Sustainable Transportation Guidelines for Nature-based Tour Operators

Second draft for stakeholder review

Wolfgang Strasdas[1]

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What is the issue?

The discussion on whether global warming is a reality or not is over. The evidence is overwhelming. What has ensued is an almost frantic discussion on what to do to avert further damage. Transportation, and aviation in particular, is one of several sectors of particular concern because of its above-average growth as a prerequisite for increasing globalization. A large proportion of transportation is leisure-related and a *conditio sine qua non* for tourism. While some tourism industry representatives may argue that tourism's contribution to global warming is small compared to other polluters, it is certainly true that from a consumer's perspective a lifestyle of frequent flying is extremely unsustainable. One intercontinental trip may emit as much greenhouse gases as driving a car for several years. Unfortunately, ecotourism is no exception in this regard since ecotourists use the same planes as everybody else. And they tend to do so

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even more because many of the pristine natural areas that eco-travellers cherish are remote and difficult to reach otherwise.[2]

On the other hand, ecotourism is also very likely to be impacted by climate change which is expected to severely affect natural habitats such as coral reefs, among others. This will become a major concern for nature-based tourism in the near future. However, adaptation to climate change is not the focus of this project. Instead, it will emphasize tourism's contribution to global warming and ways how this impact can be reduced or mitigated.

Taking active steps in this direction is an indispensable component of ecotourism taken seriously. But it is also a way for tour operators to reduce reputational risk and to offer a more comprehensive environmental performance to climate-conscious consumers. Furthermore, it may also be an appropriate response to impending government inter-vention. As the Travel Foundation has put it: "If the travel industry does not take urgent steps to reduce carbon emissions, it leaves itself open to increased government inter-vention and, ultimately, limitations on travel." While this situation is most acute in the European Union (especially in Britain and Germany, where long-haul tourism has become a target for public and political criticism), it may soon become an issue in other countries as well, affecting the tourism industry worldwide.

1. Rationale, purpose and development of the guidelines

The draft guidelines proposed here are the result of a 6-month research project undertaken by The International Ecotourism Society, the University of Eberswalde (Germany) and the Center on Ecotourism and Sustainable Development at Stanford University/USA. The research project is part of a broader TIES advocacy campaign on climate change.

The rationale for the research project and the resulting guidelines has been based on the following assumptions:

1. In relation to global warming, **transportation** is the No. 1 concern for sustainable tourism.[3] Strategies to mitigate tourism's contribution to climate change impact must therefore focus on transport rather than on local facilities.

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[2] for an excellent case study from New Zealand see: "The Cost of Getting There – impacts of travel to ecotourism destinations" by D. Simmons/S. Becken. *In*: R. Buckley: "Environmental impacts of ecotourism". CABI Publishing, 2004

[3] In domestic tourism about two thirds of the energy consumption of an average trip can be attributed to transport alone (the case of Germany, which is a comparatively small country with an excellent public transportation network). In New Zealand, a typical nature-oriented tourism destination with remote tourist sites, the share is 78%. In long-haul tourism the figure is usually over 90%, reaching 97% in a long-haul resort destination like the Seychelles.

2. The concept of ecotourism (like most other sustainable tourism concepts) so far has been largely limited to the **destination** itself or even to local sites (such as protected areas or eco-lodges). The trip between the destination and the place or country of tourists' origin has been disregarded.

3. As a consequence, sustainable transportation principles – with the exception of local transport – are largely and conspicuously absent from sustainable tourism **certification** schemes or codes of conduct, most of which cover accommodation and local tourism facilities/operations only.

4. In order to cover the carbon footprint of an entire trip, (outbound) **tour operators** are becoming key stakeholders in the tourism industry since they are usually the ones who design those trips, market them and contract the other suppliers involved. Whereas outbound play a larger role in the international arena, inbound and local operators may have a stronger influence on national and local transport, respectively.

5. There are no performance-oriented certification schemes specifically designed for outbound tour operators. Those that do exist are either **process-oriented** such as EMAS II), **non-binding** (such as the *forum anders reisen* code of conduct) or both (Tour Operators' Initiative' Sustainability Reporting Guidelines). With few exceptions those schemes or guidelines make no explicit mention of sustainable transportation.

6. Nature-based or **ecotourism** operators and their customers represent a comparatively small segment of the overall tourism market, but they have traditionally been at the forefront of sustainable tourism development and may be expected to play this role once again with respect to climate change mitigation.

Based on those hypotheses, which by and large have been confirmed in the course of the research, the Sustainable Transportation Guidelines for Nature Tour Operators have been drafted. These guidelines are to be further developed in a multi-stakeholder consultation process and, once agreed upon, serve the following purposes:

- First step: a non-binding, mostly performance-oriented code of conduct for nature tour operators (current stage)

- Second step: Integration of the guidelines into existing sustainable tourism certification schemes and codes of conduct

- Third step: Eventually the guidelines may be adapted to be used for mainstream tourism operators.

