

Agenda 21, the Internet and Globalization – Creating a Networked Sustainable Tourism Guidance System to Develop Sustainable Consumption and Production

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Abstract

This paper discusses the contemporary meeting of three large-scale systems or processes - Agenda 21, the Internet and globalization - and what this historical conjunction means for networking sustainable tourism development. It is important to understand this issue as there is now an unparalleled opportunity for local actors to do global business, and these three interacting forces shape the way that business will be done. For tourism stakeholders, a wide range of competitive advantages and constraints are becoming evident across the supply chain as they engage in each one of these processes. Those stakeholders who actively participate in the mosaic creation of a global green knowledge-based economy will ultimately benefit from their sustainable development-driven actions. But the learning curve to get on board this high-speed development engine is steep. Stakeholders require improved guidance and governance that emphasizes a change to Agenda 21 value systems and the development of environmentally and socially responsible administrative control systems of supply chain activity and destination management. This paper argues that there is a need for an overall (global to local) networked sustainable tourism guidance and governance system if stakeholders are to benefit from current opportunities, and if the sector is to play a positive role in socio-economic transformation towards a global green economy.

Introduction

This paper discusses the contemporary meeting of three large-scale systems or processes - Agenda 21, the Internet and globalization - and what this historical conjunction means for tourism stakeholders. It is important to understand this issue as there is now an unparalleled opportunity for local actors to do global business, and these three interacting forces shape the way that business will be done. For tourism stakeholders, a wide range of competitive advantages and constraints are becoming evident across the supply chain as they engage in each one of these processes. Those stakeholders who actively participate in the mosaic creation of a global green

knowledge-based economy will ultimately benefit from their sustainable development-driven actions. But the learning curve to get on board this high-speed development engine is steep. Stakeholders require improved guidance and governance that emphasizes a change to Agenda 21 value systems and the development of environmentally and socially responsible administrative control systems of supply chain activity and destination management. This paper argues that there is a need for an overall (global to local) networked sustainable tourism guidance and governance system if stakeholders are to benefit from current opportunities, and if the sector is to play a positive role in socio-economic transformation towards a global green economy.

The vast dimension of these issues gives rise to a complexity of this 21st Century paradigm that is completely overwhelming for most tourism stakeholders, including specialized academics, long-term institutional administrative career professionals, single issue consultants, etc., all of whom are overloaded with information in the course of their work. Beyond the confines of the linear rationale that justifies current economic growth, the three dimensional economy, environment and society problem set requires an holistic approach to understand the dynamic interactions and effects of these multi-stakeholder, multi-thematic, multi-sector, multi-level processes.

Therefore the paper starts with a description of large-scale systems taken from the overarching discussion of subject of sustainable development itself and moves towards the concept of the European Commission's *Tourism Learning Areas* approach, which addresses the issue of human potential development. The case of the UN Type II *DestiNet Partnership* to create a sustainable tourism information and communications portal for tourism stakeholders is used as an example of how these processes are being mapped to form such a guidance system. In conclusion, the paper deals with the implementation of the UN World Summit on Sustainable Development (WSSD) framework of programmes for sustainable consumption and production (SCP) for tourism stakeholders to be realized by 2012, arguing that it is impossible to develop the necessary on-the-ground good practices without using such an internet-based networked good governance guidance system as a pro-active tool to create knowledge networks of Agenda 21-aware stakeholders as the basis for sustainable tourism development.

It shows how this can be done on a joint market-public administration basis, so long as there are common multi-stakeholder processes set in motion to create the necessary information and learning channels, best practice dissemination programmes, sustainable territorial management and sustainable visitor flow systems. In accordance with the understanding of how large-scale systems operate, these processes must be underpinned by the promotion of a sustainable development value system.

Large-scale Systems and their Relevance to Sustainable Tourism Development

In the context of this paper, the phrase 'large-scale system' is used as a cybernetic¹ term to describe a vast set of multi-component processes that can be considered in totality as a coherent entity. Large-scale systems have various qualities in common, formed from a sub-set of 7 interacting systems:

1. evaluative or value system (VS)
2. communication system (CS)
3. hierarchical structure (HS)
4. system of governance (GS)
5. environmental control system (ECS)
6. system of reproduction (RS)
7. archetype for the role of a member (PS).

'In the science of large-scale systems a general mega-system model has been proposed, which embodies the "first" systemic principles, in other words the epistemological bases of systemic, cybernetic and information sciences (see Diagram 1). That mega-system, which is valid for any large-scale system, has a hierarchical structure according to the complexity of its systems and consists of the following seven systems, which in any case share relations of interdependence and interaction.'²

¹ Cybernetics is the interdisciplinary study of the structure of regulatory systems.

² (M. Decleris) Law of Sustainable Development DG Environment 2000 p129

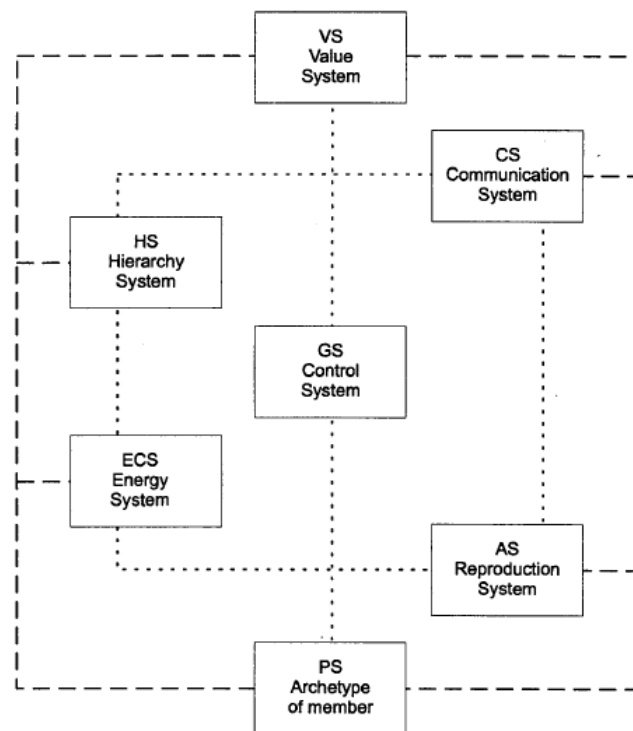


Figure 1 Cybernetic Model of a Large-Scale System

Decleris continues to describe these elements as follows:

‘The main system of the mega-system is the **evaluative** or **value system** (VS). With that system the mega-system recognises, works out, codifies and "consecrates" its values and principles, on whose basis it orientates itself towards its environment and by means of which it constantly nurtures the other systems of the Mega-system. By definition the value system is that with the largest content and consequently constitutes the fundamental long-term control element of the mega-system.

After the value system comes the **communication system** (CS) by means of which the mega-system gathers, processes, stores and distributes to its elements, in other words the rest of its systems, the information they need in order to realise its values.

