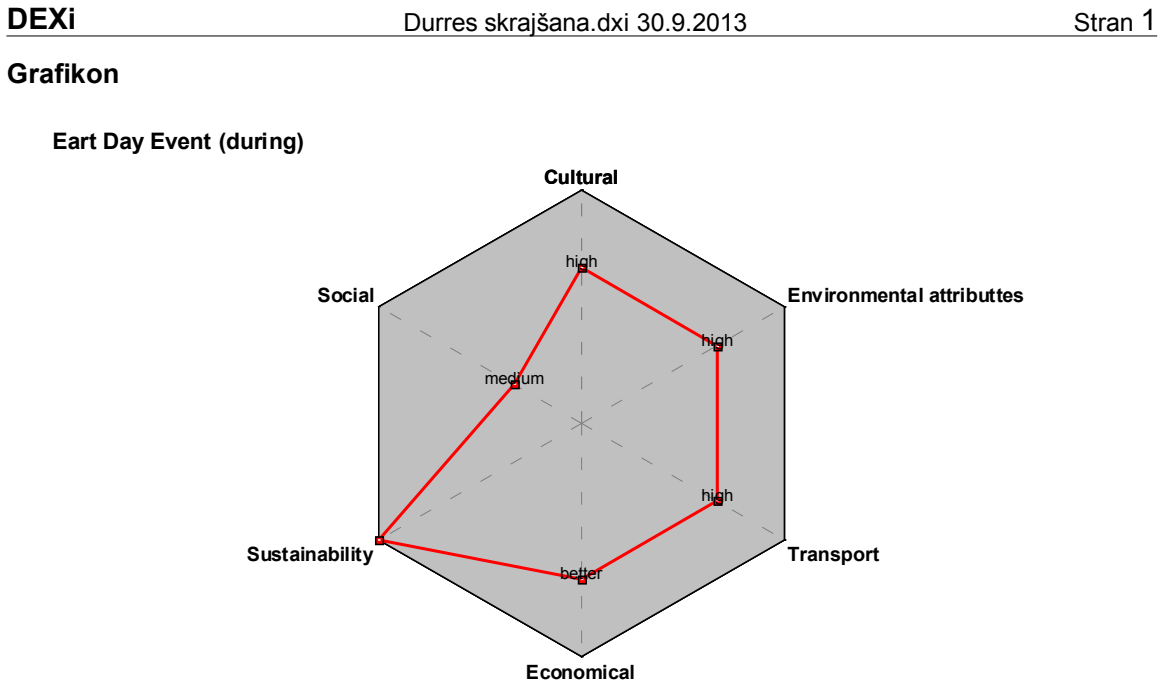
Below are presented five events chosen by the project partner *Regional Council of Durres, Department of Regional Development Policies*:

1. Sea Festival
2. Games Festival
3. Olive Festival
4. Durres International Film Festival
5. Earth Day Event.

The best rated event is "Earth Day Event" (Graph 9) and the worst rated "Games Festival" (Graph 10). Graph 9 shows that the high-ranking event "Earth Day Event" includes all sustainable criteria, the best being the sustainability criterion and the worst the social criterion.

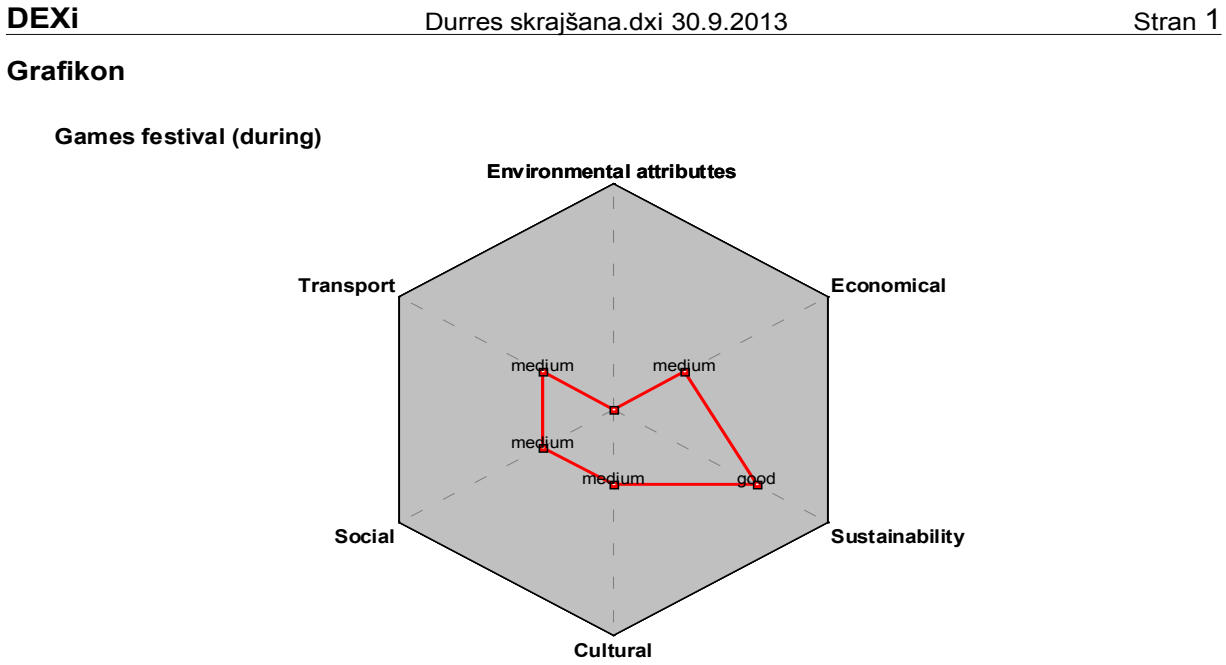
The least sustainable event of this partner is "Games Festival", which the organizer rated with mean values although the criterion of sustainability stands out among other attributes which can be seen in Graph 10. From both graphs can be seen that this partner generally pays more attention to the sustainability criterion.

Graph 9: Sustainability criteria for event „Earth Day Event"



Source: Authors' research

Graph 10: Sustainability criteria for the event "Games Festival"



Source: Authors' research

2.3.6 *Faculty of Tourism and Hospitality Management, Croatia*

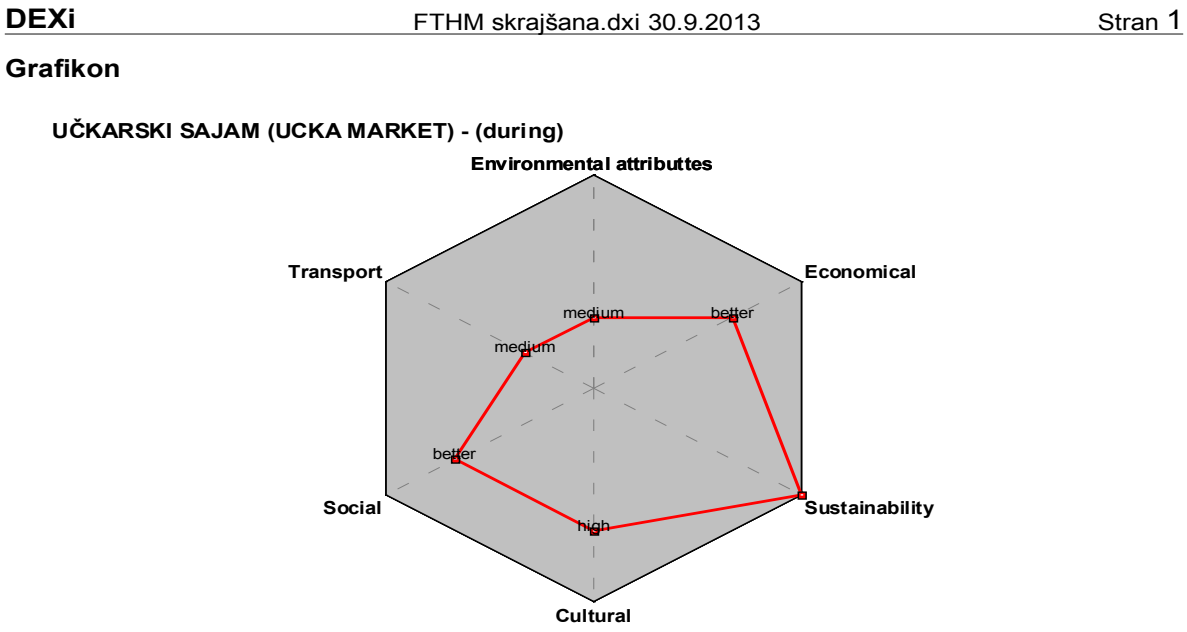
The Lead project partner the *Faculty of Tourism and Hospitality Management, Opatija* analysed following events:

1. Marunada Dobreć (Chestnut days in Dobreć)
2. U□karski sajam (Ucka Fair)
3. Dani □okolade (Chocolate Festival)
4. Festival mjuzikala (Musical Festival)
5. Kvarner EXPO.

Of the above events, the highest ranking and most sustainable event is "Ucka Fair".[7] For this event, the criterion of sustainability, which is the highest rated, stands out among other criteria (Graph 11). The worst ranked event is "Musical Festival". The total score for this event is lower by the environmental attribute, which is rated very poorly. The organizer highly ranked the transport criterion (Graph 12).

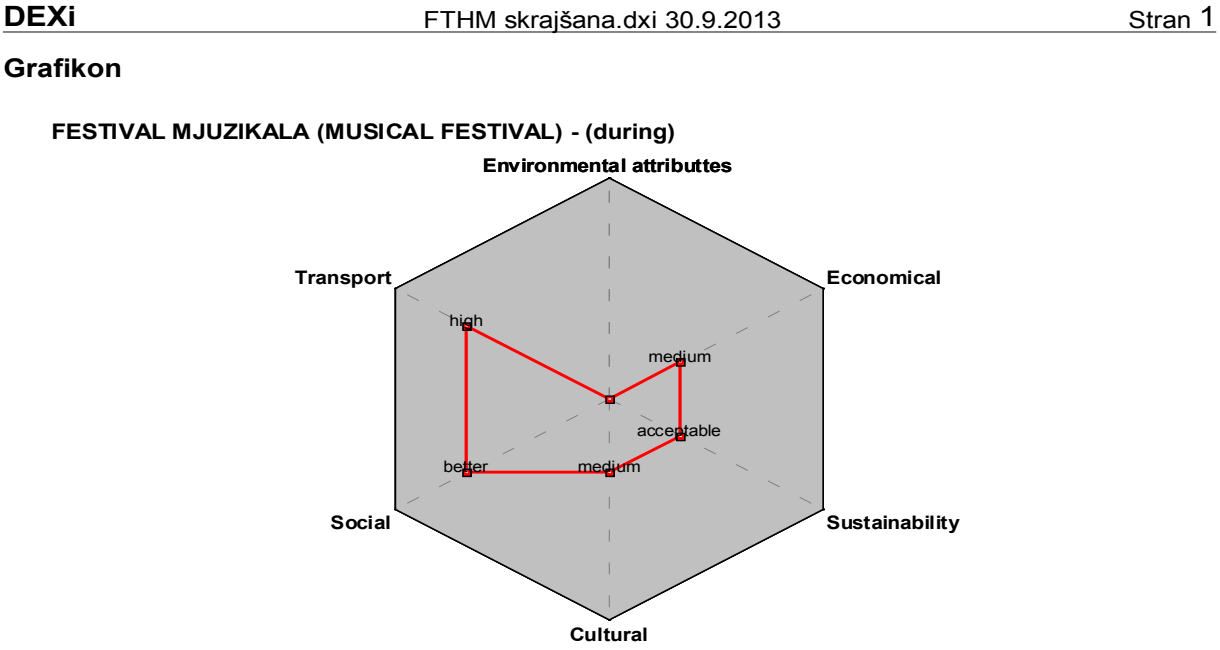
7 Ucka Nature Park, http://www.pp-ucka.hr (01.01.2014.)

Graph 11: Sustainability criteria for the event "Ucka Fair"



Source: Authors' research

Graph 12: Sustainability criteria for the event "Musical Festival"



Source: Authors' research

2.3.7 City of Opatija, Croatia

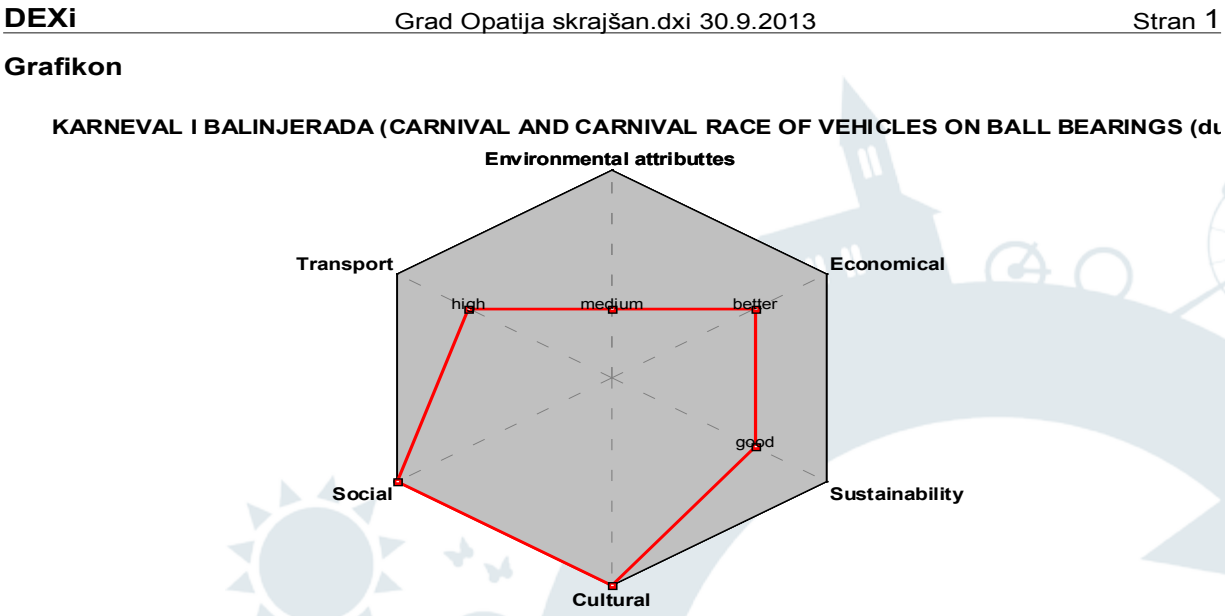
The project partner *City of Opatija, Mayor's Office* chose the following events:

1. Dani vatrometa (Fireworks Festival)
2. Vološanske noći (Volosko Summer Nights)
3. Karneval i balinjerada (Carnival and Carnival race of vehicles on ball bearings)
4. Carski grad (Imperial city)
5. Klizalište na Ljetnoj pozornici (Ice rink at the Open air theatre).