TIES is in the process of seeking funding for additional steps, including:

- Conducting a more formal multi-stakeholder workshop in order to integrate the guidelines into existing schemes and codes (Step 2)

- Developing and disseminating a "how to" manual on sustainable transportation for nature tour operators

- Educating the traveling public about sustainable transportation (incl. how to pick suitable tour operators)

The research was conducted in four phases:

1. Analysis of the interrelationship between tourism and climate change and identification of sustainable transportation strategies for the tourism industry[4]

2. Analysis of existing sustainable tourism certification schemes and guidelines for tour operators.

3. Survey of nature-based tour operators who are members of TIES, Sustainable Travel International (STI) and the Adventure Travel Trade Association (ATTA) on their attitudes and activities in relation to climate change and sustainable transportation[5]

4. Drafting the guidelines.

2. Sustainable Transportation as a part of Sustainable Tourism Certification Schemes and Codes of Conduct for Tour Operators

The 2003 Djerba Declaration resulting from the first industry-driven conference on tourism and climate change organized by the UNWTO in Tunisia contains two recommendations in relation to the industry itself. Without further specification these recommendations emphasize technological and logistic improvements as well as consumer education.[6]

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[4] The results of this phase are summarized in the attached document "Voluntary Offsetting of Flight Emissions"

[5] see separate document: L. Driscoll, C. Mansfield and W. Strasdas: Nature Tour Operators' Attitudes and Actions Concerning Travel Related Greenhouse Gas Emissions. Stanford/USA, May 2007

[6] "To encourage the tourism industry, including transport companies, hoteliers, tour operators, travel agents and tourist guides to adjust their activities using more energy-efficient and cleaner technologies and logistics in order to minimize as much as possible their contribution to climate change. ... To encourage consumer associations, tourism companies and the media to raise consumers' awareness at destinations and in generating markets in order to change consumption behaviour and make more climate friendly tourism choices." (UNWTO 2003)

Formal, externally verified certification schemes specifically for outbound tour operators do not currently exist. Green Globe 21 and Sustainable Travel International's STEP Program (Sustainable Tourism Eco-Certification Program) are intended for a variety of tourism companies including tour operators, but do not currently list any outbound tour operators as being certified. ISO 14.001 and EMAS II (Eco-Management and Audit Scheme of the European Union) are process-oriented environmental management certification schemes that can be applied to any kind of company. At present, only a few outbound tour operators are certified under these schemes.

In order to fill that gap *Travelife*, an EU-financed initiative by several tour operator associations from Britain (Federation of Tour Operators), the Netherlands (ANVR), Belgium (ABTO) and Germany (*forum anders reisen*), is about to develop a sustainability evaluation framework for outbound operators with an original focus on supply chain management, which has been expanded to include product development, internal management and customer communication. Sustainable transportation is to become an integral part of that framework.

Outbound operators

Tour Operators' Initiative

The TOI has developed a framework (Sustainability Reporting Guidelines) specifically for tour operators relating to five fields of business management: Product management and development, Internal management, Supply chain management, Customer relations, Cooperation with destinations. This is a process-oriented tool which makes no specific mention of transportation. The basic structure of the framework is being used by the *Travelife* project and will also be used for the Sustainable Transportation Guidelines (see Chapter 4).

forum anders reisen (FAR)

FAR's sustainability criteria are binding for the association's over 100 members, but there is no external verification of compliance. The criteria are structured according to travel phases (trip to/from destination, type of destination, accommodation, leisure activities) as well as internal management.

In terms of sustainable transportation the FAR criteria are unique and can be regarded as exemplary concerning transport to and from the destination. FAR operators do not leave sustainability to their suppliers, but see it as part of their own product development. This includes the use of environmentally friendly means of transportation to the destination wherever reasonably possible, the exclusion of plane trips under 700 km as well as a minimum length of stay in mid-range or long-haul destinations. However, the criteria are much less strict for the destinations themselves where

domestic flights are common components of FAR members' travel packages. On the local level, motorized leisure activities (such as snow scooters or helicopter flights) are excluded unless unavoidable for transferring guests to remote sites. These principles are to be clearly communicated to customers. FAR members also ask their clients to offset their flight emissions by paying into compensation projects managed by their partner *atmosfair*.

However, as exemplary as FAR's sustainable transport criteria may be in relation to public transit and the time–distance ratio of a trip, one has to keep in mind that these are based on the German outbound market, where there is an excellent railroad network and travelers have several weeks of paid vacation per year. In spite of this there is increasing evidence of non-compliance by member companies with those rules.

The Travel Foundation

The Travel Foundation (TF) is an NGO established by major British tourism associations and airlines. In its "Insider Guide for Managers – Climate Change and Tourism" the Travel Foundation outlines a number of principles and recommendations relevant to tour operators who would like to reduce their energy consumption and thus their contribution to climate change. TF emphasizes supply chain management, where its guidelines are particularly strong (relating to "Sustainable Aviation" principles and providers as well as to local transport), as well as customer information and internal management. The two latter are more general and less transport-focused. In terms of product development and travel patterns TF advocates carbon offsets only, but this with noteworthy dedication. The three major British outbound tour operator associations (who are also TF members) have recently established a special compensation scheme, the Tourism Industry Carbon Offset Service (TICOS).