Next, the system of **hierarchical structure** (HS) converts the information to objective tasks with a valid social distribution, in other words it uses the information to generate tasks which it assigns, in the order of importance, to the hierarchically arranged elements. From this distribution stems the fundamental structural order of the mega-system, consolidated by the distribution of **authority**.

Then comes the **system of governance** (GS), which exercises the appropriate short-term and medium-term control over the behaviour and course of the mega-system on the basis of rational decisions that coordinate the behaviour of all the mega-system's systems.

At the hierarchical level immediately below operates the **environmental control system** (ECS), through which the mega-system is linked with its physical space and regulates its coexistence with the relevant ecosystems, drawing energy and resources from them.

Then comes the **system of reproduction** (RS) of the members of the system, which ensures that the mega-system will survive for longer than the life of its members.

Finally, the spontaneous action of the human members of the mega-system is coordinated with the overlying systems by means of an archetype for the role of a member (PS).³

For further clarification, Annex 1 describes prerequisite features of the Agenda 21 large-scale system.

Three large-scale systems or processes - Agenda 21, the Internet and globalization

Agenda 21, the Internet and globalization all fit this description of a large-scale system. The three large-scale processes considered here have their own momentum and development dynamics, affecting global to local conditions. But how do these trends interact? Specifically, how do we develop these trends to ensure a positive outcome for all tourism stakeholders? Independently, and together they form defining elements of the even bigger mega-system of human societal development in its current capitalist mode of production.

Fitting them together, we can see that an Agenda 21 approach to sustainable tourism views the tourism sector as a part of the global economic system in complex interaction with the global resource base. The implementation of an Agenda 21 as a guidance system for a globalized tourism sector involves balancing natural eco-system requirements with socio-economic development. This balancing act requires understanding the way large-scale systems work in relations to contemporary problems such as climate change, resource depletion, social deprivation, etc. The complexity of gathering this knowledge and applying it globally was an impossibility prior to the advent of the internet, which now offers us the chance to develop a knowledge-based, Agenda 21-compliant global economy, as well as opportunities to rapidly develop and transfer a common value system to underpin responsible tourism sector development.

Globalization

We are all aware of how our species is undergoing a phase of rapid socio-economic and technical evolution. Underlying the nature of all economic, environmental and social transformation is the human population dynamic – an exponential growth curve starting at 1 billion at the end of the 19th century, now reaching 7 billion people, rising to 8 billion by 2020 and possibly stabilizing at 9-10

3 (M. Decleris) Law of Sustainable Development DG Environment 2000 p27

billion by 2050⁴. This remarkable growth has scaled up the global labour force, agricultural and industrial output, resource consumption and urban concentrations.

The global economy brings us all into a single economic process. It has opened up a world-wide market place in which an exchange of cultural knowledge is occurring that is leading to unprecedented levels of technical innovation, culminating in the current wealth of Information & Communications Technologies (ICT), energy and transport possibilities. This process has seen the original social organisation of family, kin and clan system based on hunter-gathering and agricultural labour transformed into approximately 200 nation-states, 500 global corporations, millions of SME and micro enterprises, and 7 billion consumers in a 500 year old history of institutional capitalist development held together by a protestant work ethic that espouses hard work and accumulation now that is to be rewarded later.

Agenda 21

This global growth spurt has re-kindled the Malthusian debate about finite natural resources in the form of sustainable management of the biosphere, initially elaborated in the early environmental awareness-raising in the 60s, then revised by the concept of sustainable development in the last three decades of Agenda 21. The tenuous Cornucopian belief still remains that we as a species can consistently expand the borders of resource constraints through innovative technological development⁵.

Whether this is true or not, what is clear is that in order to preserve the gains made through transport and communications infrastructure development, urban improvements and labour force education, the conditions of peace and then social education must met first. Otherwise a drift backward toward barbarism is inevitable, evidenced by the 40 or so conflict zones in the world, where poverty, ignorance, desperation and lack of freedom are the rule, and tourism is out of the question.

Secondly, prosperity needs to be realised for all, since if 8 to 10 billion people wish to live peacefully there cannot be a significant number of impoverished individuals - once again this would lead to barbaric degeneration of societies who cannot sustain their own. Many African nations have exemplified how attainment of wealth for the few whilst the majority are left in poverty has proved

⁴ http://esa.un.org/unpd/wpp2008/pdf/WPP2008_Executive-Summary_Edited_6-Oct-2009.pdf

⁵ As evidenced in the peak oil debate http://en.wikipedia.org/wiki/Peak_oil retrieved 31.03.10

non-viable in the long run, with Mozambique and Zimbabwe being clear recent examples of how tourism suffers when poverty replaces prosperity.

Thirdly and finally, the planet and its rich biological and cultural diversity must be maintained so that sustainable resource use can be achieved in the consumption and production processes required by our species as a whole. Without sustainable management of natural resources we would quickly reach the point of barbarism once more, with growing conflict over resources driving us toward protectionism and ruthless short-term expropriation policies.

These three conditions were in fact part of the slogan of the United Nation WSSD in 2002 – people, planet and prosperity – condensing the 1992 UN Agenda 21 message from Rio de Janeiro that set in motion a global Agenda for the 21st Century, encapsulated in the Millennium Goals Declaration in 2000 and the Johannesburg Plan of Implementation (2002)⁶. There is a global blueprint being designed to meet the challenges facing society as a whole. However, the implementation of this overarching plan is proving as challenging as the challenges, a worrying fact that should concern us all as some of these challenges have time frames, eg climate change, use of fossil fuels and key mineral resource use, food crises, population growth, etc ... In fact, the more powerful the force of economic globalization, the more urgent the need for responsible and sustainable responses to the socio-economic and environment problems

When looking at the difficulties of managing a large-scale process such as globalization, or implementing a large-scale system like Agenda 21 or the internet, we need to a) understand the general features of large-scale systems and then b) develop the elements of the system to match the needs of stakeholders, i.e., people who benefit or suffer from systemic processes.

From the large-scale system model presented above, what is evident is that *the value system is crucial to the coherence of the overall system*. Agenda 21 has a series of value propositions that need to be taken on board by stakeholders as guidance for their actions. The peaceful and just world of Agenda 21 (see Annex 1) is both a vision for stakeholders and a set of stakeholder values, which is often conveniently overlooked when difficult political and business decision are taken.

Secondly, a guidance and control system is necessary to counter the short-term ruthless development mentality that underlies our current socio-economic model. Agenda 21 implementation is only just beginning to develop administrative systems for sustainable development, as can be seen through the growing importance of sustainable development strategies, National Sustainable Development Councils, sustainable consumption and production

⁶ http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm retrieved 31.03.10

territorial planning monitoring and indicator systems, impact assessment and good governance processes. In the business world, certification and corporate social responsibility reporting processes act as parts of control systems, but these voluntary measure need to be formulated in relation to effective judicial legislation.

