

# Tourism. Sustainability. Development

## Design and practical strategies for implementation of sustainability within and through tourism

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### **Summary: Tourism and travellers could become ambassadors and actors of sustainability**

Tourism is a sector of activities which presents a growth rate higher than the mean of all activities. Thus the number of international tourism travellers rose from 170 million in 1970 to 698 million in 2000, and it should reach 1.6 billion around 2020. At the global level, this increase of demand can be explained by democratisation of flying transportation, by a trend to higher revenue and by extension of the time liberated for leisure.

Unfortunately, the air sector very badly integrates the environmental dimension of its activities. Its history too a long time subsidized by the public monies and exempted of any tax and any CO2 quota.. Any serious fight against climatic change cannot put without holding account of the air sector. Besides all its environmental impacts, - particularly by the intensive expansion of transportation means and by the increasing flow of matters and wastes - , its effects on the receiving areas are really significant. But the role that tourism could take in matter of the problematic of local development, cannot be ignored. The problem of sustainability of this activity arises in an urgent and crucial manner.

Resting on a quantitative and qualitative panel of criteria, Atmosfair, a German non profit organization for programs of voluntary CO2 offset, arrives at the head of the classification of 17 programs of voluntary CO2 offset in the 10 OECD countries.

The present communication has the aim of giving proper answer to the question posed on the way of introducing sustainability in tourism and creating locally global sustainability through tourism: what would be the practical, coherent and efficient system, then also a very attractive one and able to mobilize. An European organization of tour operators, Forum Anders Reisen, one of designer of Atmosfair CO2 offsetting program, try to offer a complete integrated awakening solution starting from the stay reservation by the tourist.

Another system based on direct implication of tourists, on internal motivations of travel pleasure, and on the seduction exerted upon travellers regarding the receiving areas is elaborated for another European organization of tour operators, World Forum for Sustainable Tourism, by young scientists belonging to a world laboratory for sustainability, APREIS. It is a system of funding developmental projects emerging from the receiving areas. Then tourism could become a human and playing activity, able to contribute to local as well as global sustainability.

Therefore introducing sustainability into tourism activity cannot be sufficient or restricted to struggle against climatic change. The contribution of tourism for implementation of sustainability cannot adopt policies which are privative of initiative and liberty, against our own dreams. Let the people travelling responds to imaginative dreams. Both helping people to travel and travelling, weave world-wide nomad and cooperative links.

This communication exposes good practical tour operators ways, justifies the opportunity and the pertinence of collaborative civil strategies and shows which is the system able to make their local and global complementarity.

**Key words** : tourism, local sustainable development, cooperation, environment, climatic change, social responsibility, civil network, ethic funds, CO2 compensation

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## 1. About sustainability

According to APREIS<sup>3</sup> viewpoint, the term of sustainable is opening a new conceptual and practical field: "the *Link, the Linked, the Linking*"<sup>4</sup>. Appearing as a wide holistic structure giving a frame for organizations, it allows proceeding in the same direction by using different ways ("*All ways lead towards Roma*"). Firstly it is necessary to define commonly which aims are involved in it but also to live in differentiating the locations. That is why such principles as reciprocity, physical or virtual proximity, local comprehension, confidence, responsibility about voluntary, and global interrelationships are fundamental and over the fence of rivalries.

In practice, sustainable development brings up the qualitative and quantitative problem which belongs to energy and raw materials flows and storages, either picked up or emitted; it does not dissociate social and intercultural solidarities. Facing the risk of ecological and cultural chaos, the justification of this new way also lies in the part of seduction carried, inside of it, through the proper imaginativeness of sustainability which can build the reconciliation of usual antinomies. Then the implementation of sustainability invites tourism to reconsider the partition of its activities by jointing interrelationships and interactions within and between the actors of tourism which firmly link intelligibility of our world, human solidarities, biosphere unity, and efficiency of social activities. Each tourism enterprise has to contribute to the development of the "*éco-liaisons*" (eco-links) between the activities of all the chain of its partners and to make the travellers feel guilty and implied in contributing to the realization of projects of development of the sustainable activities in their destinations.

What are the strategic practical propositions done? From this starting underground point, this communication proposes simple and concrete integrated solutions. Then, an approach of sustainable tourism should not only allow prevent the environmental impacts resulting from travels, particularly to allow reducing the greenhouse effect gas, but also to return to the receiving areas their capacity for decision, management, sharing the profits made around tourism and to encourage the local projects with integration of sustainable concern.

## 2. A brief global picture of the tourism

Before all it is useful to notice that global tourism proceeds rather in a one way manner. 1/7<sup>th</sup> of human kind is in a position to visit the other 6/7<sup>th</sup><sup>5</sup>. The tourism over the world concerns only populations living in North America and Europe: they represent 70% of the total, Europeans count for more than 55%. Five Tour Operators are sharing 70% of the turnover related to all-in deal travels<sup>6</sup>. Tourism represents 25% of all exporting services and 40% when flight traffic is included<sup>7</sup>

According to International Labour Organization, more than 250 million of people are working within this sector, including 15 millions of young people below 18 years old. But even if this activity represents the first source of currency in 1/3<sup>th</sup> of concerned country in the South part of the world, or 46 out of 47 less advanced countries, it would be more profitable for foreign

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<sup>3</sup> <http://www.apreis.org/docs/dayan-avisexpert.doc.vp.pdf>

<sup>4</sup> Dayan L., *Sustainability, a holistic concept* (2004) in "What sustainable development means: View of French recognized experts". Ed. d'Organisation -France.