Green Globe 21

Green Globe 21 is exemplary in that it has put the reduction of greenhouse gas emissions at the top of its agenda. Apart from tour operators, the program also certifies transportation companies, but so far has only done so to a very limited degree. Green Globe 21 requires certified companies to reduce their energy use as much as possible, mostly by technological and operational measures, including renewable energy sources. Secondly, carbon offsetting is recommended, with an emphasis on sequestration through tree planting. There is no mentioning of adapted travel patterns and products.

Sustainable Tourism Eco-Certification Program (STEP)

Sustainable Travel International's STEP program is similar to Green Globe 21 in that it offers certification to a variety of companies including outbound and inbound tour

operators. The program also explicitly lists global warming and climate change and the associated minimization of greenhouse gas emissions, specifically in relation to transportation, as one of eleven fields of action. There is a strong emphasis on carbon-offsetting, which is being offered through STI itself, as well as on the use of environmentally friendly technology and logistics for local transportation. The program's second emphasis is on companies' internal management (including staff's commuting and travel avoidance through tele-conferencing, among others). There is no information available on how many tour operators have been STEP-certified, but several of STI's members have signed up for compensating their emissions.

Travelife

Travelife is a common sustainability management system for European tour operators which is presently being developed by the Dutch ANVR, the British FTO, the Belgium ABTO and forum anders reisen of Germany. All members of these associations will have to implement a common sustainability management system. This evaluation framework for outbound tour operators originally focused on supply chain management, but has expanded to all other fields of business management, including product development. An essential part of the system is the evaluation of suppliers through a common online tool based on social and environmental sustainability criteria. Standards for transportation are under development. From 2008 onwards participating tour operators will get credits for working with more sustainable transport suppliers. Noteworthy are also *Travelife*'s Best Practice Standards for local transport, for example on coach/bus driving and boating. In relation to product development *Travelife* suggests a shift to more environmentally modes of transport and the adoption of some of the FAR criteria. This also has to be communicated to the customer. Carbon-offsetting is expected from suppliers, and customers need to be informed about it.

Inbound operators

Nature's Best

This certification scheme for inbound/domestic and (mostly) local nature tour operators from Sweden has very strong sustainable transport principles for the local level and, to a more limited degree, even for the national level (modal shift, mostly). According to Nature's Best, "alternative modes of transport that saves energy, provides less emissions and noise, are sought after, encouraged and preferred." And: "The transportation to the destination in itself is a polluting factor, which increases with the distance covered. The tour operator tries to minimize this in different ways. In part through using transport alternatives using the best available technology, and in part by making it possible for the customer to choose means of transportation with less environmental impact."

Criteria for local transport are differentiated and include shuttles to meet train arrivals (to be actively communicated to the customer), the use of environmentally friendly technology and optimized logistics to reduce energy consumption. Motorized leisure activities are excluded for NB-certified products: "The basic rule is that motorized vehicles can be used for transfers to and from the attraction, but should not be the attraction itself." There is a bonus for companies who offer products without any motorized transport.

Ecotourism Australia's EcoCertification Program

Similar to Nature's Best, Ecotourism Australia (EA) is an association of local and inbound tour operators and tour guides. The organization's certification program has a highly differentiated section on local transport, but is much weaker with regard to transport-ation at the national level. Apart from fuel efficiency, local traffic impacts (noise, air pollution, physical damage, disturbance of wildlife) are a major area of concern for EA. There are specific guidelines for land-based vehicles and for power boats relating to environmentally friendly technologies, logistics and driving techniques, which are also to be applied to suppliers. Customers should be encouraged to do the same and to minimize motorized transport, but energy-intensive product components (such as scenic flights) are not excluded from certification.

Sustainable Tourism Certification of the Americas

This network of tourism certification programs in Latin America has been derived from Costa Rica's pioneering Certification for Sustainable Tourism (CST) program. Although these schemes are centered on accommodation businesses, CST has recently been applied to inbound tour operators. However, although energy saving and the use of renewable energy sources are generally being advocated, there are very few criteria explicitly relating to climate change and sustainable transportation. These are limited to asking certified businesses to use fuel-efficient vehicles and to make sure that legal emission requirements are being met (including by suppliers). There is no mentioning of adapted product design.

Smart Voyager, the certification scheme for boat operators in the Galapagos Islands, has some very specific criteria to minimize the local impact of boat operations (e.g. the use of four-stroke external engines) and to increase fuel efficiency. Again, there is a provision asking certified companies to comply with national and international emission standards.

Soft Mobility

Sustainable tourism transportation has been at the center of several initiatives in Central Europe, including the "Alpine Pearls" (network of car-free and soft mobility vacation resorts and regions in the Alps) and the German *Reiselust*[7] projects. These projects have promoted the use of public transportation at the international, national and local levels by creating an uninterrupted "travel chain" from the tourists' homes to their holiday accommodation and tourist attractions, thus connecting the source country with the destination. The prime target groups of these projects have been destination management organizations and individual travelers, but the former have also acted as tour operators by offering full packages based on a complete modal shift to public ground transportation.

