Eco-tourism and collective learning: an institutional perspective

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Abstract: Eco-tourism covers a wide range of environmental, cultural and social criteria intended to improve the regional economic development in tourism regions. Most private and public instruments make use of certification programmes to overcome information asymmetries between tourists and suppliers. The paper presents arguments why certification programmes will not be sufficient to distribute necessary information and why it is necessary to extend theoretical analysis based on neoclassical institutional economic models with the help of concepts on collective learning. By describing and comparing four case studies, the paper shows the limits of existing institutional approaches to improve collective learning.

Keywords: eco-tourism; sustainable tourism; institutional economics; collective learning.

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1 Introduction

Despite the negative impact of terror attacks after September 11, 2001, tourism is still a fast growing sector. By 2000, worldwide spending on tourism had reached over $5 trillion, and the industry was generating, directly or indirectly, 11% of the global GDP. According to statistics of the World Tourism Organisation (WTO), tourism and travel is the world's leading export-earning industry [1]. Thus, it can hardly surprise that tourism is seen as one of those few future sectors creating development potential to poor countries favoured by climate, natural resources and cultural background [2–4]. Simultaneously, experts in environmental sciences criticise the increasing relevance of travel and tourism as source for several local and international environmental damages [5,6].

Starting in the 1970s, new forms of tourism have been developed to reduce the negative impact on the environment and indigenous culture [7,8]. Firstly, these changes only attracted the attention of small groups of environmentalists and adventurers. But in the early 1990s, *eco-tourism* including nature tourism was hailed as the fastest growing sector of the travel and tourism industry [9]. The International Year of Eco-tourism in 2002 accompanied by several regional forums and a World Eco-tourism Summit in Quebec City in May 2002 illustrated the attractiveness of this way to spend leisure time [10]. Despite these optimistic perspectives, scientific assessments came to ambiguous results, whether eco-tourism is really the key to reconciling environmental objectives and regional development needs in developing countries [11,12].

One major barrier to expansion of eco-tourism refers to problems of information asymmetries. While in many other consumer markets environment-friendly products can be separated by consumers through identification of labels with widely accepted criteria, this transparency is still missing in markets for eco-tourism. In this paper, it is analysed why the usual economic recommendations to overcome information asymmetries – signalling or screening – alone do not suffice in case of eco-tourism, if additional institutional incentives for collective learning processes are missing. Thus, we will investigate a cause–effect relationship between institutions, including social norms, collective learning processes and market distribution of eco-tourism. The paper follows four steps. In Section 2, the general context of global tourism markets is introduced. This serves as framing for the identification of specific characteristics of eco-tourism and the particular problems of information asymmetries in this market segment (Section 3). In Section 4, the theoretical framework to analyse these problems is presented extending the usual argumentation of neoclassical transaction cost models by approaches of evolutionary concepts of collective learning. Finally, in Section 5, this concept is applied to four case studies revealing the strengths and shortcomings of existing eco-tourism labels.

2 The context: global tourism markets

Tourism and travel are seen as the major export-earning industry in the world. Within this industry, however, structural changes took place during the last decade. For a long time, domestic tourism in North America and Western Europe was the dominating way of spending leisure time and doing business with tourism. Estimations referred to nearly 90% domestic demand of all tourism [13,14]. Many arguments on globalisation of tourism and its negative environmental and cultural impacts are based on recognitions of increasing numbers of far-distance travel and longer stays in countries hitherto not visited as countries of destination. Looking at a current ranking of major exporters and importers (2001) in Figures 1 and 2, however, Western Europe and North America are still representing more then 60% of all travel services with Asia gaining importance. Forecasts, however, argue that South and East Asia will remain the regions with highest growth rates in international travel with China being the dominating country of destination in 2020.