Thirdly, the implementation process needs to be both territorial and thematic, i.e. aimed at regions and topical subjects, eg, a local or regional destination such as the Algarve in Portugal, or a subject such as climate change or energy use. In both cases the business supply chains and their administration are key to the development of multi-stakeholder coherence.

The Internet

Similar rules also govern the development of the internet. We are in fact witnessing a revolutionary transformation of society that has led to a communications system that has established a global library of human knowledge providing the basis of the post-industrial information era, or knowledge-based economy. Knowledge gives economic, environmental and social advantages to those who have access to it, and are able to use it to guide practical actions. The development of ICT infrastructure is the foundation of transforming the way we educate ourselves, organise our working activities and how we spend our leisure time. In short the internet gives us the opportunity to transform society. It is therefore appropriate to relate this system to the globalization process and Agenda 21, processes which also look to transform society.

The world-wide web has come a long way since military technology from the 50s was harnessed by the Seattle Community in the US to create the first online user base in the late 1980s. The UK based GreenNet was the first NGO in the UK to link up to this process and bring internet access to the field of environmental conservation, but still the Rio Summit in 1992 was a paper-based process. This was in stark contrast to the World Summit on Sustainable Development in 2002, which saw 4,500 media correspondents using a 1000 computer terminals to relay the sustainability talks around the world. Almost ten years further along the technology development path, almost every individual in developed countries has the opportunity to go on-line on a personal internet telephone for under 50 Euros. Now millions of us are interconnected via a vast system of handsets, terminals and servers that spans the globe, allowing open access to multimedia information. We can see how the technology has created both a truly globalized market place and the opportunity to govern that market process of international production and consumption in a coherent manner.

Problem-solving in complex systems is facilitated nowadays by the way stakeholders can use information technology to link up their efforts. This network potential allows the deconstruction of

traditional hierarchical top-down management systems that no longer reflect the needs or reality of European governance. Instead, the Agenda 21 participatory approach to the problems of global change requires the use of self-regulating, self-organising individual systems grouped in interactive networks.

In these networks, the major stakeholders of the sector define their partners and thematic areas of intervention. In this complex system, the information technology currently available for networking permits the development of *system coherence*. Importantly, the overall large-scale system is guided by the information that flows *around* the networks, rather than coming from a particular source. This offers decentralised control and support mechanisms, governed by the rules expressed in the value system of the sector, ie the principles of sustainable tourism.

For example, local communities will produce tourism-related information that is as valid as to tourism management as information from the global level. Yet both levels can be informed by the same value system, and both levels can have access to a common information network. If both levels inform each other, the overall system enjoys a higher quality of information. Establishing this flow is part of networking or knowledge transfer, best achieved in Agenda 21-aware knowledge networks using ICT.

An Agenda 21 Networked Sustainable Tourism Guidance System.

The premise is that, in the face of complex resource and land use issues, the current tourism sector is insufficiently informed and lacks coherent administrative organisation for the management of its own success and growth⁷. Yet in order to implement sustainable development, stakeholders have first of all to know what to do, i.e., what is sustainable tourism and how do we do it? There is where the guidance system assumes primary importance. In the systemic model it can be defined as a mixture of the value system and control system.

For tourism sector stakeholders, this means understanding the rules of sustainable development, then processing them through the various sector specific global principles and guidelines from the Commission for Sustainable Development, World Tourism Organisation, United Nations Environment Programme and the Convention on Biodiversity. This information is augmented by further information from other sources – the European Union, national tourism policies, NGO recommendations, regional strategies, local ideas and finally personal experience. All these

⁷ EU Commission Communication "Basic Orientations for the Sustainability of European Tourism" COM (2003) 716 final

different sources of information contribute toward the value system and control system in a networked Agenda 21 Tourism Guidance System.

As the last paragraph shows, a series of programmes and policies addressing sustainability already exist. Similarly, elements of an organisational framework for sector sustainability also exist in the form of regional, national and international tourism administrations. However, the difficulty facing policy makers is the overwhelming complexity of the sector, its fragmentation, and its diverse set of problems. The question is how to systematically organise both these elements (policies and institutions) so that we can arrive at a model of the sector in which institutional bodies, businesses and employees, tourism destinations and their residents, and tourists themselves, all benefit from an effective set of government policies, programmes and market processes? To, answer this, it is evident that the guidance system must be a networked compilation, as it can then take into account the multi-dimensional issues raised above.

This paper limits itself to the description of the policies, programmes, processes or projects where the Agenda 21 system intersects with tourism supply chain globalization processes and internet-available information.

Implementing sustainable tourism first requires definition of its constituent elements. The approach taken here develops the principle components of large-scale complex systems, and then defines tourism sector processes. The elements below constitute the formation of an **Agenda 21 sustainable tourism guidance and governance system**. The model is indicative rather than exhaustive. Elements can be itemised in the following order:

1. Value system

- Agenda 21 – the Rio Declaration, Earth Charter, WSSD JPOI
- Millennium Goals Declaration
- UNEP/CBD Sustainable Tourism Guidelines
- Agenda 21 for the Travel and Tourism Industry
- Corporate Social Responsibility - Legal Regulations and Guidelines
- UN Global Code of Ethics for Tourism
- EU Sustainable Development Strategy
- National Sustainable Development Visions
- NGO socio-environmental advocacy campaigns

2. Communication system

- World Wide Web and ICT framework for:

- The Sustainable Development Meta-network
- Tourism Sector Information and Knowledge Networks
- Tourism Media activity

3. Hierarchical (Responsibility) structure

- Public authorities
- Corporate business and SMEs, including company shareholders, owners and managers
- Civil Society tourism-related organisations
- Resident communities & sector employees
- Tourists/visitors
- Mass media – consumers

4. Control System (System of governance)

- Stakeholder Forums based on the tripartite arrangements between private business, public authorities and major groups in each of the following processes:
 - UN Global Agenda 21-driven National Sustainable Development Plans
 - CSD/WTO/UNEP/ CBD sustainable tourism development process
 - CSR reporting and accounting systems
 - European Commission efforts for an integrated tourism policy promoted by DG ENTR
 - Member State Ministry/Department of Tourism national tourism strategies
 - Regional Tourism authorities territorial planning
 - Local authorities Local Agenda 21

5. Environmental control system

- CSD/UNEP/CBD conventions and agenda 21 monitoring systems
- The EU 7th Environmental Action Programme
- Habitats Directive - Natura 2000
- Sustainable Development Law
- National/regional environmental law and Impact Assessment tools
- Destination management monitoring and indicator systems
- Eurostat/EEA statistics and indicator system

6. Energy Systems

- Use of renewable energy sources
- Carbon offset mechanisms
- Sustainable Transport policies

7. System of reproduction

- Investment institutes
- Public assistance programmes
- General educational institutions
- Sector training institutes
- Company recruitment and induction
- Media influence
- Best Practice transfer
- Tourism Learning Areas
- Knowledge Networking

