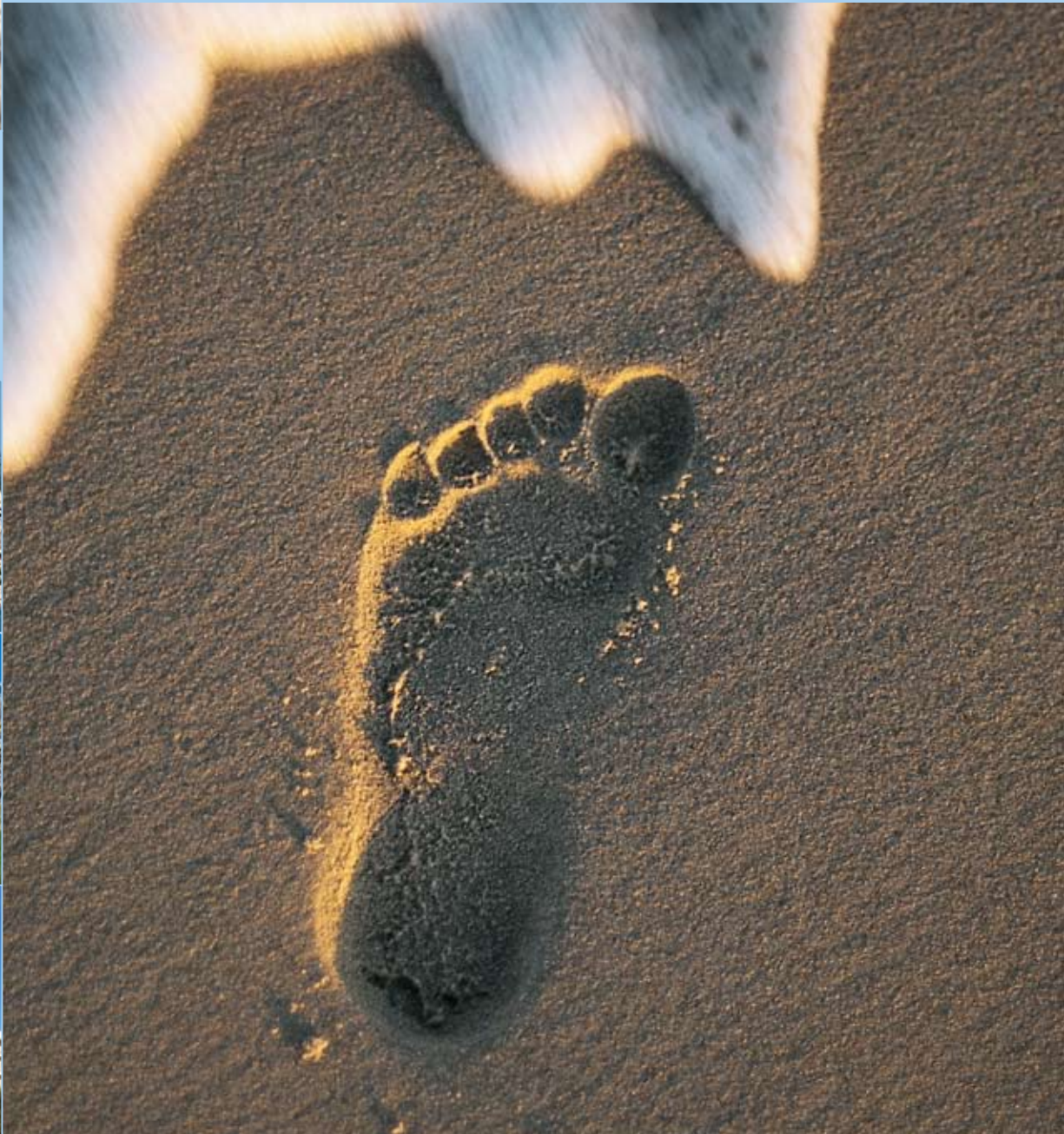
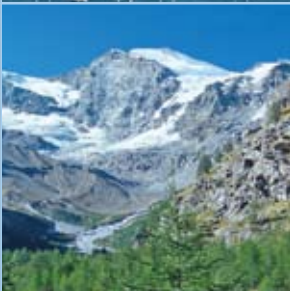




for a living planet

The Tourist Climate Footprint

WWF Report on environmental impacts of holiday trips



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White beach and a sea of turquoise and blue symbolize many a tourists' dream holiday – like here in the Cape Verde Islands off the Western African shore. But the long journey by plane enormously amplifies the climate footprint. © Birgit Weerts / WWF



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Introduction

Footprints in the sand – they make us dream of the sound of the sea, of relaxation, of days or even weeks at ease. Our wanderlust knows no bounds, every year millions of Germans gravitate towards the world's beaches. In 2007, Germans set aside nearly five percent of total annual consumption for “the most beautiful time of the year”, establishing a new record with 61 billion Euros spent on travelling abroad (Source: Dresdner Bank). For years we have been holding our position as world champion in travelling, and in terms of money spent we are the most travel-eager nation, followed by the USA and Great Britain.

But are the sands of our favourite vacation spots' beaches the only places we leave our footprints in? At many of the world's most beautiful places, the harm that tourism can do is already clearly discernible: more traffic, mountains of waste, unchecked consumption of resources, uncontrolled development and urban sprawl ruining coastal sceneries.

Climate Footprint too large

In the face of climate change, emissions of greenhouse gases connected to travelling have become more and more relevant. Tourism produces five percent of all greenhouse gas emissions. In this context, the distance to the destination and the choice of transport for getting there and back play by far the most important part: Long distance trips by plane amount to not even three percent of all trips, but cause seventeen percent of the harmful emissions connected to tourism. Because carbon dioxide emissions in high altitudes advance the greenhouse effect in a measure far greater than at ground level (the so-called RFI factor, Radiative Force Index), the impacts of air traffic on the climate are significantly larger.

WWF Demands

- Climate protection must become a core aspect of planning and organizing new tourism products
- For every trip a fee depending on distance must be charged by the airlines and forwarded to climate protection projects
- Tour operators must show more transparency concerning climate impacts of their products
- The decision about the extent of the trip footprint ultimately rests with the consumers. They play a key part in the diminution of their climate footprint while critically pondering travel distance, while organizing transport, and while deliberately choosing accommodation facilities that comply with environmental standards.

According to UNWTO¹, an average long distance holiday trip causes 0.25 tons of carbon dioxide equivalents.

WWF analyzed German travel behaviour and calculated the climate footprint of our favourite holiday trips, using typical example vacations to destinations near and far. The seven trips we examined in detail are typical for Germans: A third of all our holiday trips match one of the seven trip types. The average emissions resulting from the presented example trips correspond to circa one ton of carbon dioxide equivalents per trip – which is four times the global average. If everybody travelled like the Germans do, worldwide travelling emission would multiply by four, leading to five billion tons of carbon dioxide equivalents released into the atmosphere.

As the WWF model calculation illustrates, German travel behaviour should not serve as an example for other countries. Quite the contrary, it is high time the Tourist Climate Footprint of German tourists and tour operators be significantly reduced. The time has come for the tourism industry to show responsibility beyond the payment of compensations, and not to just paint a few of their products green by financing a handful of nature conservation projects. Already in the planning stage of tourism products, climate protection must be considered more thoroughly, and energy-conserving concepts in trip design must be pressed ahead with.

A transparent presentation of the carbon dioxide footprint would empower the consumer to deliberately choose more ecologically sound alternatives in holiday travelling. And our survey shows that two thirds of all Germans expect to receive competent environmental advice already while planning their trips with the travel agencies.

It does not have to be vacation at home...

WWF is certain that travelling can have positive effects for the visited regions and their people. Tourism offers chances for nature-orientated economic development and makes natural habitats more valuable. Where, if not on a holiday trip, do we get to make unforgettable experiences of nature's beauty! The fascination for nature makes of travellers very ambassadors of nature protection.

With our advice on vacation behaviour, tour operators as well as travellers can contribute to keeping our footprints as small as possible.

¹ United Nations World Tourism Organisation

Holiday Trips and the Environment

The tourism industry is booming, the pressure on the last “natural oases” is increasing. At the same time, tourism is more dependent on an intact environment than any other business sector. Tourists thus are at the same time responsible for and suffering from the damages caused.

Environmental damage directly or indirectly related to tourism is caused by climate-relevant emissions, by the usage of drinking water, by waste and sewage disposal, by land consumption and by disturbances of flora and fauna, e.g. through noise exposure or light. In addition to the global environmental impacts, also the spatial and temporal concentration of travelling is ecologically relevant³.

In contrast to tourism confined to Germany, when travelling to foreign countries water consumption (particularly in dry regions) and waste production gain in importance. Large hotel complexes are expanding and destroying coastal landscapes. Forests and mangroves are disappearing. Water and energy consumption in holiday paradises is immensely high and more often than not causes great distress among the local populace⁴.