Conclusion: Sustainable Transportation Guidelines for Nature Tour Operators do not have to be created "from scratch". Several sustainable tourism certification programs and guidelines already include soft mobility elements, but none of them offers a comprehensive set of criteria and some aspects miss entirely, especially in relation to product development. There appears to be a certain tendency to move responsibility to suppliers and to customers instead. Furthermore, there is a stronger focus on local transportation rather than on the national and international levels, where the biggest amount of energy consumption and greenhouse gas emissions occurs. This is also in line with some schemes' emphasis on internal management, often concentrating on "office ecology", an area which is certainly important, but much less significant in comparison to the emissions caused by the trips taken by tour operators' customers.

3. Tour operators' perceptions, attitudes and actions regarding sustainable transportation

The third step of the research project consisted in exploring present perceptions, attitudes and actions concerning global warming and sustainable transport strategies among nature-based tour operators. This part of the research, conducted with the help of students of Stanford University was implemented in two steps:

a) A website analysis of all outbound and inbound tour operators (N = 248) who are members of TIES, Sustainable Travel International (STI) and the Adventure Travel Trade Association (ATTA)

b) An in-depth online survey of those same operators as well as of those who are members of national ecotourism organizations associated with TIES (N = 67).

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[7] = Joy of Traveling

Outbound operators of the three organizations are mostly based in North America, whereas the inbound operators are more evenly spread over all continents, many of them in developing countries with a focus on Latin America. By contrast, Europe is strongly under-represented on both levels.

The results of the study can be summarized as follows:

- About 15% of tour operators mention any climate change mitigation or sustainable transportation activities on their websites. Considering the fact that this a selected sample of companies who are members of organizations committed to sustainable travel this figure is low. It confirms that sustainable transport has not really found its way into ecotourism practice yet.

- However, the survey shows that there is a very high level of awareness of climate change. A majority of those surveyed see tourism (including nature-based tourism) as both affected by, and contributing to global warming. It has to be kept in mind, though, that participation in the survey was based on self-selection, therefore this is not representative, but rather the prevailing opinion of a small elite of operators. Furthermore, there was sometimes limited knowledge about the exact interrelationship and suitable ways to counteract global warming, especially in developing countries.

- Many of those surveyed have already started to take action to mitigate their impact. Two patterns can be observed here: Outbound operators usually favor emissions compensation of the flights they offer as part of their packages. In most cases they ask their customers to do so, but several have gone one or two steps further by including their internal management into the process and by (partially) supporting carbon offsetting themselves. This result shows that outbound operators tend to assume a global responsibility for the trips they offer.

- Inbound operators are more concerned about the impacts of local transportation, including its immediate local impacts (such as air pollution). Technical solutions are usually preferred (increased energy efficiency, use of renewable fuels), but in some cases efforts were reported to minimize motorized local transportation altogether. This focus of concern makes sense in that it relates to the immediate sphere of influence of those operators. However, neither outbound nor inbound tour operators seem to feel responsible for the sustainability of the national transportation level.

- When asked about future activities it becomes clear that the present state of mitigation is only the beginning. Many operators want to do even more if they can. This includes sustainable supply chain management (working with climate

friendly carriers and transport companies) and a stronger integration of carbon offsetting into the booking process and even the entire company's operations. Educating the consumer also ranged high on many operators' agendas.

- The absence of different travel patterns, a substantial modal shift and adapted product development (longer stays, less distances covered on a given trip) is conspicuous, even where future plans are concerned. Although this is a very effective way to reduce tourism's energy consumption per day of travel it is hardly considered by anyone. This may be due to customers' time constraints and the non-availability of suitable public transit in most countries of the world.

- Most of those surveyed mentioned one or several barriers that keep them from implementing far-reaching mitigation measures. The most frequently cited concern is related to increasing costs, which consumers may not be willing to bear, along with a perceived unwillingness of the latter to adapt their travel behavior accordingly. Other barriers mentioned were a lack of suitable suppliers, a non-supportive political framework and in some cases lack of access to alternative technologies and know-how.

Conclusion: The study shows that there is not yet a broad discussion about climate change mitigation strategies in the ecotourism industry. However, the level of awareness seems to be high, and a number of operators have begun to take action. It can be expected that the nature tourism sector will be very open to implementing more encompassing sustainable transportation principles in the near future, especially in view of new scientific and media reports coming in almost on a daily basis which point both at tourism's vulnerability and responsibility. However, there are barriers to this which need to be taken seriously, particularly by small companies who may be less capable of coping with increased costs. Apart from knowledge and technology transfer to many operators, educating the consumer will be crucial to gain support and marketability of adapted travel products and full emissions compensation.

4. Sustainable Transportation Guidelines

As pointed out earlier, in a first step these guidelines are to become a non-binding code of conduct, which in a second step may be integrated into existing certification schemes for tour operators. The *Travelife* project is of particular interest here since it is the first attempt to create an encompassing evaluation framework for outbound tour operators, which will also include sustainable transportation criteria.

The guidelines will be developed primarily for outbound tour operators and contain some specific criteria for nature-based operators, especially with regard to local transportation

in fragile natural areas. The scheme can also be used by inbound operators and by transport companies that are suppliers of tour operators.

It is suggested to set up an overall structure that provides:

a) a process-oriented framework

b) a set of performance-oriented criteria and indicators, which will in turn be divided into basic (= compulsary) and advanced (= optional) criteria.