8. Archetype for the role of a member

- Training/Educational programmes for:
 - Corporate owners and managers (the responsible enterprise)
 - Tourism (state and private) sector employees (the responsible employee)
 - Consumers (the responsible tourist)
 - Public authorities (the responsible politician, and civil servant)

These policies and programmes have been developed as guidance on what should happen if the global tourism sector is to become sustainable. When joined together via the internet we can combine them into **a single large-scale ICT networked system that describes the global to local tourism supply chain in an Agenda 21 administrative network**. *Bringing coherence to all these diverse approaches is nothing short of the organisation of an ITC system that utilises the global information network potential to inform and guide all tourism stakeholders. The organisation and development of this guidance system is made possible via stakeholder co-operation in networks, state of the art information technology developments, and the maturity of global-local good governance mechanisms.*

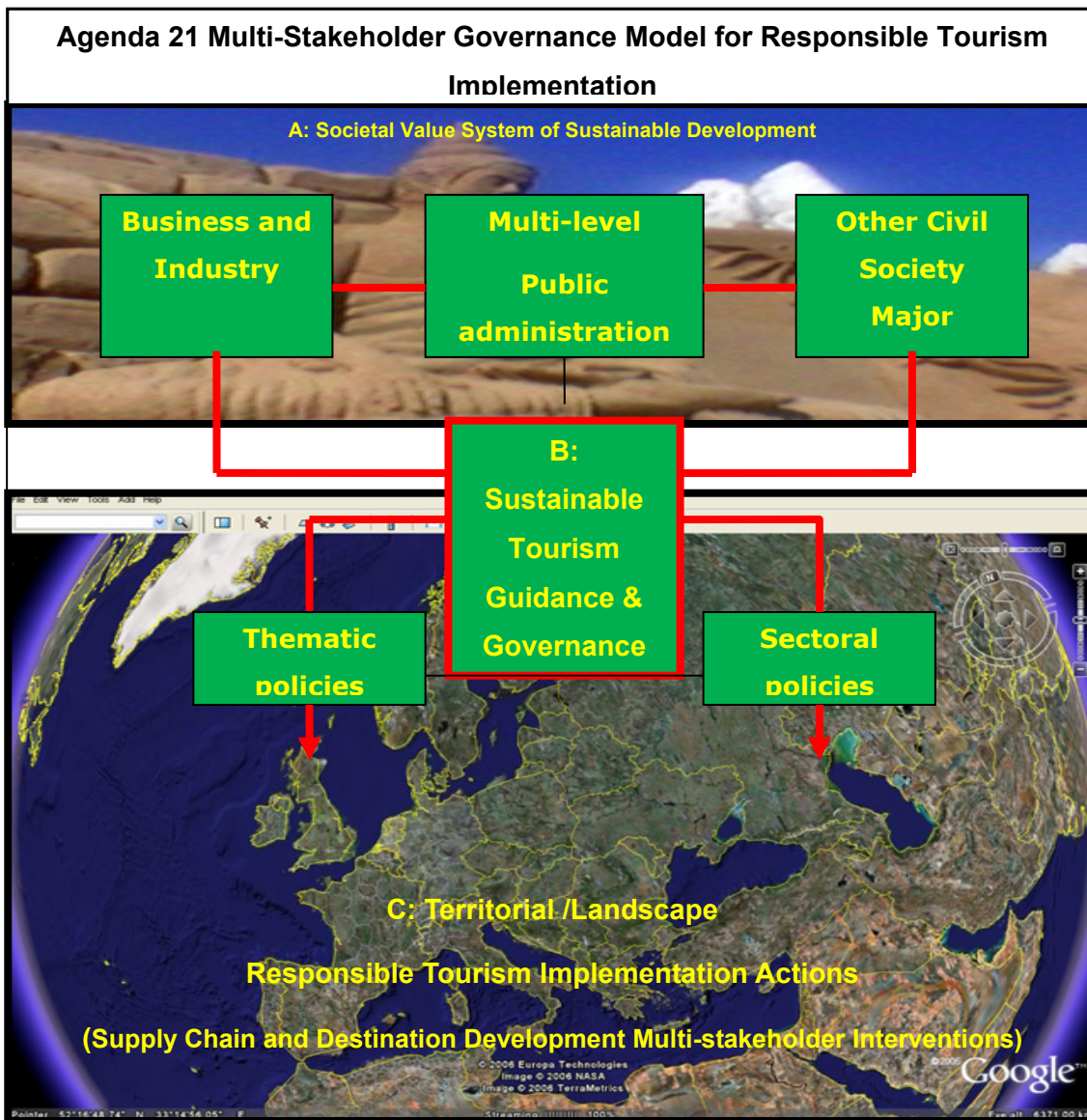


Figure 2 Agenda 21 Multi-Stakeholder Governance Model for Responsible Tourism - Implementation showing central role of a guidance system to ensure multi-stakeholder coherence

The above diagram condenses the systemic model into an ABC of sustainable development:

- a) Multi-stakeholder participation from all Major Groups drives sustainable development, so long as there is an underlying societal value system that joins them together.
- b) A central Guidance and Governance system provides coherence to the efforts of stakeholders
- c) Thematic and Sectoral policies, harmonized in the guidance system, impact upon the global territory. In the case of the tourism sector, these policies and programmes affect supply chain and destination development.

The DestiNet sustainable tourism information and communications portal – A Networking solution for tourism stakeholders

Part I of this paper has shown that sustainable development needs to be viewed holistically, and that its success depends on the development of a sound value and control system. For the tourism sector, a sustainable tourism process needs to be implemented by a partnership of public authorities, private business and civil society stakeholders, organised in tripartite knowledge networks that subscribe to this value system. These networks are guided by sustainability reporting, monitoring and indicator systems which provide transparent information on social, environmental and economic interaction for improved policy-making and decision-taking by all stakeholders. Part II of this paper examines one specific approach to developing such a guidance system for the tourism sector, namely the DestiNet partnership to create a Sustainable Tourism Information and Communications Portal as a solution to the complexity of networking sustainable tourism development.

Participatory, Knowledge-Based, Networked Sustainable Development

As much as the 1992 Rio process set in motion the issue of the development of monitoring and indicating systems for sustainable development, the WSSD promoted the concept of Type II Partnerships⁸ in recognition of this underlying need for multi-stakeholder participation collaboration, and cooperation if Agenda 21 implementation is to occur. A Type II Partnership formulation was conceived within the UN WSSD process as the ‘engineering component’ of the JPol (which had ‘Type 1 Outcomes’). That is, if you undertake to implement the agreements made in Johannesburg, you need to form multi-stakeholder partnerships that target specific sectors of the JPol. Johannesburg was in fact a reorientation of the earlier Rio de Janeiro UN Agenda 21 process, and succeeded in linking the issue of sustainable development to the UN Millennium Goals. In Europe, this equated to the EU SDS which was updated in 2007.

