Sustainability assessment of the annual conferences of the International Association for Impact Assessment

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Abstract

Since 1982, the International Association for Impact Assessment (IAIA) has held an annual conference. This sustainability assessment establishes a framework by which the sustainability of the conference is assessed in comparison to four potential alternatives to the conference in its present form. The results of this assessment show that the conference in its present form may not be the most sustainable way to achieve the objectives of the conference, and that changes may have to be made in order to move towards sustainability. The methodology used is a literature review in the fields of environmental impact assessment, strategic impact assessment, sustainability assessment, educational psychology and virtual technology.

Introduction

This sustainability assessment (SA) uses a seven step process created by Pope, which was developed from her earlier five step method (2007, p.337). Each of the seven steps will be explained, as well any assumptions made during the process. A sustainability framework is established by which the conference and potential alternative ways of achieving the conference objectives are assessed. Four potential alternatives are then outlined, and are then assessed as to their sustainability. The "most sustainable" alternative is then chosen, and mitigation measures for that method are suggested. Finally, the conclusion contains recommendations to IAIA on meeting the objectives of the IAIA conferences.

Definition of sustainability

There are many ways of defining sustainability, and it is important to establish the definition used in order to create a context. For the purposes of this assessment, sustainability is defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, 1987), recognising that integration of environmental, social and economic factors is essential, as opposed to their treatment as separate, discrete entities. These issues are therefore considered in unison, without giving preference to any one factor over another, and without allowing significant "trade-offs" of one factor for another (Gibson, 2006).

Step 1: The Issue

The first step in creating the SA is to identify the issue to be assessed. Here, the impacts of IAIA's annual conferences is the issue which has been identified as requiring assessment.

Step 2: Objectives of the conference

Having established that the issue to be addressed by the assessment is the IAIA conference, the next step is to identify the desired outcomes or objectives of the conferences. These are: to enhance the effective use of impact assessment tools (IAIA, 2002), and to maximise the positive impact of IAIA's resources and network on members and others in promoting best practice in environmental assessment (IAIA, 2007).
The question that this sustainability assessment therefore poses is:

What is the most sustainable way that IAIA can meet its objectives in holding its annual conference?

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Step 3: **Develop a decision-making protocol**

In order to assess whether or not the conference, or any alternatives to the conference, are considered "sustainable", it is necessary to create a framework in which to contextualise the issues. Sustainability is often a qualitative rather than quantitative concept, which makes it difficult to set concrete targets, however, relevant sustainability criteria and aspirational objectives or targets can be set for each factor where possible, in order to "operationalise" sustainability in the relevant context (Pope, 2007, p.237). This "decision-making protocol" (Pope, 2007, p.237) can therefore determine whether the proposed action is moving towards or away from sustainability, and to what degree this is the case. Table 1 outlines the sustainability principles, criteria and targets for environmental, social and economic factors that were considered in this assessment.

Table 1   Decision-making protocol

Sustainability Principle	Criteria	Target	Issues
Effective protection and enhancement of the environment			
Ensure that any negative impacts on the environment are at a sustainable level, and do not exceed acceptability limits	Minimise emissions from transport related to the conference	Any alternatives must have a considerably reduced effect from emissions relative to the conference in its present form (see "Assumptions" below)	Can carbon offsets be used to offset any negative impacts from emissions? (See discussion of offsets in "Assumptions" section below)
	Minimise environmental impacts from energy use	Reduce energy consumption overall, and increase the proportion delivered from renewable sources	How can the volume of use of renewable energy sources be monitored?
Social development			
Maximise education potential	Create social networking opportunities, to facilitate opportunities for knowledge transfer, and create opportunities for delegates with less experience in the field to interact with those with more experience	All members gain useful and practicable knowledge that can be applied in a practical way upon return from the conference, in order to enhance the effective use of impact assessment tools	Is face-to-face social contact in knowledge transfer essential for *all* people?
Capacity building	Ensure that less developed countries, particularly those with significant environmental problems, are represented and their opportunities are optimised at the conference	Proportionate spread of attendance from all regions, relative to spread of membership of IAIA	Are there any social benefits for society in general, as opposed to just conference attendees?
Equity of access	Ensure all IAIA members have equal and adequate access to all the resources of the conference	Proportionate spread of attendance by age, gender, income, ability and so on, relative to spread of these issues within membership of IAIA	Is the structure of the conference equitable in terms of income, ability, age, experience and so on?
Economic benefit			
Ensure any economic benefit from the conference is distributed in a sustainable manner	Where possible, use local suppliers in preference to national or multinational entities	Higher proportion of money spent on conference goes to local suppliers than to national or multinational entities	Are profits made by the airlines considered in the assessment of sustainability, when they also produce a significant negative impact on the environment?