It is suggested to base the framework on the five business management fields of tour operators as laid out by the TOI Sustainability Reporting Guidelines:

- Product management and development: This is considered to be a core area where trips are being designed. This area is directly under the control of the (outbound) tour operator, but is of course dependent on demand and the feasibility of certain travel ideas.

- Supply chain management: In this field it needs to be made sure that the designed trips can be carried out using the highest available standards. Tour operators have less influence here since they are dependent on what their suppliers can offer, which may even force them to modify their trip designs, for example, if public transport is not available. On the other hand, tour operators may influence suppliers, for example by creating a demand for bio-fuelled busses or carbon neutral airlines.

- Customer relations management: This is another key area because sustainable transport needs to be accepted by the demand. Consumers may need to be educated, and climate-friendly trips will have to be specially promoted. Again, there is limited control by the tour operator.

- Cooperation with the destination: This is a secondary field not belonging to the core areas of business management. It is defined as anything going beyond immediate supply chain management, for example participatory planning, philanthropic activities or additional capacity building.

- Internal management: This is an important area in that it forms the basis for the above activities (company's goals, definition of procedures and management systems, staff responsibilities, etc.). However, in terms of emissions, it is less important than the trips taken by the customers themselves.

The second structural element is a physical one related to travel phases and the spatial level where transportation takes place:

- International transportation: This is obviously the most important part of the trip in terms of greenhouse gas emissions, mostly referring to travel between the

country of origin and the destination. However, multiple-destination trips involving several countries may entail additional international transport. Unless neighboring countries are visited, the use of airplanes is usually inevitable.

- National transportation: This can either relate to the second leg of a trip between the international gateway and the final destination, ranging from a simple hotel transfer from the airport to several domestic flights in the case of multiple-destination trips. Travel emissions from domestic tourism in large countries may equal or surpass international transport emissions.

- Local transportation: Although relatively insignificant in terms of greenhouse gas emissions, the local impact on fragile natural areas (e.g. through air/water pollution, noise, wildlife disturbance) may be considerable. Certain motorized leisure activities that are typical for nature-based tourism (e.g. the use of power boats for whale-watching, helicopters or scenic flights) are both energy-intensive and have a strong local impact.

Putting these two structural elements together will result in the following cross-chart.

Tab.1: Conceptual framework for Sustainable Transportation Guidelines

Spatial level ➔ Business management field	1. International Transportation	2. National Transportation	3. Local Transportation
1. **Product development and management**	1.1 (*forum anders reisen*)	1.2 (Soft Mobility Europe)	**1.3** (Nature's Best, Ecotourism Australia)
2. **Supply chain management**	2.1 (Travel Foundation)	2.2 (Travelife)	**2.3** (Nature's Best, (Ecotourism Australia, Travelife)
3. **Customer relations management**	3.1 (*forum anders reisen*)	3.2 (Soft Mobility Europe)	**3.3** (Nature's Best, Ecotourism Australia)
4. **Cooperation with destinations**	4.1	4.2	4.3
5. **Internal management**	5.1	5.2	**5.3** (STEP, (Travel Foundation)

Legend: Colors measure the relative importance of each field of action (red = very, yellow = less important)
Numbers relate to the following text. Names indicate certification schemes with some exemplary criteria in the respective field (as outlined in Chapter 2).

The colors in the table highlight the relative importance of each field of action. From the point of view of climate change taking action in relation to international transportation must have the highest priority, especially when designing and marketing products (customer relations). However, supply chain management is a less effective tool in this

respect since most international airlines already have very similar standards concerning fuel efficiency and emissions. National and local transportation have been assigned the same importance, although the former is more significant for its greenhouse effect. However, local transportation gains similar importance in the context of nature-based tourism because of its potential impacts on fragile local ecosystems.

When comparing the different fields of business management, product development and customer relations score the highest. Supply chain management is also an important field, especially when working with national and local transport companies which can have significant differences in terms of energy efficiency and emissions. Cooperating with destinations is generally a less important field since it is an "add-on" to the core business management. In relation to sustainable transportation it could include activities such as knowledge/technology transfer or carbon-offset projects at the destinations themselves. Finally, internal management has an important symbolic function, but emissions from business trips and staff commuter traffic are much less significant than those from trips sold to clients.

As mentioned before, this framework is very much adapted to the needs of outbound tour operators as well as for inbound operators who actively design and sell entire packages domestically or overseas. As mere suppliers of foreign outbound operators their actions would figure under "Supply chain management" at the national and local levels. Transport companies would fall under the same category.

Sustainable transportation can be achieved through a variety of different tools or actions. A combination of those is probably necessary to reach the massive cuts that are needed to make tourism truly climate friendly:

- Technological solutions (improved energy efficiency, decreased emissions, renewable energies) ➜ Tour operators cannot directly influence the development of new travel technologies, but they can favor them by appropriate supply chain management or by purchasing climate friendly vehicles.

- Operational solutions (aerial traffic management, increased occupation, vehicle logistics and maintenance, training of drivers, etc.) ➜ Again, this is more of an issue for transport companies or ground operators who are the suppliers of outbound or inbound operators.