Figure 1 Top 15 ranking of tourism exporters

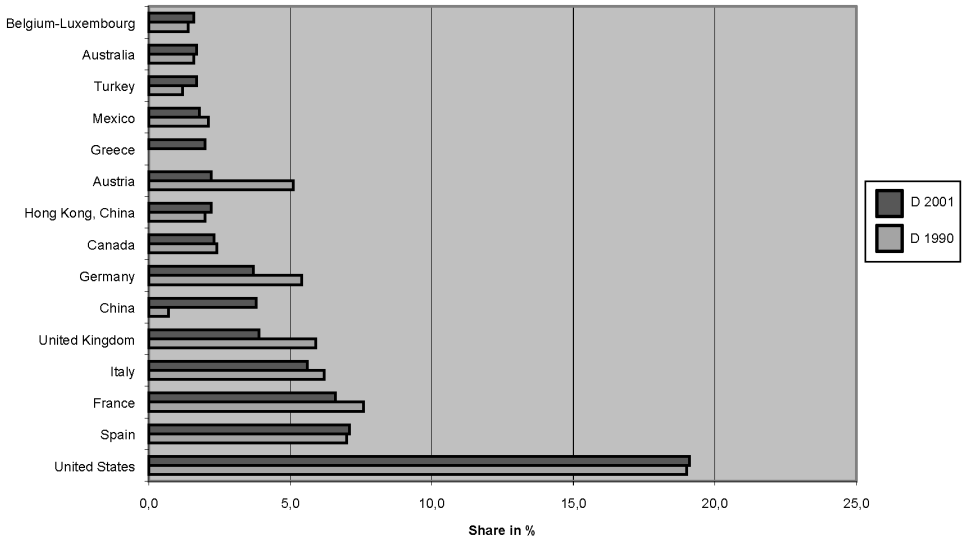
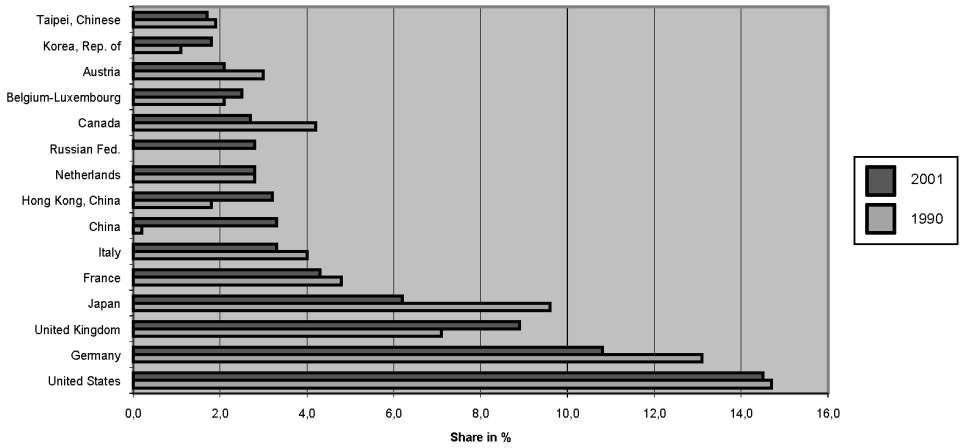
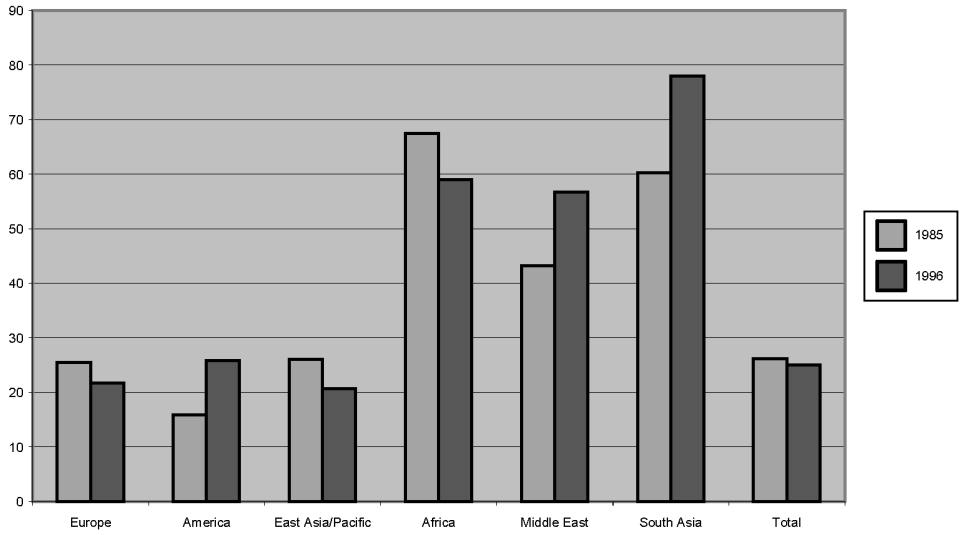