Of the above events, the "Carnival and Carnival race of vehicles on ball bearings" is rated the highest, although its environmental criterion is very poorly ranked (Graph 13). The element of "biodiversity preservation" in this event is highly ranked, while other elements scored a mean value.

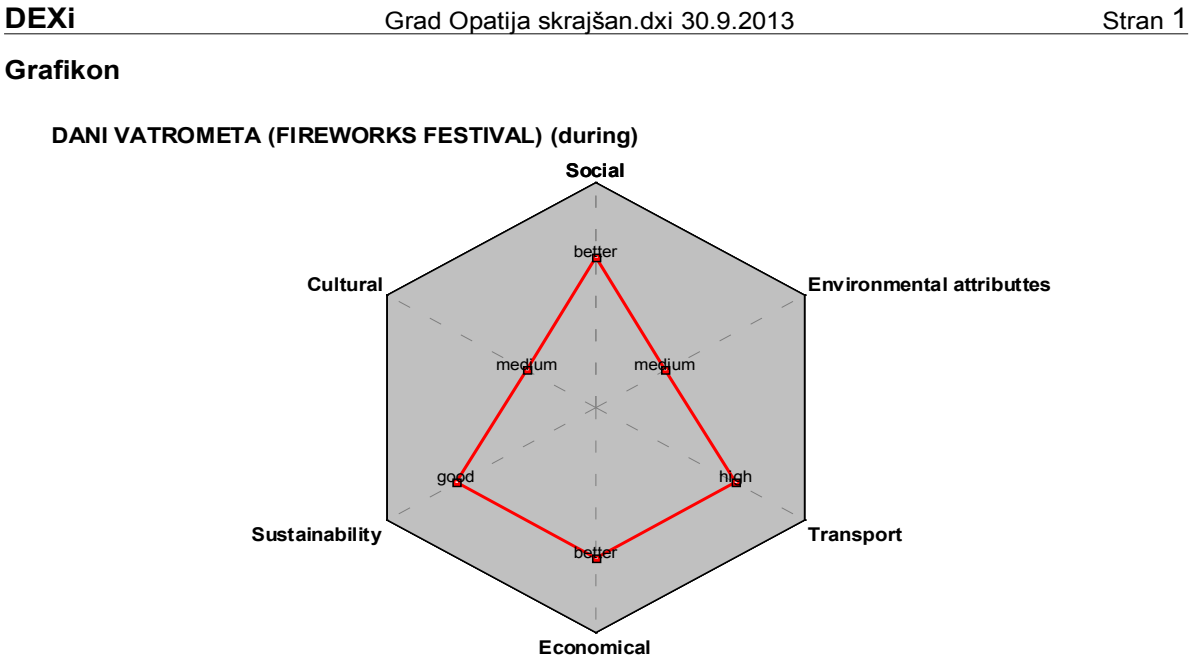
The event with the worst score is the "Fireworks Festival" with the organizer paying the least attention to the social and environmental criteria, while other criteria received an equally high (high, better) score, as seen in Graph 14.

Graph 13: Sustainability criteria for the event "Carnival and Carnival race of vehicles on ball bearings"



Source: Authors' research

Graph 14: Sustainability criteria for the event "Fireworks Festival"



Source: Authors' research

2.3.8 Spazio Eventi L.t.d., Italy

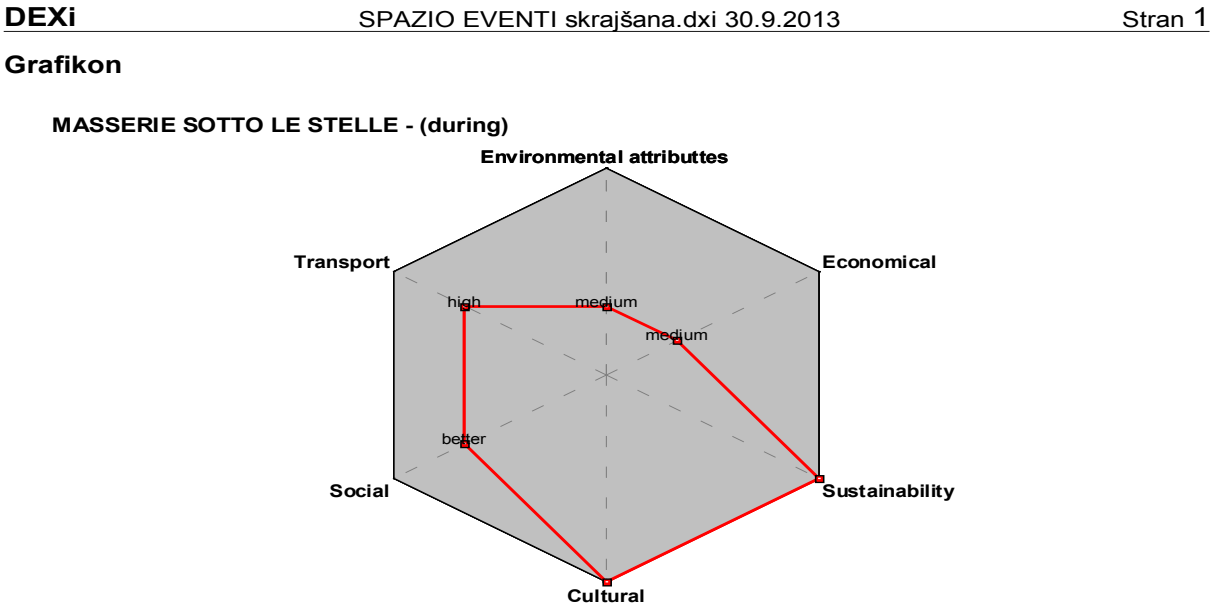
The project partner *Spazio Eventi L.t.d.* decided to focus on the following events:

1. Festival dell`innovazione / innovabilia,
2. Masserie sotto le stelle,
3. Radici wines,
4. Bari in jazz ter
5. Biol prize.

"Masserie sotto le stelle" is ranked the best and "Festival dell`innovazione / innovabilia", the worst. Based on Graphs 15 and 16, it appears that the organizer of the event "Masserie sotto le stelle" paid the least attention to the environmental and economic criteria.

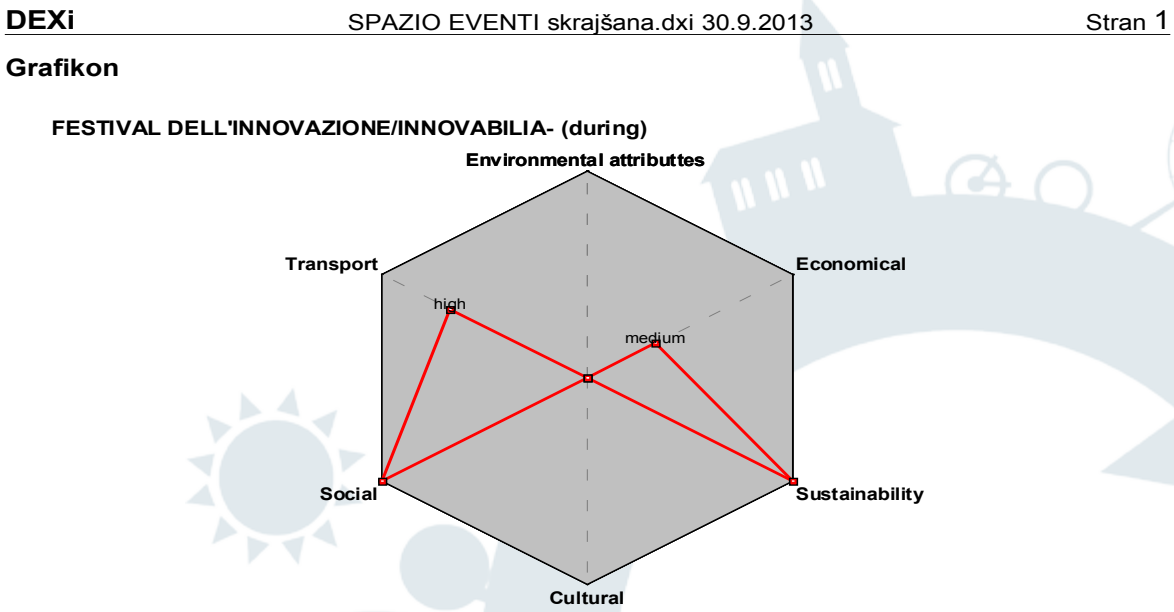
The event "Festival dell `innovazione / innovabilia" focuses considerably on the cultural and social criteria, but it barely pays any attention at all to the environmental criterion. With this criterion some attention is paid to the sub-attributes of "separate collection of waste" and "minimization of waste quantity", while other elements are not detected because they are not taken into account in the implementation of the event.

Graph 15: Sustainability criteria for the event "Masserie sotto le stelle"



Source: Authors' research

Graph 16: Sustainability criteria for the event "Festival dell`innovazione / innovabilia"



Source: Authors' research

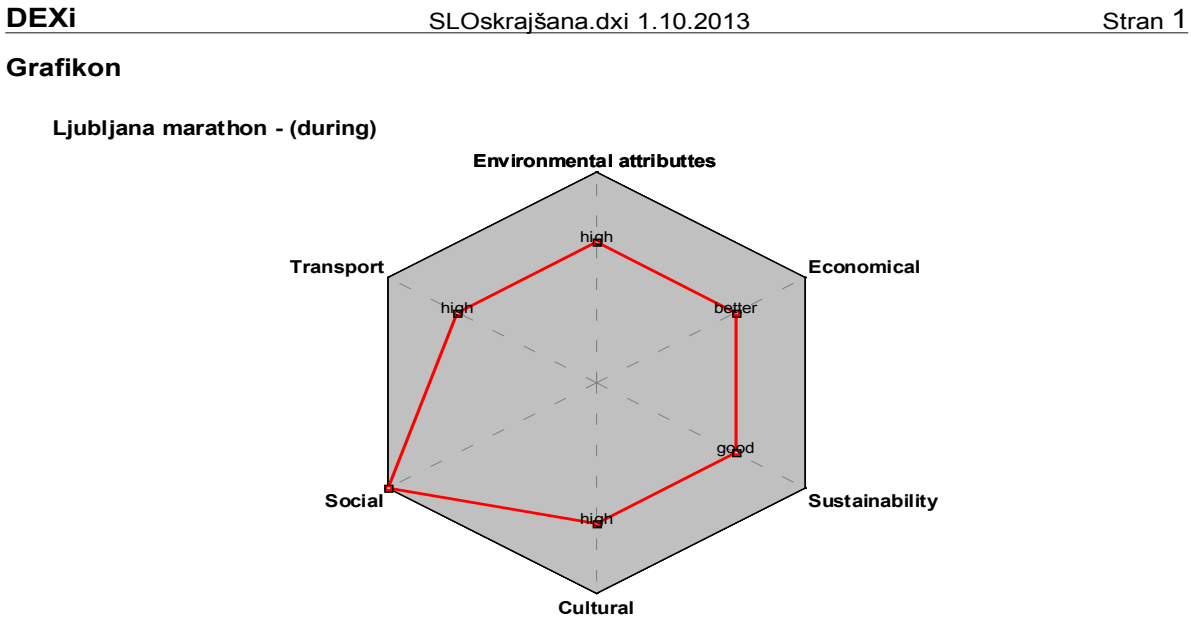
2.3.9 Faculty of Tourism Studies - Turistica, Slovenia

The project partner *University of Primorska, Faculty of tourism studies – Turistica, Portorož* included in the research the following events:

1. Ljubljanski kolesarski maraton (Ljubljana marathon)
2. Pilgrimage path Sladka Gora - Tinsko - Sv. Rok
3. Erasmus IP - Summer School "3R for Cultural Tourism", Komen, Slovenia, 2-18 September 2013
4. Masterclasses Haliaetum 2013
5. Pikin festival Velenje.

Among these the "Ljubljana marathon" was evaluated as the most sustainable event, and the "Pilgrimage path Sladka Gora – Tinsko – Sv. Rok", as the least sustainable event, as can be seen in Graphs 17 and 18. It is evident that the "Ljubljana marathon" is highly rated, especially with regard to the social criterion, while the other criteria have a slightly lower rating.
The event "Pilgrimage path Sladka Gora - Tinsko - Sv. Rok" is very poorly rated with regard to all criteria, although some attention is paid to the environmental and social criteria.

Graph 17: Sustainability criteria for the event "Ljubljana marathon"



Source: Authors' research

Graph 18: Sustainability criteria for the event “Pilgrimage path Sladka Gora - Tinsko - Sv. Rok”

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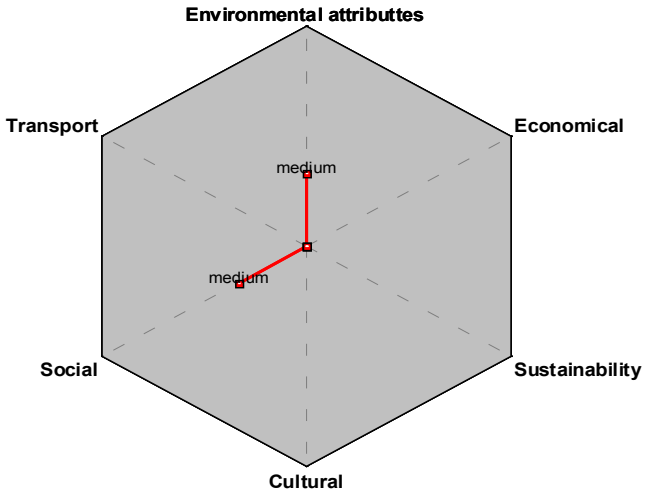
Grafikon

Pilgrimage path Sladka Gora - Tinsko - sv. Rok - (during)



Source: Authors' research

3 Guidance notes – setting out the seven steps to sustainable event and festival management

From the aspect of the organisational theory, an event can be considered as a system. The system concept embodies the idea of a set of elements connected together, which form a whole rather than properties of its components parts.[8] This implies dynamic relationship between interacting components such as sub-systems, processes, organizational structures, and a set of rules.

