SPHERES AND DIMENSIONS OF SUSTAINABILITY AND THEIR VALUE CONFLICTS

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ABSTRACT

The Agenda 21 model consists of economic, social, and ecological considerations, which are to be balanced for the sustainability concept to be applicable. However, the model is silent on how value conflicts within and between each sphere is handled. These conflicts are investigated in connection with temporal and place dimensions in the three spheres. Anecdotal empirical evidence indicates that three spheres are insufficient and that cultural heritage should be added. Models of sustainability should explicitly address issues of conservation and utilisation value. An attempt is made to integrate all these qualities into an integrated model.

Key Words: Sustainability, Agenda 21, conflicting interests, intergeneration, intrageneration.

INTRODUCTION

Problems with using tourism as a development tool has been recognized for decades, see e.g. Young (1973) on general issues, and de Kandt (1979) on the social dimensions problems. In the Brundtland report, *Our common future*, (WCED, 1987) the need for sustainable development is scrutinised. Sustainable development is understood to be allowing actions that satisfy our present needs so long as they do not compromise the abilities of future generations to satisfy theirs. The report led to the Rio Declaration (UN, 1992) where it was further developed into Agenda 21. The model proposed views on sustainability in three spheres; the economic, the ecological, and the social, and has gained widespread acceptance in municipality planning. For example, in Värmdö kommun (a municipality in the Stockholm's archipelago) it is included in their vision project for 2030. (varmdo.se acc. 2009-10-30) The municipality officials considers that one of the most important actions to be taken in this direction is the development of sewage systems to connect the rather large areas of 'second homes' on the islands to a central sewage treatment facility in the neighbouring municipality of Lidingö kommun, which will even involve the transportation of raw sewage under water. (Doyon et al, 2009)

In tourism, the economic sustainability sphere points towards short- and long-term viable economic activities, that provides support for businesses in the local areas, and ensures that a sufficiently large part of the fruits of production stay or provide services within the local economy (Hall, 2002). The ecological sustainability sphere points toward functioning ecosystems, where tourism activities or operations do not deplete the ecosystem of its resources or services, e.g. effects on biodiversity, landscape wear from trails, litter, and the consequence of local emissions as well as the overall climate effects. (Hall, 2002, Pettersson & Svensson, 2005, cf. Emmelin, 2005) The social perspective includes the tourism industry's effects on the local society, as well as on its cultural artefacts, to ensure that each society can maintain its customs. (Hall, 2002)

Sustainable tourism is defined by The World Tourism Organisation as developments that "meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future … leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems" (WTO,. 1998, p.21). The conception of sustainable development is however problematic according to Harrison (1996), who points towards the vagueness of the terms sustainability and development, and the mess that comes from combining two vague terms. In the late 1990s, there were many attempts to address the problem. Garrod & Fyall (1998) note: "defining sustainable development in the context of tourism has become something of a cottage industry in the academic literature of late" (Garrod & Fyall, 1998, p. 199). Berno & Bricker (2001) find two kinds of sustainable tourism concepts; "as a process of tourism development and/or an outcome of tourism development" (Berno & Bricker 2001, p.3). Hunter (1997) suggests that the multidimensional four archetype format of Turner, Pearce and Bateman (1994) be imported to the sustainable tourism development area. Berno & Bricker find that the sustainable development conception is not directly transferrable to the field of tourism, since the latter have even more complexities than the former.

Along the lists of what should be addressed we find the timescale, level, beneficiary, conditions, what, norms to be encapsulated, area of application and activities to be covered (Luke, 1995, Wall, 1997, Berno & Bricker, 2001). Cater (1995) identifies tourists, host population and tourism organisations and the environment as stakeholders. Swarbrooke (1999) instead suggest the following set of stakeholders: the public sector, the tourism industry, voluntary sector organizations, the host community, the media and the tourist. According to Mannion (1992) a full picture requires understanding intergenerational and intragenerational aspects of sustainability, and also the need to specify for whom it is sustainable.