All these policy processes have generated libraries of good practice information on how to do sustainable development. The European Environment Agency (EEA), as information service providers to certain Commission Directorates, have formulated their ICT approach to track sustainable development, reporting at regular intervals on the state of Europe’s Environment.⁹ They are developing an internet-based information strategy that builds up a knowledge base on

⁸ http://www.un.org/esa/dsd/dsd_aofw_par/par_index.shtml retrieved 31.03.10

⁹ <http://soer2010.ew.eea.europa.eu/> retrieved 31.03.10

sustainable production and consumption in Europe. Their *EnviroWindows* programme¹⁰ represents a state of the art application of ICT to produce decision support systems for European stakeholders. Technical component features of this system include open source *Naaya* Content Management and map-based technology using Google Maps. The UN Type II DestiNet Partnership Portal is part of this ICT family of web-based decision support systems.

DestiNet History

The development of the DestiNet Sustainable Tourism Information and Communications Portal is an example of the how the processes of globalization, Agenda 21 and the Internet have converged in an attempt to face the millennium challenges. Sustainable tourism is now linked in the overall discussion of how to implement sustainable development. The UN WSSD 2002 Johannesburg process recognized the importance of bringing the sector into the forefront of implementing sustainable development, (cf Item 43 JPOI¹¹).

As a response to this, and also recognising the major and growing impact the tourism sector has on the environment, the EEA formed in 2003 a multi-stakeholder partnership with UN tourism stakeholders and experts to use their *EnviroWindows* technology to monitor tourism activity and impacts through the development of a sustainable tourism information Portal, named DestiNet. The partnership was registered in 2004 as a "UN Type II Partnership for Sustainable Development", with the *UN World Tourism Organisation* (UN-WTO), the *United Nations Environment Programme* (UNEP) and the *ECOTRANS Network for Tourism and Sustainable Development* as current partners.

DestiNet has been developed as a positive and practical response to the WSSD call for the implementation process to be undertaken via a multi-stakeholder partnership approach. It serves as a learning tool and decision support system for tourism stakeholders to undertake a wide range of sustainability actions in conjunction with other stakeholders. Ecotrans, as partners in the project and whilst working also with DG Enterprise on the implementation of Agenda 21 for European Tourism, added a specific cutting edge knowledge networking methodology developed to stimulate tourism sector innovation known as the Tourism Learning Area Approach¹².

¹⁰ <http://ew.eea.europa.eu/> retrieved 31.03.10

¹¹ http://destinet.ew.eea.europa.eu/tools/command_control_instruments/HTML_Page1065623211 retrieved 31.03.10

¹² European Commission **Innovation in tourism — How to create a tourism learning area — The handbook** Luxembourg: Office for Official Publications of the European Communities 2006 — XVI, 162 pp. — ISBN 92-79-00095-0

Tourism Learning Area Approach

Tourism Learning Areas (TLAs) were envisaged as multi-stakeholder administrative networking systems covering a given administrative level or thematic issue, bringing together life-long learning processes to development human potential to innovate and compete in a fast-changing, globalising and increasingly competitive market-place. The approach provides a coherent knowledge networking methodology to develop more competitive and sustainable tourism activity. The learning area idea, originating from a combination of the rapidly-advancing knowledge of regional development and field of education, has been applied to the tourism sector as a problem-solving tool and can be used to develop responsible governance structures¹³. The impetus to implement the concept of learning areas for the tourism sector was instigated in the human potential debate about the sector, in which – once capital injection have reached their limits or are lacking effectiveness - the process of learning is seen as the key to improving our individual and collective performance, especially at work, but also with regard to socio-cultural and environmental issues. The process was applied to the tourism sector in the high-level working group created to develop the Communication *Working Together for the Future of European Tourism*¹⁴.

From the stakeholders` viewpoint the key to knowledge is learning, and from the administrators viewpoint, for sustainable development to occur, educational and learning processes must be strategically analysed and integrated with new IT opportunities and with the local to global-shaped economy. This process recognized that learning must be organised efficiently at a regional or thematic level if we wish to see qualitative, quantitative and sustainable improvements in stakeholder activity. From this process, the Commission, via DG Enterprise`s Tourism Unit, developed its handbook called *‘Innovation in Tourism - How to Create a Tourism Learning Area*¹⁵.

The Definition of a Tourism Learning Area:

‘A Tourism Learning Area (TLA) is a concept of a multi-stakeholder, inter-sectoral, problem-solving approach aimed at improving SME/micro-enterprise performance and human potential in the tourism sector at the destination level.

The TLA approach engages a broad range of regionally based stakeholders, bringing them together in a top-down/bottom-up process to form coherent information and cooperation networks.

When structured as the primary regional tourism sector knowledge network, a TLA can address contemporary tourism sector challenges by developing inter- and intra-organisational collaboration alongside a set of holistic learning opportunities.

¹³ This was realised in the Life-Long Learning Regions concept developed by the Commission via CEDEFOP

¹⁴ ‘Working together for the future of European Tourism’ Brussels, 13.11.2001 COM(2001) 665 final

¹⁵ Ibid #11

These are aimed at continuous improvements in labour competences and organisational management, in order to foster better entrepreneurial quality, innovation, competitiveness and sustainability.¹⁶

This learning process takes the form of public information and market-place exchange. The tourism learning area concept is based on the idea that stakeholder partnerships, fora and networks are identified alongside 'learning-experience marketplaces', so that learning experience providers and learning-experience clients can meet up efficiently, either formally or informally, face to face, on the internet, through books, film, radio, etc to exchange knowledge.

