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ICT and Sustainable Tourism Development

* Renu Malra

Abstract- The paper discusses an analytical study into uses and applications of Information and communication technology in the sustainable development of tourism. It explores the uses of different applications like Destination Management System, Intelligent Transport System, Tourism Information System, Global Positioning System, Geographical Information System, and Virtual Tourism. Different case studies have also been studied which justifies the uses of these techniques on different destinations and research examined how ICT can be used in the management of sustainable tourism.

Key words-eTourism, ICT, sustainable tourism

The application of ICT to sustainable tourism can be practical tool that the tourism professionals can adopt to manage the sustainable tourism development of destinations, as these days applications of ICT are showing a trend while choosing the destination for holidays. The uses of ICT applications are tremendous. According to Irish News Times(Sept 21, 2011) Tourism Ireland's Facebook fan base had grown six fold over the last year, leaving Ireland just behind the number Two destination, Britain and trailing the most "liked" Facebook destination, Australia. Hence people are now in the habit of follow the destinations while making the use of ICT applications best examples are tourism blogs, social networking, virtual tourism, RSS and Pod casting.

Some indicative ICT- based tools/applications which can be used to attain sustainable goals are Destination Management System, Intelligent Transport System, Tourism Information System, Global Positioning System, Geographical Information System, and Virtual Tourism. The paper discusses the implications of these tools in attaining the goal of sustainability at various level of planning and implementation. Sustainable tourism is tourism development that avoids damage to the environment, economy and cultures of the locations where it takes place. The aim of sustainable tourism is to ensure that development is a positive experience for local people; tourism companies; and tourists themselves. Under sustainable tourism, it may be unlikely to experience the kind of 'boom and bust' that led to the rapid growth.

Sustainable Tourism: Sustainable tourism is a heavily researched concept but in reality there has been limited implementation of the principles and practices of sustainable tourism for destinations. Adopting a destination focused perspective. In other words, sustainable tourism is considered to be tourism that is developed in accordance with the principles of sustainable development. However, if the

characteristics of tourism as both an economic and social activity are mapped against the fundamental elements of sustainable development, it become evident that there is a lack of 'fit' between the two concepts (see Table 1). In other words, the development of tourism is unable to meet sustainable development's fundamental principles, nor its development and sustainability principles. This lack of fit between tourism and sustainable development is (Sharpley 2000, 2009; Telfer and Sharpley 2008), summarized as follows:

Table 1:
Sustainable development and tourism: principles and objective

Sustainable Development Fundamental principles:	Tourism Compatibility
<p><input type="checkbox"/> <i>Holistic approach:</i> development and environmental issues integrated within a global social, economic and ecological context.</p> <p><input type="checkbox"/> <i>Future:</i> focus on long-term capacity for continuance of the global ecosystem, including the human sub-system.</p> <p><input type="checkbox"/> <i>Equity:</i> development that is fair and equitable and which provides opportunities for access to and use of resources for all members of all societies, both in the present and future.</p> <p><input type="checkbox"/> Millennium Development Goals</p> <p><input type="checkbox"/> Improvement of the quality of life for all people: education, life expectancy, opportunities to fulfill potential</p> <p><input type="checkbox"/> Satisfaction of basic needs; concentration on the nature of what is provided rather than income.</p> <p><input type="checkbox"/> Self-reliance: political freedom and local decision making for local needs.</p> <p><input type="checkbox"/> Endogenous development</p>	<p>Tourism is a diverse, multi-sectoral and fragmented sector, comprising innumerable small business and organisations. Hence, limited possibilities for an holistic approach.</p> <p>Tourism businesses typically focus on short-term profit objectives.</p> <p>Access to tourism as a social activity and an economic sector remains inequitable.</p>
Development objectives:	
<p><input type="checkbox"/> Poverty reduction</p> <p><input type="checkbox"/> Sustainable population levels.</p> <p><input type="checkbox"/> Minimal depletion of non-renewable natural resources.</p> <p><input type="checkbox"/> Sustainable use of renewable resources.</p> <p><input type="checkbox"/> Pollution emissions within the assimilative capacity of the environment</p>	<p>Tourism brings potential economic benefits; broader developmental benefits are not an inevitable outcome of tourism, and are dependent on local socio-cultural and political-economic conditions.</p> <p>Ecotourism - projects may contribute to basic needs and cultural sustainability.</p> <p>Low compatibility between tourism and development goals</p>
Sustainability objectives:	
	<p>Specific programmes (pro-poor tourism) may be targeted at specific groups. Local projects may minimise resource depletion and enhance environmental conservation.</p> <p>Tourism (i.e. travel) will inevitably be a major contributor of greenhouse gases.</p>