Figure 2 Top 15 ranking of tourism importers [1,10]



International tourism is still concentrated in a few countries worldwide (the Top 15 importers represent more than 70% of the global market). This concentration is accompanied by sustaining dominance of intra-regional travel. Those regions with highest share of travel and tourism show only low numbers of far-distance (interregional) arrivals, while for developing countries in Africa, Middle East and South Asia far-distance travellers are the most important demanders for tourism services (Figure 3). Nevertheless, the relevance of far-distance tourism does not have to be underestimated, as these data of WTO do not include duration of stays. Thus, tourism in regions with developing countries depends on demand for far-distance travelling from other regions. Despite the low global market shares, tourism is particularly for developing regions the dominating export sector within the fast growing commercial services [1].

Figure 3 Share of far distance arrivals in all arrivals of foreign tourists in % [13]



Within tourism industry, vertical and horizontal integration (travel agents, promoters, carriers, agents in countries of destination, hotels) have been intensified dramatically during the last decade leading to multinational companies with headquarters in developed countries [15]. Integration enables companies to realise economies of scale and scope in organising tourism products and to build up diversified tourism portfolios reducing dependence on single target groups. This last aspect gained importance within the last years, as demanders increased their flexibility looking at last-minute offers and switching between different forms of tourism [1]. Regardless of a persistently high market share of low-budget mass tourism, differentiation and separation between the other demand groups increased. One of these differentiated demand patterns refers to groups looking for tourism services considering environmental issues and compatibility with cultural values within countries of destination, which we will follow in the next section discussing definitions of eco-tourism.

The realisation of economies of scale and scope requires increasing standardisation within the different segments of tourism companies. Thus, tourism services were standardised according to target groups' preferences limiting the scope of regional specificities. For suppliers in developing countries, this concept limits scope for autonomous growth and access to new models of services. Standardisation restricts the recruitment of local workforce to low-qualified jobs and concentrates value added to headquarter and R&D locations. For employees from developing countries in the tourism sector, adaptation to standardised patterns of comparatively low-qualified work remains the only option of participating in growth rates of tourism thereby restricting positive effects on the regional knowledge base and the inflow of foreign currencies. Besides this restriction of positive effects, even negative impacts are expected considering the cultural impact of standardised tourism products [16,17]. Established cultural routines and norms have been adapted to be included into tourism services. Otherwise, tourism areas are separated from the rest of the country of destination illustrating the lack of compatibility between the two cultures.

3 Characteristics of eco-tourism

The persistently high growth rates of tourism and the exploration of new hitherto unaffected areas as tourism locations caused two main criticisms [8,18]:

- increasing negative effects on local, national, transboundary and global environment and culture endangering a sustainable development
- lack of positive impact of tourism for (developing) countries of destination due to oligopolisation of global tourism markets.

Both criticisms came to the conclusion that tourism in its conventional shape cannot be sustainable as it decreases available environmental resources for future generations and increases the economic gap and dependence between developed and developing countries [19]. Eco-tourism should be an answer to these deficits of conventional tourism. According to The International Eco-tourism Society eco-tourism is "responsible travel to natural areas that conserves the environment and improves the welfare of local people" [9]. In most cases, transport has not been included into eco-tourism services, as the relevance for environment and people in the host countries is restricted. According to the Quebec Declaration on Eco-tourism it "embraces the principles of sustainable tourism (…) and the following principles which distinguish it from the wider concept of sustainable tourism:

- contributes actively to the conservation of natural and cultural heritage
- includes local and indigenous communities in its planning, development and operation, contributing to their well-being
- interprets the natural and cultural heritage of the destination to visitors
- lends itself better to independent travellers as well as to organised tours of small size groups" [5].