Assumptions

Carbon offsets have not been considered as an answer to the problem of emissions from travel for a number of reasons. Firstly, there are currently no accepted standards as to what constitutes an offset (Trexley Climate and Energy Services, 2006). Similarly, there is no standard "price" for carbon: for example, Carbon Neutral (IAIA's offset provider) charges a fee ($18) per tonne of CO_2 offset (Carbon

Neutral, 2008), while Elementree charges per tree planted ($2.50) (Elementree, 2007). Furthermore, carbon offsets do not address the issues of oil depletion or of other pollutants released by burning aviation fuel.

Some environmental issues (biodiversity, water and waste) that were considered in the preliminary stages of the assessment were subsequently dropped because they were not considered relevant in this context.

Another crucial assumption is that the social aspect of the conferences are important in achieving their objectives. In the field of educational psychology, this is known as social constructivism, and places emphasis on the learner's construction of knowledge within a social context (McInerney & McInerney, 2002, p.5).

Step 4: **Identify alternative ways of achieving the objectives**

A sustainability assessment is a more strategic and proactive process than a traditional, reactive environmental impact assessment (EIA) (Pope, 2007), whereby alternative approaches to achieving the stated objectives can be considered. Previous EIA of IAIA conferences (Heijbroek et al, 2002 and Bowes, et al, 2004) found that the most significant negative environmental impact stemmed from the emissions from air travel, but the current format (with some mitigation measures) was still preferable to any alternatives offered due to the environmental benefits from the transfer of knowledge and capacity development in the face-to-face format. Any alternatives would therefore have to reflect these factors. In Therivel's (2004) hierarchy for alternatives and options, the first consideration is whether there is a real need for the event in question. If the objectives of the conference *are* deemed necessary, the question then is whether the objectives can be met in an alternative format. Following this is the consideration of "options" (p.112) within the chosen alternative, such as location and timing. These options are considered in the mitigation measures of Step 7 and in the Conclusion.

Alternatives to the conference in its present form

Concurrent regional conferences with online interaction	No conference, but enhance existing IAIA services
A number of smaller conferences can be held concurrently in different regions of the world, for example, one on each continent. The conferences can be linked via the internet to allow exchange of information and ideas with all members, while still allowing for the important social contact of a face-to-face conference. This compromise measure allows for the use of technology to facilitate information transfer as well as a certain level of face-to-face contact. Less air emissions would be created as travel distances would be shorter.	IAIA membership offers a range of provisions facilitating exchange of information and mentoring services, such as training manuals and workshops, the Environmental Assessment Learning Exchange, and specialist sections within the Association (International Association for Impact Assessment, 2007). These programs could be expanded as well as adding new initiatives which could achieve the objectives by facilitating transfer of knowledge as well as social contact between members.
Create a system of practical visits	**Virtual conference**
Practical visits of anywhere from a few hours to several days in length can be arranged at a number of sites around the world. People can then utilise the trips within their own region, or attend visits when travelling to another region for any other reason, such as work or holiday. These can be coordinated to facilitate synchronisation of visits to maximise social contact. This gives practitioners the opportunity to travel and be involved in impact assessment while creating a less significant negative impact on the environment than the conference.	There are a number of platforms by which a virtual conference can be held, and no particular approach is prescribed here. However, it is envisaged that the chosen format will be able to deliver the objectives to the highest degree possible, so considering the requirement for social interaction, an interactive platform such as Second Life (http://secondlife.com) or InXpo (www.inxpo.com) is advocated.