Requirements for sustainable development:	Limited evidence of 'responsible' tourism consumption in practice. 'Tourists are consumers, not anthropologists'. Some evidence of 'corporate social responsibility' and environmental programmes within some organisations; also benchmarking schemes. Limited opportunities for global alliances or global systems equitable access to and distribution of tourism resources.
<p><input type="checkbox"/> <i>Sustainable consumption:</i> Adoption of a new social paradigm relevant to sustainable living</p> <p><input type="checkbox"/> <i>Sustainable production:</i> Biodiversity conservation; technological systems that can search continuously for new solutions to environmental problems</p> <p><input type="checkbox"/> <i>Sustainable distribution:</i> International and national political and economic systems dedicated to equitable development and resource use.</p> <p><input type="checkbox"/> Global alliance facilitating integrated development policies at local, national and international levels.</p>	

Source: adapted from Telfer and Sharpley (2008: 36)

Holistic approach: under this approach all tourism development are considered under sustainable way under socioeconomic, political and ecological context. *Future:* due to the presence of small private sector and profit motivated businesses, the more businesses in this sector is concerned with short term profit considerations instead of the long-term sustainable development of the destination.

Equity: there is restriction in equitable access to the benefits of tourism due to dominance of local elite.

Development and sustainability objectives: tourism undoubtedly play an important role as a vital source of income, foreign exchange and employment, however the extent to which the more giant (sustainable) development goals such as satisfaction of basic needs, self reliance, and endogenous development can be achieved through tourism.

In particular, the achievement of sustainability in tourism is dependent upon a number of prerequisites, in particular the need for all tourists to become 'good' or 'responsible' tourists.

ICT and Tourism- Tourism as a technology based industry is now a well established body of literature since there is no doubt the ICT has brought about a metamorphosis of the tourism industry. ICT is not only a critical factor for destination competitiveness (Poon 1993; Sheldon 1997; Buhalis 2003; Buhalis and O'Connor 2006) but it is transforming the tourism system worldwide with regards to structure and operations (Buhalis and O'Connor 2006). ICT use in tourism has not only

defined methods of making existing processes more efficient but has provided new ways of performing these existing functions (Cronin 1996).

In essence, ICT is the technology required for information processing. These are innovative tools that form an integrated system of software and networked equipment that facilitates data processing, information sharing, communication and the ability to search and select from an existing range of products and services for an organization's benefits (Buhais 2003). It is the umbrella term that refers to any product that stores, retrieves, manipulates, transmits and receives digital data and how these differing applications work with each other.

ICT-based tools/applications can be grouped into three sectors: ICT equipment, software products and ICT services and carriers (Erdmann and Behrendt 2003). This can be further sub-divided into microelectronics, new functions, networks, ICT devices and interfaces, software, knowledge management, services and applications (Erdmann and Behrendt 2003). Today, ICT applications include cell phones applications, Internet, wireless, voice-over information processing, Geographical Information Systems, Global Positioning Systems, Location Based Services, convergence (data, voice, and media), digital radio and applications on demand. These ICT applications depend on a variety of products such as personal computers, net servers, mobile phones, cables, satellites and peripheral devices (screens, printers, scanners). These technologies are used by consumers, businesses, tourism marketing organizations, regulatory agencies, natural resource managers, local government, transport system managers, students and researchers, making their influence pervasive throughout the tourism system. It is all the ICT-based tools/applications that can be used by the tourism industry for business management, planning, development, marketing and distribution (Werthner and Klein 1999)

In tourism, the use of ICT and especially the Internet have changed the way in which information is collected, stored, distributed, processed and managed in tourism. It acts as a mechanism for reducing the information gap (Zehrer and Hobbahn 2007). Tourists are also demanding better, quicker and more reliable information (Gratzer et al. 2002) and using ICT is fulfilling this through the provision of timely, appropriate and accurate information. Destinations have benefited tremendously from ICT by using it to communicate market and promote destinations to potential tourists. It also serves as a mechanism for new distribution channels (Wöber 2003; Flouri and Buhais 2004) and increases communication and interaction with and between stakeholders (Buhais and O'Connor 2006).

ICT and Sustainable Tourism- ICT does possess the potential to mitigate tourism's negative impacts at the destination level (Liburd 2005). A search of the literature revealed that opportunities do exist for using ICT-based tools/applications for sustainable tourism and there are several ICT-based tools/applications which can be used by destination managers for these opportunities. These opportunities are namely information management, tourist satisfaction, and interpretation, enabling partnerships, community participation and sustainable consumption.