Especially the emission of greenhouse gases is of great importance, the amount of which in turn is mainly determined by the choice of transportation to and from the holiday destination, of accommodation, alimentation and on-location activities. In this context, the airplane is climate killer number one: A flight from Germany to Majorca is as harmful to the climate as driving a car for one year⁵.

2 Institute for Tourism and Spa Research in Northern Europe
3 Federal Environment Agency (http://xxx, as of 05/19/2008)
4 Schmied/Buchert/Hochfeld/Schmitt (2002): Umwelt und Tourismus. Daten, Fakten, Perspektiven. (Publisher: Federal Environment Agency)
5 Der ganze Wahnsinn. Reisen Nonstop. VCD, 2005

Holiday trends

The following long term tourism demand trends are becoming apparent in Germany:²

- **Volume: Stable, but with changed structures.** Neither a lot more nor a lot less holiday trips than before. More trips by the elderly and less trips with children.
- **Motives: Constant basic needs, more differentiated and higher expectations regarding the realization of trips.** Relaxation, distancing oneself from the daily routine, being free and having time, renewing one's forces these remain the most central aspects. Concerning trip realization there are ever more specialized target audiences.
- **Clients: Growing competence.** Greater experience in travelling leads to more competent travellers.
- **Information: More sources, less depth.** With all the choices around, there is less time to study everything carefully.
- **Destinations: Clear rankings between areas, equal distribution between specific countries/destinations.** The Mediterranean, the Alps, the coasts of North and Baltic Sea are favourite destination areas. Within these areas, there are no discernible specific destination favourites
- **Forms of vacation: Put more variety into one trip.** A holiday trip always has to cover several aspects: Nature, culture, health etc.
- **Duration: Shorter.** For financial and professional reasons, trip durations are getting shorter and shorter.
- **Expenses: Higher, but also more concern with pricing.** Comparing prices is gaining in importance. The aim: More vacation for the same amount of money.
- **Trips organized by tour operators: En route towards majority.** Flexible package tours are increasingly interesting also to independent travellers.
- **Holiday accommodation: Higher quality.** Clients are expecting at least last year's vacation's accommodation standard (and the accommodation quality they know from back home)

Current holiday demand – reason to worry about the environment?

As far as destinations are concerned, the choice is “typically German”. In 2007, as in the years before, one third of Germans spent their holidays in their own country, one third at the Mediterranean Sea, and the last third travelled throughout the rest of the world. In Germany, Bavaria holds the pole position among travel destinations, abroad Spain is the favourite. One trend, though, is obvious: Air travel is increasing, not least due to the grow-

ing choice in low budget airlines. This happens at the expense of travelling by car and especially by train.

At the same time, there is a shift in chosen accommodations from guesthouses, private guest rooms and camping towards hotels, in accordance with a travelling budget that grew by almost 25 percent during the last ten years. But more comfort also means higher consumption of energy and resources, which in turn means more emissions of gases harmful to the climate.

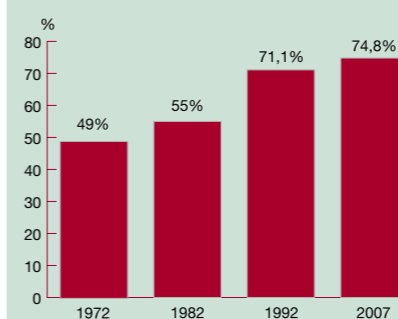
The Germans' holiday trips

According to a 2008 travel analysis⁶ of the Forschungsgemeinschaft Urlaub und Reisen, 48.5 million Germans made at least one holiday trip of five or more days in 2007. Holiday travelling intensity, i. e. the share of the population that made at least one trip, lies just under 75 percent, slightly exceeding the previous year's number and continuing on the same high level it had already reached in the early 1990s. In comparison, Germany thus is the world's most travel-eager nation.

In total, 62.9 million holiday trips were carried out last year. Some Germans thus travel more than once per year. As a rule, one holiday trip per year is considered standard, while two or more trips are a luxury you treat yourself to only once in a while, not least bearing in mind the contents of your money purse.

6 Forschungsgemeinschaft Urlaub und Reisen (Holiday and Travel Study Group, F.U.R.) (2008): RA 2008, Erste Ergebnisse

Holiday travelling intensity



“made at least one holiday trip last year”

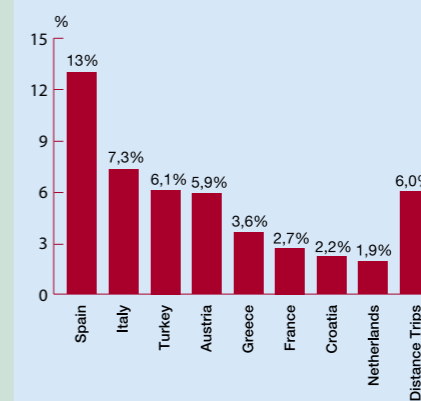
Base: Population of 14 years and older
Source: F.U.R (2008): RA 2008 - Erste Ergebnisse

The most popular domestic and international holiday destinations

In 2007, holding a market share of more than 30 Percent, Germany still is the Germans' most popular travel destination by far. Another third of Germans' holidays are spent at the Mediterranean Sea, and the remaining third in the rest of the world. While this distribution has proven very stable over the years, developments within these greater areas are quite dynamic – influenced by positive factors like new travel offers (e.g. in Eastern Europe) or improved accessibility (e.g. via budget flights), but also by external influences like diseases (e.g. avian flu), political insecurity or weather extremes.

In Germany, Bavaria with its share of 8 Percent of all holiday trips clearly holds the pole position, followed by Mecklenburg-Western Pomerania, Schleswig-Holstein, Lower Saxony and Baden-Wuerttemberg. Among holiday destinations abroad, market leader Spain easily remains aloof of the competition. But Italy, Turkey and Austria also rank among the Germans' most important international travel destinations. Long distance travelling accounts for a market share of six percent.

International holiday destinations

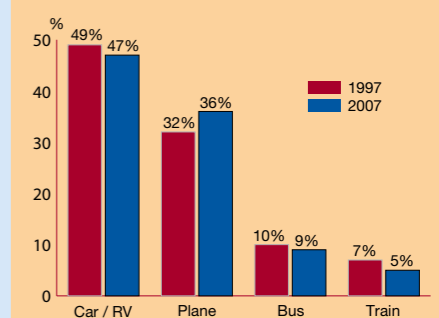


Base: 62.9 million holiday trips, of five days or more, respectively
Source: F.U.R (2008): RA 2008 - Erste Ergebnisse

Travel behaviour: Means of transportation, accommodation, trip duration and expenses

Travel behaviour developments and tendencies can only be discerned in long-term observations. In most cases there are only marginal short-term changes. Changes of preference concerning destinations in conjunction with improved accessibility, e.g. via budget flights, led to an increase in air travel at the expense of car and especially train use over the course of the last decade.

Verkehrsmittelnutzung



Base: 62.2 or 62.9 million holiday trips, of five days or more, respectively
Source: F.U.R (2008): RA 2008 - Erste Ergebnisse

Instead of staying in pensions, private guest rooms or on campsites, Germans increasingly spend their holidays in hotels. This development is partly due to the choice of preferred destinations (holidays on southern coasts usually take place in hotels), but also to demands growing ever more sophisticated – apparently, clients' expectations are met up with more fully in “modern” hotels than in “old-fashioned” pensions.

These growing expectations towards quality standards also leave their imprint on the Germans' holiday budgets: While the average trip duration decreased from 13.9 to 12.5 days since 1997, trip expenses went up by nearly 100 Euros to 810 Euros per person and holiday trip.

The Climate Footprint of typical holiday trips

To better illustrate the impacts of human activities like consumption and production on Earth's eco-system, the metaphor of the ecological footprint was developed in the mid-nineties. It refers to the productive capacities of the system Earth and tells us the amount of land and water areas that are necessary - taking into account current technological conditions - to supply resources for one nation, one region, one household or one person, and receive their refuse.^{7 8 9}

When talking about travelling, the size of the ecological footprint varies greatly. This is especially true for impacts to the climate caused by travelling. To illustrate the magnitude of climate-relevant ecological impacts of different holiday trips, WWF closely examined a set of holiday trip archetypes, having the Öko-Institut¹⁰ calculate the Tourist Climate Footprint of these seven example trips. WWF intentionally chose trips that are typical for German holiday demands:

WWF's Footprint and CO₂-Calculator

WWF developed an internet-based calculator which allows everyone to calculate their entire ecological footprint, that is, their carbon dioxide usage through alimentation, consumption, habitation and mobility, and compare it to the average.