In the context of sustainability and zero waste, a set of rules defining zero waste events is far from sufficient. Generally, energy, transport, waste management, waste reduction and resource recovery, and materials purchasing and procurement are the major areas of impact during an event.[9] The key to creating a zero waste event is being able to control the flow of materials entering and being used on an event site, so that only materials that are absolutely necessary are brought onto a site.

To achieve this you need to go through a process of defining strategic vision of development and the resulting system of environmental impact prediction. Thereafter, the vision needs to be operationalised through specific managerial and organisational steps that could help event organisers to minimise the negative impacts.

In this regard, the organisers should consider what materials are going to be brought into an event site, and whether these can be eliminated, reduced, reused, recycled or composted through the waste collection systems set up on site. Where materials do not fit into one of these categories, organisers should investigate alternatives that can be reused, recycled or composted, and then work with suppliers to specify these for the event. When it comes to systems for collecting materials the rules are to keep the number of different streams to the minimum practical, to have clear prominent signage, to never let containers get too full, and to provide appropriate numbers of bins where they are needed.

Waste generated at public events can usually be separated into two categories: recyclables, such as drink containers, and biodegradable materials that will decompose, including organic materials such as food scraps and 'paper' cups, cutlery and plates made from corn starch or similar, cardboard and paper. It is also necessary to consider the disposal of other waste that is not recyclable or disposable, such as disposable nappies, cigarette butts, and liquid waste. Other waste should be removed from the site and disposed as general waste. This includes cable ties, plastic bags, broken chairs, and pieces of power cables.

8 Checkland, P., Soft Systems Methodology: a thirty year retrospective, Systems Research and Behaviour, 17 (1), 2000, p 11-58.

9 Jones, M., Sustainable Event Management: A Practical Guide, Earthscan, UK, 2010.

Waste quantities and composition

The following review provides some broad estimates of maximum total quantities of waste that can be expected per person by event type and duration. If this is the first year you are running your event you can use these figures to estimate the quantities you might have to deal with. If the event has been run before, then you can base quantities on previous years, making adjustment for any changes to the event that could impact waste quantities.

Daytime only event	1-2 litres per person
Daytime plus evening event	2-2.5 litres per person
Multiple day (residential)	10 litres per person per day

Waste composition

The composition of the waste from events will, like the quantities, vary depending on a similar range of factors including:

- **The type of event**
- **The numbers of people attending**
- **The duration of the event**
- **The types of stallholders present**
- **Policies on material that is allowed to be taken into the event area.**

Taking these factors into account there is likely to be a reasonable degree of similarity in terms of the types of waste – although proportions will vary. It is very useful to provide typical litter composition from a range of events in your destination for the purposes of comparison.

Note: the composition is provided in terms of weight. In terms of volume the composition will be different with high volume materials such as plastics and aluminium cans accounting for a greater proportion, and dense materials like food accounting for less.

This Guide provides information on seven key steps to run a successful zero waste event:[10]
1. Commit to zero waste
2. Engage key stakeholders
3. Determine potential waste
4. Plan your system
5. Operate your system
6. Communicate
7. Monitor & Improve

10 Guideline for working towards zero waste events, Auckland City Council, November 2008., p. 5.

TIPS

The internationally accepted "waste hierarchy" provides a guide to the options for managing waste, with the most preferable at the top of the hierarchy and the least preferable at the bottom.

Reduce:
· Avoid excess packaging
· Avoid items sold in metallized plastic film (e.g., chip packets, candy bars)
· Avoid multi material packaging (e.g., blister packs, pringles containers, etc.)
· Expanded polystyrene (Styrofoam)
· Substitute plastic bags with paper bags or biodegradable plastic bags
· Substitute polystyrene and plastic clamshells, plates, cups, cutlery with biodegradable alternatives if you are collecting material for composting. Although some plastic plates, cups, etc. may technically be able to be recycled, in practice it is often contaminated with leftover food which makes recycling not viable. Hence it makes sense to use biodegradable alternatives where the plates, etc. can be collected together with the leftovers for composting.

Reuse:
· Reusable cups with a deposit
· Unused food may be able to be donated to a charity that feeds the homeless (cooked food cannot be donated due to food safety issues).
· Signage, etc. may be reused – stored for future events

Recycle:
· Paper - all grades
· Cardboard
· Plastic containers – (grades: 1-7)
- grade one - soft drink bottles
- grade two - milk, cream and detergent bottles
- grade three - food and cleaning material bottles
- grade four - flexible squeeze bottles
- grade five – ice cream, yoghurt, margarine and Chinese take away containers, strawberry punnets
- grade six - shampoo, conditioner and moisturiser bottles, dip containers
- grade seven - squeezable tomato sauce containers
· Plastic wrap
· Plastic bags
· Aluminium cans
· Tin/Steel Cans
· Used cooking oil

3.1 Step 1: Commit to "zero waste"

The event initiators and organisers need to make a firm commitment to create a zero waste event and provide the necessary resources (including people's time).

Things to do:

- Develop a written zero waste policy
- Develop waste reduction targets for your event.

An example of how to systematically approach planning actions and minimum requirements for the environmental organization of an event is given in the Table 33.

Table 33: Rules of "Green Events": actions and minimum requirements for a sustainable event

	Objectives for the environmental organization of an event
Waste management Preparation activities	Waste management – Prevention activities (minimizing waste quantity)
	Minimizing the quantity of waste produced during the preparation phase of the event and, if is possible, to reuse materials from previous editions.
	Minimizing the quantity of waste produced during the event outside the food court (ban on abandoning any kind of waste anywhere).
	Replacement of disposable materials with reusable materials, biodegradable materials, compostable materials or 100% recyclable materials within food courts (kiosk, catering, food and beverage).
	Consider to recycle plastic banner.
Waste management Collection activity and correct disposal	Waste management - Collection activity and correct disposal
	Implementation of Separate Collection (SC) during preparation and dismantling phases of the events.
	Installation of small collection points for SC of paper, glass and light packaging (plastic or metal) in high frequency places, to be used by athletes/visitors.
	Implementation of SC also for wet waste within food courts.
	Organization of activities aimed at increasing the SC quantity as SC points, controlled by staff members, even volunteers, trained in order to campaign about SC and control the proper use of the SC point.
	Implementation of awareness campaigns and behavioural rules for athletes/visitors in order to maintain as much as possible the cleanliness of facilities and places used during the event (especially if those are public) and prevent improper behaviour, like leaving waste outside appropriate bins (example: plastic bottles, plastic shoppers, cigarette butts, chewing gums).
Use of water resources	Protection and regard of water resources
	Athletes use tap water instead of bottled water in order to minimize the amount of plastic waste (bottles) usually produced by athletes during competitions and to advocate for a major use of tap water.
	Visitors use tap water instead of bottled water in order to minimize the amount of plastic waste (bottles) usually produced by visitors during competitions and to advocate for a major use of tap water.
	Use of flow adaptors within water distribution points (in order to minimize water waste).
	Adopt good practices in order to save water; for example, make sustainable use of water to irrigate sport fields and/or clean facilities.

	Objectives for an environmental organization of events
Energy	Energy saving and alternative energies
	Minimize as much as possible the waste of energy by buying, renting or using equipment with an advanced technology and high energy efficiency.
	Advocate using "green" energies, produced from removable sources as solar energy.
	Make awareness campaigns about practices of energy saving directed to athletes/visitors.
Sustainable mobility	Sustainable mobility
	Advocate to a sustainable mobility by planning in that way the logistics of the whole event (minimize transfers, organize group transfers instead of single ones, spread out leavings in order to avoid gridlocks).
	Favour event participants who reach the event's facilities by public transport.
Procurement policies	Green and fair trade market
	Favour the use of natural local products supplied by local producers. Eventually by using Fair Trade Market Groups.
	Favour the use of "green" products, like organic products (eventually with the label Ecolabel-FSC), recycled or easy to recycle and with a low environmental impact.
	Favour the use of fair trade products.
Internal and external communication	Internal and external communication
	Use sustainable communication methodologies within the information campaigns about the events; for example, it would be better to print leaflets and posters on recycled paper, prefer digital communication, promote e-ticketing rather than traditional one.
	Use sustainable communication techniques within internal organization communication; for example, when the target is the participants of a competition (basic information provided through email or social network).
	Include environment respect within rules of competition (example: to forbid cyclists to waste canteens during races).
Environmental education	Environmental education/awareness raising campaign
	Organize educative moments, before or during the events, aimed at raising awareness about the environment and local territory protection among visitors, participants and other people (schools, citizens, institutions).
	Create information points within the event where informative materials can be shared.

Source: Memorandum of Understanding about Promotion of Environment Sustainability of Events organized within the Territory of the Province of Rimini, Rimini, Italy, 2013.

- Actions to undertake a process of gradual reduction of territorial impacts of the events, in order to convert them into real "Green Events"

TIPS

A zero waste policy will help articulate what you want to achieve from the event and can be used to communicate your commitment to key stakeholders including suppliers, council and media.

Another very useful document in the strategic planning stage is definitely the waste management site plan.

The waste management site plan will:

· identify the location of food and beverage vendors that will require waste collection
· identify the best positions for signage
· identify the placement of areas for tables and chairs where people will eat and drink and therefore the best position for bins
· show access lanes for service vehicles such as equipment suppliers, vendors and waste services contractors before, during and after the event
· help ensure that signage is well placed and can be easily seen by vendors and patrons.

The plan is an important planning tool for you and your waste services contractor who need to:

· calculate the number and type of bins required
· plan bin locations and service areas
· clarify access ways for vehicles
· determine signage and its positioning
· communicate with vendors and volunteers.

3.2 Step 2: Engagement of key stakeholders

Holding a zero waste event requires the cooperation of everyone who is going to take part, from event organisers, suppliers, stall holders, to waste and recycling service providers, cleaning/litter crews, etc. It is important to communicate with key stakeholders early and secure their agreement to play their part in making the event as waste free as possible.

Involve all possible stakeholders - from site owners, event owners and sponsors, to vendors, patrons and supply contractors. Site owners will be supportive but they may have specific requirements or conditions you must take into account for any event on their property. Liaison with event owners is important to gain their support and to encourage them to see waste minimisation as valuable. Sponsors are attracted to minimal waste events and will be able to gain promotional benefit, particularly if it is a Zero Waste event.[11] Vendors need to be informed that you are minimising waste. Their involvement is best gained by inserting a short clause in their contract requiring them to supply materials and follow procedures in line with these guidelines. Give them as much notice, advice and help as possible.

11 Jones, M., Sustainable Event Management, A Practical Guide, 2nd edition Earthsacan Routledge, UK, 2014.

Service contractors offer cleaning services, bin provision, waste collection and material recovery and separation as well as infrastructure and facilities such as fences, chairs and portable toilets. Negotiate mutually acceptable contractual arrangements in line with these guidelines. Both service contractors and vendors will want to know about the type and quantity of bins or drums and their locations. Patrons respond well to waste minimisation events. Tell them what to expect in your promotional material and by clear communications and signage at the event.

Things to do:

- Contact stakeholders and tell them of your zero waste objectives
- Secure their commitment to play their part in making the event a zero waste event
  Key stakeholders could include the following:[12]
  - Site owners
  - Waste companies
  - Recycling companies
  - Recycling/composting processors
  - Suppliers
  - Stall holders
  - Security
  - Onsite staff/volunteers
  - Cleaners
  - Entertainers
  - Media
  - Sponsors
  - Attendees
- Work with suppliers/stall holders to determine what materials they will be bringing into the site
- Where materials are not recyclable or compostable, investigate alternatives
- Interview and engage recycling/composting/waste collection contractors that meet your requirements. You may need contracts in place for:
- Reuse
- Recycling
- Composting
- Waste Disposal.

Special attention should be given to food and drink vendors who should be informed about the event expectations:

- Specify in vendor contracts that they may only sell or use products that are recyclable, biodegradable or reusable
- Provide a list of products acceptable for use at the event with the product supplier contact details.
- Consider providing a separate list of materials that are not acceptable and should not be brought into the event.
- Give vendors as much lead time as possible.

12 Guideline for working towards zero waste events, Auckland City Council, November 2008., p. 6.

3.2.1 Strategies to involve stakeholders/key actors

To be successful, a zero waste event must be mainstreamed in all the sectors involved in setting up and running the event. By cooperating with the main stakeholders, you make it possible to inspire change and create a legacy that will last long after the event. Build on the enthusiasm and interest of the private sector and the public, looking out for those stakeholders, such as host cities, venues and hotels, who already have their own sustainability (zero waste) agenda. Partner with them and take advantage of the increased funding, knowledge, skills or capacity. Local actors will provide vital knowledge of, for example, planned activities, understand community sensitivities, etc.

Checklist for stakeholders' engagement:

- **Map out** all relevant stakeholders and among them include: Site owners, Waste companies, Recycling companies, Recycling/composting processors, Suppliers, Stall holders, Onsite staff/ volunteers, Cleaners, Entertainers, Media, Sponsors, Attendees, Venue owners/managers, Hotels, Local residents, Workforce, Participants, Statutory bodies, Local authorities, Emergency services, relevant NGOs, Security
- **Categorise them**: differentiate between internal and external stakeholders and define their role (do they have decision-making or purchasing power? Will they interact with your participants?). Assess their area of influence, level of importance, and current involvement or interest in (events) sustainability so as to benefit from their potential fully.
- **Communicate** your zero waste goals early on in a way that is easily understandable by all, and give stakeholders time to adapt and better respond to the sustainability strategy needs. Explain the background of the environmental and social issues so decisions are better understood, thus giving stakeholders a sense of pride in having been part of the process. Meeting participants should send a logistics note on sustainability issues related to the city level.
- Establish **formal collaboration**, linking to stakeholders' current zero waste initiatives or highlighting the benefit of creating new ones, setting common goals and using joint resources.
- Plan **awareness-raising and capacity-building activities**, from simply circulating informa tion, to organising meetings and training for those that will have a role in the event. Take advantage of the fact that sustainability issues are now receiving more media coverage than ever before and use practical examples and concrete figures to capture the attention of the general public.