<sup>5</sup> Duterme B. (2006) "*Gagnants et perdants du tourisme*". Points de vue du Sud. Alternatives Sud-Ed.

<sup>6</sup> Thomas Cook Belgium reached in 2006 a consolidated turnover of 868.3 million € and a profit amount before taxes of 35.8 million €. The headquarter has just decided to purchase the British My Travel which would allow him to reach an annual turnover of 12 billion €, putting this group as number two, behind TUI (14 billion)

<sup>7</sup> According to IAAT, More than 40% of the tourists and 40% (in value) of the manufactured goods intended for export are transported by plane

investors than for local population receiving tourists. According to CNUCED, expenditure made within the country of residence of tourists (travel purchase, transfer, accommodation, and advertising expenditure) can reach 80% of total expenditure for stays in countries in the South : they are used for paying travel agencies and flying companies.

Furthermore, for the time being, the tourism world exceed the limit which would allow to maintain the quality standard of the travel, and the preservation of the local resources. The more apparent impacts of tourism appear in countries where the economical and social structures are weak. Inhabitants living within the areas concerned by tourism, are suffering from pollution after having dreamed of profitable results: withdrawal of traditional activities linked to agriculture, cattle rearing, fishing : these activities are replaced by under qualified jobs having as consequences : intermittence in jobs and revenues, social destructuring, commercial '*folklorization*' of the cultural patrimony, extension of prostitution and mendacity.

### **3. A brief environmental impacts picture from the of air sector**

During the last 50 years, the mean temperature of our planet increased around 0.6°C and the temperature of Arctic arose around 2.1°C. On the one hand, as a result of this accelerating evolution, ice fields are diminishing and this situation is favouring a warming of liquid water. On the other hand, the melting of permafrost facilitates the emission of enormous quantities of methane, a particularly active gas in producing greenhouse effect; to this phenomenon, we should also take into account the melting risks of the polar cap in Greenland and the risks of change concerning the Gulf Stream movement.

The natural greenhouse effect gave birth to life on our planet but its recent acceleration is a new risk threaten balances of ecosystems; the effect results of a combination of several different gas (CO<sup>2</sup> counts for about 40%) emitted by human activities ( mainly industry, transportation, cattle rearing and another agricultural activities, house heating...)

These activities create a greenhouse effect which is qualified of "anthropoïde" in nature. Alone this process is able to inverse the balance of CO<sup>2</sup> absorption or sequestration by natural elements (forests, oceans, etc...); beforehand this balance was positive. According to several social and economic scenarios, the concrete effect to the climate is a calculated potential increase of +2° to +5°C in 2100. Besides this global warming, various effects induced by these dispersal emissions arise, as for instance dilatation of the oceans which will be operating on several thousand of years.

Based on a mean distance of 6 500 km realized by a long distance flying service and supposing the plane is completely full of passengers, each passenger is using 230 litres of kerosene, and then 165 kg of carbon equivalent for the sole CO<sup>2</sup>. And if take into account the other sources of gas emissions, the total emission could become 330 kg of carbon equivalent according to the average of the various coefficients used. The result is that each flying passenger will emit as much greenhouse effect gas as if they were alone driving a big car on the same distance. As the problem of climatic change is urgent to take into consideration, we have also to react because the part of transportation among the tourism chain is high and according to the consequences linked to its rapid expansion because there are little operational alternatives concerning technological innovations for limiting the consumption of kerosene.

Within this framework, the air sector very badly integrates the environmental dimension of its activities. Its history too a long time subsidized by the public monies and exempted of any tax and any CO<sub>2</sub> quota.. It is without real competition for the long ways but any serious fight against climatic change cannot put without holding account of the air sector and no technical complexity of the implementation of good policies can delay more time the decision-making

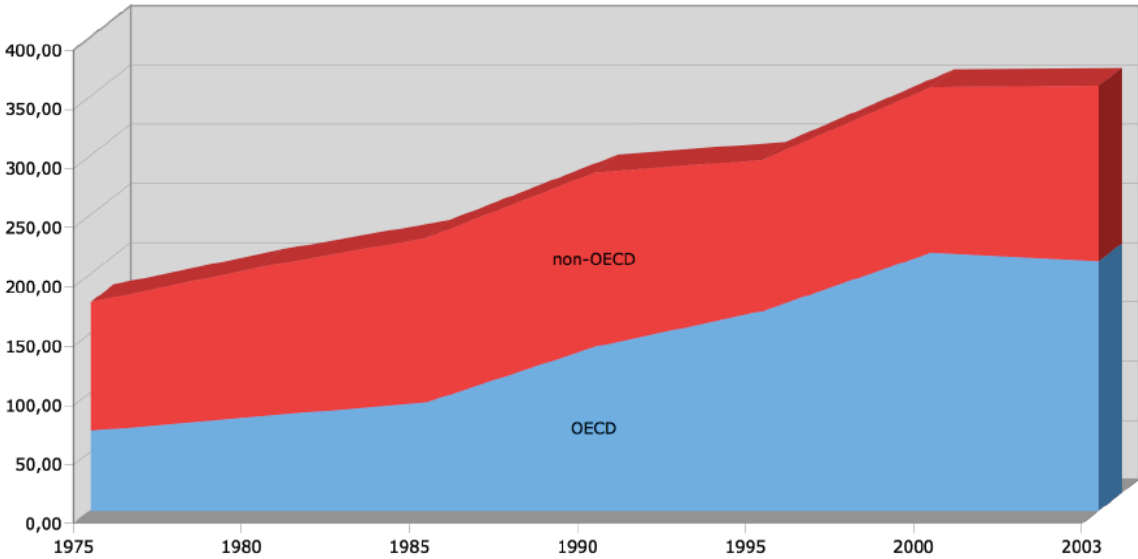
If we apply the factor of 2,7 suggested by the GIEC to hold account of the other GES, aviation would be thus responsible of almost 4% of the effect of greenhouse on the world level<sup>8</sup>.