Table 2:

Collection of ICT-based Tools/Applications for Sustainable Tourism Development

ICT-based Tools/ Applications	Definition	Uses for Sustainable Tourism
Carbon Calculator	Used to determine carbon emissions based on the type and amount of energy consumed. The result of this calculation is known as the carbon footprint and is measured in tones of CO2	Environmental benefits result from the monitoring of emissions. Economic benefits can be realized if destinations demonstrate to the tourists that they are willing to pay more attention to the environment. They will gain more support from the environmentally-conscious traveler. Socio-cultural benefits are created by having a cleaner environment for the host community through the monitoring of emissions.
Community Informatics	An ICT-based tool/application focused on the design and delivery of technological applications for enhancing community participation and development through the use of e-mail, bulleting boards and networks all based on the Internet.	Socio-cultural benefits are enhanced through increased community participation in the decision making process. This develops social capital by empowering individuals and strengthening community identity and creating opportunities for economic development
Computer Simulation	A simulation of real world settings where models are designed to depict how a system operates over time	Issues too complex for direct observation, manipulation or mathematical analysis are simulated to investigate the effectiveness of alternative management practices. This leads to better decision by destination managers and impacts on the economic, natural and socio-cultural environments. Realistic images are produced for public consultation concerning visitor use of the community's space, rather than just identifying a hypothetical situation. This leads to better relationship with the tourist, tourist planner and host community and facilitates community participation in decisions which affect them

ICT-based Tools/ Applications	Definition	Uses for Sustainable Tourism
Destination Management System	A system that consolidates and distributes a comprehensive range of tourism products through a variety of channels and platforms	Facilitates the establishment of platforms for promoting economic benefits for the local communities, reducing socio-cultural tensions and negative impacts and highlighting the fragile eco-systems of destinations By providing co-coordinated online information, anywhere, anytime, DMS can lead to increased levels of tourist satisfaction by reducing search time and providing pertinent information about a destination
Economic Impact Analysis Software	Software used to monitor the economic impacts of tourism by providing information on the type and amount of spending	Information can be used to determine financial feasibility, choose among alternatives, increase the level of economic activity and lobby public support for tourism development
Environment Management Information Systems	A combination of computer hardware, software, and professional services that integrates disparate information about environmental issues in order to manage the environmental function within an organization. EMIS systematically gathers, analyses and reports business information related to environmental management such as waste tracking and emissions monitoring. This allows a company to track, refine, and improve its environmental management practice.	Disparate information about environmental issues such as tracking waste, monitoring emissions and conducting cost/benefit analysis are connected and integrated by the EMIS for analysis. This leads to better decision by destination managers and impacts on the economic, natural and socio-cultural environments

ICT-based Tools/ Applications	Definition	Uses for Sustainable Tourism
Geographical Information Systems	An information system that can capture, store, manage, manipulate, analyze, integrate and display large amounts of geographical data	Indicators for sustainable tourism can be identified, defined and measured. Information provided for identifying and designating suitable locations for development and three-dimensional images can be produced for proposed developments to evaluate proposals

Global Positioning System	Satellite-based navigation system that provides positioning, navigation and timing services to users in any weather conditions around the world 24 hours a day	By tracking tourist movements, plans can be developed to distribute tourists throughout the destination or at different times of the year so that the impacts on the environment can be managed and minimized
Intelligent Transport System	Telematic systems which provide detailed information on traffic, information from independent locations, traffic guidance and dynamic routing	A better ground transport system allows tourists to be more aware of their exact traveling times at the destination. This leads to wider usage of public transport rather than hiring private cars at the destination. This leads to energy savings and protection of the environment A better transport system also benefits the local community. This reduces traffic congestion at the destination. Host-tourist antagonism can decrease since locals may no longer be resentful of the tourist crowding the roads with their rentals or not understanding the driving rules and regulations of the destinations. People will feel more at ease since transport is relatively hassle free. ITS also provides information about accidents and the safest routes to take so it increases both the safety of the visitor and the host community
Location Based Services	An ICT- based tool/application that can collect and deliver information to and from a mobile device depending on the automatic location of the user. The aim of LBS is to provide targeted information to the user based on his/her geographic location. Such information include but is not limited to places to visit, eat and stay as well as emergency and health services	Information can be provided on the LBS thereby reducing the need for print material Messages can be sent to the tourists to create awareness and familiarize them with the culture and customs of a destination. This information can help the tourists make sustainable choices about which products to consume whilst at the destination. It not only makes them environmentally aware but also more conscious of the socio-cultural environment. This information helps them to develop a better respect for the local community and their culture and heritage. Information can be provided on promotions, places to visit, accommodation and other general