- **Inspire change: host countries and cities**

The support and commitment of the host country and/or city is crucial, especially when they are contributing to the event financially or otherwise. Since they are likely to be more familiar with local service providers, involve them in developing your Zero waste Action Plan and ask them to take the lead in the sustainability process if they are willing to do so, or to be members of your sustainability team.

- **Inspire change: venue managers**

When selecting a venue it is extremely important to assess the **commitment** to zero waste of the venue management beforehand. It is essential to include zero waste criteria and goals, together with corresponding activities, in the agreements you have with them and ask for these principles to be applied in the contracts they have with their own suppliers. If a "sustainable venue" is not available, **work with the venue managers to make**, if not major infrastructural changes, at least some smaller operational improvements, leaving a lasting sustainability legacy for future users. To get their commitment, highlight the **financial advantages**, the improved image and the **competitive edge** that may attract other events organisers.

- **Inspire change: service providers**

Given the scale of goods and services needed for larger events, it is important to make sure to include sustainable procurement considerations in all your purchasing activities. Again, a combination of appropriate management and communication will increase your chances of engaging the interest of the service providers in your zero waste process: Signal your commitment to sustainability and hence to green purchasing and service practices to the market early on. Set clearly defined objectives and include your sustainability requirements from the tendering process onwards and later in all agreements.

- **Inspire change: participants and other relevant stakeholders**

Involve event participants, as well as other local stakeholders, to increase the chances of success of your zero waste strategy and enhance your image and reputation. Link up with local NGOs and recruit volunteers among your staff and members of the local community – offer them special awareness raising programmes and use this potential for transferring awareness and knowledge to visitors.

3.2.2 Zero waste participants for a zero waste event

Inform participants that the event will be organised in the most zero waste way both prior to and during it to ensure they are aware of the importance and benefits of zero waste. Make them aware that they too have a role to play so they are conscious of how they are expected to behave.
Even if you have no resources to develop additional **communication tools**, you can nevertheless take advantage of the existing event related ones (such as programme, promotional material, signs, on-stage announcements, videos, information stands, etc.) to inform participants and engage them.

It is crucial to:

- **Be creative!** Find interactive ways to engage participants, such as quizzes and prizes, mini eco-education centres out of the waste stations to explain the why and how of recycling, have "sustainable stewards" mingling with the attendees. Invite local artists to showcase art installations or prepare a sustainability-themed performance.
- **Incorporate** the concept of zero waste into the topic of your event – ask the Master of Ceremonies or manager of event to briefly outline the main zero waste measures of the event or close your sessions with attention-grabbing slides that give participants tips on how to behave sustainably.

There are various other stakeholders that, depending on the type of event, you may wish to involve:

- **Sponsors**: companies who want to demonstrate their commitment to zero waste could sponsor some "sustainable" area of your event (e.g., providing green IT equipment, subsidising fuel-efficient shuttle buses for participants, funding your waste management, or carbon offsets). Make sure to choose sponsors whose environmental and social policy and ethic is in line with your zero waste strategy to avoid damaging the reputation of your event.
- **Media**: in addition to incorporating your zero waste message in all your communications, create a separate press release or section on the event Web site which details all your initiatives and is disseminated to media. This should also target the media working on the topic of sustainability or the environment, who you may not normally address.
- **Local community and NGOs**: consulting with local decision-makers and leaders before the event and involving them in your zero waste plan will reduce the potential disruption the event could create. Giving local action groups or NGOs space in the event programme or offering them the option to be present in other event areas (exhibitions, social events) will help to raise awareness among participants, get volunteers on board and give these groups the chance to gain visibility at the international level.

TIPS

Site owners may have specific requirements or conditions you must take into account for any event on their property.

Sponsors are attracted to minimal waste events as it may help them meet their corporate sustainability objectives and will be able to gain promotional benefit, particularly if it is branded as a genuine Zero Waste Event.

Stall holders need to be informed that you are minimising waste. Their involvement is best gained by inserting a short clause in their contract requiring them to supply materials and follow procedures in line with these guidelines. Give them as much notice, advice and help as possible.

Waste & recycling contractors Select contractors that are able to recycle/process the materials you will collect, that can provide the bins you need, and provide information on the types and quantities of materials collected. Negotiate mutually acceptable contractual arrangements in line with these guidelines.

Attendees Tell them what to expect in your promotional material and by clear communications, event staff and signage at the event.

3.2.3 Strategies to select supplies

Sustainable Procurement (SP) is about incorporating environmental, economic and social aspects into procurement procedures. SP enables organisers to meet environmental goals such as reducing greenhouse gas emissions, improving energy and water efficiency and supporting recycling, encourage social improvement and achieve financial savings. If the organiser is a public body, it's about Sustainable Public Procurement (SPP). Public spending normally represents 15-30% of national GDP and every purchase is an opportunity to drive markets towards innovation and sustainability. Through SPP, governments can lead by example and deliver key policy objectives. SPP enables governments to meet environmental goals such as reducing greenhouse gas emissions, improving energy and water efficiency and supporting recycling. The social benefits of SPP may include poverty reduction, improved equity and respect for core labour standards. From an economic perspective, SPP can generate income, reduce costs and support the transfer of skills and technology.[13]

The Principles were developed by the Marrakech Task Force (MTF) to guide countries on sustainable public procurement. They include:

- Good procurement is sustainable procurement
- Leadership
- Policy through procurement
- Enabling delivery
- Implementing
- Monitoring results and outcomes

Figure 2: The Marrakech Approach

Source: Zero Waste Scotland, Sustainable Procurement in Scotland - A Collection of Case Studies, http://www.zerowastescotland.org.uk/

13 United Nations Environment Programme (UNEP), Sustainable Public Procurement Implementation Guidelines, UNEP, 2012., p. 7.

Life cycle impacts
Life cycle impacts help the user identify and assess impacts. It is also possible to refer to other information sources to identify the key environmental and socio-economic risks and opportunities. For example, it may help to focus attention on the disposal phase before the procurement is carried out, allowing the organisation to build end-of-life management requirements into both its performance clauses for successful contractors and its own internal management procedures.

In the Marrakech Approach, the assessment of these risks and opportunities is broken down in to four key phases, summarised below:[14]

- Raw materials
- Manufacturing and logistics
- Use
- Disposal or end-of-life.

Impacts of obtaining raw materials
Focus on specification, suppliers' own procurement
Impacts of manufacturing and logistics
Focus on supplier selection stage
Impacts during use
Specification and end user awareness
Impacts at end-of-life / disposal
Supplier responsibility and end user awareness

Signal your commitment to sustainability and hence to green purchasing and service practices to the market early on. Set clearly defined objectives and include your zero waste requirements from the tendering process onwards and later in all agreements.

CASE STUDY

Sustainability requirements — EU Danish Presidency 2012

The EU Danish Presidency 2012 has announced that all its events of more than 100 people will be as sustainable as possible. Sustainability requirements have been integrated into all contracts with sponsors and suppliers. This has become a competition for companies that want to collaborate with the Presidency and also allows organisers to opt for sustainable products without spending extra money.

Source: http://www.sustainableeventsdenmark.org/csmp/sustainable-eu-presidency

14 Zero Waste Scotland, Sustainable Procurement in Scotland - A Collection of Case Studies, http://www.zerowastescotland.org.uk/

If a selection is not possible (e.g., because a venue has a pre-selected caterer), inform those involved in procuring goods and services about the sustainability requirements of the event and make sure that they follow the recommendations given in this guide – highlight the market competitiveness of implementing zero waste criteria.
If someone else is selecting the suppliers, empower them with the knowledge needed to make the most sustainable choice. Connect the decision-makers with new sustainable (or willing to become such) contractors and encourage them to discuss issues and find suitable solutions.

Connecting decision-makers and service providers
Connect the waste manager and recycling industry bodies (e.g., the plastic recycling group) to see how to improve recycling separation and treatment and then use the event to promote the recycling organisation's activities. Introduce a new green printer to the graphic designer, marketing or advertising staff to discuss green printing practices, paper and ink choices.[15]

CASE STUDY

Sustainability requirements - COP 15/CMP 5

For the Climate Change COP15/CMP5, much effort was put into greening the supply chain: all COP15 sponsors and suppliers were asked to contractually commit to upholding the ten United Nations Global Compact principles concerning human rights, labour rights, the environment and anti-corruption measures. With greater engagement and commitment to the principles of sustainable development, the Royal Danish Ministry for Foreign Affairs promoted the value of private-public partnerships and fostered a mutually beneficial collaborative approach to organising the event.

A very successful example was the engagement with hotels in the Copenhagen area. The COP15 planners, together with Horesta (a trade organization representing 85% of Copenhagen hotels), carried out a series of stakeholder engagement initiatives, such as training and networking sessions designed to raise awareness about the benefits of certification and provide guidance on how to meet certification requirements. As a result, the majority of hotels succeeded in fulfilling the necessary criteria to be recognised with third party eco-certification. Whereas in December 2008 12% of Copenhagen hotels were third party certified, meeting the criteria necessary to be awarded the eco-labels of The Green Key, Green Globe, EU Flower or Nordic Swan, by December 2009 that figure had grown to 53%.

Source: http://www.e-pages.dk/visitdenmark/473/

15 See more by Meegan Jones, Sustainable Event Management: A Practical Guide, Earthscan, UK, 2010.

Work with your suppliers to help them make more zero waste choices

Choosing zero waste or sustainably or environmentally certified providers can simplify the research and selection process. If there are none in your area, you can still look for those who comply with environmental and social principles. If these are also difficult to find, work with the available ones to create solutions that will reduce their negative environmental and social impacts.[16]

Here follow some recommendations:

- Request to see their business's zero waste policy and a list of their related initiatives, thus motivating them to review their current systems. If they do not have a zero waste policy in place, ask them to create one and make it public. For an example of a sustainability policy, see Seventeen-Events-sustainability-policy.pdf.[17]
- Offer support for your zero waste team or person to advise them and monitor the adherence of their services to the given criteria; establish communication and information channels during face-to-face meetings and by sending newsletters and personalised emails; provide information packs and summary sheets or offer training to their staff. Create awards and other incentives to encourage them to develop innovative solutions.
- Brief or, when possible, train the workforce (e.g., suppliers' staff, hostesses, etc.) that will be present at your event and will potentially interact with participants so that they know what zero waste behaviour is expected of them and they can pass on this knowledge to the delegates.
- After the event share the success stories. Post on the Web site or include a list in your conference report (by name where appropriate) of the "zero waste" service providers involved and their efforts to comply with the sustainable events strategy. This will give the suppliers visibility and act as an incentive for them to continue to act sustainably, while inspiring others to follow the same example.

Sustainable – green – zero waste procurement

Sustainable procurement can **(BENEFITS)**:

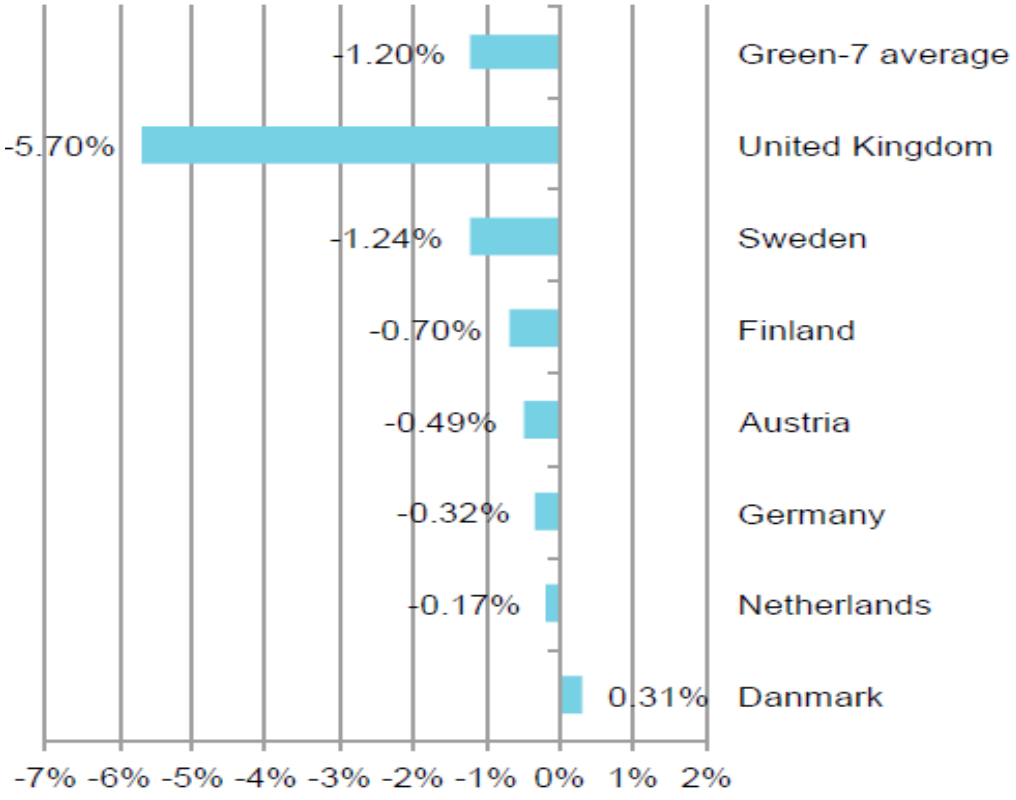
- **Reduce negative environmental impacts by requiring:**
  - Greater energy efficiency (buildings, meeting rooms, IT appliances)
  - Waste reduction/management (food, packaging, training)
  - CO2 reduction (low-emission transport, renewable energy)
  - Water-saving devices
- **Encourage social improvement through:**
  - Supporting local and regional business (catering, cleaning, energy supply)
  - Tackling unemployment (social integration, "reserved contracts")
  - Contributing to Millennium Development Goals (gender equality, Fair Trade)
  - Ensuring human rights and labour standards – also along the supply chain (core ILO Conventions)
- **Achieve financial savings through:**
  - The above-mentioned reductions in water, energy, etc.
  - Having trained staff
  - Other smart solutions (Specific: increase vegetarian food in catering, car/truck-pooling)

16 In some regions it is possible to find an inventory of sustainable suppliers, such as the one created by the Regional Activity Centre for Cleaner Production, which developed an online toolkit to help event organizers in the Mediterranean area to organize events that are more sustainable. The toolkit offers a list of sustainable suppliers along the Mediterranean. www.sustainableeventstoolkit.net

17 http://www.seventeenevents.co.uk/wp-content/uploads/downloads/2010/08/

Additionally, SP can contribute to economic performance and is not only an effective way to reduce environmental impacts but it can also help the purchasing organisation reduce costs. The financial impacts of including environmental criteria in procurement was assessed in a 2007 study by the European Commission. The study compared the economic costs and benefits of Green Public Procurement (GPP) versus standard purchasing for national governments and individual purchasing authorities.[18] The results of the study point to the economic benefits of calculating operating costs in the procurement, and that the purchasing cost plays only a minor role in the total life cycle costs.[19] Another study, also from the European Commission, found that six out of the seven European countries surveyed (the so-called "Green-7") were able to show costs savings achieved by purchasing greener products or services. Figure 3 shows the countries that participated in this study. A study from the Nordic countries in 2009 also found that GPP for some of the selected product groups has clear economic as well as environmental benefits. Example product groups included computers and construction.[20] Negative numbers imply cost reductions and positive numbers imply increases in costs.