<http://independent.footprint.wwf.org.uk/>
<http://www.wwf.de/themen/klimaschutz/>

A beach-and-bathing holiday on Majorca, a cultural holiday in Trentino, a family holiday on the Isle of Rügen, an Allgaeu/Bavaria wellness holiday, a skiing holiday in the Alps and a cruise on the Mediterranean Sea, together representing more than 60 million German holiday trips.

In this context WWF factored in the most important climate-relevant parameter of the ecological footprint: The emission of CO₂ equivalents.¹¹ The following aspects were incorporated into the calculation:

- **Travel to and from the destination** (distance, choice of transport, number of travellers)
- **Accommodation** (type of accommodation, time of year and duration of travel)
- **Food** (number of warm meals, upscale or normal gastronomy)
- **Activities** (distance, choice of transport, number of excursionists).

The Tourist Climate Footprint for holiday trips provides scientifically sound information on climate impacts caused by tourism, thus rendering it an easy to understand and relatively easy to use indicator for the ecological viability of a given trip, illustrating in which areas there is need for improvement.

Following each of the seven example holidays' descriptions and the presentation of the respective climate footprint, there is an illustration of tourists' options to decrease their climate footprints during each kind of trip. To do that we use the following legend: = large effect, = medium effect, = low effect. To facilitate the classification of the chosen trips, we additionally list the German travellers' choices of transport and accommodation for each trip. (Data source: F.U.R. travel analysis 2008).

7 Global Footprint Network – oekologischer_fussabdruck: Overview, <http://www.footprintnetwork.org> (as of 05/05/2008)
 8 Lexikon der Nachhaltigkeit (Encyclopedia of Sustainability, http://www.nachhaltigkeit.aachener-stiftung.de/artikel/kologischer_fussabdruck_733.htm, as of 05/05/2008)
 9 WWF-UK: What is the ecological footprint? http://www.wwf.org.uk/filelibrary/pdf/what_is_ecofprint.pdf
 10 Eco Institute
 11 CO₂ equivalents is a unit used to measure the impact of all greenhouse gases (in addition to CO₂, these are, for example, methane (CH₄) and nitrous oxide (N₂O)) on the climate, converted to hypothetical CO₂ amounts.

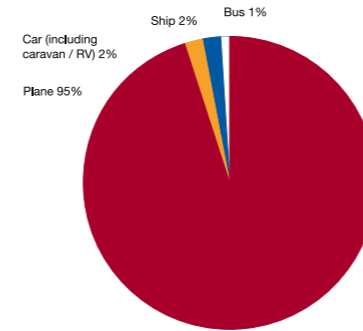
Urban sprawl and waste of resources – the building boom in popular coastal holiday resorts deteriorates the climate balance. © Michel Gunther / WWF-Canon



Majorca: Summer, sunshine, beaches and more

Holiday destination Majorca: 3.3 million holiday trips by Germans in 2007

Prevalent means of transport



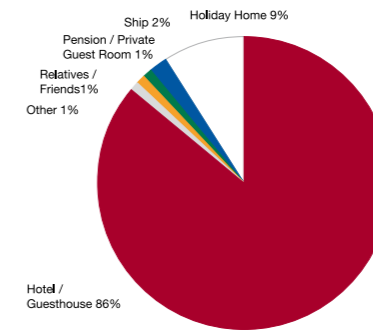
Laughing out loudly, Ulrike, Bettina and Anja squeeze their suitcases into the car and head towards the airport bus that will take them to Hamburg Airport. The 30 kilometres by bus as well as the flight from Hamburg to Majorca pass quickly.

For a much longer time, or so it seems to the three girls that just finished high school, they are now already sitting in the bus that is taking them to their hotel in Alcúdia, at a distance of 70 kilometres from the airport. And on top of that the exhaust fumes drifting in at all the uncountable stops, the bus standing in front of other hotels with its engine running while waiting for guests to find their suitcases... The three of them are relieved when they finally reach their hotel.

The four-star hotel with its giant swimming pools and landscaped wellness area nearly looks as depicted in the brochures. The room seems enormous to the girls, and the sea view from the balcony is breathtaking.

After lunch they set off to town to pick up the rental car they booked for the entire duration of their stay on the island. After all, they do not want to just laze on the beach, but have a rigorous agenda of excursions all mapped out already: They are planning to go see the Tramunta

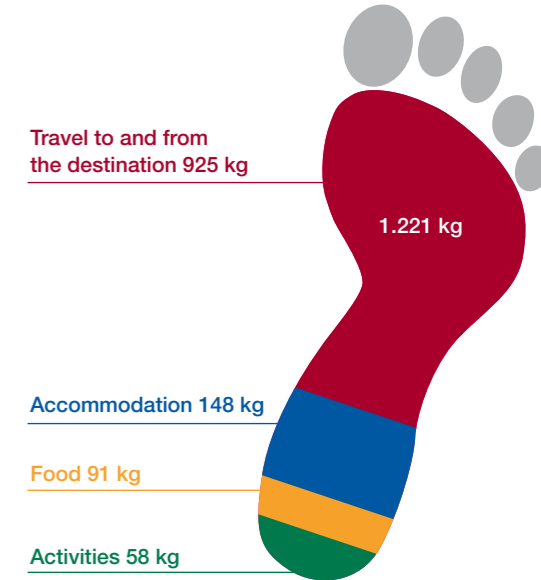
Accommodation



Mountains, Palma and various others of the island's beaches. And 500 kilometres in two weeks are not too much, they all agree. Moreover the car is air-conditioned, so that even the midday heat is easily bearable inside.

Ulrike also booked an introductory diving course. Equipped with air tanks and everything, she wants to immerse herself in submarine worlds for three days, while the other two prefer to stay above water, enjoying themselves on an all-day motorboat excursion, including getting pulled into the air with a parachute. On an impulse the three of them let someone talk them into also joining a quad ride day trip. Every evening, they visit the numerous bars, where they celebrate their holidays till the break of dawn.

The Tourist Climate Footprint CO₂ per person 1.221 kg:



Travelling to and from the destination, 925 kilograms of CO₂ equivalents are emitted per person, 916 kilograms of which due to travelling by plane. 13 nights in a four-star hotel produce 148 kilograms of CO₂ equivalents, full board (=25 warm meals) amounts to 91 kilograms. The emissions relating to recreational activities add up to 58 kilograms (rental car trips 36 kilograms, motorboat excursion 16 kilogram, quad day trip six kilograms).

Advice for Ulrike, Bettina and Anja to diminish their Tourist Climate Footprint

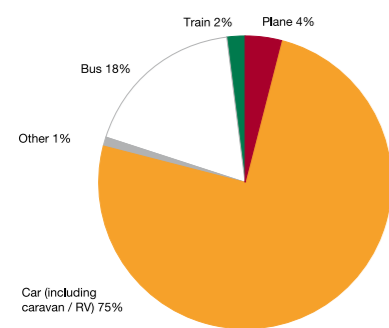
Choose a destination at a shorter distance, one that can not only be reached by plane

Abstain from activities that consume lots of energy or water – especially in places with water shortages: Paddling instead of motor-boating, riding a bike instead of a quad

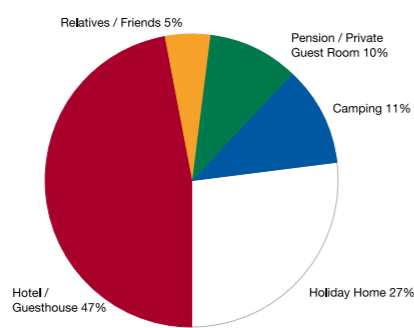
Culture and Wine in Trentino

Holiday destination Northern Italy: 2.1 million holiday trips by Germans in 2007

Prevalent means of transport



Accommodation



Mr. and Mrs. Corriera are in a very good mood as they wait outside their home in Berlin. Together with two other couples from the neighbourhood, they booked a five-day bus trip to Bolzano in the Italian Trentino region for this spring. Today is the day they begin their vacation. Their children, already grown up, take them to the central station by car – this is the place where the bus trip begins. Almost at the same time they are dropped off, their neighbours reach the station as well, also having been taken there by car. Mrs. Corriera's fear of the bus ride being strenuous and uncomfortable quickly subsides as she sees the modern five-star bistro bus. WC, air condition, refrigerator, TV – everything at the travellers' disposal. Especially the little bottles and snacks in the onboard fridge are very popular with the guests.

The five-star hotel outside Bolzano they finally reach after nine and a half hours of driving exceeds all expectations, and the food is also fantastic. Particularly Mr. Corriera is thrilled by the well-stocked mini-bar and the technological amenities of their room (among other things it comes with DVD player, hot spot, electronic safe).

The next morning they are off to their first day-trip destination: The small town of Riva del Garda at Garda Lake, 60 kilometres from the

hotel. After touring the historical town centre, they board one of the numerous excursion boats to have some traditional Italian food while enjoying the vista of the shores and mountains all around. After returning, they meet their friends at the hotel bar for a last glass wine of before retiring to their room, wanting to start the new day well rested.