Common characteristics of eco-tourism refer to downscaled tourism, active conservation instead of protection of environment and the participatory involvement of local and indigenous people [8,12,19]. Thus, a 'destination life cycle' starting with high-value tourism but leading to mass tourism with increasing environmental risks and loss of sustainable living conditions and long-term competitiveness should be prevented [20]. The increased market share of eco-tourism services and the observed willingness-to-pay for these services by tourists from developed countries raised the expectation that the assertion of those objectives behind the term eco-tourism could be achieved by private or public–private self-regulatory regimes [21,22] on scientific methods. During the last decade, different certification programmes have been established on international, national, industry, or government levels to prove the achievement of eco-tourism standards beyond compliance to public environmental and social standards [9,18,23–25].

In general, these certifications serve to overcome problems of asymmetric information in case of credence goods [26]. Consumers are interested in eco-tourism services but unable to assess the quality of competitors according to eco-tourism standards due to high costs of information ('quality insecurity before closing a contract'). Within basic institutional economics models, this is the typical case of *adverse selection* [27,28]: Consumers fear to be exploited by opportunistic suppliers

having superior knowledge on sustainability issues of their tourism products. Therefore, they cannot separate between actual and pretended eco-tourism products and decrease their willingness-to-pay. Certification programmes serve as a *signal* for the consumers, which suppliers actually and credibly meet quality standards [29]. Despite the high number of certification programmes and the intensity of research on eco-tourism demand, however, there are still controversies on their contribution to the assertion of eco-tourism objectives. Only 1% of consumers know about eco-tourism certification [24].

Compared to other products where environmental labelling has been established, e.g. the Forest Stewardship Council [6], successful certification of eco-tourism is hindered by further challenges.

- *The complexity of ecotourism quality*. In the context of eco-tourism, environmental and cultural criteria have to be included raising the complexity of interrelationships and the specificity of local impact by tourism. Therefore, differentiation of single certification schemes is needed making it more difficult for consumers to compare.
- *The involvement of the consumer*. For most products with international environmental labelling, production and consumption are spatially separated with labelling criteria only referring to production or product standards. In the case of eco-tourism as a typical example of service sectors, the behaviour of the consumers affects the achievement of eco-tourism standards. Thus, consumers do not only have to be informed and motivated to select but also to adapt their habits, when travelling to host countries.
- *The persistent dependence of eco-tourism qualities on spatially bounded assets with open access*. For most tourism segments, the quality of services is not only concentrated to single geographical points [30]. Instead, the availability of spatially bounded assets close to tourism resorts determines its attractiveness. In particular, demanders for eco-tourism are interested in the existence of natural ecosystems and social communities with common cultural values. Many ecosystems have open access, thus single users cannot be (completely) excluded. Social communities depend on the loyalty of all members to common values. Otherwise they would need public regulation. Non-compliance of single persons can threaten the availability of these assets for longer times, thereby causing negative effects on their neighbours. Thus, intense coordination within the affected area is needed [31].
- *The intensity of regulation by eco-tourism standards in the host countries*. The utilisation of certification for eco-tourism implies a selection of suppliers according to the consumers' perception and preferences of eco-tourism. But the impact of certification on suppliers is not only restricted to the production process itself, but also to standards for housing, social life, or cultural habits of people not directly involved into tourism value chain. This increases difficulties of compatibility between certification standards demanded by consumers in developed countries and citizens in developing host countries.