Figure 3: Financial impacts of GPP



Source: United Nations Environment Programme (UNEP), Sustainable Public Procurement Implementation Guidelines, UNEP, 2012, p.10.

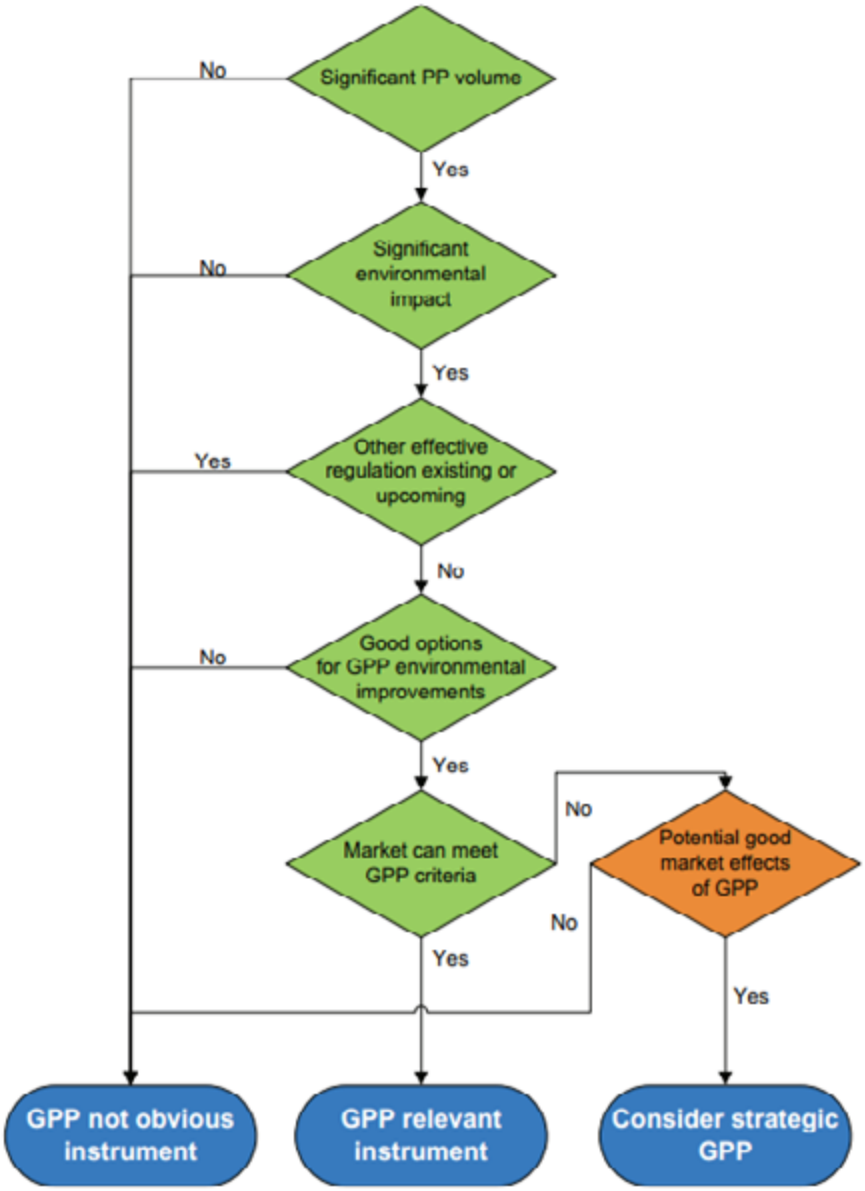
18 Sustainable public procurement is also called Green Public Procurement. It depends on sources. See more: Costs and Benefits of Green Public Procurement in Europe, Öko-Institut and ICLEI, 2007. http://ec.europa.eu/environment/gpp/pdf/eu_recommendations_1.pdf (05.05.2014.)

19 Costs and Benefits of Green Public Procurement in Europe, Öko-Institut and ICLEI, 2007. http://ec.europa.eu/environment/gpp/pdf/eu_recommendations_1.pdf (05.05.2014.)

20 Benefits of Green Public Procurement, 2009, Nordic Council of Ministers, TemaNord 2009:593, Copenhagen http://mst.dk/media/mst/68665/planmiljoe_for_nmr_benefit_gpp.pdf (15.05.2014.)

SPP/GPP assessment model

Figure 4: Flowchart for GPP assessment



Source: Benefits of Green Public Procurement, 2009, Nordic Council of Ministers, TemaNord 2009:593, Copenhagen, p 53 http://mst.dk/media/mst/68665/planmiljoe_for_nmr_benefit_gpp.pdf (15.05.2014.)

By selecting for more sustainable goods and services, SPP can be used to:

- Stimulate competition;
- Create markets for appropriate technology (i.e. not necessarily high-tech solutions);
- Expand markets for innovative sustainable solutions;
- Encourage early engagement and dialogue with the market; and
- Enhance dialogue with stakeholders to promote growth in demand for goods supplied by local markets and by making sustainable products purchased by the public sector more readily available to individual consumers.

For instance, the United Nations, along with the international community, has recognised the potential offered by the "Green Economy" to provide employment and wealth creation opportunities in any part of the world. In Mexico, for instance, 1.5 million people are being employed to plant and manage forests, whilst the Chinese Government has committed to produce 16 per cent of its primary energy from renewable sources by 2020.The world market for environmental goods and services stands at $1.3 trillion and is continuously growing.[21]

SUSTAINABLE EVENTS TENDER – Recommendations for public procurers

Sustainable Procurement (SP) is about incorporating environmental, economic and social aspects into procurement procedures. When issuing calls for tender for a large event, it is advisable to clearly state right from the beginning and identify in the subject matter that you want to organise a "zero waste - sustainable event". All subsequent tender phases and criteria need to relate to the subject matter. To make the process more manageable, a possibility is to divide one tender into various lots for specific services and products; but the "zero waste event" specification must always be there.

Examples of relevant requirements:

- Specify minimum percentages (e.g., at least 50%) and/or award points for the use of fruits and vegetables, sustainably harvested items (e.g., marine products), or resources that must be seasonal and organically produced (technical specification/award criteria)
- Food waste and/or waste from food packaging must be minimised (contract performance clauses)
- Caterers must describe their experience applying appropriate environmental management measures, such as training for staff, or donation of edible leftover food (selection criteria for suppliers)
- Paper is made from 100% recovered paper fibres (recycled) or sourced from sustainably harvested forests
- All or a certain percentage of IT products (PCs, notebooks, monitors, multifunctional devices) meet the latest ENERGY STAR standards for energy performance, available at www.energystar.org. (technical specifications)
- All cleaning products are accredited, or equivalent, to be environmentally friendly without toxic or hazardous substances (technical specifications)
- Electricity (or a proportion of the electricity) must be generated from renewable energy sources. Request Renewable Energy Certificates (technical specifications).
- Additional points are awarded for complementary energy saving activities offered by the venue organiser, such as an energy audit of the existing consumption patterns (award criteria).

A proposal for the list of green suppliers can be found in Appendix 3. The organisers of the events and festivals could fill this list with the names and characteristics of their green suppliers and use it as help when organising an event or festival.

21 United Nations Environment Programme (UNEP), Sustainable Public Procurement Implementation Guidelines, UNEP, 2012, p.12.

3.3 Step 3: Determine potential waste

The quantities and types of waste that will be generated by an event are quite variable and will be dependent on a range of factors including:[22]

- The type of event
- The numbers of people attending
- The duration of the event
- The types of stallholders present
- Policies on material that is allowed to be taken into the event area
- Unique bulk event waste i.e. coconut husks

Table 34: Types of waste according to the material

Material	Set up/pack down	Public areas	Back of house
Paper	Cardboard Posters	Brochures/leaflets Cigarette packets Coffee cups Napkins Newspapers Paper plates	Cardboard
Plastic	Electrical ducting and ties Plastic plumbing and spouting Signage Tape Temporary Barriers	Plastic bottles Clamshells Polystyrene cups Plastic plates Plastic cutlery Crisp packets/candy bar wrappers Plastic bags Coffee cup lids	Polystyrene packaging Plastic bags Shrink wrap Plastic strapping Vacuum wrap Plastic bottles
Metal	Electrical cables Roofing iron	Aluminium cans	Tins Aerosol cans Foil
Material	Set up/pack down	Public areas	Back of house
Glass	Window glass	Glass bottles	Glass bottles
Wood	MDF/ Chipboard Signage Temporary barriers Timber	Stirring sticks Wooden cutlery	
Organic		Leftover food Biodegradable packaging	Food preparation waste Leftover food Biodegradable packaging Used cooking oil
Textiles	Banners/signage Canvas/tent fabrics		
Hazardous/Other	Paint	Cigarette butts Disposable nappies Broken merchandise	Broken merchandise

Source: Auckland City Council, Guideline for working towards zero waste events, Auckland City Council, November 2008, p. 13.

22 Guideline for working towards zero waste events, Auckland City Council, November 2008, p. 7.

TIPS

Set up and pack down waste: Depending on the type of event there may be significant quantities of waste generated by activities associated with setting up and packing down after an event. Multiple day events such as music festivals will generate more of this type of waste.

Public area waste: Waste from the public areas will be the most visible waste generated and in most cases will constitute the largest proportion of the waste generated from an event.

Back of house waste: A significant quantity of material can be generated by vendors/stallholders and other service providers. A lot of this material is bulk packaging that has been used to transport goods to the site (such as cardboard boxes, cans, plastic wrap etc.). The back of house wastes should be managed separately to those in the public areas, as the requirements are quite different, and there is greater opportunity to inform vendors of systems before the event and to require them to separate material.

3.4 Step 4: Plan your event and festival system

Of critical importance to a successful zero waste event will be correctly identifying potential waste streams and figuring out how these can be best addressed. Once you have figured out what your final waste stream is likely to consist of (after you have eliminated materials that you don't want on site, and substituted recyclable or compostable materials for non-recyclable and non-compostable materials), you need to finalise how the material will be separated and collected.

Things to do:
For each of the Set up, Public Area, and Back of House areas:

- Decide in consultation with your recycling and waste service providers what separate streams of material you will collect
- Make sure you are clear what materials the recyclers and/or composters will and will not accept. This can be done by providing samples to your service providers to ensure they can process the material correctly.
- Construct a site plan (refer information box)
- Using the site plan and estimates of volumes of material you expect, work out how many bins you will need
- Make allowances for peak flows (around mealtimes in public areas, during set up and pack down for back of house)
- Decide on the types of bins and signage you will use for each collection stream

TIPS

Making a site plan:

· Locate on the site plan key activity areas (e.g., food stalls, dining areas, performance areas, etc.)
· Mark out where waste/recycling stations will be
· Mark out key access areas for waste vehicles and for servicing bins
· Mark out storage and bulking areas for waste

Research indicates that, depending on the item and the area concerned, people are willing to walk between 3 and 14 metres to dispose of an item. At greater distances littering increases substantially.

Generally speaking, recycling stations should be placed no more than 28 metres apart, and good practice would be to have a recycling station available every 20 metres.

Waste is also likely to get generated more in certain areas particularly where people congregate to eat and drink (not necessarily where they purchase it). These areas should be identified and sufficient provision made.

3.5 Step 5: Operating your event and festival system

Make sure your system will work on the day by resourcing it properly and having spare capacity in case the number of people attending or site arrangements are different than anticipated.

Things to do:
Servicing Arrangements

- Appoint an on-site operations manager who knows the system and can be responsible for ensuring everything works on the day
- Work out how often you will need to service bins/recycling stations
- Based on servicing arrangements determine how many staff you will need
- Schedule staff numbers to cope with peak times
- Make use of volunteers to help encourage people to separate their waste properly. Volunteers can be compensated with free entry to the event and free meals. If there are large numbers, a volunteer canteen/rest area may be a good idea. Having people monitoring waste stations is one of the key success factors
- Determine how waste from bins that have been emptied will be transported back to bulking and storage areas

Waste storage and sorting areas

- Allocate space for materials emptied from containers to be bulked and stored prior to being transported off site for recycling, composting or disposal.
- Some additional sorting of recyclable materials to remove contamination and/or sorting of residual rubbish to remove recyclables can be done in the storage areas

Clean up

- If good systems have been put in place and are well run, the amount of litter should be minimised, however there will likely still be some – particularly in areas that may have been difficult to service (e.g., in front of stage at concerts). Measures to recycle appropriate litter items should be put in place
- Ensure all waste and recycling is removed from the site in accordance with the contracts.