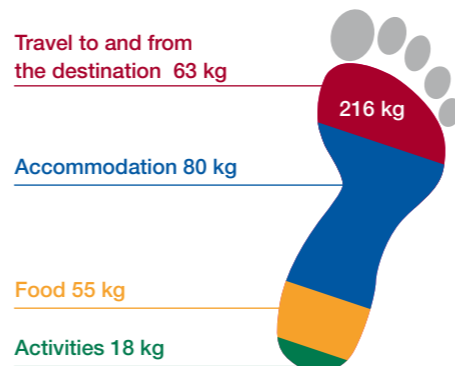
The 90 kilometre drive to Merano might be long, but the city is worth the effort. The cultural sights are very impressive, and the quaint restaurant offering delicious regional fare strikes the right note with the group. Cheerfully they move on to a wine-tasting at Castle Rametz, where they spend the afternoon before heading back.

Luckily there is nothing on the excursion schedule for the last day, so Mr. and Mrs. Corriera have time to take a Taxi to Bolzano to pick up some souvenirs for their loved ones at home.

The next day, after an eventful time, they have to go back to Berlin. It is a shame that due to the tour operator's tight schedule, there was no spare time left to visit the hotel's wellness area ("Including swimming pool and sauna!", Mrs. Corriera sighs wishfully).

Tourist Climate Footprint
216 kg CO₂ per person:

Regarding this trip, the emissions relating to accommodation play the most important part: For four nights in a five-star hotel, 80 kilograms of CO₂ equivalents have to be charged due to the high consumption of electricity. The trip to and from the destination by modern motor-coach leads to relatively low emissions, compared to the other holiday trips presented here (60 kilograms plus 3 kilograms for the car trip to the station). But the emissions concerning food, on the other hand, are relatively high: Seven warm meals (four of which in upscale gastronomy) cause 55 kilograms of CO₂ equivalent emissions. Among the numerous activities on location, the excursion to Lake Garda has the strongest impact on the climate (boat ride seven kilograms, bus ride four kilograms), followed by the bus trip to Merano (six kilograms) and the taxi ride to Bolzano (one kilogram).



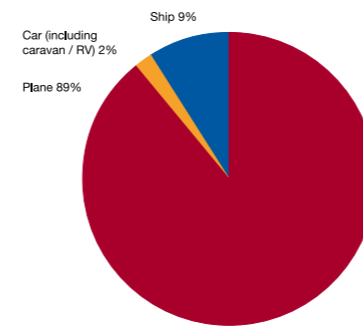
Advice for Mr. and Mrs. Corriera to diminish their Tourist Climate Footprint

- Choose your tour operator with care. Be mindful of environmental certificates and book your trip where energy conservation and environmental protection policies are implemented in an exemplary manner.
- If possible, use public transport to reach the central station. Otherwise, form car pools.

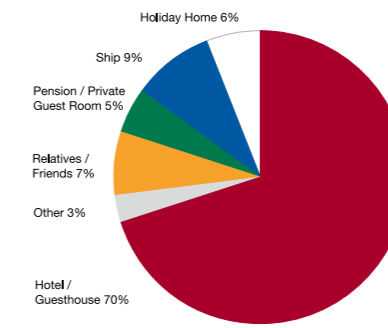
Viva México!

Holiday destination South/Central America, Caribbean: 0.9 holiday trips by Germans in 2007

Prevalent means of transport



Accommodation



"Last call for the passengers of flight LT 1414 to Cancún!", a loudspeaker's voice snarls through Munich airport as Maike and Stefan pass the security check. On the plane the couple slumps into their seats with relief. Absolutely everything went wrong: Their old car they wanted to go to the airport with did not start. Luckily, their neighbour was nice enough to take them to the airport, 30 kilometres from home. And then they got stuck in a construction site traffic jam... But now, nothing stands between them and their two weeks of all-inclusive holidays in Cancún, Mexico. After more than 10 hours of flying, they are happy to be greeted by their tour guide and taken to their hotel by air-conditioned bus. In May, Cancún with its 30°C is just a bit warmer than Germany. After the usual stops at other hotels the tour operator works with, and a drive of twenty kilometres along the thickly hotel-studded coast, the two of them finally reach their destination. The five-star complex, part of a well-known international chain, is situated right at the beach and sports a generous garden with green lawns, in spite of the heat. The mangrove woods typical for Mexico, however, are nowhere to be seen.

The two of them already planned everything they wanted to do on their holiday while at home. Maike

as well as Stefan have an avid interest in all kinds of sportive activities: An all-day scuba-diving excursion and a day on the golf course are on their schedule. But they did not shun the additional expenses for a 200km flight to see the ruins of Chichén-Itzá, either. So after the quick domestic flight, it is only a short distance they cover by micro-bus before they can immerse themselves in the world of the Maya.

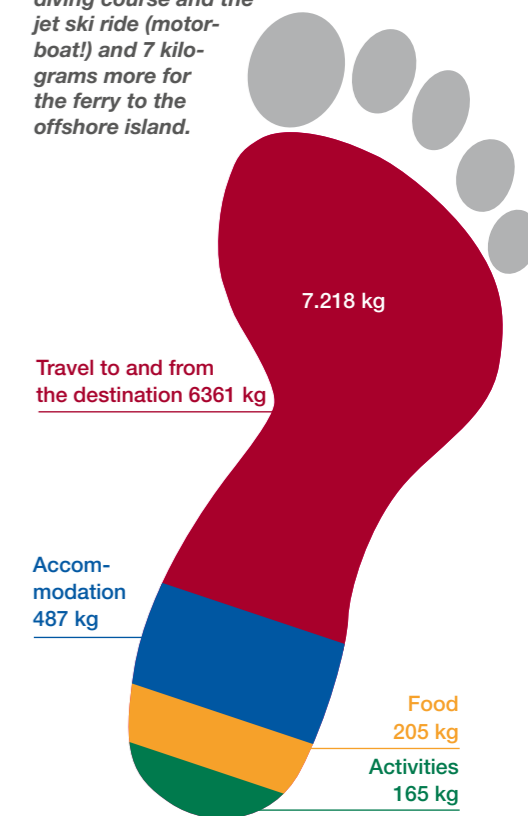
Back at the hotel, the adventurous couple will not remain confined to the swimming pool for long: They take a ferry to an island off the coast. After a refreshing hour on a jet ski they explore the island riding a rented motorbike. With all the heat, they really learn to appreciate the fact that they can buy chilled drinks in disposable bottles and fresh fruit in plastic cups all over the place.

Advice for Maike and Stefan to diminish their Tourist Climate Footprint

- If possible, choose a destination at a shorter distance (for example, the Mediterranean Sea). Learn about payments to climate protection projects with Gold Standard Quality Label to compensate for CO₂ emissions per covered flight distance, and

Tourist Climate footprint
7.218 kg CO₂ per person

The flight to Cancún emits 6356 kilograms of greenhouse gases. Considering this, the drive to the airport and the transfer to the hotel (a total of six kilograms) carry almost no weight at all. But 13 nights in a five-star all-inclusive hotel resort do so all the more: The extremely high energy usage amounts to 487 kilograms of CO₂ equivalents. 25 warm meals (13 of which in upscale gastronomy) cause 205 kilograms of CO₂ equivalents. In the activities sector, this trip holds the negative record, too: 165 kilograms of CO₂ equivalents are emitted, the domestic flight accounting for 107 kilograms of which. To this amount, add further 24 kilograms each for the diving course and the jet ski ride (motorboat) and 7 kilograms more for the ferry to the offshore island.



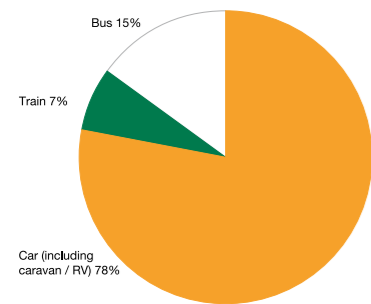
pay the sum recommended for your flight.

- If possible, use more ecological means of transport for your excursions, and avoid short domestic flights.

