
7

Ecological Impacts

Learning objectives

- Distinguish between nature, ecology, and ecological processes
- Know how to assess the 'greening' of events and 'event sustainability'
- Learn how events impact upon, and are affected by the natural environment and ecological processes
- Understand the subjects and objects of EIA for events and tourism
- Know how to plan and conduct and EIA

7.1 Introduction

In this chapter we examine nature, ecology and ecological impacts, as distinct from the impacts of events and tourism on the built or human environment. This brings sustainability to the fore, and that is a term that has to be examined carefully with reference to the 'greening' of events, different interpretations of the meaning of sustainability, and how this influences evaluation and impact assessment.

It is also very useful to examine environmental impacts ON events, as opposed to the impacts OF events. This involves an illustration of the event settings spectrum that identifies important variables related to the differences between indoor events and those situated in natural environments.

The subjects and objects of ecological impact assessment for events and tourism are examined in detail, presenting goals, methods and indicators that can be applied to the full range of 'subjects' – individuals and families or the entire nation.

The process of EIA follows the generic IA process model, with a number of special considerations. Methods include the Leopold Matrix, Forces-Pressures-State-Impact-Response model, and carbon and ecological footprint analysis.

7.2 Nature and ecology

People understand ‘nature’ as being in opposition to environments where human influences are obviously dominant. ‘Nature’ covers the entire physical world, including plants, animals, geomorphology and geology, but we can also speak of ‘natural forces’ such as climate and weather that influence everything humans do. Within the study of nature there is the science of ‘ecology’ which covers interactions between organisms and their environment, including species-to-species and human-environment interactions. Two specific terms have to be defined:

- ◆ *Ecosystem*: A community of species within a supporting environment. Ecosystems are open systems, dependent upon flows of energy and materials to sustain them; they are subject to external forces and are seldom static.
- ◆ *Ecological processes*: Underlying forces or ‘drivers’ affect ecological processes and result in changes or impacts. The processes we are interested in depend upon the situation. For major events or new arena construction we will want to examine drainage, soil erosion, ground water retention, wildlife movement and habitat, carbon and other emissions from machinery, construction waste and its disposal, etc., all with a view to the accumulating impact on the natural (and built) environments.

Research on the ecological impacts of events has lagged behind the other ‘objects’ of IA. Jones et al. (2008) in the report *Assessing the Environmental Impact of Special Events* (conducted for the Cooperative Research Centre on Sustainable Tourism, Australia) noted the following potential impacts and the reasons why so few events were doing EIAs or adhering to sustainability standards:

“The environmental impacts identified by organisers and/or hosts as the most important were transport (parking and traffic), waste management (general rubbish collection, litter, recycling and the provision of toilets) and noise. For six of the events, mention was also made of putting measures in place to promote environmental awareness. Environmental impacts/issues perceived as less significant included the provision of power, (for outdoor events), air pollution (smoke haze and vehicle emissions), management of environmental risk and the minimisation of environmental harm. However, the calculation of environmental impacts is more problematic, due to the limited availability of data for most of the perceived environmental impacts and the limited enthusiasm of both organisers and hosts to collect such data.”

There has been a limited amount of research published on the potential effects of climate change on events (Jones et al., 2006) and the influence of environmental values on events (Kim et al., 2006). However, a number of books on greening and the sustainability of events are available (e.g., Jones, 2018).

7.2.1 Sustainability and the greening of events

The sustainable events movement is a very positive development, although there is little evidence to demonstrate the extent of compliance, the cost implications, or the results for cities or regions. Certainly there is enough advice available, and examples to learn from, to enable every event organiser, regulator and facilitator to insist that available standards be met, yet that is not widely the case. One can easily get cynical by pointing to the rather obvious attempts by some events, corporations and governments to paint tourism and events as green, or carbon neutral by touting 'offsets' such as planting trees somewhere, or by easy efforts like recycling. Clearly more must be done to ensure compliance, assuming that we want the sustainability paradigm (Getz, 2009) to be universally accepted.

A review of the literature suggests there are two sets of applicable sustainability goals:

1) *The greening of events* as an important path to make events and tourism more sustainable. Standards of practice are available (e.g., ISO 20121) and books such as *Sustainable Event Management* (Jones, 2018) provide the foundation. This quote is from Meegan Jones (2018):

"ISO 20121 ... includes requirements for an event to establish a statement of purpose and values as it relates to the principles of sustainable development. This standard prescribes, as a minimum, the sustainable development principles of inclusivity, transparency, integrity and stewardship."

2) *A positive force for sustainability*: In this theme events are encouraged to not just 'go green' but to become a positive force for sustainable development, especially within the policy framework of communities seeking to be green and sustainable (Getz, 2017). Events are viewed as important media for social marketing and as agents for change, a view that is in accord with Theory of Change approach to impact assessment. This set of goals covers both the natural and built environments and embodies the inter-related concepts of sustainable development and social responsibility.

The term 'sustainable', however, is often used to describe *sustainable development or growth* which reflects a very narrow bias on the part of those operating a business or marketing a destination. Some business people do understand the triple bottom line and support ecological-sustainability initiatives, but others only understand money and growth.

Steady-state sustainability

An economic interpretation of sustainability starts with capital and equates natural resources with monetary capital – that is, things to invest for growth and a return on investment. Conservation and social programmes might detract from this goal. But the 'steady state' approach to sustainability requires that resources are not depleted – all must be renewable.