As a consequence, certification of eco-tourism requires intense coordination between different stakeholders in demand and host countries. While multinational tourism companies are mainly interested in certification as a means to prevent public regulation schemes, assert high-price segments or reduce private environmental costs by standardisation, consumers are interested in getting the expected value added for their

higher willingness-to-pay and -select, and environmentalists and NGOs are looking for ways to improve sustainability of environmental resources or cultural integrity. Those players mostly act in the developed countries and follow their interests and perceptions. In the host countries, other and competing interests can be found, as tourism is not the only one sector in these regions and has to compete with other established or promising sectors in agriculture or industry. This complex coordination problem cannot be solved only by signalling instruments like certification. In the following, a theoretical concept of collective learning will be presented to explain its contributions to the described coordination problem.

4 Collective learning: theoretical roots and institutional prerequisites

In a broad sense, learning refers to any kind of – intended or unintended – processing of one's own or others' experiences. Learning psychology and brain sciences show that this processing is not just a mechanistic and unspecific utilisation of input (experiences) leading always to the same output (instrumental knowledge and its use), but a highly context-specific and individual process [32]. Any new experience is checked within the individual brain according to its compatibility with already existing patterns of experiential knowledge [33]. These patterns are determined by genetic characteristics or socialisation and former learning processes. As a consequence, new experiences are individually framed and filtered. Non-fitting experiences are rejected or stored and recycled in completely different contexts. Thus, individual learning processes have to be seen as path-dependent developments of the knowledge base influenced by early experiences and patterns of recognition and interpretation.

Due to these individual path-dependencies of interpreting and using new experiences, transfer and processing of experiential knowledge by other individuals are restricted. Different and non-compatible patterns of framing and interpretation raise dangers of misunderstandings and misuses [34]. Common communication codes are a necessary prerequisite to avoid problems of missing compatibility. Such codes refer to language and methodology of scientific disciplines, cultural norms, or habits. The developments of such codes is particularly difficult for 'tacit knowledge', which means that experiences cannot be described by means of codification and can only be recognised by participating in routines [35]. From an economic perspective, these communication codes reveal characteristics of collective goods in a sense of networks [36]. There is no (limited) rivalry between the users of the codes, as only the increasing number of persons (network nodes) adapting their communication to this code enables the network members to realise benefits by communication. The exclusiveness of access to these networks depends on the specificity of the codes – the higher the costs of adapting to these codes are, or the more dependent the adaptation to these codes is on the cooperation by existing network codes, the easier it will be to control the exclusiveness.

The term 'collective learning' refers to learning processes by several individuals enabled by the utilisation of common communication codes ([37,38] on organisational learning). It is not the collective, which actually learns. Learning is still an individual process, but the codes make it possible to transfer experiential knowledge and frames of interpretation between all members of the collective (network) and the utilisation of storage instruments – storage of contents and codes – raise the independence of this collective knowledge base from the individual. As for any problem of providing

collective goods, institutional arrangements are needed to reduce transaction costs of securing exclusiveness of the codes and overcoming free-rider incentives within the network [27,39]. The actual design of institutions depends on the context, the implementation of hierarchies in companies can be observed as well as contractual arrangements for communities-of-practice or informal cultural norms. In contrast to many economic models of institutions, the design of these institutions will not inevitably follow optimal functions, but will be influenced by power structures and context [40,41].

The impact of institutions can be measured from a consequential or procedural perspective. From a consequential point of view, changes of strategies and habits and the resulting effects on outcomes, e.g. productivity, innovativeness, or environmental impact, are analysed [36,42]. Here, problems of identifying the actual relevance of learning and single institutional arrangements to promote collective learning occur due to multi-co-linearity of cause–effect relationships. Thus, learning effects can be overestimated and actual deficits of incentive compatibility within institutional arrangements might be overseen. To overcome these difficulties, procedural investigations of learning processes serve to get a closer look at cause–effect relationships and bottlenecks. Within management literature on 'organisational learning' four dimensions of learning on an organisational level have been distinguished by connecting institutional incentives, learning processes and outcomes [37,43]:

- *formalistic learning*, which only pretends to process new experiential knowledge but actually does not change any habits, e.g. tourism companies, which formally implement environmental objectives, but do not change production processes
- *single loop learning* describing processes of changing competencies and rules of communication due to adaptation to other organisations, e.g. tourism companies implementing new ('sustainable') management systems without reflecting further changes of qualifications, attitudes, or cooperation partners, and therefore without actual impact on individual reflections of routines
- *double loop learning* describing processes of changing whole organisational systems leading to new distribution of resources, competencies, and objectives, e.g. tourism companies changing their organisational style and thereby creating incentives for their employees to develop new products reconciling economic, environmental and cultural objectives
- *deutero learning* describing processes of learning how to learn, i.e. how to process new experiences and implement changes, e.g. tourism companies building up common learning networks with other organisations and controlling the actual effects on in-company processes.

5 Collective learning and eco-tourism

The previous two sections gave definitions for the terms 'eco-tourism' and 'collective learning'. Linking these two concepts together, two main needs for collective learning with different framing conditions can be identified:

- a collective learning process within the affected tourism region in the host country
- a collective learning process between stakeholders in host countries and other countries.

5.1 Within the host region

The attempts of defining eco-tourism show that the main characteristics – environmental sustainability and cultural integrity – refer to spatially bounded assets depending on coordination between different persons within the affected host regions. The broad approach to eco-tourism requires that even single accommodation facilities need coordination with local communities on maintenance and protection of natural habitats and the achievement of social and cultural objectives. Within local communities, good prerequisites for the development and utilisation of common communication codes exist due to common socio-cultural background, language and experiences [44]. The successful implementation of eco-tourism projects in terms of attracting targeted demand groups and extending regional income and endogenous growth potential, however, would require compatibility with expectations by consumers and marketing channels. Thus, nodes are needed between local or national communication codes and international tourism markets [45].

5.2 Between stakeholders in host and other countries

One coordination problem already mentioned refers to non-compatibility of preferences and attitudes between consumers and other stakeholders, particularly in host countries. It has been observed that consumers look for visible environmental conservation, they are a diversified group to be integrated into programmes of education on environmental and cultural issues, and are uncertain on cultural authenticity in particular when confronted with atavistic cultures not necessarily integrated into daily life [46]. The complexity of eco-tourism requires a high amount of information, while consumers are interested in reducing information costs by looking at well-known and broadly used logos. Thus, only within industrialised countries, where consumers and host regions have similar cultures and patterns of experiences available, advanced programmes have been introduced for single segments of tourism, like natural protected areas, or beaches [23].

Therefore, one reason for the failure of eco-tourism certification, particularly in the case of developing countries, might be rooted in different communication codes and motivations. Additional institutional arrangements are needed to 'learn' about compatibility of expectations in demanding and host countries serving as prerequisites for successful certification. In the following, four eco-tourism projects serve to illustrate these challenges and possible solutions.

The Rio Blanco project in Ecuador. Within this region in Ecuador, indigenous groups (Quichua) migrated from Andean regions needed an alternative to agricultural cash crop production due to high rates of population and persistent degradation of environmental resources [47]. Quichua from different regions built up a common network of expertise to develop tourism independent from international tourism companies. Within Rio Blanco, in 1995 first small-scale tourism projects were initiated in cooperation with a biological field station nearby. Most of the tourism consists of visits to primary forests, which otherwise would have been converted to agricultural land. Rudimentary feedback

analysis of tourists and local providers reveal that there is only scant transfer of information between consumers and suppliers, tourists do not learn about cultural norms and agricultural business in the tourism regions. Local suppliers learn by their own experiences and the exchange with eco-tourism providers of the same cultural origin. Thus, within this early and small-scale local example, we have collective learning on needs for coordination within indigenous groups, even double loop learning, but most of new information for providers is coming from own experiences [48]. There is low interaction with consumers or other stakeholders. Therefore, definition of criteria and content is determined by the suppliers' recognition of tourists' expectations. As a consequence, short-term regional impact of eco-tourism is limited to small additional income and incentives to protect primary forests.