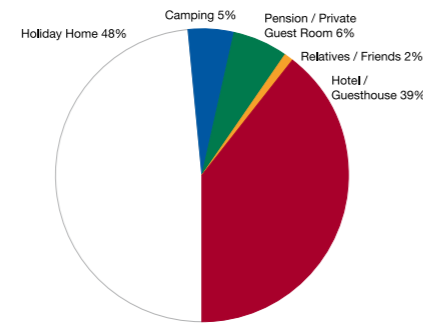
Baltic Sea family summer

Holiday destination Isle of Ruegen: 1.4 million holiday trips by Germans in 2007

Prevalent means of transport

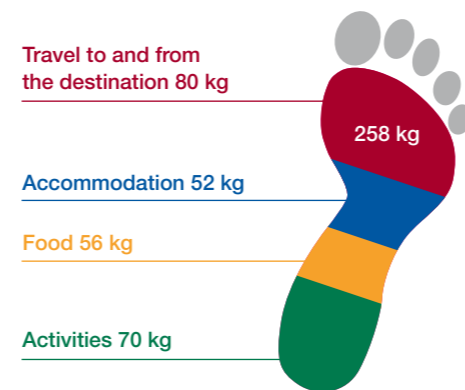


Accommodation



Tourist Climate Footprint
258 kg CO₂ per person:

Because the car is shared by four persons, "only" 80 kilograms of CO₂ equivalents are emitted during travel to and from the Isle of Ruegen. On second place: Emissions caused by the family's numerous activities (70 kilograms, 52 kilograms of which due to the sightseeing flight). Because holiday apartments use a great deal less energy than hotels do, the Ruges' 13 nights only amount to 52 kilograms of CO₂ equivalents per person. This includes the energy spent preparing breakfast and supper. The daily visits to fast food restaurants, sausage stands and snack bars account for a total of 56 kilograms.



Philipp, the two-hour ride with the "Rasender Roland" as well as the water park will be absolute highlights.

The Ruges reach the destinations of their excursions by car. As a special surprise for the children, the parents already booked a sightseeing flight over the island from home.

The Ruges take care of breakfast and supper themselves; most provisions they already bought at a discounter at home, so that only few things remain which have to be obtained at local supermarkets. During the day, they treat themselves to fries, sausages, fish bread rolls and other tasty things from takeaway places and fast food restaurants. In addition, tradition demands that the Ruge family make a short stopover at a rest stop on their way back home.

Advice for the Ruge family to diminish their Tourist Climate Footprint:

Think thoroughly about what you really need during your vacation. With bicycle rack and ski luggage box your car consumes considerably more fuel.

Give preference to activities which allow you to really experience nature without destroying it. To replace sightseeing flights, horse-cart rides and boat or bicycle tours are good choices.

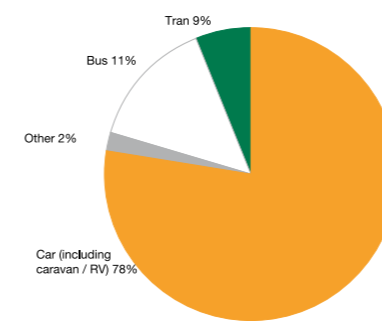
Just the usual craziness at the start of summer holiday season – for the Ruge family, it already starts before their holidays even begin: Way too much luggage for their little estate car. But this year, Mr. Ruge is well prepared: a ski luggage box on the roof and a bicycle rack on the hitch should take care of the problem. This way, they are able to take with them not only the children's bikes and all their suitcases and bags, but also the countless odds and ends that remain loosely stacked in the doorway at the end every time they spend the day before their holidays packing their stuff. The eight hour trip from Düsseldorf to Göhren on the Isle of Ruegen seems very long to five year old Philipp and eight year old Sophie, like it did the other times before. But to compensate for that, the beautiful three-star holiday apartment they already know from last year's vacation awaits the Ruge family in all its splendour. Particularly the well-equipped kitchen with dishwasher and washing machine is very important to them.

14 days of vacation now lie ahead of the family of four. Two weeks during which they plan to see not only the beach, but also the island's numerous other attractions. Especially Sophie still vividly remembers the summer toboggan run and the amusement park they went to last year – both of which must be visited again this time. For little

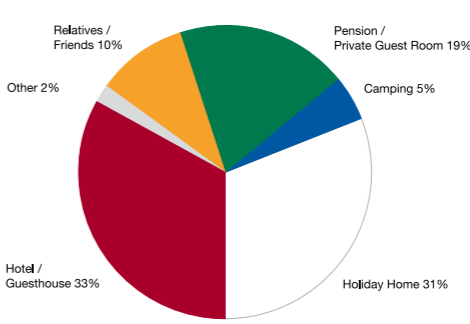
Autumn vacation in Oberstdorf

Holiday destination Bavaria: 4.8 millions of holiday trips by Germans in 2007

Prevalent means of transport



Accommodation



Tourist Climate Footprint
297 kg CO₂ per person:

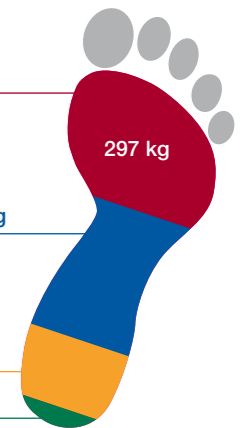
With 110 kilograms of CO₂ equivalents for nine nights in a three-star guesthouse, the family's accommodation uses up a little more energy than the trip to and from the destination (105 kilograms, 104 of which for the train ride). A total of 17 warm meals at the guesthouse and in fast food restaurants, respectively, lead to 73 kilograms of CO₂ equivalents. 5 more kilograms are added by their on-location activities.

Travel to and from the destination 105 kg

Accommodation 110 kg

Food 73 kg

Activities 5 kg



Sunshine, autumn-coloured leaves, blue skies – and holidays at last! The Neumann family in Düsseldorf, a middle-aged couple with a 12 year old daughter called Lisa, has everything packed and ready to be off for ten days of wellness holidays in the Allgaeu, in Bavaria. Eventually, the taxi's horn is sounding outside – their ride to the station is waiting. Before the trip begins, they quickly buy provisions for the journey at the station's fast food restaurant. After a six hour drive and two changes of train, they arrive at their destination.

In Oberstdorf, the Neumanns' host already awaits them in his minivan to take them to the cozy three-star guesthouse in nearby town centre. After bringing their luggage to their rooms, supper time has come – the Neumanns booked full board.

In the evening, with their minds already wandering towards tomorrow's amenities – massages, a relaxed swim in the pool – they sink into their pillows happily. This way, the first days of their vacation pass in an instant: The wellness programme with daily treatments and visits to sauna and whirlpool bath as well as the delicious food (two warm meals a day) let them forget their everyday lives easily. In the meantime, Lisa participates enthusiastically in the spa administration's children's holiday entertainment programme.

After a few days the Neumanns rent a car to explore the Allgaeu mountains and take a look at Neuschwanstein Castle, at a distance of around 35 kilometres from Oberstdorf. On their way back they pass the guesthouse's minivan, which took other guests to also see the Castle after lunch.

The cable car to the top of Nebelhorn Mountain is on their agenda for the next days, too. The vista during the 12 kilometre ride to the peak is breathtaking. After reaching the top, they walk the little panoramic round trail before descending back to the valley by cable car again.

With such an abundance of activities, a holiday passes in an eye's blink. Relaxed and rested, the Neumann family gets on the train back home. On their way back to Düsseldorf, they give in to Lisa's pleading to have a little stopover at the station's fast food restaurant.

Advice for the Neumann family to diminish their Tourist Climate Footprint:

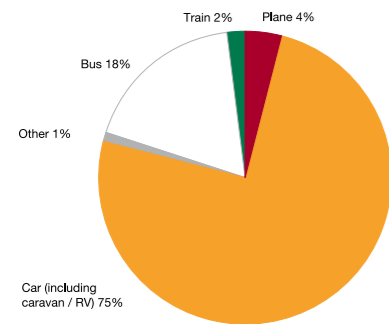
Choose your accommodation with care. Be mindful of environmental certificates and book your trip where energy conservation and environmental protection policies are implemented in an exemplary manner.

Give preference to owner-managed inns and restaurants, as well as local foods and drink. That way you support your holiday destination's economy and conserve the environment by favouring short routes of transport.

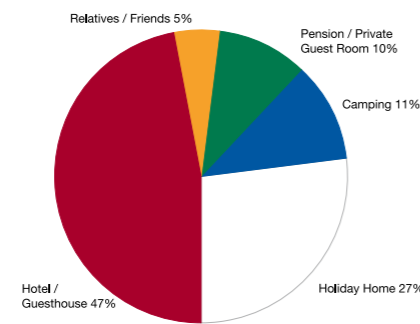
Skiing fun in Vorarlberg

Holiday destination Austria: 3.7 million holiday trips by Germans in 2007

Prevalent means of transport



Accommodation



At last! A week of skiing holidays in the Alps once again! Ronny's application for holiday leave was granted, and snow conditions in Austrian Vorarlberg are just perfect. Now there is only one thing left to do: Getting the skis out of the basement, and then he will be off. There is always a certain uncomfortable lack of space when he is travelling in his compact car together with all his skiing equipment, but it is alright as long as he is travelling alone. Furthermore, the journey does not strike him as that long: Only 700 Kilometres, single trip. There were more arduous journeys he and his car had to endure... The accommodation he has booked for his holiday has been recommended to him by a friend. The pension is situated right in the centre of Lech and has simple rooms and offers half-board of simple home-style cooking. Just the right thing when you spend all day outside breathing mountain air.