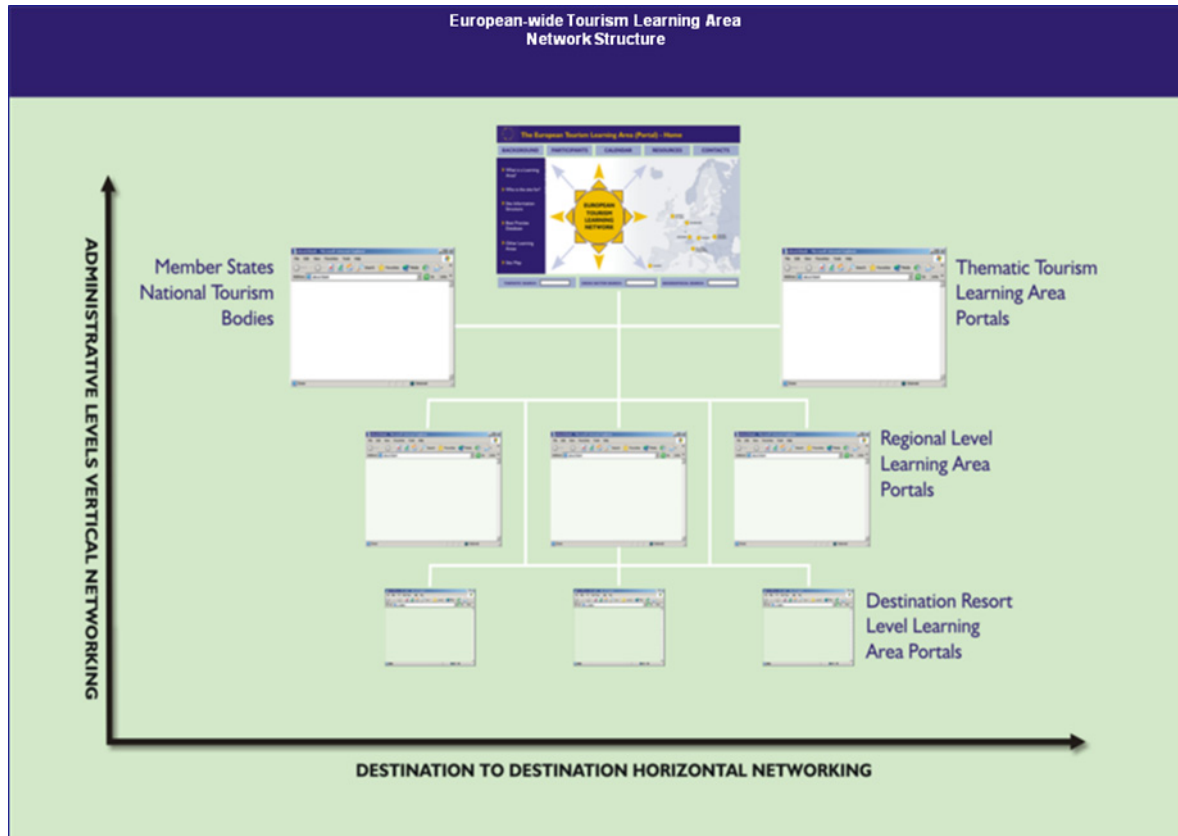
The DestiNet portal acts as a technical networking tool to link these providers with their clients, eg by identifying stakeholders providing learning experiences (such as universities, colleges, training programmes, etc,) then matching them to stakeholders who wish to be clients of these experiences (students, SME & Micro enterprises, administrators, consumers, etc).

Since 2005 a coherent international content structure for DestiNet has been developed, based on the UNEP/UNWTO publication '*Making Tourism More Sustainable, a Guide for Policy Makers*' 2005, and more recently, the Global Sustainable Tourism Criteria, which can be seen as representative examples of the creation of a value system for sustainable tourism development. Sample information has been uploaded (e.g. all sustainable tourism certificates worldwide, eco certification in Austria, various publications,).

The establishment of public access good practice material and a market place for learning in a Tourism Learning Area requires efficient use of ICT – essentially in the form of a portal that links cooperating organisations into a common knowledge networking process. After 7 years and an estimated 500,000 Euros investment, the DestiNet ICT Portal now provides a working tool for any stakeholders in Europe to implement the Tourism Learning Areas approach, and is currently being applied to over 18 different knowledge networking processes in the tourism sector.

¹⁶ TLA Handbook p18 EC 2006

Figure 3 European Tourism Learning Area network structure – note the possibility exists for decentralized vertical and horizontal knowledge networking between stakeholders, with one Portal structure for all administrative levels



DestiNet Portal Technical Characteristics

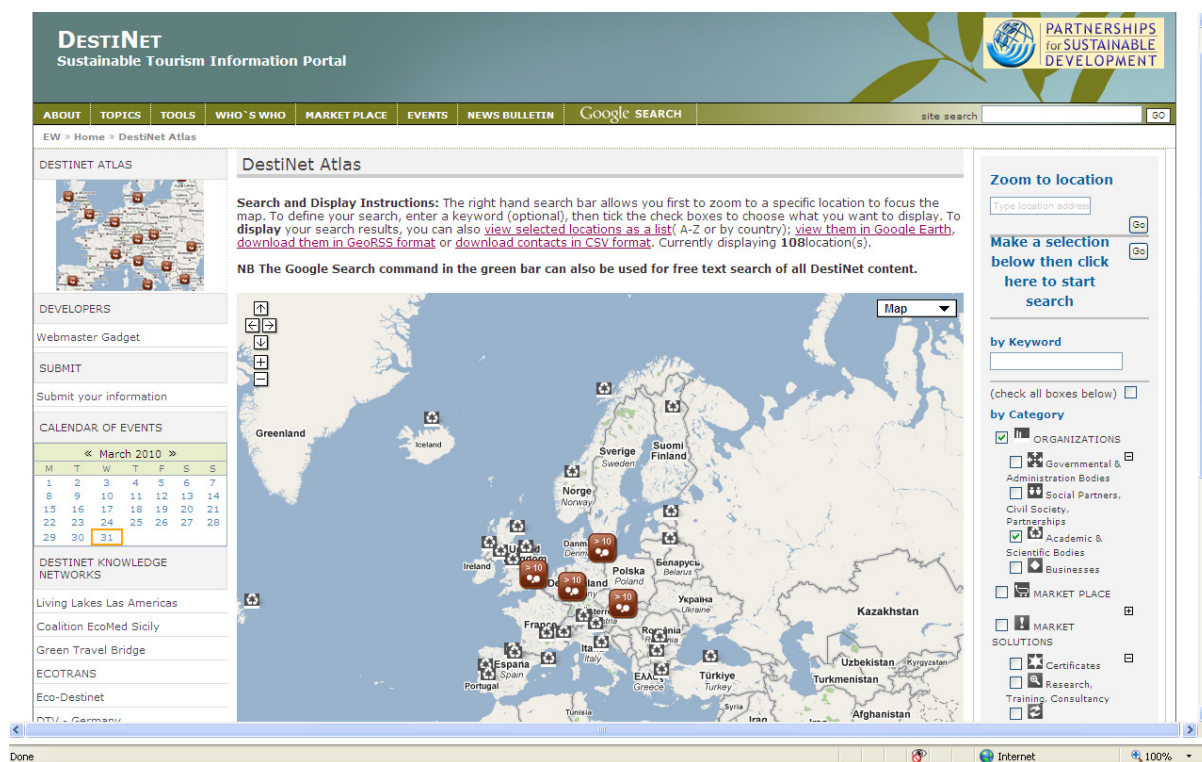
The Portal is designed as a common space for tourism administrators, businesses, NGOs, consultants and academic bodies to map and develop more sustainable destinations and tourism supply chain products/services, drawing from a global knowledge base of best practice information. Users can upload their own information, or search and display any content related to sustainable tourism from local to global level. The DestiNet Portal comprises of a wide range of on-line tools, and is a content management system that acts as:

- a map-based market place for sustainable tourism products and services at any operational level in any part of the globe
- an information resource on sustainable tourism, accessible by topic or by territory
- a best practice library of examples how to implement sustainable tourism
- a stakeholder listing and mapping system

- a communications tool, disseminating news and events, hosting on-line forums, offering bulk emails, user feedback and ratings features, and RSS and XML feeds
- a quality assessment system and clearing house for identifying and avoiding greenwash
- a workgroup tool, allowing website linking, collective online editing of documents, folder content administration, crowd data collection methodologies and networking administration
- a website content provision system, using iFrame technology to run various portal features on several different websites
- a multi-lingual interface to global information, offering a choice of 19 different languages with translation facilities.