Step 5: **Assess the sustainability impacts of each alternative**

The table below shows how each alternative was assessed as to whether it was moving towards or away from sustainability in the environmental, social and economic fields. The table is based on a similar model in Harridge et al., 2002. The key is as follows:
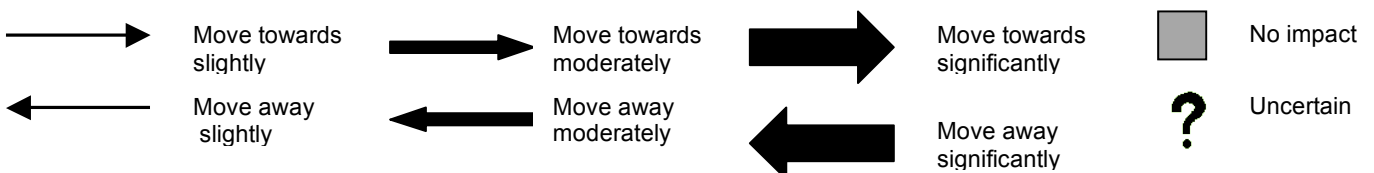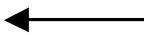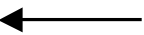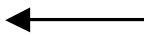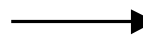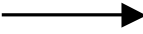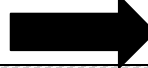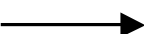
Table 2   Sustainability Assessment Matrix

Sustainability criteria	Conference in its existing form	Concurrent regional conferences	No conference enhance existing services	Virtual conference	Field trips/practical visits
Environmental					
Emissions from conference travel	⬅ (large)	←	▣	▣	⬅
Energy use	←	←	?	?	←
Environmental impact overall	Moderately unsustainable	Slightly unsustainable	No impact	No impact	Slightly unsustainable
Social					
Education	➡ (large)	→	→	→	→
Capacity building	➡ (large)	→	→	→	→ (thin)
Equity of access	←	→ (thin)	➡ (large)	→	← (thin)
Overall social impact	Moderately sustainable	Moderately sustainable	Highly sustainable	Moderately sustainable	Slightly sustainable
Economic					
Cost to members	⬅ (large)	←	▪	⬅	⬅
Economic benefits	→ (thin)	➡	▪	→ (thin)	➡
Economic impact overall	Moderately unsustainable	Neutral	No impact	Slightly unsustainable	Neutral
Overall sustainability	**Moderately unsustainable**	**Slightly sustainable**	**Highly sustainable**	**Slightly sustainable**	**Neutral**

Step 6: Select preferred alternative based on assessment outcomes

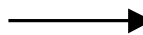Based on the sustainability criteria in this assessment, it can be seen that by the environmental criteria, the alternatives of "no conference" or "virtual conference" come out on top, as they both create no known impacts. Both of these options may create an additional impact in the use of electricity for computer use, however this can be mitigated by the use of renewable energy sources.

All of the alternatives are sustainable in terms of social impacts to differing degrees, however the "no conference" alternative again comes out on top.

In economic impacts, the "concurrent conferences", "no conference" and "practical visits" are all either neutral or have no impact, making these three equal best in this sphere.

In terms of overall sustainability, the alternatives rank as follows:
1. **No conference, enhance existing services**
2. (joint 2nd)Concurrent conferences/Virtual conference
3. Practical visits
4. Conference in its existing form

The "no conference" alternative comes out on top, making it the preferred alternative, because it is the only one that has no negative impacts, and scores highly on the social impacts. The conference in its existing format rated poorly predominantly due to its significant negative impact on the environment from transport emissions, as well as its high economic cost and inequitable nature.

Step 7: Mitigation measures for preferred alternative

The only potentially negative impact of the "no conference" alternative is in energy use, where the impacts were rated as "uncertain". This could be mitigated by the use of renewable energy sources. Positive outcomes can be maximised by ensuring inclusiveness to practitioners from developing countries by establishing programs that directly target these members. Education opportunities can also be maximised by creating specific platforms for sharing knowledge and research options.

Conclusions and recommendations

IAIA is already taking steps towards "Greening the Conference" (International Association for Impact Assessment, 2008) via the use of carbon offsets. If offsets are considered to be an acceptable mitigation of the negative environmental impacts of carbon emissions, the results of the SA would be different and would show the existing conference format in a more positive light. However, even if offsets were taken into account, the existing conference format would still not rank the highest in terms of sustainability because of the issues of cost and equity.

Sustainability is a qualitative and objective concept, and decisions about sustainability may depend upon inherent bias and assumptions on the part of the decision-makers. For example, in this SA, the conference in its existing format rated poorly on direct environmental impacts but highly on social impacts and subsequent (indirect) environmental impacts stemming from knowledge transfer about environmental impacts. The virtual conference, however, rated more highly on environmental impacts but lower on social impacts. Different decision-makers will evaluate these factors in different ways and subsequently make different decisions.