For the time of his stay, Ronny arranges for a ski pass to be able to use all the lifts in the skiing area. He plans his days in a way that every evening after skiing he reaches the station where he left is car in the morning. Good thing there are so many ski-lifts around Lech.

One entire day Ronny devotes to brushing up his snowboarding skills, as he resolved to do back

home. Although there is no glacier here that he might have someone take him up to by helicopter, like he did back in the Rocky Mountains, the local alpine slopes are perfectly sufficient for a fun day of snowboarding.

In the evenings Ronny uses the opportunities offered by numerous après-ski parties in town to loosen up his strained muscles with a little dancing before retiring to his room. Luckily, he left the heater running during the day, so that now it is nice and cozy inside, and he can smoke a cigarette at the open window to bring the day to a close.

On his last day, Ronny sees a sign posted to one of the ski-lifts saying that a ski pass entitles its owner to ride not only the lifts, but also the ski busses. This is an idea he did not even think of...

Advice for Ronny to diminish his Tourist Climate Footprint:

- Use public transport for travelling to and from your destination. In case you only infrequently go on skiing holidays, consider renting your equipment on-location. That way, you save luggage space and simplify travelling by bus or train.
- In case you are looking for variety: How about a (snowshoe) hike or a day of cross-country skiing for a change? The only energy you consume that way is your own, and you save on energy used for powering the ski-lifts.

Tourist Climate Footprint
422 kg CO₂ per person:

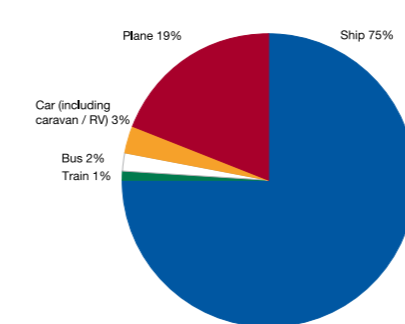


The car ride from Dresden to Lech leads to emissions of 296 kilograms of CO₂ equivalents, six nights in a simple pension add 85 kilograms more (in summer, it would have been less due to less need for heating). In addition to that, 32 kilograms have to be counted for eleven warm meals at ski lodges or restaurants, and 10 kilograms for on-location activities (a considerable 9 kilograms of which are accounted for by the daily car trips to the lift station).

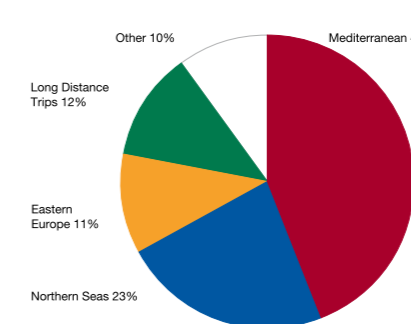
Cruising the Mediterranean Sea

Cruise Ship Holidays: 0.9 million holiday trips by Germans in 2007

Prevalent means of transport



Accommodation



It has been a while since Else Mertens from Stuttgart was as excited as she is today: Together with her friend Ruth, the 72-year-old lady booked a cruise on the Mediterranean Sea. On her seven-day journey she will travel to Marseilles via Naples and Rome, and from there via Barcelona to Majorca.

After months of anticipation, the moment has arrived – all the bags are packed, with her new sunhat easy to reach, just on top. The 50 kilometre car ride to the airport takes longer than expected.

Stressed, but just in time she reaches the meeting point in the departure lounge. Luckily Ruth is already there. In Palma de Mallorca they are expected by a shuttle bus which takes the cruise ship passengers to the nearby harbour. The two-person cabin on board looks just like a hotel room, and the view from the balcony is stunning. In the evening the buffet is a real treat, and the entertainment leaves nothing to be desired either: There is a play, followed by a musical and then the next day a show with acrobats... And of course there is dancing, too.

The next day they spend relaxing in the wellness area and shopping for souvenirs in the ship's shop and art gallery. For the two following days the two spry seniors booked day-trips. These excursions are not ex-

actly cheap, but at least food and drink are included.

In Pompeii they tour the ancient city ruins, and then they head to Vesuvius, climbing up to the crater on foot. After a walk of one and a half hours, they return to the ship by bus.

The next day they take the comfortable "Roma Express" to Rome, changing into a tour bus at the train station to go see the Basilica San Clemente and the Coliseum.

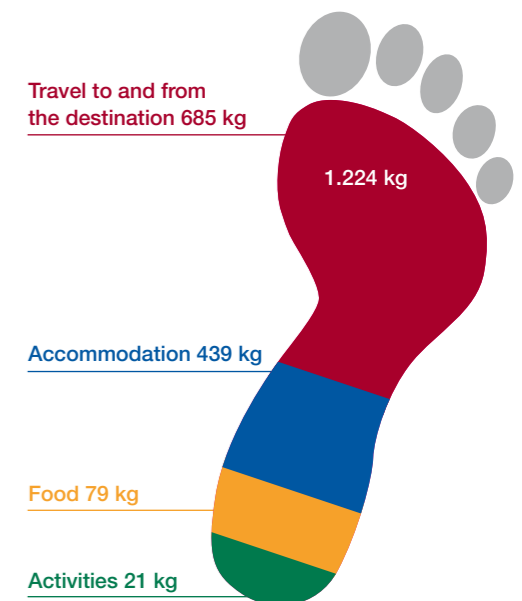
Straight after that, the group visits St. Peter's Square and St. Peter's Cathedral. Unfortunately there is only little time left to explore the numerous sights of the city or to enjoy a cup of coffee in one of the many street cafés.

At the ship's next stop in Marseilles harbour, a bus takes Else, Ruth and other passengers to Brandol beach, approximately one hour away. Both of them love the promenade lined with palm trees – a shame that after only two hours they have to get back to the bus.

On the last day, the city of Barcelona is on the two ladies' agenda. The bus takes them to the Sagrada Familia, and from there along the Plaça de Catalunya to the Ramblas.

Tourist Climate Footprint
1.224 kg CO₂ per person:

Although the trip to and from Majorca by plane causes most of the emissions (685 kilograms of CO₂ equivalents), the accommodation on a cruise ship during a journey of slightly more than 2500 kilometres approximates this amount surprisingly closely with 439 kilograms of CO₂ equivalents. The sophisticated foods (eleven warm meals, six of which in upscale gastronomy) account for 79 kilograms of CO₂ equivalents. In addition to that, there are 21 kilograms of greenhouse gases emitted during the numerous excursions on land (trips by bus and train).



Advice for Else Mertens and her friend Ruth to diminish their Tourist Climate Footprint:

- Choose a destination at a shorter distance (for example, a Danube river cruise) or adjust the length of your stay to the distance you travel.
- Choose your cruise ship with care. Book your trip where energy conservation and environmental protection policies are implemented in an exemplary manner.

The seven example trips compared

Comparing all seven holiday trips presented here, the Trentino culture holiday does best in terms of climate conservation, closely followed by the family trip to the Isle of Ruegen and the Allgaeu wellness holiday in Bavaria, on second and third place. But the trip to Trentino secured its pole position also because it is significantly shorter than the Ruegen family vacation: Regarding the emitted greenhouse gases per day instead of the emissions per vacation, the Ruegen trip is the one with the most advantageous ratio among the presented holiday trips. All in all, the numbers show that the choice of transport to and from the destination is by far the most influential factor in a given vacation's ecological balance. The decision for a holiday destination of as short a distance from your home as possible in connection with the choice of a low-emission means of transport

Greenhouse gas emissions per person and trip (calculated as CO₂ equivalents)