**CO2 EMISSIONS FROM FUEL COMBUSTION**

CO2 emissions from fuel (Mt)	1975	1980	1985	1990	1995	2000	2003
Marine Bunkers	325,85	342,53	291,08	363,82	404,72	466,71	459,03
OECD	217,05	236,83	175,52	232,69	247,30	275,45	252,93
Non-OECD	108,80	105,70	115,56	131,13	157,42	191,26	206,10
Aviation Bunkers	176,04	205,41	230,36	285,54	296,30	357,52	358,67
OECD	67,40	79,49	91,50	138,20	168,51	217,70	210,69
Non-OECD	108,64	125,92	138,86	147,34	127,79	139,82	147,98
Total fuel combustion				20 735,60	21 790,90	23 390,60	24 983,20

Source : (IEA 2005)

**CO2 Emissions from International Aviation**



Source : IEA (2005)

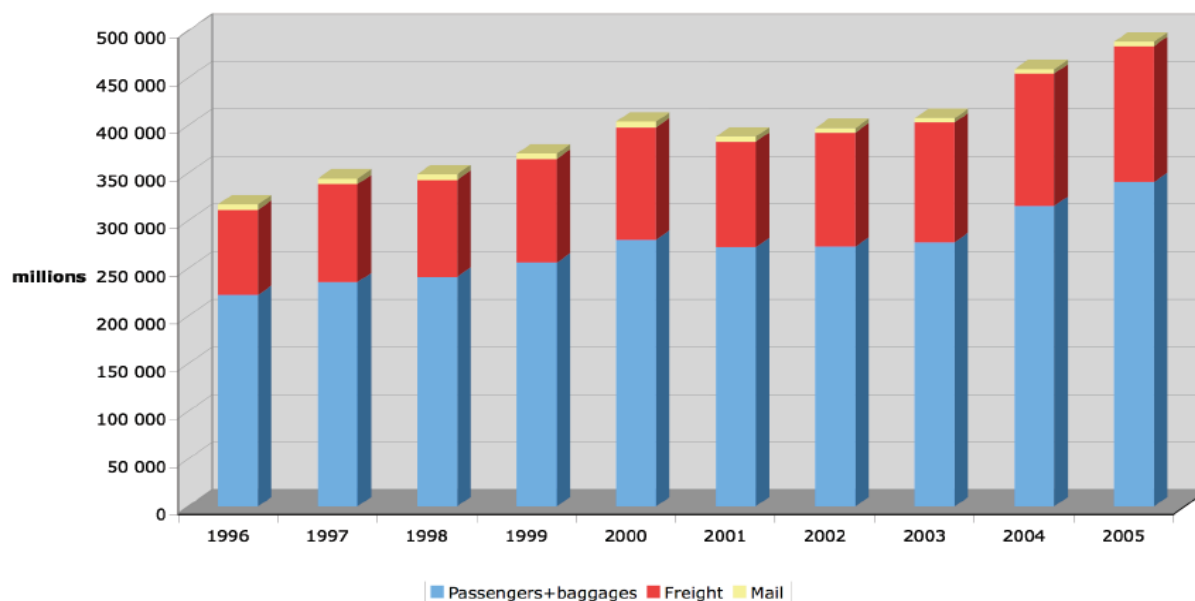
The analysis of the ascribable emissions with international aviation shows the following observations :

Air emissions doubled for the whole of the world. They passe from 176,12 MT (1975 ) to 357,52 MT (2000).

The air emissions have triplet in OECD countries for the same period, they passe from 67,40 MT (1975), to 217,70 MT (2000 )

<sup>8</sup> "Transport &Environment" affirms that the air sector contributes for 4 to 9% of the human impact on the climatic reheating (T&E 2006 p10). T&E is a federation of 45 ONGs working for sustainable transport in Europe

## Tonnes - Kilometers 1996-2005



Source : ICAO - International Civil Aviation Organization

To compare the traffic "passengers" and the traffic "goods", the International Civil Aviation Organisation uses the concept of "tonnes-kilometers", which integrates at the same time the transported weight and flight outdistances. It appears that the traffic "passengers" represents the largest component of the air traffic with nearly 70%.

## CO2 emissions in EU

CO2 emissions in EU 15 (Gg)		1990	1992	1994	1996	1998	2000	2002	2004
<b>Fuel Consumption</b>		3 108 130	3 078 642	3 016 290	3 128 895	3 114 919	3 112 630	3 177 951	3 260 271
<b>Transports</b>		689 172	729 574	739 403	766 007	799 152	820 136	840 167	859 866
	civil aviation	17 517	17 136	16 516	19 366	21 469	24 066	22 491	23 342
	road transportation	637 400	677 469	689 883	713 569	744 214	763 124	785 181	801 103
	railways	8 338	7 907	7 291	7 291	7 160	7 102	6 652	6 410
	navigation	19 359	20 634	19 227	18 765	19 533	18 282	18 517	21 087
	other transportation	6 558	6 428	6 487	7 016	6 777	7 562	7 326	7 924
<b>International Bunkers</b>		164 566	170 562	178 689	195 976	222 373	235 580	241 465	261 659
	Aviation	61 293	66 860	74 068	82 923	93 759	106 790	103 796	114 311
	Marine	103 273	103 703	104 621	113 054	128 614	128 790	137 669	147 348

Source : (EEA 2006)

By comparing the CO2 emissions due to the energy sector and more particularly the transport sector with the emissions due to the bunker fuel of the aerial navigation and maritime international. We can notice that in Europe:

The international flights (114.311 Gg in 2004) emit meadows of 5 times more CO2 than the domestic flights (23.342 Gg).