The Agenda 21 seems still to be the most wide spread model of sustainability. In this paper, we will investigate conflicts of interest within and between the spheres of Agenda 21, and if there is reason to settle for the Agenda 21 three spheres or if their structure suggest developing the model.

In many ways, there has been an increased interest in methods of measurement. Jones and Munday (2007) suggest using tourism satellite accounts in an input-output format as a way to assess impact of tourism. That and other popular methods like ecological footprints (Collins, Flynn & Netherwood, 2005) are not discussed in this paper. Also, problems of policy making structures and their implications are not discussed in this paper, but some ideas may be found in Svensson & Pettersson (2005), and especially in the chapters by Emmelin (2005), Grundberg (2005) and Svensson (2005). Also, stakeholder identification is necessary for every decision. Here stakeholders are seen as elements in a set and in this paper we are looking at those sets. Of course you need to analyse each stakeholder's view of each decision alternative.

Forming a valuation of individual conflicts in the Agenda 21 is a complex matter and is beyond the scope of this paper, since to go into it would violate the volume constraints of the paper. Here we analyse methods of identifying conflict areas. Values come into the actual solutions, but are not necessary in the conceptual work of this paper.

CONFLICTS BETWEEN SUSTAINABILITY ENDS

It is easy to envisage conflicts between economic activity and the other two spheres of the model. The quest for sustenance may well create pressure to adapt a new way of life, as it historically probably always has; every major technological change, *e.g.* the advent of railway transportation has created new patterns within the society, as well as a potential shift in economic significance of affected social groups and the creation of new groups parallel to the creation or restructuring of the local business landscape.

The advent of post World War II mass tourism clearly shows how economic activity affects ecological sustainability, *e.g.* on the fauna of the shores of the Balearic Islands and other Spanish seaside resorts where sewage was dumped directly in the oceans, which lead to a change in the conditions of life for those species whose habitat has been affected. Here, we can clearly see how both inter- and intragenerational un-sustainability is inflicted on ecology by intergenerationally unsound economic behaviour. It may also be viewed as intragenerational, if the villains are acting the way they do because of the incoming tourists.

It is also rather easy to see that ways of life have had impacts on the ecological sphere. One of the more significant climate changes according to meteorologists occurred as a consequence of the Neolithic revolution, when behaviour patterns changed from a hunter and collector way of life to a settlement way of life with farming and domestication of animals, which in turn changed the carbon dioxide emissions levels into the atmosphere, due to a change of land use. Obviously, it is here difficult to separate the social and economic aspects, since the new behaviour encompasses both. (Losjö, 2009)

Also it is quite difficult to clearly specify what it would mean to act in a way that is detrimental to the social sphere in terms of preservation and utilisation when it comes to preserving the social situation as it is. The reason behind this is that in the ecological sphere and at least that part of the economic sphere that is captured by material resources, there is a natural depletion of resources from utilisation. This holds for objects of a civilisation, like buildings and cultured landscapes, but it does not hold for the social organisation as such, which is really what the social sphere is about – the right to continue cultural life as it is. When it comes to intangible resources, there is no such competition for utilisation – one's usage does not preclude the neighbours' usage. Rather the other way around. If one treats someone as a friend, and thus uses that person's social capital, the capital increases, rather than depletes. Of course, this does not mean that the social sphere will always have sustainability. We have seen too numerous examples of the opposite. What it means is that its logic is rather different. It does not really make sense to view this from the intergeneration perspective – who would appreciate having exactly the same social settings as their ancestors? A friend who hasn't developed since primary school, is a rather depressing experience.

Sustainability within the economic sphere is focusing on the short term as well as the long term sustenance of people, i.e. it seeks to balance intergenerationally. If resources are ruthlessly exploited we cannot talk about sustainability but neither can we if people succumb due to famine. It is thus a trade off between resource utilisation for consumption today and resource preservation for tomorrow. Fredman & Jonsson (2005) discuss this in terms of utilisation versus preservation. Any utilisation today often lessens the possibilities of future utilisation and hence is a temporal consumption value conflict, at least in those cases where utilisation amounts to consumption of the resource qualities and perhaps quantities. It may well also be an inter-generational conflict, since allowing for future utilisation by no means

guarantees that anyone will harvest the fruits or utilise the resource. In many instances it is also a conflict between preservation of some resources or their immediate utilisation in production of others. One may here state that preservation must not preclude utilisation, even though this is the prototypical case. The issue is really whether utilisation depletes the resource or not.