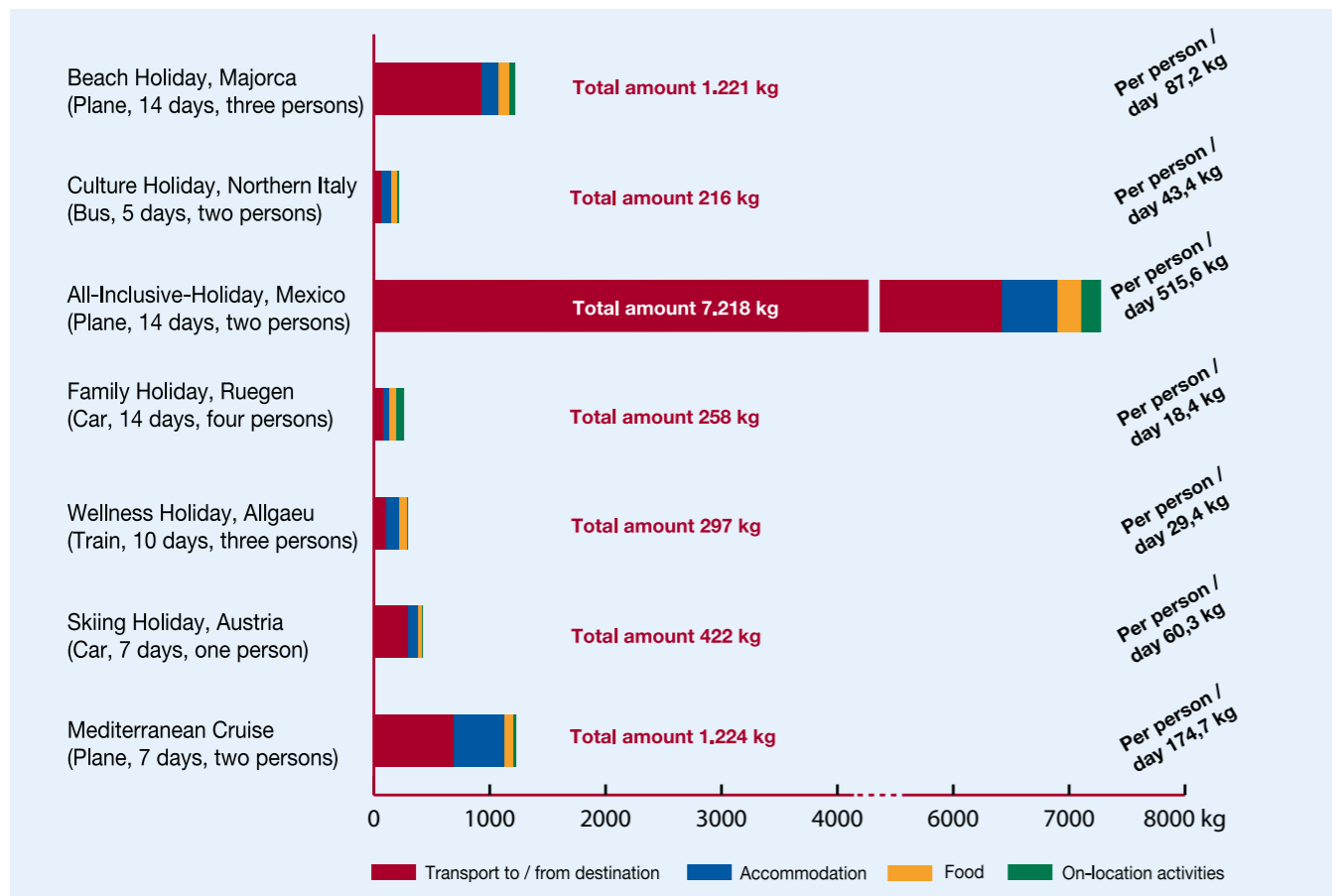


Cultural treasures like the Temple of Apollo in Side, Turkey, should be appreciated as a very special holiday destination – to minimize the climate footprint, long distance flights should remain an exception. © VASCO Travel

will minimize the ecological footprint of your trip significantly.

For the beach holiday on Majorca as well as the Mediterranean cruise, the tourists travel by plane – as a

consequence, CO₂ emissions are considerably higher. The all-inclusive holiday in Mexico brings up the rear of this comparison: It does as much damage to the climate as all other example trips



added together! The crucial factor for this fact, of course, is the very long flight distance of nearly 18,000 kilometres.

German approachability for questions of environment and travelling

The WWF example trips prove the extreme impacts of travelling to and from holiday destinations on the climate footprint, and they could make consumers reconsider their options when planning future holiday trips – provided they have access to this information. In principle, Germans are quite approachable in questions of environmental aspects of holiday travelling. The results of a representative survey executed by the Studienkreis Tourismus und Entwicklung¹² on behalf of the Federal Environment Agency show that an intact environment plays a very important part for most of the Germans' (84 percent) holiday satisfaction. Furthermore, the survey demonstrates that holiday destinations with landscapes spoilt by concrete and without authentic character have a dissuasive effect on nearly three quarters (71 percent) of Germans.

The survey illustrates that environmental questions play an important part for lots of Germans in planning their holidays:

- Nearly two thirds (64 percent) of Germans expect to be informed competently on environmental issues by their travel agency
- The environmental acceptability of holiday destinations and accommodations is relevant for the holiday plans of more than half of the respondents (51 percent)
- The tour operator's environmental commitment at the holiday destination is considered an important criterion for the choice of tour operator by more than a third (36 percent)

Based on given answers, the study group created four "approachability archetypes"

The doubtful dismitter of environmental aspects of holiday trips (25 percent or 15.6 millions, respectively)

Dismissive attitude towards environmental protection while on vacation, little travelling activity, little interest in nature holidays, holiday activities related to nature and/or culture are carried out comparably scarcely. Higher-than-average number of males and young people up to 29 years.

The one interested in immediate experience of nature (28 percent of 17.7 millions, respectively)

Strong interest in opportunities for immediate nature experience, environment-friendliness of holiday region and of accommodation play an important part, high significance of nature- and culture-related travelling motivations, most holiday trips independently organized, preference of destinations within Germany, strong interest in nature, wellness and farm holidays, predominantly older persons.

The ecologically aware one without interest in nature experience (24 percent or 16.8 millions, respectively)

Little interest in opportunities for nature experience while on holidays, but thoughtful and considerate in questions of social and natural environment, high expectations towards the tour operator in terms of environmental information and environmental commitment in the destination area, above-average interest in beach holidays, no particular demographic attributes.

The ecologically aware sophisticated one (22 percent or 14.4 millions, respectively)

High expectations and high disposition towards environmental commitment while on holidays, strong interest in opportunities for nature experience, unwillingness to do without nature utilisation, nature- and culture-related travelling motivations are particularly important - adventure, exploration, culture and education. Tourist of above-average activity, with interest in strikingly many holiday types and destinations, no particular demographic attributes.

- For a considerable percentage of the population, the opportunity to experience nature – like animal watching or visiting a national park – is an important criterion for the decision where to travel.

¹² Tourism and Development Study Group. Empirical study concerning German citizens' approachability in questions of environmental aspects of travelling

How can tourism contribute to protecting the environment?

WWF wants to reduce the ecological footprint of holiday trips and make use of the Germans' high approachability in questions of environment and travelling for preserving and helping to appreciate biological and cultural diversity. Depending on the way it is managed, it may very well have many positive effects.

When properly attended to, travellers can become ardent ambassadors of nature protection. When nature gains in economic value due to an increase in ecologically aware travelling, the disposition of holiday destinations' populations to preserve nature will grow even more, as will their goodwill towards the creation of protected areas like national parks. Tourism also offers opportunities for nature-orientated economic development: In its wake come alternative sources of income beyond activities that destroy nature or are even illegal, like felling wood or poaching. But one thing has to be kept in mind: From an ecological point of view, travelling to faraway destinations is always questionable. This is why trips like that should be made only rarely, and with a long duration of stay – the negative effects of plane travel on the global climate cannot be argued away.

What can travel service providers do?

To make sure that tourism has positive effects and the tourist footprint is minimized, WWF asks travel service providers and tour operators to comply with highest possible quality standards, with the best available environment protection practices, throughout the entire service chain. WWF calculated the Tourist Climate Footprint of selected holiday trips as an example. WWF supports the development of a methodology to devise comparable standards for calculating the cli-



A mountain holiday is very relaxing - and when travelling there by train or bus, a trip like that does comparably little harm to the climate. © Michèle Dépraz / WWF-Canon

mate footprint. A standardized calculation of the footprint would result in more comparability and stimulate competition, as it would allow consumers to consciously choose trips with the smallest possible footprint. Furthermore tour operators should modify their offers according to the following criteria:

Travel to and from the destination

- Preference of bus and train travel
- In case air travel is unavoidable: Justifiable relation between distance to destination and length of stay, e.g. no flights of less than 700 km, flights of 700 km and above only with staying at least for 8 days, 2000 km and above only with staying at least for 15 days.
- Compensation of CO₂-emission-related impacts on the climate through a distance-based surcharge which flows into climate protection projects bearing the Gold Standard quality label.

Accommodation

- Ecologically aware management: Waste prevention and separation as well as energy and water conservation
- Adoption of an environmental management system (e.g. according to ISO 14001 ff or EMAS)
- Procurement of an ecolabel (according to ISI 140024)

Food

- Preference of regionally produced, seasonal, organic food and drink.

Activities

- Avoid offering off-road tours by 4WD or motorbike, sightseeing flights by helicopter or plane, heli-skiing or snowmobile tours
- No activities that have negative effects on flora and fauna – e.g. through noise, unnatural light or the disregard of recommended minimum distances when observing animals, or by destruction of nesting or breeding places (instead, guided tours into protected areas should be offered).