Air transport, domestic and international flights joined, emits 137.653 Gg in 2004, that is to say a sixth of CO2 rejected by the road transport (801.103 Gg).

We can also observe that over one 14 years period (1990-2004):

- The emissions due to the fossil consumption of energy increased by 4,89%.

- The emissions related to transport taken into account by Kyoto<sup>9</sup> increased by 24,77%
- The emissions related to international air transport increased by 86,50%

There is a contradiction between the climate policy and the growth of the European air sector. Tyndall Centre for Climate Change<sup>1</sup> (2006) affirms the European policies aim at thus limiting the increases in the temperature to 2 ° and the CO<sub>2</sub> concentrations to levels of 450 or 550 ppm. If the aircraft industry continues to grow, even at intervals slightly lower than that of today, the EU could see the air sector being adapted between 39 and 79% of the total of its Carbon budget.

#### 4. Voluntary CO<sub>2</sub> Offsetting

In Europe, the concern of integration of sustainable into tourism concerns mainly the problem of CO<sub>2</sub> emission, and more precisely the segment "transportation" of the tourism sector. Partnership projects between flying companies<sup>10</sup> and NGP are blooming everywhere. They consist in voluntary compensation of emissions of greenhouse effect gas.

We can understand these initiatives are both necessary and useful. So far kerosene taxation is not in function and no system of quota of CO<sub>2</sub> is applied for the sector or flying transport. But we should remember that the European Commission gave instructions to the members of the European Union, in order to apply a tax and to introduce quotas in 2011. It is the reason why, pushed by the green NGO, the flying companies make efforts to postpone the deadline and to keep the leadership for the decision making process; in that way, the companies are introducing – by booking a flight ticket and under diverse modes – the equivalent of a carbon tax calculated in function of the quantity of CO<sub>2</sub> emitted by km and by traveller.

Market studies next years predict a strong increase of the world programs of compensation. Even if the compensation represents yet today only one very small percentage of the gas emissions for purpose of greenhouse of aviation, it allows at least a broad sensitizing the problem. The calculators of emission, even if they provide divergent estimates according to the methods used, inform us of the importance of this problem and the urgency to act.

17 programs of voluntary CO<sub>2</sub> offset in the 10 OECD countries: CO<sub>2</sub> Solidaire (France), Coolflying (Holland );Tree For Travel (Holland); Atmosfair (Germany); SAS (Suède);My Climate (Swiss); Climate Care ( United Kingdom); Carbon Neutral (United Kingdom); Grow a Forest (United Kingdom); Tree Canada Foundation (Canada); Better World Club (USA); Green Tags (USA); Carbon Fund (USA); Sustainable International Travel (USA); Climate Friendly (Australia); Green Fleet (Australia); Ebex21 (New Zealand).

A strong divergence of the figures as well from the point of view of the CO<sub>2</sub> emissions as of the amounts to be compensated is observable. The differences are explained partly by the scientific bases of calculations which take into account or not the non-CO<sub>2</sub> effects. It should be noted as certain programs propose formulas simplified for a continental flight or an intercontinental flight. The prices of the ton of CO<sub>2</sub> are very different and often do not reflect that of the market, e.g. the SCEQE which varies between 15 and 20 € by ton. The compensation cost of a ton of CO<sub>2</sub> varies in a ratio from one to six : the lower price low is 6€/t and the higher one is 40€/t. In a very large majority of the cases, the programs of compensation have an Internet site on which can be carried out the transactions: the payment is done on line using a chart of bank or a credit card. The reducing projects of CO<sub>2</sub> are varied, their costs too. Moreover, the CO<sub>2</sub> reductions which they generate distribute differently in time, according to

<sup>9</sup> The bunker fuels are not covered by the protocol of Kyoto

<sup>10</sup> That the case for example, for SAS, Lufthansa , etc..., and now Air France.

the nature of the project. Taking into account the fact that CO<sub>2</sub> emitted at the time of the altitude flights will remain in the atmosphere during several tens of years, this question of the distribution in the time of the CO<sub>2</sub> reductions financed by the compensation deserves to be put. A compensation of a ton of CO<sub>2</sub> via a project of solar energy will not have the same environmental impact as the same compensation via a project of reforestation or a hydroelectric stopping. The comparison of the various programmes of compensation from the point of view of their environmental effectiveness would require a thorough analysis of the assessments carbon of the projects, which appears however premature. Currently, the majority of these projects do nothing but start. The programs provide projections of the carbon reductions, but almost no program provides figures on the quantities of CO<sub>2</sub> already reduced through constant projects.