CONFLICT BETWEEN PRESERVATION OBJECTIVES IN DIFFERENT SPHERES

Ecological and Economic Spheres

Preservation in the economic sphere is understood as long term economic behaviour, i.e. making sure that economic activity does not jeopardise the future utilisation of the resources engaged. Ecological preservation is rather self explanatory, involving e.g. national park designations, with issues like biodiversity. Many poor areas disrupt their ecological assets in the name of sustenance.

Ecological and Social Spheres

In the Emån waterway district of Kalmar Län (County) in Sweden, there were a rather large number of water mills, with channel system and other economic sites belonging to the agrarian epoch in Sweden. These have long since lost their economic significance and today are part of the cultural heritage of the area. Naturally, some of them have been abandoned and are more or less in ruin, while others are rather well kept. The area is being considered by the county antiquarian to be kept as a cultural heritage site. (Dedering, 2009) As a consequence the area is of interest for cultural heritage tourism.

However, this is also a migration route for trout spawning in the locality. For the fish, all water areas are best cleared of all obstacles, such as constructions in water like the dams and channels used in the transformation of energy in the agrarian society. According to the county ecologist, this is in the reproduction interest of the fish. (Dedering, 2009) As a consequence it is also in the interest of fishing tourism operators.

There is a preservation conflict between the social and ecological spheres, in that what enhances the preservation in the one is detrimental to preservation in the other sphere and conversely. As a consequence there is also a conflict between tourism operations related to respective spheres.

It is however not clear to me that the cultural heritage affects the social order and interaction. It is decidedly clear that the above mentioned mechanism for increase of social capital does not apply to the material traces of earlier civilisation, since these latter are clearly subject to depletion by use.

Economic and Social Spheres

Here, a prototypical example is when utilisation of cultural heritage objects are detrimental but deemed necessary in order to secure long term economic sustenance. Machu Picchu may perhaps pose as an example. As noted above, it seems difficult to properly conceive of the preservation of present social structures.

CONLICTING ENDS IN THE SAME SPHERE

Economic Sphere

In the economic sphere there are always competing interests for a given resource from industry competitors, as well as generic competitors. This occurs so frequently in what we understand as market based capitalism that I do not need to go into more detail here. It may be more or less affiliated with aspects within the social sphere, and if so, best discussed under that heading. From what I understand to be the perspective of the UN report, the sustainability issue here is only of interest as long as there are also power aspects involved, viz., some group, with definite problems in raising sufficient funds, is confronted by a strong actor, who is often external to the local economy e.g. a western tour operator, or an urban based operation exploiting rural sights. There is also a temporal conflict between utilisation and consumption, today against tomorrow. Under this heading we can consider any real estate development since it will always involve a conflict between the economic and another sphere, e.g. ecological.

In many cases, an economic conflict within a local economy is hardly separable from a social conflict, as the social and economic spheres will be intertwined. It may however surface as conflict between ethnic groups. For example, the Saami need for the mountains where their reindeer can get summer pasture, against the need of tourism operators wanting to utilise the mountains for climbing, downhill biking etc.

Ecological Sphere

In the Emån case discussed above, we can see a potential conflict of interest within the ecological sphere between trout and other species, which have benefited from the agrarian waterway installations. The trout would benefit from clearance of the installations, while other species may experience worsening conditions by the same action. Here, some kind of norm functioning as arbiter is required. Biodiversity may be one such norm, if all species are to be considered as equally valuable.