- Modal shift (switching to more energy-efficient means of transportation) ➜ Provided that appropriate suppliers (e.g. public transit systems) are available, tour operators can contribute to modal shift by integrating it into their tour product design.

- Change of travel patterns (reasonable time–distance ratio, less multiple destination trips) ➜ While it is ultimately up to consumers to change their

travel behavior, tour operators can support this process by creating and promoting attractive "slow travel" products ("Moving Less and Experiencing More").

- Use of regulatory instruments (such as compulsory emissions standards, fees and taxes, cap-and-trade systems for transportation emissions) ➔ Given the necessity of substantial emission reductions in each economic sector, government regulation is inevitable. Tour operators should prepare for this and actively shape and support the process rather than obstructing it.

- Voluntary compensation of greenhouse gas emissions (carbon offsets) ➔ Since transportation is a *conditio sine qua non* for tourism, especially for long-haul trips, carbon-offsetting becomes a prime climate protection measure for tour operators *in addition* to (often limited) direct emissions reduction as described above. Compensation costs may be internalized, i.e. integrated into a trip's price calculation (product development), and/or communicated to the customer. Carbon offsetting may also be required from suppliers.

It is important to note that implementing such strategies may have additional benefits not relating to climate change mitigation to both operators and consumers. For example, the minimization or better coordination of transport will reduce trip costs and prices. In developing countries and peripheral areas (which are becoming increasingly popular destinations for adventure and nature tourists) motorized transport also leads to a high degree of leakage from local or national economies since vehicles and fossil fuels usually have to be imported from abroad. By contrast, non-motorized forms of local transport may often result in more benefits to local people offering guiding services or providing traditional forms of transport (including pack animals). Finally, such forms of transport and more quality time spent at a destination also enhance the travelers' experience of an adventure or nature trip.

Last but not least, it should be noted that while it would certainly be a relief to the world climate to prefer short-haul over long-haul destinations, a widespread implementation of such a strategy would have devastating economic consequences for typical long-haul tourist destinations with a small or non-existant domestic market or with few other (sustainable) economic alternatives. Therefore, it is not the intention of these guidelines to generally "penalize" operators offering trips to long-haul destinations as long as the recommendations made above are taken into account. Fewer trips, but with extended stays, in such destinations would not hurt them economically, and carbon-offsetting, if implemented in those destinations, may even provide additional benefits.

Proposed set of criteria[8]

An overriding goal of the Sustainable Transportation Guidelines is to reduce the amount of greenhouse gas emissions ("Ecological Footprint" or "Carbon Footprint") per day of travel or per unit of money spent on a given trip. This may be achieved by defining a maximum amount of CO_2-e as "sustainable" (as suggested below). This figure may perhaps be differentiated for intercontinental, intra-continental and domestic tourism (alternatively, it may be the same for all types of trips, with the differences being "neutralized" through increasing emissions compensation to be paid for long-haul trips). However, such a threshold value will inevitably be arbitrary and subject to controversial discussions. A process-oriented approach may be more viable in this case with tour operators aiming to reduce the average amount of greenhouse gas emissions of their products (per trip day or per package price) by a certain percentage over a defined period of time.

1. Product development and management

1.1 International transportation

- If feasible and in line with your profile, diversify your range of travel products by increasing the percentage of domestic trips and to nearby destinations as well as to destinations that can be reached through ground or maritime transportation. Offer a minimum number (*to be defined*) of such trips. Explanation is needed if this is not possible.

- Maintain a reasonable ratio between trip length and the distance of the destination. Offer a minimum number (*to be defined*) of trips following this ratio: Length of stay in a destination between 700 and 2,000 km away should be at least 8 days. It should be at least 14 days for destinations over 2,000 km away (*figures to be defined*). Advanced operators will apply this rule to all of their trips. Any trips not following this rule must include compulsory emission compensation.

- The time–distance ratio should be reflected in the amount of energy consumed and/or of greenhouse gases produced per day of travel. The maximum amount should be XXX tons of CO_2-e (*to be defined*)[9] per day of travel on international trips.

- If direct flights to the destination are available, these should be preferred over non-direct routes involving stopovers.

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[8] Please note that the following list of criteria is not complete. It needs more specifications of some aspects; some quantitative measurements need to be discussed and, there has to be a clearer differentiation into basic and advanced criteria.

[9] Alternatively, a steady reduction may be required here (see discussion earlier on).

- Use public transportation (trains, busses, ferries) or chartered buses/trains to get to a destination wherever reasonably possible and environmentally sustainable. Offer a minimum number (*to be defined*) of trips following this rule, if possible. Explanation is needed if this is not possible.

- Organize such "slow" trips in a way that they become part of the experience of travelling, for example by including stopovers at attractive sites or by providing entertainment/interpretation during the journey.

- Do not offer trips under 700 km (*distance to be defined*) by plane unless this is the only way to access a destination. Explanation is needed why this is not otherwise possible. If so, such trips must include compulsory emission compensation.

- If reasonably possible, include public transportation to the international departure airport as part of the package. Do not offer domestic connecting flights to the international airport, if these can be avoided. Explanation is needed if this is not possible. If so, such flights must include compulsory emission compensation, if booked through the tour operator.