What can tourists do?

One's own behaviour is a decisive factor when determining to which extent the environment is affected by a holiday trip. Thus, holiday trips are not all the same. Every single tourist can contribute to minimizing his tourist footprint by consciously planning his travels with care. Apart from the directions given above, most of which can be applied to single trips as well, there is a multitude of questions the traveller should ask himself while planning his trip, and a multitude of choices he should contemplate:

How far do you want to travel? Do you have to fly or drive 1000 or 10,000 kilometres to relax?

- Does it have to be the Bahamas, or couldn't you just as well sunbathe and go for walks on the Isle of Borkum or Ruegen? The closer your holiday destination is to your home, the less energy you use, the lower the emissions you produce.

Avoid holiday destinations with insufficient environmental and nature protection standards

- e.g. with unchecked building booms, dirty beaches or seawater polluted by untreated sewage discharges.

Prefer tour operators that present themselves as environmentally aware

- e.g. by giving out information on the environment in holiday regions, by putting up their own environmental criteria for hotels or means of transport, by regular payments to regional environmental protection organisations, by preferring ecological means of transport.

The choice of accommodation is another important factor for determining if a holiday trip will disproportionately fuel climate change © Birgit Weerts / WWF

It does not always have to be the car

- Particularly in summer, the metal avalanche of holiday car traffic, in addition to consuming large amounts of energy, pollutes the air with ozone, which is harmful to climate and health – not to mention the stress and the risk of accidents. But your holiday could just as well already begin on the way to your destination: When travelling by train, bus or ship. And at times, going by train is neither more expensive nor slower than going in your own car.

If you fly, do it CO₂-neutrally

- Compensate for the amount of harmful greenhouse gases produced by your flight. The climate protection project you choose should bear the Gold Standard quality label.

Read up on public transport at your destination

- Not everywhere you have to rely on your own car or a rented one. There are busses and ferries in many regions, and at times you can even take your bike with you for free. Another advantage: That way you get to know the place and its people much more easily.

Be on the lookout for offers that allow you to really experience nature without destroying it

- e.g. on guided hikes, or while animal watching in national parks, on bicycle tours or river excursions in boats typical for the region or the like. Avoid activities like mountain biking, hiking off marked paths or boat rides in designated water protection areas.

Avoid sports that consume lots of energy or water (especially in places that are short of water already)

- e.g. golf in arid environments or floodlit tennis

Reduce your water consumption

- especially in summer and in hot regions.

Choose accommodations that are built in a way to ward off the summer heat naturally

- That way, you do not contribute to the enormous amount of electricity consumed by air conditioning.

Further advice online at www.wwf.de/interaktiv/verbrauchertipps/besser-reisen/



Where to find further information

Better travelling with WWF

WWF and “Forum anders reisen”¹³ (see below) jointly developed organized trips into WWF project regions. A fixed part of the revenues generated by these products flows into nature protection activities. An important aspect of these trips is involving and counselling the local populations in the development of a sustainable tourism infrastructure by tourism experts.

Further information you will find at <http://www.wwf.de/interaktiv/verbrauchertipps/besser-reisen/reisen-in-wwf-projekte>.

WWF's advice for consumers

concerning “Better Travelling” (e.g. trips into WWF projects, WWF holiday hints, CO₂-neutral flying, souvenir guide) you will find at www.wwf.de/interaktiv/verbrauchertipps/besser-reisen/.

WWF's press releases

Here you will find current press releases and WWF's press archive (touching on tourism as well as other topics). Moreover, you can sign up for the press mailing list and download press pictures: <http://www.wwf.de/presse/>.

Shopping guide “Bewusst reisen”¹⁴

For everyone who wants to preserve the environment and support the local economy while on holidays, the shopping guide “Bewusst reisen” offers convenient advice and information. The Verbraucher Initiative¹⁵, the Verkehrsclub Deutschland¹⁶ e.V. (VCD) and WWF compiled therein lots of convenient hints concerning everything from departure to provisions, comparing environmental impacts of travelling by plane, car, train and bus and recommending national and international ecolabels. <http://www.reisekompass-online.de>.

Climate neutrality: WWF study compares standards

The market for voluntary climate protection donations is booming, offers for compensating greenhouse gas emissions spring up like mushrooms. The environmental foundation WWF had the standards of these offers examined – and discovered considerable faults. The report shows that solely the Gold Standard, a globally recognized quality standard, really is to be considered a warrant for the authenticity of compensation projects. The Gold Standard's objective is to make sure that compensation projects really lead to a reduction of greenhouse gases. Furthermore these projects are supposed to boost sustainable development in their respective countries. More on this you will find at <http://www.wwf.de/klima>.

Destination nature

Information on holidays and excursions in German national parks and protected areas, including practical advice for travelling there and back by public transport, addresses of tour operators and environmental associations you will find at <http://www.fahrtziel-natur.de>.

Forum anders reisen

The “Forum anders reisen” is an association of travel service providers offering trips to all parts of the world that are of particular ecological and social sustainability. More detailed information concerning the association and numerous exciting trips – some of which developed in cooperation with WWF – you will find at <http://www.forumandersreisen.de>.

The bicycle travel database

Offers more than 70,000 worldwide cycle tour dates from more than 100 tour operators, 1,900 cycle trips, more than 650 bicycle tracks, more than 500 bicycle hotels, contact information for more than 200 tourist

boards, facilities to place orders for catalogues and lots of further helpful information on planning bicycle trips (<http://www.fahrradreisen.de>).

Viabono

The Viabono label was awarded to more than 400 hotels, gastronomy businesses, nature parks, municipalities, campgrounds and landlords of holiday homes, all of which were able to demonstrate ecologically adequate management and an especially frugal handling of natural resources. The directory you will find at <http://www.viabono.de>.

INVENT – sustainable tourism offers for the mass market

In the context of the INVENT project, supported by the Federal Ministry of Education and Research, the Öko-Institut lead-managed the development of several innovative model travel products for different target audiences and different destinations of the package tour and mass market. In an across-the-board approach, the entire value creation chain of a holiday trip was examined – including transport to the destination, on-location stay, accommodation, holiday activities and the trip back home. Further information at <http://www.invent-tourismus.de>.

The travel analysis of the Forschungsgemeinschaft Urlaub und Reisen (F.U.R.)

is an empirical investigation to record and describe the Germans' holiday travel behaviour, as well as their holiday motivations and interests. Every year in January about 7,500 persons that are representative for the German-speaking resident population in private households aged 14 or more are interviewed in this context. Further information at <http://www.fur.de>.



One of the Germans' favourite holiday destination still is Germany – like here at the Kreidefelsen on the Isle of Ruegen
© Christian Zapf / WWF

References

Aderhold, Peter (2008): Die Urlaubsreisen der Deutschen. Kurzfassung der Reiseanalyse 2008 (ed.: Forschungsgemeinschaft Urlaub und Reisen, F.U.R.)

Deutscher Tourismusverband (DTV) (2008): Tourismus in Deutschland 2007. Zahlen - Daten – Fakten

F.U.R./N.I.T./Ipsos (2007): Akzeptanz klimaschonender Verhaltensweisen im Urlaub

INVENT (2005): Traumziel Nachhaltigkeit. Innovative Vermarktungskonzepte nachhaltiger Tourismusangebote für den Massenmarkt (Download unter http://www.inventtourismus.de/pdf/INVENT_Broschuere_051104.pdf)

Lohmann, Martin/Aderhold, Peter/Zahl, Bente (2004): Urlaubsreisetrends 2015. Die RA-Trendstudie – Entwicklung der touristischen Nachfrage der Deutschen (ed.: F.U.R., Aktualisierung 2008 geplant)

Müller, Michael/Fuentes, Ursula/Kohl, Harald (Hrsg.) (2007): Der UN-Weltklimareport. Bericht über eine aufhaltsame Katastrophe

Schallaböck, Karl Otto (2008): Luftverkehrsstudie 2007. Im Steilflug in die Katastrophe? (ed.: Wuppertal Institut für Klima, Umwelt, Energie)

UNWTO, UNEP und WMO (2007): Climate Change and Tourism: Responding to Global Challenges

WWF (2008): Living Planet Index 2008

WWF-UK (2002): Holiday footprinting. A practical tool for Responsible Tourism <http://www.wwf.org.uk/filelibrary/pdf/holidayfootprintingfull.pdf>

WWF/Abteilung Marketing (2006): Klimaneutrales Fliegen

13 „Travel differently“ Panel
14 Travelling Consciously
15 Consumer Initiative
16 Traffic Association Germany



WWF is one of the world's largest and most experienced independent conservation organisations, with almost 5 million supporters and a global network active in more than 90 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by

- conserving the world's biological diversity,
- ensuring that the use of renewable resources is sustainable and
- promoting the reduction of pollution and wasteful consumption.

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