Social Sphere

At Gamla Uppsala in Sweden, the kings of old lie in burial mounds. These mounds have been very popular for sledge riding foremost among local families with children where it was an established way of life, but this action is now prohibited by the desire to preserve these iron age tombs. Here we see how the sustainability of a contemporary way of life is supplanted by preservation of cultural heritage which may even inhibit the aspect of tourism related to the visits by friends and relatives. This is a distinctly different kind of conflict. It is not one interest group against another, but in a sense, one group against an abstract collective. This indicates the need for a model that separates preservation as such from trade-off decisions. Within the ecological sphere it is species against species. In the social and economic spheres it is the stakeholder groups against each others. When it comes to heritage, the work of UNESCO points towards a interest group consisting of the entire world and its present and future inhabitants, and perhaps also the memory of those past.

RESULTING MODEL

The work of UNESCO points toward separation of heritage objects as such, i.e. cultural and natural heritage as candidates for sustainability considerations. This enables consideration for objects such as mountains in their own right, and not only as habitat for the species both flora and fauna living there. It also provides for a simpler analysis of the social sphere, dividing it into a material side and an intangible.

As a result we have a model which suggests trade-offs between present utilisation of resources within the three spheres, between the spheres, between preservation desires against both these dimensions, and preservation desires against each other. This, then, becomes a rather complex model of four spheres and two dimensions in each sphere. If we allow conflicts within each dimension and sphere – e.g. one economic use against another, we end up with matrix of 64 cells for investigation, instead of the Agenda 21 six cells. An illustration of a sustainability matrix is given in Table 1 below. This is really sacrificing simplicity for precision. From a conceptual point of view, this is hardly a problem, but from practical point of view, there may be a need to find ways to reduce complexity. That is, however, something to be developed in another paper.

Sustainability matrix

		Social Life Sphere		Social Heritage Sphere		Economic Sphere		Ecologic Sphere	
		Utili-sation	Preser-vation	Utili-sation	Preser-vation	Utili-sation	Preser-vation	Utili-sation	Preser-vation
Social Life Sphere	Utili-sation								
	Preser-vation								
Social Heritage Sphere	Utili-sation								
	Preser-vation								
Economic Sphere	Utili-sation								
	Preser -								
Ecologic Sphere	Utili-sation								
	Preser -								

Table 1. Sustainability matrix

CONCLUSION

When it comes to decision making about sustainability, the three-sphere model of sustainability points toward a trade-off between the social, the economic, and the ecological spheres. This paper has investigated the spheres of the model and found conflicts not only between spheres, but also within the spheres. Also, the analysis points towards a model with four spheres, where cultural heritage is separated from the social sphere. There are two rationales for this separation. The first is that whereas social aspects are interest group related, cultural heritage is collective and in many cases regarded as global, as evidenced from the work of UNESCO. The converse goes for natural heritage. The other is the intangibility of social life; where as cultural heritage is, at least to a significant part, of a material kind.

REFERENCES

Berno, T. & Bricker, K. (2001) Sustainable Tourism Development: The Long Road from Theory to Practice, International Journal of Economic Development, 3, 3, 1-18.

Cater E. (1995) Environmental Contradictions in Sustainable Tourism, The Geographical Journal, 161, 1, 21-28.

Collins, A., Flynn, A. & Netherwood, A. (2005) Reducing Cardiff's Ecological Footprint, A Resource Accounting Tool for Sustainable Consumption. Cardiff: WWF- Cymru.

Dedering C. Krock och Kompromiss – om att lösa värdekonflikter vid vatten, Lecture on Riksantikvariämbetets höstmöte 'Kulturarv och Vatten', Stockholm, 2009-10-13.

de Kandt E. (1979) Tourism: Passport to Development? Oxford: Oxford University Press

deKandt E. (1992), Making the Alternative Sustainable: Lessons from Development for Tourism. In V. Smith and W. Eadington (Eds.) Tourism Alternatives: Potentials and Problems in the Development of Tourism, Philadephia: University of Pennsylvania Press, 47-75.

Doyon, H., Asplund, I., Dufva, K. & Dahlqvist, S., Sandhamn, unpublished course paper, Södertörn university, 2009.