Bhutan. Bhutan is a small mountainous country in Himalaya. Until the 1980s, only few external contacts (13 research expeditions during 300 years) existed [49]. From 1974, government decided to use tourism as a tool for economic development. Negative experiences in neighbouring Nepal with high numbers of tourists leading to environmental degradation, cultural alienation and low marginal profit of single tourists raised interest in eco-tourism as a way to restrict the number of tourists, assert high-price levels, control and the negative impact of tourism [50,51], thus preventing a 'destination life cycle' leading to permanent degradation of environmental and cultural attractiveness [20]. The main form of learning refers to adaptive (single loop) learning within or with the help of hierarchies. Government launched tourism programmes, and worked closely together with international tourism companies and international organisations [52]. Challenges of intercultural learning were reduced by longer stays of Bhutan employees for qualification in Western tourist countries. As a result, Bhutan created an exclusive branding dominated by central management. This branding was determined by adaptation to preferences of high price level tourists and the wish to limit the environmental or cultural impact of tourism by concentrating interaction between domestic population and tourists to business interaction.

Costa Rica. Due to its biological diversity, attractiveness of landscapes and beaches, and geographical proximity to the USA, Costa Rica had good preconditions as an exporter of tourism services. With the increasing awareness on eco-tourism, guidebook authors cooperating with environmentalists developed a ranking system for all lodges pretending to provide eco-tourism in Costa Rica and first published their results in 1992 [53]. These criteria heavily rely on investigations of environmental impact and the economic and cultural consequences for the local communities. The ranking followed two objectives: firstly to use the popularity of a then-leading guidebook on Costa Rica to influence consumption decisions of tourists and increase the market share of locally-owned lodges, and secondly to use the ranking as an instrument to discuss improvements with the lodge owners thereby initiating a learning process of best practises between the lodge owners. Limits to this approach were caused by decreasing popularity of the guidebook restricting the influence on consumption, restricted resources for surveys and marketing, and the restricted numbers of lodge owners involved, as most internationally-owned lodges and all beach resorts have been excluded [9]. In 1996, a new certification programme was developed at the government's tourism agency aimed at surveys on environmental, cultural and social impact of all hotels in Costa Rica [54]. This certification system – Certification in Sustainable Tourism (CST) – based on 153 criteria in four categories has been seen as successful insofar as most tourism resorts applied for

certification and many of the key stakeholders participated in a National Accreditation Committee. In 2001, six Central American countries agreed to promote a regional certification programme based on CST. By using a rating system with a scale up to five, appliers got opportunities and incentives to improve according to CST criteria initiating a learning process within the certification programme. The impact of this system is however low for consumers and locally owned lodges. The certification is mostly unknown by tourists and not actively supported by multinational tourism companies. For locally owned, small-scale lodges some of the criteria are hard to achieve. As a result, internationally owned big hotel resorts with huge systems of energy efficiency got the same rating as small-scale resorts particularly concentrated on compatibility of their services with protection of primary forests. As the transfer of experiences heavily depends on the auditors and employees of government's tourism agency serving as knowledge transformers, originally tacit knowledge at the lodges might be distorted and a mainstreaming of learning content not compatible with the diversified preconditions at the single lodges set in. Therefore, double loop learning can only be achieved if the certification process would lead to small communities-of-practice within the total groups of applicants [55], and if consumers from importing countries would be actively involved into the certification process.