The compensation is a practical application principle of the pollutant payer. It can thus easily become, in the spirit of those which compensate, a simplistic taking out of bond, a right of pollutant which now avoids a handing-over in too major question of our thirst for displacement in a world become our village. Until now, nothing does not make it possible to affirm that a ton of carbon dioxide compensated will be indeed avoided elsewhere using the donation which is made. The overheads of the program, the times of installation of the projects in countries where, very often, the corruption is too well anchored, the lack of control, or worse, the embezzlements are as many obstacles which are likely to destroy the charitable gesture of that which compensated. Finally the voluntary compensation will not solve with it only the problem of the growth of the emissions of the air sector. It thus should be integrated among a whole of other measurements

Remain that the compensation has beautiful assets, it allows each one a voluntary contribution which contrary to a system 'cap and trade' is not limited to the goings beyond of quotas, but can ideally cover all the gas emissions for purpose of greenhouse of aviation. If tourism can become responsible, if the trade can become equitable, air transports, like any other transport, must become sustainable, but one is still very far .

From this view point, the CO<sub>2</sub> compensation to can flight is a means to prevent the public opinion.. If one moves towards an equitable distribution of the resources of our planet, it is urgent to show to the consumers the indicators which they should monitor. The problem of the climatic change recalls us that the emissions of CO<sub>2</sub> is doubtless one of these criteria. Into this prospect, the compensation of the flights is a means of sensitizing of the world citizen.

Great differences in approach could exist between carbon offset programs. If many options are offered to the travellers, all these ones do not offer the same guarantee of result. The reducing projects of CO<sub>2</sub> of these programs are very varied. They support sometimes, but not always, technology transfer towards the developing countries. They are generally integrated, but not always, within the framework of a sustainable development. The choice of the traveller is of course made only more difficult. Fortunately some schemes guarantee as well as possible the effectiveness of the projects.

However, a majority of the programs are not satisfactory<sup>11</sup>. Their evaluation use these six criteria exposed by Sterk & Bunse<sup>12</sup> : emissions, certificates, calculations, projects, standards, projects localization, to which are added three other ones : sensitization, structure, transparency. The six first ones cover only the environmental efficiency of the CO<sub>2</sub> compensation. Nevertheless five programs are distinguished favorably<sup>13</sup> : *Atmosfair*, *MyClimate*, *ClimateFriendly*, *CO<sub>2</sub> Solidaire* and *ClimateCare*. They offer the best guaranteed

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<sup>11</sup> Heughebaert A.(2006) *Etude comparative des programmes de compensation volontaire des émissions de CO<sub>2</sub>* Université Libre de Bruxelles IGEAT

<sup>12</sup> Sterk & Bunse (2004), *Voluntary Compensation of Greenhouse Gas Emissions*, Policy Paper N°3/2004, Wuppertal Institute

<sup>13</sup> With all the reserves for the ways introduced by the comparison of qualitative criteria so different as those who were used, and by applying a simple non-balanced formula based on an arbitrary quantification

effectiveness and the least risks of inadequate drifts of use of the donation, take a sustainable way and receive a good support by the travellers.

It is thus preferable to advise those with the passengers of plane. Among them, Atmosfair arrives at the head of the classification. It is the only program to have only good evaluations and without any problems..

*"Don't flight ... We are so well at home.  
If I buy a flight ticket , then I contribute to Atmosfair "*

## **ATMOSFAIR**

German non profit organization for programs of voluntary CO2 offset

### **Structure**

Atmosfair was created in May 2005, it is supported by the German federal ministry of the environment. It is a joint initiative of Forum Anders Reisen, a non profit organization of more than one hundred turn operators, and Germanwatch, an environmental organization.

### **Emissions**

Atmosfair is addressed only to the air passengers

### **Certificats**

Atmosfair buys certificates of projects MDP and cancel them.

### **Calculations**

The calculation data of the emissions were checked by the federal agency of the environment of Berlin. The compensation is made at the cost of 20euros/t.

Gold-Standard accounts audited and approved by the DZSF (Court of Auditors) normalizes where

### **Projects**

The helped projects reduce the emissions to the source:

Generation of electricity starting from waste in Brazil

Solar furnaces in the schools and hospitals in India

Heating and electricity in South Africa

### **Standards**

All the projects follow the criteria and procedures MDP and answer Gold Standard.

### **Localization**

The projects are located in countries not covered by Annex B

80% of donations go indeed to sustainable projects certified CDM.

### **Sensibilisation**

200 Donations / day

Atmosfair aims to give responsibilities and to sensitize the travellers.

It explains clearly why to avoid the air flights is best options.

Put in practice also by large companies and green deputies members of Greenpeace

### **Transparency**

The administrative expenses are limited to 20%

The compensated amounts are 160.000 € in 2005, 1.000.000€ envisaged into 2008.

The first annual report is available

## **5. Environmental protection, collaboration and ethic responsibility within tourism :**

Forum Anders Reisen (FAR), one of designer of Atmosfair CO2 offsetting program, is a reference in Germany. It offers an integrated awakening solution starting from the stay reservation for the customer.

It was founded in 1998 by 12 German small tour operators to join together the small and middle-sized tour operators. It proposes to its members free strategic co-operations concerning marketing (for example, common catalogue, salons), internet, media visibility, purchase policies (insurances, transportation tickets), services (legal consultation, information, specific training). Each member pays an entrance fee in proportion to its size (basic entrance cost : 420 €). 140 tour operators-members generates, all production joined, annual CA : 100 M €. The number of FAR customers are about 110.000/ year.

All the tour operators which are members of the FAR commit themselves proposing stays of quality and contribute to establish sustainable tourism. Their principles are each member of the Forum respect the other one like competitors and share a honest commercial attitude, the safeguarding of the natural resources (ground, water, air, fauna and flora) and the respect for practical environmental applications in all the tourism chain (transport, accommodation, activities.) The selected criteria relate to only one part of the social responsibility (climate protection, human rights, labour law).