The argument about the importance of face-to-face social contact in knowledge transfer is an important one. Perhaps most people would prefer this type of setting for their learning experiences, and feel that they learn more this way, but that does not necessarily mean it should be the only option. An analogy can be drawn with distance learning: if face-to-face contact is considered essential, then all externally taught courses would be rendered obsolete, which of course is not the case. While face-to-face contact is preferred, it is not actually *necessary*. So, although some IAIA members may resist, if the objectives of the conference can be met without creating the negative impact from air travel emissions, then the environment is better off, even if individuals are not. Also, just as social skills are developed and drawn upon in a face-to-face setting, so new social talents can be developed for the use of computer-mediated communication (Hine, 2005), just as people have already adapted to the use of email and text messaging as a basic form of contact.

Since stakeholder engagement is an important factor in sustainability (see Gibson, 2006; Pope, 2007), IAIA members could be canvassed as to their opinions and preferences regarding conferences. There are likely to be many members who want to continue the conferences, whether for the travel aspects, or the social contact, so IAIA could organise biennial or triennial conferences, and an alternative format could be held in the intervening time.

IAIA is committed to conferences in the existing format for 2009 and 2010, so any changes would not be made until after that time. However, in the intervening time, IAIA could begin to enhance the existing services over the next two years, and also consider trialling some aspects of the virtual conference in conjunction with the conferences in 2009 and 2010

References

Bowes, A.C., Rowe, H.J., Sheriff, K. & Westhaver, A (2004). *Executive Summary: Environmental Impact Assessment of the International Association of Impact Assessment Conference 2004* in Government of Canada (2004) *IAIA04 Canada Whose Business Is It? Impact Assessment for Industrial Development, 24th Annual Conference of the International Association for Impact Assessment. Conference Presentations, Papers and Documents*, CDRom, Government of Canada.

Carbon Neutral Product Statement. (2008). Retrieved April 19, 2008 from http://www.carbonneutral.com.au/carbon_neutral_product_statement_4_apr_08.pdf

Elementree FAQ. (2007) Retrieved April 19, 2008 from http://www.elementree.com.au/faq.asp#cost

Gibson, R.B. (2006). Beyond the Pillars: Sustainability Assessment as a framework for effective integration of social, economic and ecological considerations in significant decision-making. *Journal of Environmental Assessment Policy and Management, vol. 8* (no.3), pp.259-280.

Guidelines for the EIA of the IAIA02 conference in: IAIA and VVM (2002). *Assessing the Impact of Impact Assessment 15-21 June 2002 All Conference Documents* CDRom, IAIA and VVM.

Harridge, C., Mactavish, A., McAllister, I., & Nicholson, S. (2002). Guide to Sustainability Appraisal, TCPA Tomorrow Series, Paper 12. London: Town and Country Planning Association

Heijbroek, A., Pottuijt, P., Lim, J, Akovuku, A. (2002). *Environmental Impact Assessment of the IAIA-2002 Congress* in: IAIA and VVM (2002) *Assessing the Impact of Impact Assessment 15-21 June 2002 All Conference Documents* CDRom, IAIA and VVM.

Hine, C. (Ed.). (2005). *Virtual Methods: Issues in Social Research on the Internet.* Oxford: Berg.

International Association for Impact Assessment. (2007). *Modeling Environmental Concern in the Business Operations of IAIA*, IAIA Policy Notes: Policy Note #14, unpublished (internal) policy of IAIA.

International Association for Impact Assessment. (2008). *The Art and Science of Impact Assessment: 28th Annual Conference (Final Program).* Retrieved April 200, 2008 from http://www.iaia.org/iaiaconference/?p=Page&id=68

McInerney, D.M., & McInerney, V. (2002). *Educaitonal Psychology: Constructing Learning.* Frenchs Forest: PrenticeHall

Pope, J. (2007). *Facing the Gorgon: Sustainability Assessment and Policy Learning in Western Australia.* Murdoch University PhD Thesis. Retrieved 20 March 2008 from http://wwwlib.murdoch.edu.au/adt/browse/view/adt-MU20070330.154243

Therivel, R. (2004). *Strategic Environmental Assessment in Action.* London: Earthscan Publications Ltd.

Trexley Climate and Energy Services. (2006). *A Consumers' Guide to Retail Offset Providers.* Portland: Clean Air-Cool Planet.