Emmelin, L. Det miljövårdspolitiska perspektivet in R. Pettersson and B. Svensson, (Eds.) Målkonflikter mellan natur, kultur och turism i hållbart utvecklingsarbete, ETOUR European Tourism Research Institute, U 2005:29, p.12-16, Östersund 2005
miun.diva-portal.org/smash/get/diva2:1658/FULLTEXT01 acc. 2011-09-19

Garrod B. & Fyall, A. (1998) Beyond the Rhetoric of Sustainable Tourism? Tourism Management 19(3), 199-212.

Grundberg, J. Med kulturpolitiska utgångspunkter in R. Pettersson and B. Svensson, (Eds.) Målkonflikter mellan natur, kultur och turism i hållbart utvecklingsarbete, ETOUR European Tourism Research Institute, U 2005:29, p.17-20, Östersund 2005
miun.diva-portal.org/smash/get/diva2:1658/FULLTEXT01 acc. 2011-09-19

Hall, C.M., Tourism planning: policies, processes and relationships, Person/Prentice Hall, Harlow, 2008.

Harrison D. (1996) Sustainable Tourism: Reflections from a Muddy Pool. In B. Archer, L. Briguglio, K. Jafari and G. Wall (Eds.) Sustainable Tourism in Island and Small States. Vol. 1 Theoretical Issues, London: Mansell, pp. 69-89.

Hunter, C. (1997) Sustainable Tourism as an Adaptive Paradigm, Annals of Tourism Research, 24, 4, 850-867,

Jones, C. & Munday M. (2007) Exploring the Environmental Consequences of Tourism: A Satellite Account Approach, Journal of Travel Research, 46, 164-172.

Krippendorf J. (1987) The Holidaymakers: Understanding the Impact of Leisure and Travel. London: Heinemann.

Losjö, K. Kulturmiljöer i förändrat klimat, Lecture on Riksantikvariämbetets höstmöte 'Kulturarv och Vatten', Stockholm, 2009-10-13.

Luke T. W. (1995) Sustainable Development as a Power/Knowledge System: The Problem of 'Governmentality' In F. Fischer and M. Black (Eds.) Greening Environmental Policy: The Politics of a Sustainable Future, New York: St Martins Press, pp. 3-20.

Mannion, A. (1992) Sustainable development and biotechnology, Envir. Conserv., 19(4), 297-306.

Pettersson, R. and Svensson, B. (Eds.) Målkonflikter mellan natur, kultur och turism i hållbart utvecklingsarbete, ETOUR European Tourism Research Institute, U 2005:29, Östersund 2005
miun.diva-portal.org/smash/get/diva2:1658/FULLTEXT01 acc. 2011-09-19

Svensson, B. Ur näringspolitisk synvinkel in R. Pettersson and B. Svensson, (Eds.) Målkonflikter mellan natur, kultur och turism i hållbart utvecklingsarbete, ETOUR European Tourism Research Institute, U 2005:29, pp. 21-24, Östersund 2005
miun.diva-portal.org/smash/get/diva2:1658/FULLTEXT01 acc. 2011-09-19

Swarbrooke, J. (1999), Sustainable Tourism Management, Wallingford, UK, CABI.

varmdo.se https://www2.varmdo.se/Resource.phx/plaza/publica/omkommunen/projekt/framtids-klimatberedning/oversiktsplan.htx acc 2009-10-30

Wall, G. (1997) Sustainable Tourism - Unsustainable Development. In S. Wahab and J. J. Pigram (Eds.) Tourism Development and Growth: The Challenge of Sustainability, London: Routledge, pp. 33-49.

WTO (1998) (World Tourism Organization) Guide for Local Authorities on Developing Sustainable Tourism, Madrid: World Tourism Organization.

UN, Report of the United Nations conference on environment and development, Rio de Janeiro, 3-14 June 1992.
http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm acc. 2009-10-30.
WCED, Our common future,
http://www.worldinbalance.net/pdf/1987-brundtland.pdf acc. 2009-10-30.
Young G. (1973) Tourism:Blessing or Blight? Harmondsworth, UK: Penguin.