Because there are no common criteria in the tourist branch, the FAR project imply the travellers, the tour operators, the NGOs, the social partners to develop common instruments of reference for a daily use by the tourism sector. This project is led with European pilot enterprises which for example distribute a common explanatory document intended for the travellers

In order to maximize the economic repercussions and the acceptance of the tourist practice by the inhabitants of the countries in the process of development, members of FAR prefer to use the existing local structures of lodging, of restoration, the services of local guides and drivers. Some forms of following stays are excluded if they constitute an exclusive component : circuits out-tracks with motor bike or in the car 4x4, stays of sports of slips motorized (like motor bike-snow, the jet-ski), of the circuits in the helicopter, in planes, ULM, etc

The FAR Chart does not allow flights below 700 km. Between 700 km and 2.000 km, alternatives are proposed with comparison of the prices. The duration of the stay is up to 7 days. With the top of 2.000 km the stay lasts 15 days at least. The size of the group of the travellers must be proportional to the destination and the type of accomplished stay. The rule is a guide for 20 people

## **6. Concerning the tourism, the dominating mode of treatment of the sustainability is still so far too dependent of considerations about energy and transportation.**

The passengers (58,7% coming from OECD) generate individually by borrowing this means of transport are already much more important than the threshold of 500 kg equivalent CO2 which would correspond to an equitable distribution of a bearable pollution.

The OECD countries emit nearly 60% of air CO2, whereas they represent only one sixth of the world population. Let us add to that they are the richest people who travel more and add to that the consequences of climate change are dangerous for the poorest populations. The reduction of the emissions of air transport thus concerns also a problem of equity

In the United Kingdom, The Civil Aviation Authority showed which the half of the richest people was at the origin of more than 70% of the enjoyments flights (CAA 2005). By

extrapolating these figures with the OECD countries, one concludes that less than 9% of the world citizens are responsible of more than 40% of the flights and thus of the emissions of GES which result from it. These 500 million privileged people emit nearly 150 million T CO<sub>2</sub> during their air travel that is to say 300 kg CO<sub>2</sub> /person /year . Applying the multiplying factor of 2,7 of the GIEC, we arrive at annual emissions of 810 kg CO<sub>2</sub> equivalent per capita. It is already well beyond the equitable and sustainable limit (500kg of CO<sub>2</sub> equivalent per capita (either 3Gt for 6 billions persons).

Therefore the environmental protection cost is supported by the travellers and the manufacturers of plane motors are not bothered about their responsibilities and their incompetence: they are not stimulated for changing their technological paths which are no sustainable. Under these conditions, the protection of the environment is perceived as a charge, and not at all as a shared investment: it would introduce the principle of a selection by the prices, which is contrary to the principle of equity. Then should the pleasure of travelling be reserved to rich people and to developed countries?

The right Brazilian tourist should be that one who stay at home, watching images of the Eiffel Tower ? The Brazilian citizen of Fortaleza should be obliged to watch the Iguacu falls on the TV set ? This picture could soon happen in Brazil, where the implementation by the TAM of a project dealing with voluntary compensation of emissions of greenhouse effect gas, copied from the mode elaborated in Northern Europe.

Moreover, the problem of CO<sub>2</sub> emission cannot be resolved through a system only based on the sole principle of compensation and on a form restricted to the financial approach. Before all, emissions should be prevented. Apart from the fact that we can have some doubts about the use of the collected funds, there is a possibility that those who will subscribe by any donation – voluntary or obligatory – through such mechanisms, will take this opportunity for having good conscience by paying for that. On the same way, it appears unacceptable that travellers by flight would systematically feel guilty, when we do know the situation of many infrastructures in certain countries, like Brazil, as these travellers have no other efficient means of transportation inside their homeland.

For fear of having a failing awareness in countries where considerations are not based on religions, the sustainable development should offer some seduction and not making guilty; it should be felt with creativity and not as a duty, and especially within a domain like tourism, where the dreaming part is so strong.

The question of sustainable in tourism is not restricted to transportation. The activity linked to tourism is made up of many segments like transport, but also housing, feeding supply, leisure activities on the spot and the local environment.

It is not restricted to the environmental question and solving the environmental problem is not restricted to climatic change neither to the question of energy. If we now consider for instance the development of technologies which could be considered as alternatives to fossil energy, - for instance ethanol production from corn in the USA – un global vision of its impact would rise the question on the fully justification of this so-called alternative solution ?

The increasing demand of corn on the bio ethanol market leads to let the poor people supporting the increasing price of this basic food, as well as the price of environment protection.

Sustainable development should not be restricted to a monetary approach, founded on the sole limitation of CO<sub>2</sub> emissions. On one side, we do have to integrate aspects concerned by other types of environmental pollutions (particularly the items affecting water resources and maintenance of soil quality), and on the other hand, we should not neglect the other components of sustainable development: social aspect, cultural dimension, women question, job creation and economical development.

Any decision can be quite rational on the strict sector based viewpoint (for instance the sole impact of cost), and also in coherence on a particular segment (reduction of CO<sup>2</sup> emissions), but the same decision can be completely counter productive at a global plan. (increasing consumption of other natural resources, price increasing of basic foods). Compartmentalized, elaborated through environmental regulation or on sector-based decision, the environmentalist compensating and repairing approach is incremental, expensive, pernicious and inequitable.