The combination of these and other features make DestINet a unique and powerful mix of public access and market access information tools, using the public access features as quality control systems for avoiding green wash in the market place, and giving coherence to stakeholder actions to develop sustainable tourism consumption and production. A recent application of the tool was to establish a European-level Learning Area on Climate Change and Sustainable Tourism for NTOs, in which the relevant stakeholders and sustainability implementation tools are brought together to support governments and businesses in their transition to more sustainable consumption and production working practices in the face of climate change impacts.

Figure 4 DestiNet Sustainable Tourism Information and Communications Portal – A View of the DestiNet Atlas, which acts as a mapping tool for tourism stakeholders and sustainable products and services



Networking a Framework of programmes for sustainable consumption and production for tourism stakeholders

At the UN level, work has been going on with regard to the implementation of the UN World Summit on Sustainable Development (WSSD) framework of programmes for sustainable consumption and production (SCP), which will reach its climax in 2012¹⁷. The follow-up action, known as the Marrakech Process¹⁸ created a series of task forces to implement SCP, but progress has been slow. UNEP and the UNWTO work closely together in the UN International Task Force on Sustainable Tourism which recently produced a declaration in Marrakech on moving the sector towards sustainable consumption and production¹⁹. The Task Force for Sustainable Tourism²⁰ has itself lacked a certain level of coherence with other similar developments (such as the development of the Tourism Sustainability Council), a problem that has beset administrations at all levels, as the urgency of the WSSD commitments fade into a distant and complicated decade-old memory.

¹⁷ http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIChapter3.htm retrieved 31.03.10

¹⁸ <http://esa.un.org/marrakechprocess/> retrieved 31.03.10

¹⁹ <http://esa.un.org/marrakechprocess/tfsustourism.shtml> retrieved 31.03.10

²⁰ <http://esa.un.org/marrakechprocess/tfsustourism.shtml> retrieved 31.03.10

However, a global 10 year framework of programmes document has reached its 3rd draft²¹, and simultaneously, with multiple global crises shaping and sharpening policy-making, it is increasingly recognised that the development of a *global green economy* can be viewed as a means to ensure sustainability in all sectors in national and regional economies²².

The idea that no single-sector solution will lead to sustainability influences tourism sector sustainable development, lending to the cross-sectoral development concepts that are frequently associated with sustainable tourism development. By participating in the development of the green economy, tourism can play a positive catalytic cross-sectoral role to improve the sustainability of several related sectors such as agriculture, energy, transport and construction, as well as contributing to its own sustainable sectoral development. In such sustainable consumption and production processes, the tourism sector should therefore be considered as a key contributor to a green economy approach that promotes economic recovery and also assists less developed countries in reaching the Millennium Development Goals (MDGs), and greening their economies. Such a process requires high levels of networking across sectors if this is to be achieved.

At the European level, the European Commission recognised the issue of sustainability not just in the tourism sector but across the European territory as a whole, and realised that IT-generated knowledge is the key to improving human potential sufficiently enough to realize improved competitiveness and more sustainable development activity²³. Improved and more accessible information flows lead to greater levels of knowledge among stakeholders, who are then in a position to develop wisdom, which in turn leads to better strategic judgment, innovation and greater competitive ability. It has its own SCP processes led by DG Environment²⁴ that require the involvement of a wide range of stakeholders if SCP is to be realised in European countries.

An ITC Guidance Tool to develop Tourism Stakeholder Sustainable Production and Consumption Actions

But in this complex and rapidly changing economic, environmental and social landscape, how can individual and institutional tourism stakeholders become aware of policy developments and then begin to act more sustainably? In accordance with a large-scale systems view, learning through networking must be seen as the key, as it can transfer positive (responsible) stakeholder value

²¹ <http://esa.un.org/marrakechprocess/draft10YFPIInput.shtml> retrieved 31.03.10

²² <http://www.unep.org/greeneconomy/> retrieved 31.03.10

²³ EU Renewed Lisbon Strategy 2007

²⁴ http://ec.europa.eu/environment/eussd/escp_en.htm retrieved 31.03.10

systems and provide good practice guidance and improved governance. The application of ICT in the DestiNet Partnership at the global and European levels shows how the Tourism Learning Area knowledge networking approach that complements the technical functions of the DestiNet Portal provides both a comprehensive methodology and functional tool for tourism stakeholders to develop a framework of programmes for sustainable consumption and production both in the tourism supply chain and at destination or regional level.

As the history of DestiNet indicates, the portal has been developed as a cross between the global level WSSD SCP implementation programmes and the European level actions to create Tourism Learning Areas (TLAs) as international, national and regional or thematic guidance systems for tourism stakeholders. The development of SCP must be conceived of as a multi-stakeholder, multi-level, multi-sector process that has local to global connections. It is inconceivable that stakeholders can engage in such a process without ICT tools that provide coherence to the multiplicity of activities inherent in SCP development.

In practice, for example at the regional level, a learning area coordination body creates a regional knowledge network around a tourism SCP theme, which then needs to be shaped in virtual reality – i.e., in the form of a regional tourism learning portal. This web-based knowledge network, with its assortment of administrative department representatives and educational institutes, is then used to underpin the innovative and competitive abilities of SMEs and micro-enterprises in a given area. A green map of stakeholder activities can be produced to provide a common vision of the reality of SCP implementation in that area.

At this regional level, the TLA model promotes universities and similar institutes as learning area co-ordinators of multi-stakeholder co-operative actions undertaken by government, businesses and civil society. The model requires the complex mapping of stakeholders, their collective resources, products and services, and their interactions. This can only be done with the internet, requiring an independent portal to link all the existing websites in a given area.

But even though universities are given a central coordinating role, the multi-stakeholder approach requires a joint market-public administration participation. Such an alliance of stakeholders can set in motion common multi-stakeholder processes to create the necessary information and learning channels, best practice dissemination programmes, sustainable territorial management and sustainable visitor flow systems. In each destination a key strategic programme for SCP within a global sustainability framework needs to be defined under the leadership of a local, regional or national public authority, backed by and active business sector which is ultimately is a key beneficiary of the process.

Linking Tourism and Environment Administrative Bodies to Develop SCP

Finally, in relating a tourism guidance system to a governance system, The DestiNet Type II Partnership approach to the implementation of sustainable development attempts to bridge the institutional governance gap that exists between the administration of the tourism sector and the administration of the environment. This gap exists at all governance levels, i.e. global, sub-global, national, regional and local. A green economy requires integrated territorial governance, so these horizontal administrative processes can be linked across department and up and down the governance chain of command. Good governance is central to the development of SCP, but administrators themselves need ever-improving decision support and communications systems to do their jobs well at this current pace and size of global change processes.