Tourism Information System	Data warehouses that manage business critical information in order to provide quality information on hand to assist in decision making by serving as a decision support system for destination managers	Provides more quality information on hand to assist in decision making by serving as a decision support system for destination managers	information such as safety and security and weather. This increases tourists' decision-making capacity and contributes to greater tourist spend, leading to economic benefits for the destination. It also reduces the volume of print material since maps and information on the destination can now be retrieved through the Location Based Services
Virtual Tourism	An ICT-based tool/application based on the Internet where anyone can experience the culture, history and other points of tourist interests in a visual and interactive manner without actually visiting the destination. An example of this include on-line guided tours of museums and heritage sites where the visitor can experience the destination without actually visiting the destination	It can be used as a substitute for destinations that have exceeded their carrying capacity, are fragile and in danger of being damaged by tourist activities. Tourists can be informed about a destination prior to their visit by having them do virtual tours of the destination. It can also act as a substitute for activities which are usually regarded as socially unacceptable such as hunting or sex tourism. Reduce tourist transport and hence have positive effect on carbon emissions	
Weather, Climate and Ocean Change Forecasting Software	Software used to monitor changes in the weather, climate and ocean	This information can be useful for destination managers in bidding for events, making decisions about proposed development, putting measures in place for hazards and risks associated with bad weather, provide tourists with updated information, energy management and other issues	

Source: Ali, A, 2009

The findings of this research demonstrated that if ICT is adopted by destinations for use in sustainable tourism development it can lead to great improvements in how

the sustainability is managed. It can be used for monitoring, reporting and measuring tourism's impacts. Destination managers would be provided with readily available and concise information on key issues for important sustainable tourism decision making. By having this information easily accessible to them they can now focus on truly developing the destination in a sustainable manner. Using ICT for sustainable tourism will enhance communication with the visitor and tourism businesses by building platforms where the community, tourist businesses and the tourists can share interests and contribute information to benefit the destination on sustainable tourism-related matters. This not only leads to tourist satisfaction but serves as a way of educating them. One such platform which can be developed is a destination dashboard which can facilitate a DMO in managing a network of stakeholders at the destination whereby these ICT-based tools/applications can be shared with tourism businesses. Request and queries can also be sent to the DMO via this destination dashboard so that they are more aware of the issues of the wide-ranging stakeholders and what is happening at the destination and thereby better able to manage and monitor. This facilitates co-ordination and engagement of diversified stakeholders in sustainable tourism and supporting relationships.

References-

1. Ali, A. and Frew, A. J. 2008. ICT for Sustainable Tourism Development – An Emergent Framework. In M. Sigala (Ed.), *Proceedings of the 2nd International Scientific Conference of the e-Business Forum: E-Business in Travel, Tourism and Hospitality 2008*. Athens: University of Aegean.
2. Ali, A. and Frew, A. J. 2009. ICT and Sustainable Tourism Development: A Literature Review. Paper presented at *Hospitality Information Technology Association Conference*, June 21-22nd 2009, Anaheim Convention Center, Anaheim CA, USA.
3. Ali, A. an investigation into information and communication technologies-based applications for sustainable tourism development of destinations, unpublished thesis, queen margaret university, 2009.
4. Buhailis, D. and Deimezi, O. 2004. E-tourism developments in Greece: information communication technologies adoption for the strategic management of the Greek tourism industry. *Tourism and Hospitality Research*, 5 (2) pp. 103-130.
5. Buhailis, D. and Law, R. 2008. Progress in information technology and tourism management: 20 years on and 10 years after the Internet - the state of eTourism research. *Tourism Management*, 29 (4) pp. 609-623.
6. Buhailis, D. and O'Connor, P. 2006. Information communication technology - revolutionizing tourism. In: Buhailis, D. and C. Costa eds. *Tourism management dynamics: trends, management, tools*. Oxford: Elsevier Ltd, pp. 196-209.
7. Buhailis, D. and Spada, A. 2000. Destination management systems: criteria for success. *Information Technology & Tourism*, 3 (1) pp. 41-58.
8. Buhailis, D. and Zoge, M. 2007. The strategic impact of the Internet on the tourism industry. In: Sigala, M., Mich, L. and Murphy, J. eds. *Information and Communication Technologies in Tourism 2007*. Ljubljana, January 24-26 2007, New York: Springer, pp. 481-492.
9. Cronin, M. 1996. *The Internet strategy handbook*. Boston: Harvard Business School Press.
10. Poon, A. 1993. *Tourism, technology and competitive strategies*. Oxon: CAB International.
11. Richard Sharpley, The Myth of Sustainable Tourism, CSD Working Papers Series 2009/2010 – No.4

14. Sheldon, P. 1997. *Tourism information technology*. New York: CAB International.
15. Sheldon, P., Knox, J. M. and Lowry, K. 2005. Sustainability in a mature mass tourism destination: the case of Hawaii. *Tourism Review International*, 9 (1) pp. 47-59.
16. Sharpley, R. (2000) Tourism and sustainable development: exploring the theoretical divide. *Journal of Sustainable Tourism* 8(1), 1-19.
17. Sharpley, R. (2009) *Tourism, Development and the Environment: Beyond Sustainability?* London: Earthscan.
18. Telfer, D. and Sharpley, R. (2008) *Tourism and Development in the Developing World*. London: Routledge.

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