Green globe 21. Green Globe has been launched in 1994 by the World Travel and Tourism Council (WTTC), an international association of the tourism association [56]. As the tourism industry got under increasing pressure to reduce negative impact on the environment and culture by NGOs and intergovernmental agreements, WTTC introduced a programme of voluntary self-regulation ('Green Globe') stressing the intentions of participating companies to implement environmental reforms to prevent public regulation [9]. Due to heavy criticisms by environmentalists and other NGOs, structure and strategies changed in 1999. Green Globe 21 became a private for-profit organisation offering an independent audit of companies on criteria initially oriented to environmental management systems based on ISO 14001 and then developed towards performance criteria [57]. By forming partnerships with tourism organisations in all industrialised countries and comparatively high marketing budgets, it gained an international industry and consumer name recognition, which exceeds the recognition of other certification systems. The reference to management and performance criteria should allow a standardisation of production aiming at reconciliation between mass tourism with high economies of scale and standardisation and eco-tourism with its environmental and socio-cultural objectives. In practice, however, few incentives are given to the companies actively changing their production processes, as management criteria do not audit actual changes of habits and performance criteria are concentrated on environmental effectiveness (water or energy consumption), not including socio-cultural aspects [24]. High costs of certification (up to $50,000 for destinations taking years to complete the auditing process) prohibit the involvement of small-scale and peripheral providers. For consumers, the repeated changes of logos and criteria leading to the display of logos by companies actually not fulfilling the current criteria as well as the inclusion of all tourism sectors worldwide cause confusion. Thus, learning was concentrated to international tourism providers. As these companies already had their own standardisation programmes to increase environmental effectiveness, participation with the Green Globe 21 programme mainly serves formalistic learning without actively changing habits or strategies.

Table 1 presents a summary of the four examples. It became obvious that the diversity of preconditions and context of the single programmes led to different objectives, instruments and outcomes. Despite the already described deficits, it is important to consider the strengths of the programmes for different types of learning and different groups involved. The Ecuadorian example shows the options for double loop learning within groups of cultural similarity by implementing communities-of-practice with face-to-face (F2F) contacts. The Bhutan example stresses the effects of international stays for adaptive learning, while in Costa Rica ranking systems have been used as instruments to diffuse experiences of best practise by intermediates serving as knowledge transformers and creating prerequisites for double loop learning. The industry and consumer name recognition of Green Globe 21 illustrate the relevance of international partnerships and marketing to expand participating groups within learning processes. These partnerships serve as important tools to raise awareness and motivation to learn more on eco-tourism criteria, which would then require additional learning instruments like F2F-contacts with intermediates, communities-of-practice, codified knowledge, or international stays.

Table 1 Examples of eco-tourism projects and collective learning in practice

	Ecuador	*Bhutan*	*Costa Rica*	*Green Globe 21*
Preconditions	Regional indigenous groups under economic pressure	Small, poor country without openness for centuries	International tourism boom, increasing tourism facilities	Political and consumer awareness on environmental criteria causing pressure on industry
Objectives	Implementation of new income source	Profit maximisation while limiting impact on domestic culture and environment	Commercialisation and sustainability of environmental endowment	Standardisation and improvement of mass tourism image
Instruments	Communities-of-practice	International stays for qualification, seminars by foreigners, cooperation with international providers	Ranking and benchmarking schemes, diffusion of experiences by auditors serving as intermediaries	Certification and auditing, codified information
Impact	Double loop learning within indigenous groups, no interaction with external groups	Single loop learning, few learning effects for external groups	Single loop learning of ranking criteria, double loop learning by intermediaries, few impact on international groups	Formalistic learning, single loop learning by standardisation, weak involvement of NGOs and developing countries

6 Conclusions

Eco-tourism covers an ambitious range of objectives by connecting environmental and social aspects with economic implications of tourism markets. The hitherto most common approach to promote eco-tourism – the introduction of certification schemes and private self-regulation – reached limits of effectiveness, as implicit prerequisites like common

communication codes, coordination of interests between stakeholders, and transparent definition of content of certifications have been missing. The different examples reveal only limited contributions to the availability of these missing prerequisites. For the future, progress can be expected, if the following steps can be developed:

- concentration to a target group of eco-tourists and main segments of eco-tourism
- development of credible international intermediaries connecting single nodes of certification
- processing experiences with existing communities-of-practice on regional or sectoral level.

From a methodological perspective, we showed the value of analysing collective learning as a necessary prerequisite to successful implementation of certification. These interdisciplinary approaches are still at their beginning as tools for institutional evaluation. For the future, however, improvements to more quantitative indicators even for procedural criteria might sharpen the profile of these investigations.

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