This approach postpones the prevention deadline and shifts the negative impact. Thus when corn produced energy would be the solution in energy, the enormous demand in water for growing corn shifts the "solved" problem towards another environmental domain and postpones in terms of time. That is no sustainable!

Operating outside of a global strategy and a preventive action, the legal principle "polluter-payer", on which is built this "end of pipe" logic, is pernicious, because it allows the polluter to redeem easily and leads to the contrary of assuming responsibility.

## **7. Sustainability within and through tourism**

### **A current pilot experiment for organizing the tourism sector**

APREIS<sup>14</sup> is leading the first professional organization in Europe which is dealing with sustainable tourism : the *World Forum for Sustainable Tourism (WFST)*; it already elaborated the aims and organizing modes. This independent and non-profit organization was born on September 2007 and it is located in France. It put already together two dozens of members. Partnership is establishing with other professional organization, like for example *Forum Anders Reisens* which gave it some advices. Its task is to put together professional structures as well as small -or middle-sized voluntary actors acting in tourism, plus their international partners, on the basis of a common chart and specification, to come within the scope of voluntary participation of tourists for funding developmental projects issued from spots receiving tourists, which are proposed by the travel agency members. The French-speaking, European and international spaces are covered by the development and promotion of marketed stays in matter of sustainable tourism.

The *WFST* is really the first professional organization at the European level whose aim is qualified in terms of sustainable. So far, the other terms used for qualification of the current tourism organizations are: "social", "reasonable", "responsible", "in another way", or again "green tourism" or "ecotourism" ... But all these terms are only particular aspects of sustainable.

The task of this *WFST* professional structure<sup>15</sup> is to sensitize, to put into network, to organize and to federate all the French-speaking and European parties concerned with the tourism chain, - and also their international partners – in order to allow them to develop and promote a supply of sustainable tourism service at a global level and for each of these components. That should be considered having in mind the travellers interests the tourism professionals on the whole, and for the benefit of the sustainable development at the planet scale, including the local actors belonging to the receiving areas.

APREIS will encourage and help the various actors of the chain, about conception, making up, realisation, buying, surveying and following up of services, also information exchange, creating links, mutualisation of tools, cooperation and association, under full respect of their perfect independence, in order to allow the voluntary implementation of sustainable into their aims and strategies, and then, into their modes of conception, production, government, management; organisation , relationship, communication, promotion, information on supplying, and evaluation of tourism service proposed on every segments on which they do have their own mastering.

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<sup>14</sup> European and International Actors, Practices and Researches to implement Sustainability <http://www.apreis.org>

<sup>15</sup> <http://www.apreis.org/docs/statutsFTD.pdf>

APREIS develops between small- and middle-sized producers of sustainable tourism stays: cooperation, information exchange and mutualisation of communication and promoting tools, information on supply, survey, following up and evaluation. But more generally, its major role is also to inform the principles of sustainable within tourism, to propose operational approach and applications. Its conceive, manage and realize research works on integration of sustainable into strategies, conception modes, production, management, government, organization, relationship and communication, within tools allowing needs evaluation, information on suppliers and evaluation of sustainable tourism services. It proposes to test the feasibility of proper solutions, prompting for its follow up, and evaluation results.

Lastly, based on a chart and specification of sustainable tourism, APREIS would like to contribute to set up a well-recognized label of sustainable tourism, owned or not by the association, and to set up a certification which would authenticate the quality of approach and tourism service proposed by the tourism agencies.

In order to point out the targeted aims, APREIS is looking for creating links, developing cooperative networks, exchanging and transferring information and competences between French-speaking, European international actors of the tourism chain, implementing structures and tools for counselling, driving, surveying, following up or evaluating the supply and demand in sustainable tourism, and also to contribute in setting up cultural partnerships in matter of sustainable tourism, either at the experimental or pilot levels.

For reaching these goals, the association is assisted by an independent scientific partner. For ensuring respect of these rules, quality of these approach and tasks, control of the right application of the chart and the implementation of the specifications, as well as result assessment, the association is helped by an "Ethic, strategic and scientific advisory committee", being totally independent of the association and being built by expert and independent personalities in the field of sustainable development.

The members belonging to *WFST* are shared out into two bodies but can also be situated out of these bodies. The first body is made of active and productive members, of individual or associated structures for mastering on either side the global supply proposed in matter of tourism stays and in implementing an approach of sustainable on the whole chain of production and realization of their staying proposals?

The second body is composed active members as partners, service providers from any particular segment of the tourism chain (stays selling, lodging, transportation, feeding, leisure activities...) who accept and undertake to cooperate or to fuse together, in order to manage all the segments of the tourism chart, and to contribute to implementing the approach of sustainable within the whole network of production and realization of their tourism proposals.

Rights and obligations of members of these two bodies, whose coexistence is necessary and useful, are not the same. The objective here is to recognise differences upon situations, but also to allow to the structures belonging to the second body, to take advantage of the multiple strategic co-operations which is possible between members, for reaching the criteria of sustainable of the most advanced actors already engaged in this sustainable approach.

## **8. Sustainability within tourism and through tourism**

As tourism is composed of numerous segmented activities, the integration of sustainable requires implementation of links between the different actors within the different segments. It is necessary to develop a form of cooperation over the fence between the actors of tourism, in order to build a chain of concerned parties about any project shared in common, and for giving responsibilities to the actors, instead of subjecting, giving advice or ordering regulation.