TIPS

Bins will generally need to be emptied at intervals throughout an event. It is critical that bins are emptied before they are full. In particular, if rubbish bins fill up then people will put their rubbish into adjacent recycling bins, contaminating the recycling. If all bins are full then this will lead to littering. You will need to make sure that you have sufficient staff to monitor bins and empty them before they fill up. The number of staff required will depend on the size of the bins, layout of the site, and the system you have in place for emptying bins (i.e. how long it takes to empty a bin or bin bank). One method is to use plastic liners. This enables the contents to be lifted out and placed in a collection cart. If liners are used and different streams are emptied at the same time it may be advisable to use different coloured liners for each stream so that bags can be easily separated, and to use compostable liners for the organic waste stream.

CASE STUDY

Soundsplash Raglan: Sorting the rubbish
"If you want to get extra performance- sort out the recyclables from the rubbish"

In February 2008, Xtreme Waste was contracted by Motherland Collective to provide waste and recycling services at the Soundsplash music festival in Raglan. The event attracted about 2,600 people over three days and diverted 83% (by volume) of the waste from the landfill. Xtreme waste provided forty people to assist with the resource recovery initiatives, which included recycling stations with separate bins for commingled recycling, organic and waste to landfill. These recycling stations were located throughout the festival and each one was attended by an assistant, who helped the public to separate their waste into the right bins. A sorting table was also set up for the assistants to sort recyclable materials out of the waste in the rubbish bins and sort the contents of the commingled recycling bins into their various material types.

Source: Auckland City Council, Guideline for working towards zero waste events, Auckland City Council, November 2008, p. 9.

TIPS

Guidelines for handling cardboard and paper:
· Be aware that peak volume is likely to occur at the set up of the event.
· Designate a special area back of house for placement of material.
· Assign staff to collect material as it is generated.
· Remove material to a service area equipped with larger containers.

Guidelines for handling liquid waste:
· Inform vendors that liquid waste must be dealt with as specified in their contract.
· Provide drums.
· Arrange collection after the event.

3.6 Step 6: Communicate and promote

Having an event that diverts waste from landfill is something of which you will be proud. It helps attract both patrons and sponsors so it is worth telling the world!

- Issue media releases and advertising about your waste minimisation goals
- Obtain the endorsement of a well-known member of the community or local celebrity who will promote the event - mentioning its environmental credentials.
- Promote your environmental objectives using word of mouth, volunteers and multimedia avenues, including on your Web site.
- Include information in official programs and relevant magazines and journals.
- Don't forget word of mouth and the power of volunteers.

No matter how good your systems are, if you do not communicate well with the people who have to use them they will not perform. Keep communications simple, clear, positive, and don't be afraid of stating the obvious – often!

Things to do:
<u>Pre event communications</u>

- Suppliers & Vendors – reminds suppliers of the waste system requirements
- Sponsors
- Media – publicise the fact that your event will be zero waste
- Event programmes and information for patrons – tell them what to expect
- Arrange photographers from local media to attend the event specifically to promote the event recycling taking place.

Communications during the Event

- Meet vendors to ensure back of house waste systems are working properly
- Signage, on the bins, around the site in visible locations
- Volunteers/staff to encourage the public to use systems correctly
- Public Announcements/reminders
- Posters informing people of system in prominent places – entrance, food stalls etc.
- Provide incentives (e.g., spot prizes for good recyclers)
- Meet photographers/media representatives and highlight the zero waste systems

Post event communications

- Press releases on event success
- Request feedback from suppliers & contractors

Promotion

Promotion is one of the elements of the marketing mix. It includes various forms of communication with potential customers/tourists, aimed at attracting tourists to a specific destination and persuading them to buy products and services during their stay at the destination and during their trip. To achieve this, companies may use a variety of different forms of promotional activities that all fall under the name of promotional mix. The mutual coordination of the forms of promotion used is key to ensuring the effectiveness of promotion, the primary purpose of which is to make tourists aware of the existence of a product, service or, as in our case, an event and to encourage them to develop a preference for that event relative to other events. This will help to attract the attention of potential tourists and further drive the demand for the event to increase.

The major promotional activities or forms of promotion used in tourism are:[23] advertising in tourism, personal selling of products and services in tourism, sales promotion and public relations. Advertising in tourism is a paid, non-personal form of promotion that uses mass media (television, radio, newspapers) to communicate the characteristics of a destination and its offering to potential tourists. Personal selling is especially important in tourism; it is a form of promotion by which a service provider communicates directly with potential customers, seeking to persuade them of the advantages of the product or service being offered. In personal selling the communication skills of the employees of hotels and other facilities, as well as those of the employees of the event organizer, are crucial when presenting an event and providing information to potential visitors. Sales promotion is a set of activities (coupons, tasting sessions, point of purchase displays, and so on) used to enhance sales. Public relations is a form of promotion that seeks to ensure a company is generally accepted by the public, on both the consumer side and on the side of suppliers, intermediaries, local authorities and others.

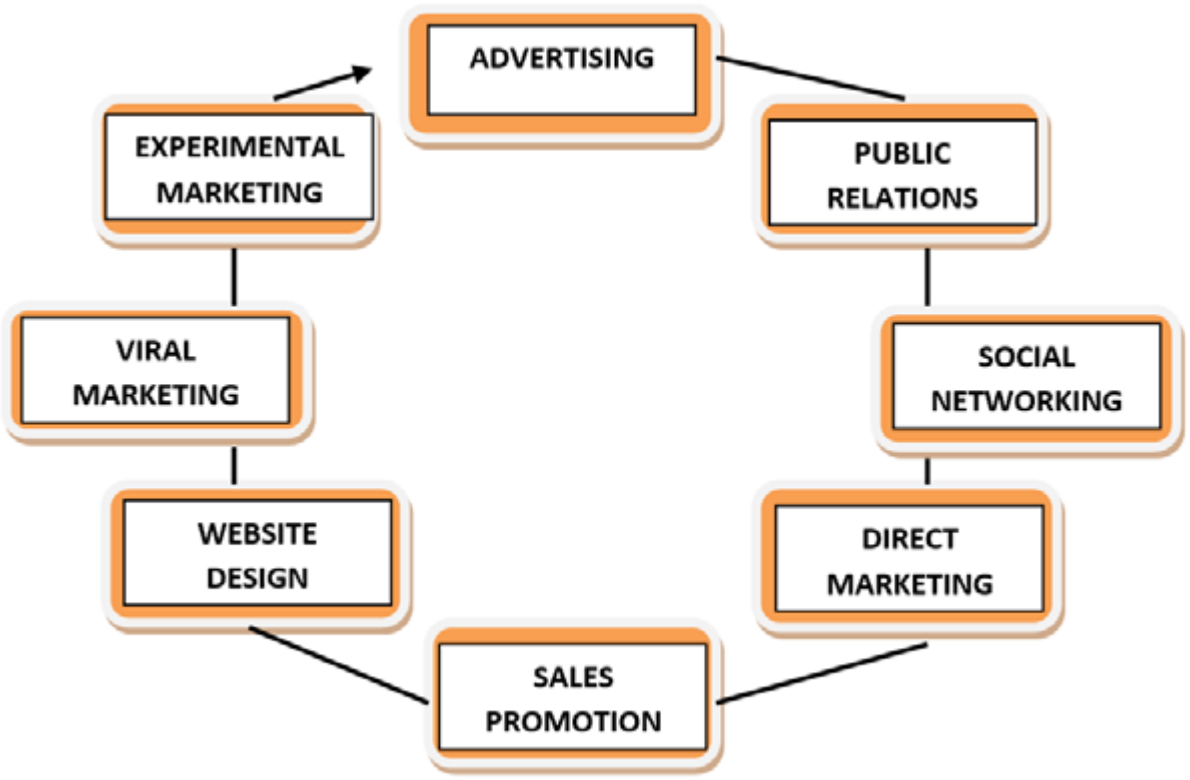
This conventional aspect of marketing communication, however, is one-way and inflexible; it focuses on the entire target market and does not allow for direct replies. Hence, sustainability marketing communication represents the next step in the evolution of marketing communications which emphasizes the process of building and maintaining relationships with customers, what is even more relevant for understanding and promoting sustainable development. In recent years there has been a growth in interactivity in marketing communication through online communications, interactive sales promotion, experiental marketing (for example, roadshows that take products out to customers, often combined with entertainment) and relationship marketing approaches.[24]
Marketing communications for sustainability are designed to achieve four main objectives:[25]

23 Seneić, J., Vukonić, B.: Promocija u turizmu, Mikrorad, Zagreb, 1998. p.10.
24 Belz, F.M., Peattie, K.: Sustainability Marketing: A Global Perspective, John Wiley & Sons Ltd, UK, 2010., p. 179-180.
25 Emery, B.: Sustainable marketing, Pearson Education Limited, 2012., p. 218-219.

1. To change everyone's behaviour with regard to the sustainability of their lifestyles affecting a variety of habits and practices such as energy use and conservation, recycling, personal travel, consumption reduction and demarketing;
2. To change consumer purchase behaviour, encouraging people to lead more sustainable lifestyles through the consumption of sustainable alternatives to conventional products and services;
3. To inform consumers and other stakeholders about the sustainable credentials, reputation, practice, performance and achievements of national, regional and local governments, NGOs, charities, business and other interested parties
4. To persuade consumers to purchase goods and services from particular companies on the basis of their sustainable features and benefits.

When it comes to events, the marketing communication mix stresses all aspects of an event representing communication about that event (Scheme 3).

Scheme 3: The event marketing promotional mix



Source: Preston, C.A.: Event marketing: How to Successfully Promote Events, Festivals, Conventions and Expositions, Second edition, John Wiley & Sons, USA, 2012., str. 77.

The introduction of information technology has brought about vital changes in advertising as a form of promotion. While traditional advertising media continue to play an important role, the Internet as a promotional medium today has a huge importance in advertising and in public relations. It represents a combination of purchased media services such as paid advertising on Facebook and viral marketing opportunities generated by Facebook users.[26] In addition to Facebook, the most popular social network, there are also other social networks such as Twitter, LinkedIn and GooglePlus, as well as less popular ones such as Tumbrl, Pinterest and Instagram. The Web site, as a promotional medium, has become indispensable. All other forms of promotion are also based on the use of the Internet and social networks, a clear indication of the importance of using these media in event promotion.

In choosing promotional tools it's important to invest in those tools which are most cost-effective, will generate the greatest return and will enable us to meet the objectives of promotion.

CASE STUDY

Waitangi Day Celebrations Okahu Bay 2008

Ngati Whatua Orakei, were responsible for organising the event which attracted 30,000 people. Key to success of the event was the participation of volunteers to staff each "resource recovery station".
Volunteers were invited to stay at the marae the night before the event and were provided with training and motivation for the task the next day. This helped develop a sense of purpose, team and camaraderie that contributed to a 79% diversation rate from landfill being achieved.

Source: Auckland City Council, Guideline for working towards zero waste events, Auckland City Council, November 2008., p. 10.

3.7 Step 7: Monitoring and evaluation

It is important to monitor how well the systems have worked so as to be able to publicise successes and get feedback that will help you to improve the system on an ongoing basis.

3.7.1 Why and what to monitor?

What does monitoring mean?
It is keeping track of and checking systematically all event activities.

26 Preston, C.A., Event marketing: How to Successfully Promote Events, Festivals, Conventions and Expositions, Second edition, John Wiley & Sons, USA, 2012, p. 78.

Things to do:

- Appoint someone to be responsible for ensuring that data from the event recycling systems is measured and recorded.
- Record the quantity of materials collected from each of the collection streams (by weight or volume). The collection contractors should also be able to supply this information.
- Note any contamination.
- Consider doing a waste audit of the residual (non-recycled) waste to determine where systems can be improved and how non-recyclable waste can be avoided. Consider writing up and publishing the results of your audit.
- Note litter levels throughout the event.
- Request feedback from suppliers and the public.
- Consider writing up a case study to pass on lessons learned.
- Take note of the results and feedback when planning the next event.

Also, you should obtain data from contractors on waste materials collected:

- Number of patrons at the event
- Amount of recyclable material sent to a recycling depot
- Amount of biodegradable material sent to a composting facility
- Amount of material prevented from going to landfill (the total of the two above).

After the event, it is important to disseminate and report on your success.

Reporting on your success!
Information on the waste outcomes of an event is very useful to its organisers. This will include:

- Number of patrons at the event
- Amount of drink containers collected
- Amount of cardboard and paper collected
- Amount of biodegradable material sent to a composting facility
- Amount of material diverted from landfill.

It should be reported to:

- Sponsors
- Site owners
- Event owners
- Local newspapers.

Feedback and data on the conducted event are of great assistance for future event organisation. They enable identification of areas for improvement and help to target resources more effectively.

3.7.2 Proposal of Zero Waste Indicators to be monitored

It is of great importance for organisers to monitor and evaluate key Zero Waste indicators. In accordance with best practice, some indicators that should be monitored are selected. The criterion for selection was to have at least one indicator for each group of criteria (environmental, transport, social, cultural, sustainability and economic). These criteria should be kept in mind as early as the planning phase.