- Packages should include a complete travel chain management from the customer's home (e.g. pick-up service) all the way through to the destination (with transfers, incl. of baggage).

- Each trip must include a calculation of greenhouse gas emissions and state the compensation amount due by using an appropriate, high-quality carbon calculator (*see section on carbon offsetting below*). Payment may be left to customers, but advanced operators include compensation costs into the package price.

- The tour operator should partner with a distinguished carbon offset provider offering high-quality offsets (*see below*). Alternatively, a tour operator may implement its own compensation project provided it follows the same strict rules.

1.2 National transportation

For domestic tourism (especially in big countries), the criteria listed above are to be applied accordingly, including carbon-offsetting. In addition, the following rules should apply:

- Offer a minimum number (*to be defined*) of trips following this rule: Reduce the number of sites visited during a multiple-destination trip with the aim to spend more quality time at each site. Offer a minimum number of multiple-destination trips spending at a reduced number (*to be defined*) of sites.

- Once in the destination strive to minimize the amount of energy consumed and of greenhouse gases produced per day of travel. The maximum amount should be XXX tons of CO_2-e (*to be defined*) per day of travel excluding the international flight.

1.3 Local transportation

- Minimize local transportation wherever possible. Trip duration should be in reasonable proportion with the attraction of the site visited and the length of stay there.

- If available and convenient, prefer public transportation or chartered busses/ trains over individual motorized traffic. Explanation is needed if this is not possible.

- If visiting highly frequented sites, prefer those with a good public transport system or striving to develop such systems.

- Make non-motorized modes of transportation and physical activities (bicycles, canoes, horseback riding, walking safaris, etc.) part of the experience, provided that customers are physically able to comfortably participate in those activities.[10]

- Exclude energy-intensive motorized leisure activities, such as helicopter skiing, scenic flights, power boating, snow scooters. Exceptions are possible where such modes of transportation are needed for transfer. In the affirmative case, explanation is needed why this is unavoidable.

- Organize programs and local transfers in a way that makes it possible for guests to arrive by means of public transportation (if available) and be met by the local operator at the time of arrival.

2. Supply chain management

2.1 International transportation

- Preferably use airlines that are certified for their environmental management or are otherwise climate-friendly. This includes certification through ISO 14.001 or EMAS II or airlines that are fully or partially carbon-neutral by offsetting their emissions through high-quality compensation projects. Other criteria may be that those airlines support binding regulation or invest into energy efficiency.[11]

- Prefer airlines that offer direct flights to the destination.

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[10] There may be limitations to applying this criterion if tour operators cater to the elderly or people with disabilities.
[11] An excellent reference for this is are the guidelines of "Sustainable Aviation", an initiative of the British aviation industry (www.sustainableaviation.co.uk)

- Preferably work with railroad, bus/coach or car rental companies that are certified for their environmental management or are otherwise climate-friendly, for example by using renewable fuel sources or hybrid vehicles.[12]

2.2 National transportation

For domestic tourism (especially in big countries) and for travel within the destination the criteria listed above are to be applied accordingly.

- Depending on local conditions and companies' standards, fuel-efficient domestic airlines may in some cases be more environmentally sustainable than also existing ground transportation. Operators preferring air transport over ground transport even though the latter would be a viable option must show that this is, in fact, the more climate-friendly alternative.

2.3 Local transportation

- If possible and convenient, use local services providers offering traditional non-motorized means of transportation, such as pack animals, canoes, rickshaws or porters.

- Preferably work with bus/coach companies that are certified for their environmental management (for example, optimization of logistics, increased seat occupancy, trained drivers) or can show that they have such a system in place.

- Preferably work with motorboat companies that are certified for their environ-mental management or otherwise strive to maximize fuel-efficiency and reduce emissions (for example, four-stroke engines, operating a "Optimal Threshold Level"; *advanced*: electric or solar boats).[13]

- Preferably work with hotels and restaurants that save energy and sell local (preferably certified) products

- Preferably work with hotels or tourist attractions offering courtesy shuttles to public transportation gateways.

- Generally work with suppliers that buy locally, thus reducing the amount of energy needed for the transport of the goods purchased.

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[12] An excellent certification program for busses is University of Vermont's "Green Coach Certification".
[13] Excellent criteria for this can be found in "Smart Voyager", the certification program for the Galápagos in Ecotourism Australia's EcoCertification program.

3. Customer relations

3.1 International transportation

- Generally educate customers about tourism's (especially aviation's) contribution to global warming.

- Calculate the "carbon footprint" (amount of greenhouse gas emissions) of each trip and per trip day and include it in the travel description. (*advanced*)

- Specially promote climate friendly products (*see above*) over others, for example in catalogs, on websites and in newsletters.

- Calculate and display costs per trip day to show the relative decrease of travel costs for trips with extended lengths of stay.

- Explain carbon-offsetting to customers, ask them to make their contribution and integrate it into the booking process (for example in the form of an opt-in or opt-out box).

- Match customers' compensation payments (if they are below 50%) and offer price incentives for climate friendly products, if necessary and possible, for example by internally "subsidizing" such products.