In the field of competition, a cooperative action is the mean and the condition of rendering the tourism sustainable. The cooperation among all the chain should concern the internal as well as the external aim of quantitative reduction and qualitative mastery of flows and stocks of matter,

energy and wastes ; it should integrate all the aspects of sustainable et it should be based on the local trait of sustainable : the means concerned by receiving the tourists. It should allow separating the creation of value and the increase of flows and stocks of matters, by reducing the costs of inputs, of environmental regulation and of wastes treatment.

The sustainable tourism should not be restricted to taxation, to compensation, to repairing or to regulation. Certain agencies belonging to the *WFST* are arguing about their presence, invoking the fact that – for facing the competitive pressure of the big companies – they have to choose the cards of sustainable, quality and strategic cooperative link. In fact, this choice allows to cut certain general costs and to gather local information which is the key point of any successful stay. This information is based on the quality of the means of receiving tourists, and on environment, but also on relation ships maintained between corporate organisations, tourists and local actors. Only the small or middle sized offices, or the decentralized companies are able to respond to the new requirements of differentiated demand and to the local actors of sustainable.

The topic of local development can and must integrate positively the tourism sector. This activity is source of revenue which should not been neglected because sustainable is a part of it.

## **9. Civic networks for sustainable tourism : between market and plan**

When initiated at the state level, the environmental protection adopt commonly the easy way of regulations or ecological taxes.

When communicating on sustainable, a flying company put on the foreground the environmental question et intend before all to adapt itself to the environmental regulations and rules, instead of thinking innovation and sustainable. The company opts for charging the users with the costs of former investments and the incompetence in R&D of the manufacturers of airplane motors.

The radical novelty of the APREIS proposal, in matter of implementing sustainable in the field of tourism, is before all to think global and to have a positive attitude. This proposal does not reduce sustainable to the environment, neither the environmental to climatic variations, neither the global climatic change to the problem of energy, neither the resolution of this latter to the taxation of CO<sub>2</sub> emissions – voluntary or obligatory -, neither the tourism to the only transportation segment. The novelty of this APREIS proposal is to lean onto the power of tourism activity in order to build a global network of cooperative and nomad links, which is the condition and the mean for rendering the tourism sustainable, and to help the tourism for a contribution to deliver a local sustainable.

The aim of this APREIS proposal is not to make the tourist feeling guilty of discovering the world, neither to accuse him to endanger the planet. The proposal is trying to develop civic and global locally based sustainable, and to set up a civic and global network of cooperation between the different actors of the tourism sector for implementing a global sustainable. These networks are offering a new mode of regulation concerning the activities of this sector, situated between the market and the state, between competition and hierarchy, between rivalry and conciliation hurting liberty.

Through these networks, tourism and traveller could become ambassadors and actors of local sustainable development.

## **10. Seven Ethic Points dealing with sustainability through tourism**

Two different and additional shutters of a system of financing of the local projects of sustainable development by the travellers. They could be applicable simultaneously. It is here about simple, concrete and strong principles. The detailed modalities of organization must be clarified (example: the mode of appointment of the members of scientific and ethical Committee)

#### **A Projets presented by local actors of host country and selected by the travellers-donors**

1. Each traveller pays a DONATION when buying any travel or stay.
2. Donations paid are into an account of a Foundation managed by a independent institution
3. Each donation is transformed into a vote unit
4. The Foundation is financing projects of sustainable development within the areas of destination
5. These projects are presented by local actors and are validated by a scientific and ethic Committee consisted of national and international skills in order to guarantee the trait of sustainability
6. These projects are presented to the travellers-donors through a numeric tool
7. The projects are selected and granted, through electronic way, are those which had collected the higher number of vote units. They will be object of a follow-up and an evaluation under the authority of the scientific and ethic Committee

#### **B Projets presented and selected by local actors of host country**

- 1 Each traveller pays a DONATION when entering the host country , rather in his first place of accommodation
- 2 Donations paid are into an account of a Foundation managed by a independent institution
- 3 The Foundation is financing local projects for sustainable development within the areas of destination
- 4 These local projects are presented by local actors
- 5 These projects are validated by a scientific and ethic Committee in order to guarantee the trait of sustainability and their correspondence with the priorities of the host country.
- 6 The State of the host country takes care to define and to make public its criterion of selection and selects the validated local projects according to these criterion
- 7 The decentralized partners structures concerned by the selected projects have the responsibility of their implementation. These projects will be the object of a follow-up and an evaluation under the authority of the scientific and ethical Committee

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Atmosfair [www.atmosfair.com](http://www.atmosfair.com)

Gold Standard [www.cdmgoldstandard.org](http://www.cdmgoldstandard.org)

## ANNEX

### Carbon Compensation Programs for a Paris-Madrid flight

Program	tCO2 Emissions	value €	€/tCO2
C02Solidaire	0,34	9,00	26,47
ClimatMundi	0,62	12,36	19,94
GreenSeat	0,75	13,34	17,79
TreeForTravel	1,25	17,00	13,60
Atmosfair	0,50	9,00	18,00
MyClimate	0,63	16,00	25,28
ClimateCare	0,23	7,36	32,00
CarbonNeutral	0,38	14,73	38,76
Grow A Forest			
Offsetters	0,22	2,47	11,23
TreeCanada	0,29	5,72	20,00
Greentags	0,81	15,76	19,46
CarbonFund			
ClimateFriendly	0,75	13,18	17,57
GreenFleet	0,35	2,79	7,97
Ebex21	0,42	5,24	12,60

Source : CO2 Compensation programs websites