Environmental criteria

No: 1	Quantity (volume) of total waste produced – in total m3
Minimization of waste quantity	To which extent does the selected event seek to prevent excessive waste production (total waste volume)?
QUESTION	Do you measure the waste quantity (total waste volume)
ANSWER	YES/NO
ADDITIONAL QUESTION	In case your previous answer was YES, please answer how many m3 of waste your event has produced.
ANSWER	_____total m3 of waste

No: 2	Quantity (volume) of total waste produced – in m3 / per visitor
Minimization of waste quantity	To which extent does the selected event seek to prevent excessive waste production (total waste volume)?
QUESTION	How many visitors attended your event?
ANSWER	_____No of visitors
Calculation	_____m3/visitor (total m3 of waste / No. of visitors)

No: 3	% of recycled materials used per event
Minimization of resources	To which extent is the event applying prevention to the production of waste (e.g., by using recyclable materials, etc.)?
QUESTION	Do you measure the share of recycled materials in the overall material resources?
ANSWER	YES/NO
ADDITIONAL QUESTION	In case your previous answer was YES, please answer what % of total used material resources are from recycled resources.
ANSWER	_____% (min 33% to be acceptable)

No: 4	% of total separate waste per event
Separate collection of waste	To which extent is the event facilitating the separate collection of waste and garbage?
QUESTION	Do you practice separate collection of waste?
ANSWER	YES/NO
ADDITIONAL QUESTION	In case your previous answer was YES, please answer what % of total produced waste is separately collected.
ANSWER	_____% (min 33% to be acceptable)

Transport criteria

No: 5	Presence of organized public transport to the event for visitors
Accessibility of the venue	To which extent is the event management considering the venue based on its accessibility by all means of transport (incl. public transport)?
QUESTION	Is public transport organized for the visitors of the event?
ANSWER	YES/NO

No: 6	Presence of organized public transport for the programme participants (performers)
Accessibility of the venue	To which extent is the event management considering the venue based on its accessibility by all means of transport (incl. public transport)?
QUESTION	Is public transport organized for the programme participants? (performers)
ANSWER	YES/NO

No: 7	Presence of access hubs for disabled people
Accessibility for disabled people	To which extent is the event management taking into account the possibility of access for the disabled?
QUESTION	Did you assure accessibility (access hubs) for disabled people?
ANSWER	YES/NO

No: 8	Presence of volunteers for helping disabled people
Accessibility for disabled people	To which extent is the event management taking into account the possibility of access for the disabled?
QUESTION	Did you hire volunteers for helping disabled people to access the event?
ANSWER	YES/NO

Social criteria

No: 9	Presence of organized medical service at the event
Safety and security (visitors and staff health and safety)	How much are the principles of safety and security applied at the selected event (in terms of actions in the case of accidents – medical teams, fire departments, are the event visitors or staff sufficiently protected from the dangers and threats like theft, terrorism, and vandalism). To which extent does the event take care of the employees' health and safety during all stages of organizing the event?
QUESTION	Is there an organized medical service atn the event?
ANSWER	YES/NO

No: 10	Presence of organized fire department service at the event
Safety and security (visitors and staff health and safety)	How much are the principles of safety and security applied at the selected event (in terms of actions in the case of accidents – medical teams, fire departments, are the event visitors or staff sufficiently protected from the dangers and threats like theft, terrorism, and vandalism). To which extent does the event take care of the employees' health and safety during all stages of organizing the event?
QUESTION	Is there an organized fire department service at the event?
ANSWER	YES/NO

No: 11	Presence of organized security service at the event
Safety and security (visitors and staff health and safety)	How much are the principles of safety and security applied at the selected event (in terms of actions in the case of accidents – medical teams, fire departments, are the event visitors or staff sufficiently protected from the dangers and threats like theft, terrorism, and vandalism). To which extent does the event take care of the employees' health and safety during all stages of organizing the event?
QUESTION	Is there an organized security service at the event?
ANSWER	YES/NO

No: 12	Presence of local community in the organization of the event
Participation of local community	How much is the local community involved in the organization of the event?
QUESTION	Is the local government included in the organization of this event (as organizer, sponsor, patronage ...)?
ANSWER	YES/NO

No: 13	Involvement of local volunteers in the organization of the event
Participation of local community	How much is the local community involved in the organization of the event?
QUESTION	How many local volunteers (in percentage of total organising staff - %) are involved in the organisation of this event?
ANSWER	____ %

Cultural criteria

No: 14	No. of different nationalities participating in the event
Multicultural character	Multicultural dimension of selected event and aspect of multiculturalism included as a part of the event programme.
QUESTION	Do people of different nationalities officially participate in this event (as performers, service providers, etc.)? (Note: at least two different nationalities)
ANSWER	YES/NO
ADDITIONAL QUESTION	In case your previous answer was YES, please answer how many different nationalities participate in this event?
ANSWER	_____ (No.)

No: 15	Promotion of local community through the event programme
Local tradition preservation	To which extent does the selected event demonstrate sensibility towards local customs and tradition?
QUESTION	Does this event promote the local customs and tradition?
ANSWER	YES/NO

No: 16	Inclusion of local culture, tradition, customs or/and heritage in the event's programme
Heritage preservation and inclusion	To which extent is the event paying respect to preserving the local heritage (incl. the potential for local people to retain/exercise their traditions)? To which extent is the local heritage included in the event theme and/or how much does it influence the organizing of the event?
QUESTION	Do local culture, tradition, customs and/or heritage make an official part of the event's programme?
ANSWER	YES/NO
	To which extent does the selected event demonstrate sensibility towards local customs and tradition?

No: 17	Inclusion of local cultural or/and heritage sites in the event
Heritage preservation and inclusion	To which extent is the event paying respect to preserving the local heritage (incl. the potential for local people to retain/exercise their traditions)? To which extent is the local heritage included in the event theme and/or how much does it influence the organizing of the event?
QUESTION	Do local culture and heritage sites make an official part of the event?
ANSWER	YES/NO

Sustainability criteria

No: 18	Presence of educational programmes
Sustainable responsibility	To which extent is the event management trying to be responsible for the "sustainable" turn-out of the event in relation to other aspects of the event organizing?
QUESTION	Is there a formal/or an informal educational programme for both staff and/or visitors about the importance of environmental protection?
ANSWER	YES/NO

No: 19	Presence of sustainability awareness
Promotion of the respect to the environment	How much is the event management/event letting the visitors and staff know of the importance of environmental awareness?
QUESTION	Do you use promotional activities for promoting event's sustainability?
ANSWER	YES/NO

No: 20	Presence of sustainable promotional activities
Promotion of the respect to the environment	How much is the event management/event letting the visitors and staff know of the importance of environmental awareness?
QUESTION	Do you use sustainable promotional activities (Internet, social networks, etc.) for promoting the event's sustainability?
ANSWER	YES/NO

Economic criteria

No: 21	Involvement of local entrepreneurs
Strengthen the local economy (inclusion of local labour services and of local goods)	To which extent does the event support local business / local providers?
QUESTION	Does the event promote/give support/encourage local entrepreneurs to participate (as product producers, service providers…)
ANSWER	YES/NO

No: 22	Customers satisfaction
Event attractiveness (evaluation of event)	How much attention is paid to the budget plans and its realization, as well as to other economic indicators, and occupancy rate? How much attention is paid to the evaluation of the event (i.e. questionnaires, etc.)? To which extent are visitors satisfied or are returning to the event in relation to previous events?
QUESTION	Do you research customer satisfaction (through surveys, book of impressions…)?
ANSWER	YES/NO
ADDITIONAL QUESTION	In case your previous answer was YES, please answer what percentage (%) of visitors were satisfied with the event?
ANSWER	____% of satisfied visitors

No: 23	Budget realisation
Event attractiveness (evaluation of event)	How much attention is paid to the budget plans and its realization, as well as to other economic indicators, and occupancy rate? How much attention is paid to the evaluation of the event (i.e. questionnairesetc.)? To which extent are visitors satisfied or are returning to the event in relation to previous events?
QUESTION	Are your actual revenues and costs in accordance with the planned event budget?
ANSWER	YES/NO

If the organisers want their event to be a ZERO WASTE EVENT, the event must meet at least one indicator of each group of indicators (environmental, transport, social, cultural, sustainability and economic) and a total of at least 15 out of 23 selected indicators.

TIPS

Some other indicators could include the following:

- Quantity and % recycled
- Quantity and % composted
- Quantity and % reused
- Quantity and % disposed of to landfill
- Amount of waste disposed of per person per hour
- Contamination levels
- Recyclable/compostable material in residual waste to landfill (this can be determined by conducting a waste audit)
- Litter levels
- Vendor feedback
- Public feedback
- Operator feedback

4 Useful information for zero waste event and festival management

Biodegradable packaging

Biodegradable packaging is suitable where the material will be collected for composting. If the material will be sent to landfill, non-biodegradable options are preferable as they will not degrade in landfill and create greenhouse gases. A selection of some biodegradable packaging options is provided below for illustration. (Note: The products shown here are for information purposes only)

Figure 5: Examples of biodegradable packaging

Wooden cutlery

Cups

Pulp based hot or cold cups

Biodegradable cold cups

Biodegradable Plastic (PLA) lined paper cups

Biodegradable /reusable bags

Biodegradable cornstarch

Cloth bags

Paper bags

Biodegradable serving items, i.e. plates, clamshells, bowls, etc.

Burger Pack

Biodegradable Sandwich Wedges

White Plain Snack Box

Source: Based on example from Auckland City Council, Guideline for working towards zero waste events, Auckland City Council, November 2008, p. 17.

Supplier agreements/ information to supplier

It is important to discuss the event's zero waste policy and requirements as early as possible with suppliers. Most of the material that becomes waste will be brought on site by suppliers and hence their participation is critical. Some suppliers may be reluctant to use recyclable or biodegradable alternatives due to concerns about branding, cost, and performance. These concerns will need to be addressed, and decisions made about what concessions if any will be allowed. It may be worthwhile providing vendors with a vendor information sheet that sets out the events requirements, in terms of packaging and waste management practices – below is a sample vendor information sheet.

Sample vendor information sheet for zero waste events

Suppliers and vendors play an important role in helping create a zero waste event. Your cooperation in supporting our waste minimisation and recycling efforts is appreciated. Please consider the following in your preparation on the day.

Recycling facilities for vendors and stall holders will be provided in back of house areas for the following materials:

- *Cardboard (boxes to be flattened)*
- *Plastic film*
- *Plastic, tin, glass and aluminium containers*
- *Food waste*

Recycling facilities for members of the public will be provided. There will be two waste streams collected – one for recycling and one for compostables. In terms of goods sold/dispensed, you are asked to only bring items and packaging into the event that are able to be placed in one of these streams:

Recyclables:

- *Plastic 1&2 drink containers and milk bottles*
- *Aluminium cans*
- *Plastic 6 cups*
- *Glass bottles*
- *Tins*
- *Programmes/Posters/Newspapers/Magazines/Cardboard*

Compostable:
- *Food waste*
- *Betal Nut, Potato plates, corn starch and wood cutlery*
- *Napkins and paper towels*

Please do not use the following:
- *Non-recyclable plastic or paper plates*
- *Plastic bags*
- *Plastic plates, cups and cutlery*
- *Polystyrene and wax paper cups*
- *Chip bags and other non-recyclable plastic film*

Tips:
- *Plan to recycle from the start*
- *Consider how your stall can avoid creating waste before you go to the event*
- *Avoid using non-recyclable containers for drinks*

There will be signage to inform spectators about the event recycling. These will be located at the entrances and recycling stations. Signage will be made available to vendors to place near serving areas to encourage recycling.

Event waste service providers

In order for an event to be sustainable, it is very important to plan the event waste service providers with great attention. Service contractors include companies offering cleaning services, bins, waste collection and material recovery and separation. Consider the environmental outcomes you want to achieve when choosing service contractors.

Do they offer?
- Liquid waste collection
- Access to a material recovery facility
- Composting facilities or access to them
- Quantitative information about:
- The amount and weight of material recycled
- The amount and weight of material composted
- The total amount of waste diverted from landfill • the rate of contamination of the two waste types and where it occurs.

Another important element of a successful zero waste system are waste bins, especially their placement, type and monitoring. The same bin design and signage should be applied to back of house, but bin caps should not be used. Collection and placement should be more specifically planned to meet vendors' requirements. The bins should be placed together so that patrons face identical choices at each location. The bins should be easily identifiable and consistent in appearance. This can be done by fitting the bins with bin caps. While front of house bins should be located near food and drink vendors, disposal does not always happen close to the point of purchase.

For optimal material recovery bins should also be located:
- At event entry points
- Near high-traffic areas
- At disposal points such as toilets, exit and entry points, and car parks
- At accessible points that coincide with movement of patrons and catch their attention
- Between 3-14 metres from the next nearest bin.

Do not place bins in areas where there are likely to be queues!

Below is the provisional list of types of bins and accompanied features with short explanations.

Figure 6: Bin types and features

Description	Additional information	Photo
On-site Compactor	Used for general rubbish containment and collection. Compactors reduce the volume of waste and mean collections can be less frequent. Compactors reduce the amount of storage space required for rubbish relative to non-compacting skips. Removal is by gantry truck, with the compactor being transported to a transfer station for emptying. Leakage may be an issue with compactors, as liquids are effectively squeezed out of the waste.	
3/ 4.5 Metre Skip Bin	Used for general rubbish containment and collection. Requires front loading compactors. Footprint = 2.72 – 3m2	
1.5 / 3 Metre cardboard cage	Used to store and collect flattened cardboard. Requires front loading compactors. Gated cages are available for manual collections where truck access is difficult. Footprint = 1.64 – 2.72 m2	
1m3 Wool Sacks (Fadges)	Fadges are woven polypropylene sacks hung on a metal frame. They are commonly used for collecting plastic film or compacted plastic bottles.	
1100-660 Litre Bin	Generally used for rubbish collections. Requires rear loading compactors or flat deck vehicles for container exchange. Footprint = 1 m2	
360 Litre Wheeled Bin	Used for rubbish and recycling collections. Can be easily manually moved on site. Requires side or rear loading compactors or flat deck vehicles for container exchange. Closed lid contains odours and restricts vermin access. Footprint = 0.6m2	

Description	Additional information	Photo
240 Litre Wheeled Bin	Used for rubbish and recycling collections. Can be easily manually moved on site. Requires side or rear loading compactors or flat deck vehicles for container exchange. Closed lid contains odours and restricts vermin access. Footprint = 0.43m2	
120 Litre Wheeled Bin	Used for rubbish and recycling collections. Can be easily manually moved on site. Requires side or rear loading compactors or flatdeck vehicles for container exchange. Closed lid contains odours and restricts vermin access. Footprint = 0.27m2	
Steel Drums	44 Gallon steel drums can be lined and used as litter bins or recycling containers as part of a recycling station	
Drum Covers	Covers for steel drums provide an effective way to make the drums look tidy and communicate recycling messages.	
Recycling Bin lids	Designed to fit over 240 L wheelie bins, and link together in banks. Lids are provided complete with signage.	
Bio bin corn-starch plastic liners	Bio degradable and compostable liners for organic waste streams. Bin liners up to 240 Litres in size are available.	

Source: Based on example from Auckland City Council, Guideline for working towards zero waste events, Auckland City Council, November 2008, p. 22.

Public area waste stream collection options

One of the critical decisions to make in establishing the events waste systems is how many different waste streams to collect from the public areas. Separately collecting larger numbers of waste streams requires more careful management and, in the context of events, more complex systems can be prone to problems with contamination. Therefore it is best to keep the numbers of separate streams that will be collected at a minimum.