- *to inbound operators*: Where feasible and promising, put more emphasis in your marketing strategy on domestic and nearby markets.

3.2 National transportation

For domestic tourism (especially in big countries) and for travel within the destination the criteria listed above are to be applied accordingly, especially in relation to multiple-destination trips, where longer quality-time experiences should be emphasized.

3.3 Local transportation

- Educate customers about their local carbon footprint in relation to different means of local transportation.

- Encourage physically able customers to use traditional non-motorized and muscle-powered forms of local transport.

4. Cooperation with destination (*advanced*)

4.1 International transportation

- Support destinations, especially long-haul destinations in developing countries, by channeling compensation payments from international flights into carbon-offset projects located in those countries. Those projects should have additional

benefits such as technology transfer, community development or biodiversity conservation.

<u>4.2 National transportation</u>

- Support destinations, especially long-haul destinations in developing countries by channeling compensation payments from domestic transportation into carbon-offset projects located in those countries (*see above*).

<u>4.3 Local transportation</u>

- Support sites visited during a trip (for example a forest area rich in biodiversity) through compensation payments.

- Support local communities through technology transfer and/or compensation payments into innovative technologies (renewables and energy efficiency) to be used by those communities.

5. Internal management

<u>General</u>

- Make climate change mitigation (including high-quality emissions compensation) an integral element of the company's sustainability goals and environmental management system.

- Have an environmental manager who is in charge of, and familiar with, climate change issues.

<u>5.1 International transportation</u>

- Minimize international business travel through video/phone conferences and by delegating as much as possible to partners (inbound operators) in the destinations.

- Offset inevitable emissions caused by business trips.

<u>5.2 National transportation</u>

- Minimize national business travel through video/phone conferences.

- Use public transportation for business trips wherever possible and convenient.

- Offset inevitable emissions, at least from air travel.

5.3 Local transportation

- Encourage and reward employees to travel to work on foot, by bicycle or by using public transit.

- Use fuel-efficient or alternative energy vehicles for business purposes.

Compensation of greenhouse gas emissions[14]

Voluntary carbon offsetting is the prime climate protection measure for aviation and tourism, especially international tourism. However, the current focus on carbon-offsetting in the travel industry is too narrow. Compensation must be complemented by other measures, such as adapted trip design and energy efficiency wherever possible.

While most carbon-offset providers comply with basic sustainability criteria, there is a lack of transparency which may hamper the credibility of the voluntary offset market. There is also strong competition among providers (over prices or corporate clients) possibly entailing decreased sustainability (no RFI when calculating flight emissions, simplified verification procedures, lack of appropriate customer education).

The development of sustainability standards is therefore a priority for voluntary carbon-offsetting. It is currently pursued by Center for Resource Solutions in the U.S. (TIES is one of the stakeholders consulted in the process) and the British government. It is not the purpose of the Sustainable Transportation Guidelines presented here to develop competing sustainability standards for carbon-offsetting. However, until those standards are in place, the following general guidelines should be observed.

Sustainability standards for carbon-offsetting

When considering using the services of one of the almost fifty carbon-offset providers worldwide or when setting up one's own program, the following quality criteria can serve as an orientation to make an appropriate selection.

The first set of criteria relates to the correct measurement of the emissions produced. In the case of flights this comprises two aspects:

a) Taking into account greenhouse gases other than just CO_2 that occur in high cruising altitudes. This so-called the Radiative Forcing Index (RFI) should be a factor of 2.7 according to the recommendations of the IPCC. As a minimum requirement it must be 1.9.

b) Aviation data must be based on realistic average figures taking into account, for example, that on an average flight only 70 percent of the seats are occupied and that, due to frequent airport congestion, real distances flown may be longer.

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[14] For an in-depth discussion, see attached document "Voluntary Compensation of Flight Emssions"

Carbon offset providers should clearly state how they compute emissions.

Secondly, the compensation projects offered must actually achieve the promised compensation effect. This, in turn, involves a number of sub-criteria:

a) Carbon-offset projects must prove that they meet the key criterium of additionality, that is, that they would not have happened otherwise.

b) Emissions must be withdrawn permanently from the atmosphere. This is certainly the case with energy projects, but not necessarily with forestry or sequestration projects.

c) If offset providers offer forestry projects, they should have tight control over the land, guarantee permanent management and monitoring of the trees' growth and health (showing measurable carbon sequestration), track possible leakage and allow a buffer for leakage (e.g. through fires or pests).

d) Compensation projects should be compatible with local community interests and with other environmental or conservation goals. Ideally, they should entail additional benefits in this respect.

e) Compensation projects should be independently verified, that is by a third-party who is accredited for this purpose. The best standards are the CDM Gold Standard[15] for energy projects and the CCB Project Design Standards for forestry and nature conservation.[16]

Thirdly, the carbon-offset provider itself should work professionally and transparently. This can be demonstrated, for instance, in the form of externally verified annual reports. The cheapest companies are not necessarily the best ones as they tend to under-calculate emissions and save costs by applying less rigorous verification standards.

Fourthly, compensation providers should adequately educate their customers about possibilities to reduce their emissions prior to compensating them.

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[15] www.cdmgoldstandard.org

[16] www.climate-standards.org