The DestiNet Partnership, by bringing together tourism stakeholders with environmental administrative bodies, demonstrates how other international entities and national administrative bodies should be encouraged to develop greater coherence between economic and environmental departments. National Tourism Administrations need to be supported by their national departmental counterparts who deal with the implementation of Sustainable Consumption and Production (SCP) and regional development in general, and in turn can support tourism sector environmental and economic initiatives where appropriate.

Conclusion

In conclusion, this paper has used the concept of large-scale systemic analysis to understand how three contemporary international processes - Agenda 21, the Internet and globalization – are influencing sustainable tourism development. These three interacting forces are shaping the way that business is been done, offering both opportunities for local actors to do global business, and bringing global problematic to local development. The scale of these issues makes them so complex that an holistic approach is necessary to understand the dynamic interactions of these multi-stakeholder, multi-thematic, multi-sector, multi-level processes.

Stakeholder need to learn to adapt to this high speed, hi tech global business development engine, which itself requires improved governance. A change to Agenda 21 value systems and the development of environmentally and socially responsible administrative control systems is fundamental to the process. This paper has argued that there is a need for an overall networked *sustainable tourism guidance and governance system* if stakeholders are to benefit from current global opportunities, and if the sector is to play a positive role in socio-economic transformation towards a Sustainable Consumption and Production.

Therefore the concept of the Tourism Learning Areas approach, which addresses the issue of human potential development and provides a coherent knowledge networking methodology, was elaborated to show how complex learning needs can be met. Knowledge networking is key to SCP, and the TLA approach delivers both a framework and tools to improve stakeholder knowledge of SCP implementation. The case of the UN Type II DestiNet Portal being development as a sustainable tourism information and communications e-tool for tourism stakeholders is used as an example of how these processes are being mapped to form such a guidance system. DestiNets` global Green Market Place for Sustainable Tourism Products and Services provides an ITC tool to realise the business of going green. Its destination development & management tools provide administrators with the know-how and best practice examples to guide their supervision of tourism SCP development. The portal gives both groups of stakeholders` access to a common Agenda 21-compliant value system that underlies this process.

Finally, the paper has focused on the implementation of the UN World Summit on Sustainable Development (WSSD) framework of programmes for sustainable consumption and production (SCP) for tourism stakeholders, showing that the necessary supply chain and destination level good practices need to be supported by using such an internet-based good governance guidance system to create knowledge networks of Agenda 21-aware stakeholders as the basis for SCP development. It showed how this can be done on a joint market-public administration basis, so long as there are common multi-stakeholder learning processes set in motion to create information channels for best practice dissemination programmes, sustainable territorial management and sustainable visitor flow systems.

SCP has to be both a publically supported and market-driven process: greening of supply chains and destinations not possible without this dual level of activity. As such the globalization process can be transformed, destination by destination, at each supply chain link, and across policy-making departments through implementation of coherent knowledge networking systems. However, with the fundamental awareness of large-scale systemic thinking in mind, stakeholders must place emphasis on developing this guidance system primarily to transfer of the *value* system of SCP to the knowledge networks of stakeholders who are ultimately responsible for SCP implementation.

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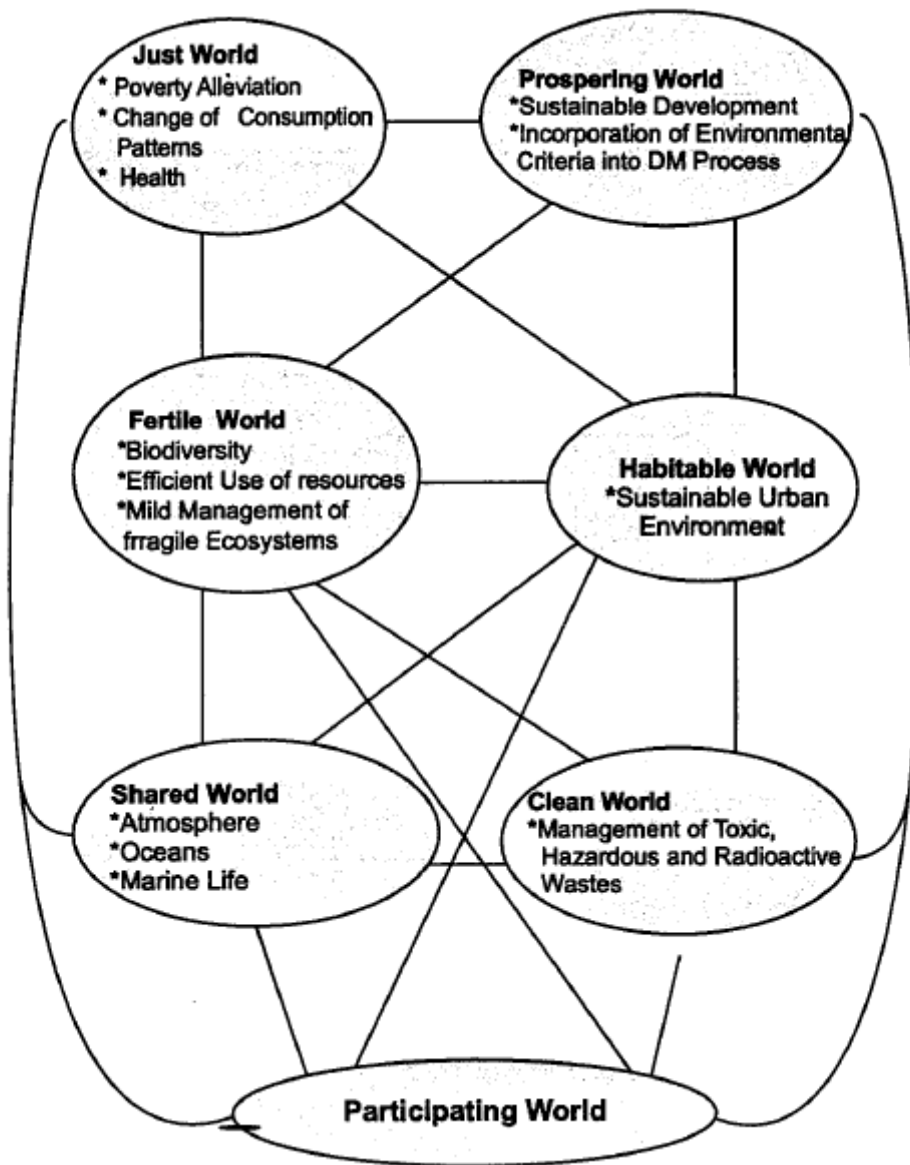
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Annex 1 – Establishing the value system of sustainable development

Extract from the Law of Sustainable development M Decleris DG Environment 2000 p132-133

Sustainability I:
(Practical System of Agenda '21)



Sustainability II:
(Logical Prerequisites of Agenda '21)