Good practice is to locate recycling and waste bins together at recycling/waste stations. This assists people to separate their waste without having to go to multiple locations. Care needs to be taken however to make sure recycling and waste bins are clearly distinguishable otherwise waste will not be correctly separated and contamination may occur. Experience suggests that people often look inside bins to see what they should put in the bin (regardless of what the signs might say) – open topped bins or bins with good size openings can therefore help this process.

Some of the options that have been used successfully in best practice events include the following:

Three stream
1. Recyclables (glass and plastic bottles and containers, cans, paper)
2. Compostables (food waste, compostable packaging such as potatopak plates, cutlery etc.)
3. Residual waste (everything else)

This is a good option for most events where it is not possible to fully control inputs into the site, and where there will be a proportion of material that is not recyclable or compostable.

Two stream (compostable)
1. Compostables (food waste, compostable packaging such as potatopak plates, cutlery, paper, cardboard, biodegradable cups)
2. Residual waste (everything else)

This option is appropriate where it is possible to control inputs into the site very well and where all food and drink is able to be sold in biodegradable packaging.

Two stream (recyclable)
1. Recyclables (glass and plastic bottles and containers, cans, paper)
2. Residual waste (everything else)

This option is appropriate where food is not being sold at the event or if it is not possible to compost food collected from an event.

Two stream (recyclable & compostable)
1. Recyclables (glass and plastic bottles and containers, cans, paper)
2. Compostables (food waste, compostable packaging such as potatopak plates, cutlery etc.)

This option may be applied where there is very good control over inputs to a space (such as an indoor venue) and where all items dispensed on site are able to be included in one of the two streams. A further possible option is to require visitors to take any non-recyclable or compostable rubbish away with them.

Single stream (compostable)
1. This is an alternative option for where there is a high level of control over inputs to a site and where all items dispensed are able to be included in a composting stream. In this scenario, food and drink would be dispensed using biodegradable plates, cutlery and cups. Paper and cardboard would also be able to be composted, along with biodegradable plastic bags and containers. The advantage of this option is that it requires no sorting by members of the public.

Signage
Signage at events is critical – patrons need to be able to find the waste and recycling points easily and when they do, be left in no doubt as to what they are supposed to put in each bin.

TIPS

Use graphic images – people will not read detailed instructions. If there are going to be crowds at your event it will be difficult to see where the bins are. Signage that can be seen above the crowd indicating the location of the waste station is good practice.

Signage and recycling symbols
The universal recycling symbols are internationally recognized symbols used to designate recyclable materials. These symbols are guides to how widely different packaging items are recycled; however you should always follow the advice of your local authority. Packaging symbols are now appearing on lots of everyday items, and help us to identify how different parts of packaging can be recycled.

To help you understand all the symbols you might see, please consider the following symbols:[27]

THE GREEN DOT

The Green Dot does NOT necessarily mean that the packaging can be recycled. It is a symbol used on packaging in many European countries and signifies that the producer has made a contribution towards the recycling of packaging.

PLASTICS

This symbol identifies the type of plastic: PET and HDPE bottles are recycled by the majority of local authorities.

GLASS

Please dispose of glass bottles and jars in a bottle bank (but remember to separate colours) or use your glass kerbside collection if you have one.

RECYCLABLE ALUMINIUM

This symbol can be placed in an aluminium recycling facility.

27 http://www.recyclenow.com/why_recycling_matters/recycling_symbols.html (18.09.2013.)

RECYCLABLE STEEL

This symbol can be placed in a steel recycling facility.

MOBIUS LOOP

Indicates that an object is capable of being recycled – not that the object has been recycled.

MOBIUS LOOP WITH PERCENTAGE

Shows the percentage of recycled material contained in the product.

PAPER

To be given the National Association of Paper Merchants mark, paper or board must be made from a minimum of 75% genuine waste paper and / or board fibre, no part of which should contain mill produced waste fibre.

Other labels you might see on packaging include:

TIDYMAN

Dispose of this carefully and thoughtfully. Do not litter. This doesn't relate to recycling, but is a reminder to be a good citizen, disposing of the item in the most appropriate manner.

CASE STUDY

The Green Dot Logo 

Unknown to many, the Green Dot logo (see diagram below) is not exactly a recycle symbol, but rather a trademark that is used in Europe. However, it does indicate of some green efforts to recover and recycle packaging waste. As such, this logo is as a "recycle symbol".

What does the Green Dot really mean?
While the Green Dot recycle symbol or trademark may mean a lot to industries and national packaging-recovery programs in countries that adopt the Green Dot system, it actually says very little to consumers.

Whether or not companies have the Green Dot recycle symbol on their products and packaging, ALL companies in Europe (in accordance to the 1994 European Packaging Directive) are required to recover and recycle their packaging waste (although the enforcement levels in different countries may differ widely). As such, not only companies licensed to use the Green Dot recycle symbol recover and recycle their packaging waste. This means that non-Green-Dot-products companies can also be green.

For example, in the United Kingdoms, companies have to pay for the recovery and recycling of their packaging waste, but they do not use the Green Dot system. As such, the recycle symbol or trademark does not have any meaning to anyone in the UK. In fact, products in UK do not require the Green Dot at all. (Under certain circumstances, the Green Dot symbol appears on some UK products. In such cases, the product companies need to pay a license to Valpak Ltd).
In countries which adopt the Green Dot recovery system, what the Green Dot recycle symbol trademark merely does is inform the local regulator which system a particular company engages to recover its packaging waste. It also informs the Green Dot recovery program of whose packaging to collect. Of course, the Green Dot program collectors would only collect the waste packaging from companies that have paid the Green Dotlicense. In Germany, the recycle symbol or trademark informs consumers of which packaging to place in the dedicated yellow bags or bins emptied by DSD.

Consumers should not interpret the Green Dot symbol as an assurance that an item is recyclable, or that it would be recycled. The Green Dot simply means that the Green-Dot-program collectors (if they are operating in your particular European country) would be collecting that waste packaging, and would manage it according, either by recycling or disposing of this waste.

Source: http://www.all-recycling-facts.com/recycle-symbol.html (18.09.2013.)

Event permitting process

Getting permission – you need to obtain an event permit for any event utilising open public space. This is an outline of the process to receive a permit for an event:

a) Contact authorities responsible for issuing permits with your event proposal (including the preferred location and dates)
   - Authorities will usually assign a facilitator to assist you with your query;
   - Your facilitator will advise you on venue and date availability, fees and any further licenses you may require;
   - Authorities will make a tentative booking;
   - Authorities will post or email you an application form and safety information to complete.

Note - Authorities responsible for issuing permits usually need a minimum of six weeks before your event date for low impact events, and three to six months for higher impact events including those with traffic management.

b) Return completed application form and additional documents such as site, safety, traffic management, waste and security plans as necessary. Your facilitator will be available for any questions on completing the application documentation.

c) Once your facilitator receives all of the information, they will confirm if a fee applies and will follow our internal process of seeking approval from relevant parties. They may request additional information from you. Your event facilitator will also advise you on other specific aspects of your event that you may need to address to complete the event permitting process such as:
   - Road closures
   - Parking
   - Food stalls and permits
   - Liquor licenses
   - Fire permits
   - Extending shop trading hours
   - Amusement device licenses / fireworks
   - Fire hydrant permits
   - Temporary building permits

Note - Depending on the scale of your event, you may need to attend a planning meeting with relevant stakeholders to discuss your event and address any areas of concern.

d) If all relevant parties approve your event, authorities responsible for issuing permits will send you a permit via post or email. If your event is not approved, they will contact you and advise you in writing of the reasons why they have declined your application.

e) Your facilitator will contact you after your event to establish how your event went and set up a debrief meeting, if required.

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- Ucka Nature Park, http://www.pp-ucka.hr

APPENDIX 1: ZERO WASTE MANAGEMENT PLAN TEMPLATE FOR EVENT AND FESTIVAL ORGANIZERS

Zero Waste Event Details	
Event Name	The official name of the event that will be referred to on any applications or permits.
Event Dates	Start and finish dates and times
Event Location	Description of event location. Include a map if appropriate.
Expected Attendance	Give estimates of expected numbers that will attend the event. If the event has been held before, estimates should be based on past attendance, with appropriate allowance made for any changes to the scale and scope of the event.
Key Activities on Site	List key activities that will take place during the event. E.g. Musical performance, food and drink vending, merchandising stalls, etc.
Contact Name	Name of the person Council should contact in respect of the waste management plans for this event.
Contact Details	Full contact details
Commitment to Zero Waste Event	
Details of Zero Waste Event Policy	
Key Waste Targets for Event	
Key Stakeholders & their Commitment to Zero Waste Event	
List key stakeholders in the event and whether or not they have agreed to commit to working towards a zero waste event.	
Key Stakeholders	Commitment to Zero Waste Event
Types & Quantities of Waste Expected	
List the main types of materials that are expected to be generated from setting up or packing down activities, and the estimated quantities. Use volume estimates if possible (litres or cubic meters) as this will enable the total volume of material generated to be calculated and the total recycling/disposal capacity required to be estimated.	
SITE SETUP AND PACK DOWN WASTES	
Materials	Main Associated Activities / Estimated Quantities
TOTAL:	
Notes:	

PUBLIC AREA WASTES		
Materials	Main Associated Activities	Estimated Quantities
TOTAL:		
Notes:		

BACK OF HOUSE WASTES		
Materials	Main Associated Activities	Estimated Quantities
TOTAL:		
Notes:		

Control of Inputs to the Site
This section of your event zero waste plan should indicate what measures have been put in place to consult with and inform suppliers.
Consultation & Information for Suppliers
Supplier Agreements
Non-compliance bonds etc.

Collection System
In this section organisers should indicate how each of the materials listed in section "Types and Quantities of Waste Expected" will be managed. Is it expected to be able to eliminate or reduce the use of a material, reuse it, recycle or composite it, or send it to disposal? This section should describe what size of bins will be used, whether they will they be lined, if they will have lids, how will they be identified, and whether they will be placed next to other bins in a recycling or waste station.

SET UP & PACK DOWN

Collection Stream	Materials	Bin Type & features	No. of Bins on Site	Frequency of Servicing

PUBLIC AREAS

Collection Stream	Materials	Bin Type & features	No. of Bins on Site	Frequency of Servicing

BACK OF HOUSE

Collection Stream	Materials	Bin Type & features	No. of Bins on Site	Frequency of Servicing

BIN/BANK LOCATIONS

Site Plans	A plan of the event site should be drawn up and appended to your zero waste management plan. Include on the site plan the major activity areas including areas where people are likely to congregate, food and drink vending areas, etc. Indicate where bins/ recycling station will be placed (bearing in mind the distance guides above), where back of house facilities will be placed, and where any areas for bulking waste, sorting, servicing, containers, etc. are. Note access for emptying of bins including bulked waste and recycling.
Access	

Collection System Management
This section should detail the collection management system you will have in place
Servicing Arrangements
Waste Storage & Sorting Areas
Clean Up
Quality Control Measures
Key Personnel/Positions and Responsibilities
Incentives
Zero Waste Event Communications
Pre Event Communications
Vendors
Public
Post Event Communications
Off Site Recycling & Disposal Arrangements
Reuse
Recycling
Compositing
Disposal
Monitoring, Reporting & Continuous Improvement
Monitoring
Reporting
Continuous Improvement

APPENDIX 2: ZERO WASTE QUESTIONNAIRE FOR EVENT AND FESTIVAL ORGANIZERS

Environmental Criteria		
1.	Do you measure the waste quantity (total waste volume)? In case your previous answer was YES, please answer how many m3 of waste your event has produced.	Yes □ No □ _____ m3 of waste
2.	How many visitors attended your event?	_____No of visitors
3.	Do you measure the share of recycled materials in the overall material resources? In case your previous answer was YES, please answer what % of total used material resources are from recycled resources	Yes □ No □ _____ %
4.	Do you practice separate collection of waste? In case your previous answer was YES, please answer what % of total produced waste is separately collected	Yes □ No □ _____ %
Transport Criteria		
5.	Is the public transport organized for the visitors of the event?	Yes □ No □
6.	Is the public transport organized for the programme participants (performers)?	Yes □ No □
7.	Did you assure accessibility (access hubs) for disabled people?	Yes □ No □
8.	Did you hire volunteers for helping disabled people to access the event?	Yes □ No □
Social Criteria		
9.	Is there an organized medical service at the event?	Yes □ No □
10.	Is there an organized fire department service at the event?	Yes □ No □
11.	Is there an organized security service at the event?	Yes □ No □
12.	Is the local government included in the organization of this event (as organizer, sponsor, patronage ...)?	Yes □ No □
13.	How many local volunteers (in percentage of total organising staff - %) are involved in the organisation of this event?	____ %
Cultural Criteria		
14.	Do people of different nationalities officially participate in this event (as performers, service providers, etc.)? (Note: at least two different nationalities) In case your previous answer was YES, please answer how many different nationalities participate in this event?	Yes □ No □ _____ No.
15.	Does this event promote the local customs and tradition?	Yes □ No □
16.	Do local culture, tradition, customs and/or heritage make an official part of the event's programme?	Yes □ No □
17.	Do local culture and heritage sites make an official part of the event?	Yes □ No □

Sustainability Criteria		
18.	Is there a formal/or an informal educational programme for both staff and/ or visitors about the importance of environmental protection?	Yes □ No □
19.	Do you use promotional activities for promoting event's sustainability?	Yes □ No □
20.	Do you use sustainable promotional activities (Internet, social networks etc.) for promoting event's sustainability?	Yes □ No □
Economic Criteria		
21.	Does the event promote/give support/encourage local entrepreneurs to participate (as product producers, service providers…)	Yes □ No □
22.	Do you research customer satisfaction (through surveys, book of impressions…)? In case your previous answer was YES, please answer what percentage (%) of visitors were satisfied with the event?	Yes □ No □ _____% of satisfied visitors
23.	Are your actual revenues and costs in accordance to the planned event budget?	Yes □ No □

APPENDIX 3: LIST OF GREEN SUPPLIERS

No.	Full name of green provider	Field of work and description of services offered (e.g. waste collection, waste separation, eco-package production...),	Type of organisation (private, public,non profit, for profit)	Country	City	District (only for Italian partners)	Postal code	Address	Phone	Web page	e-mail

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