Sustainable travel

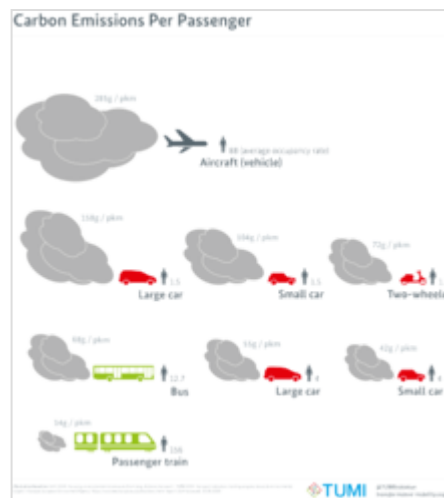*See Responsible travel for the economic and cultural impact/sustainability of travel.*

This travel topic on **Sustainable travel** deals with how to best avoid negative impacts on the global and local natural environment while traveling and how to best preserve the places you visit for future generations to enjoy.

Carbon emissions per passenger

Understand

> " We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road—the one less traveled by—offers our last, our only chance to reach a destination that assures the preservation of the earth. "

—Rachel Carson, *Silent Spring*

Travelling can be fun, and it broadens the horizon. Seeing some place on TV is one thing, but being there in person can give deeper insights and understanding that go beyond prejudice and cliché. For others, travel is a necessity either for business, to visit friends and family or for myriad other reasons. However, travel can also be harmful to the natural environment of the places travelled to as well as (mostly through CO_2 emissions that know no border) the world at large. Any responsible traveller must want to ensure future generations can enjoy the world the same way they did and thus everybody should contribute their share in preserving historic sites, and reducing harm on nature. Obvious things like switching off the light when you leave a room probably don't have to be mentioned here, but there are a few other things, that you should keep in mind.

As much of the environmental impact comes from transportation, one way to lessen impact is to travel shorter distances, another to travel more seldom. On one extreme, visiting New York, Singapore and London, each over a weekend, requires several long-haul flights. Instead there might be a neighbouring country you don't know well, also with fine sights, reachable by rail, or even places next to your home that you never visited (cf Staycation). You could also save days off (or arranging work or study at the destination) for less frequent longer stays. Staying gives you a chance to study your destination well in advance, to really get to know it while there, and allows you to live more like the locals (perhaps with locals, e.g. in a rented room in someone's home) instead of in a hotel, and thus with much less of an environmental footprint.

One concept related to sustainable travel is *slow tourism*: take your time to experience your environment when travelling. By car or rail you often learn little about the country you are rushing through, and even less when flying over it, while by bike or on foot you will see much more, and probably more frequently interact with locals.

Prepare

See also: Getting ready to leave

Before you leave, unplug all electronic devices that don't have to keep running. Not only does this save money and electricity, it also eliminates the risk of lightning strike destroying your appliances, TV or the likes. If you can and it's feasible, turn off power entirely. When leaving home for a larger period of time, consume your frozen and refrigerated food, thus you won't have to keep the fridge plugged in, saving both money and electricity. Furthermore, refrigerated or frozen food does spoil after some time, so eating it before you go is the best way to ensure this does not happen. Turn off the main water supply and drain the pipes – they can't freeze and leaks won't flood your house that way. Depending on how your heat and hot water system works, you might wish to switch it off entirely, but subzero frost or just moisture can do damage, so consult an expert.

Get in

See also: Transportation, Responsible travel#Environmental impact

As a rule: don't use cruise ships and don't fly, if you don't really, really need to. In most cases, cruising is the worst and flying isn't far behind as the least environmentally-friendly way of getting to wherever. Also, just flying from one place to another is the surest way to miss everything interesting in between and being in port for a few hours is no substitute for spending the time needed to experience the culture and hospitality of a place.

Royal Clipper Karibik can use sail power, which reduces pollution – but that doesn't in itself make it responsible

And do you really need to get that far away to experience something new? Exploring the places close to home can be quite interesting, too.

If you want to go far, do not go often, but prepare well and stay a longer time instead. If you are travelling for your job or for similar reasons, use the opportunities to stay for a holiday before or after, instead of always doing separate trips for that.

Get around

> "We cannot solve a crisis without treating it as a crisis...if solutions within the system are so impossible to find, then... we should change the system itself."
>
> —Greta Thunberg

Walking, cycling, rail travel (including urban rail) and bus travel minimize emissions per distance and passenger. Electric trains are almost always less loud and emit less pollution. When you must ride a car, consider ride-sharing, or low-emission vehicles. While most populated regions in Europe and East Asia have great public transportation (countries with the most public transportation users are centered around developing countries with poor systems, i.e. in Latin America), travelling the United States without a car or in any African country is more of a challenge. **Don't fly** unless there is absolutely no alternative (e.g., rail transport). General aviation has an enormous environmental footprint. Occasionally aircraft may actually consume less fuel per person than a car with only one person in it, but both are highly inefficient. Some types of ship travel (notably ferries) are environmentally responsible ways to travel, while others (notably cruise ships) are among the filthiest ways possible to travel.

Cycling is the most efficient form of transportation in terms of energy use per passenger kilometer (yes, this includes walking). If you are comfortable on a bike and the local environment allows it, a bike is a superb way to see urban and rural areas. One big benefit of a bike is that it is slow enough to let you see landscapes you are driving through, but fast enough to enable you to go large distances, also to places with little other transport. If something interests you, finding "parking" for a bike is rarely a huge problem, and less interesting stretches can often be skipped by taking the bike on a bus or train.

Avoid taxis if there is public transport. In most European and many Asian cities there are public transportation lines running throughout the night. Although a taxi wastes less manufacturing resources and parking space than a private car, it still shares their other drawbacks. While the taxi business in some countries (such as Sweden) is an early adopter of green fuels, even such a taxi is much less efficient than the tram – and most taxis run on gasoline. Look for the way back to your hotel/hostel before heading out to avoid having to figure it out in the night (or having to find a taxi). If your mobile device works in the local network or you are sure to have Wi-Fi, download the local public transit app to check connections. Many of those apps even offer updates in real time.

Inner-city car traffic is one of the most inefficient (and often unpleasant) ways to get around. The fuel consumption of all cars goes up in city-environments as a lot of energy is wasted in repeated brake-acceleration cycles (even for hybrids and electric cars that have regenerative braking). You also contribute to congestion, which in turn has effects on fuel and land use. Other modes of transport might not only save the environment, but also time and money.

Being stuck in a traffic jam is not only boring, it's bad for the environment.

Also when driving on the road, the engine is most efficient when working steadily. Avoid unnecessary overtaking and driving near the vehicle in front. Choose days and times of day when the traffic is reasonably light and take a break when other traffic gets on your nerves.

When boating, efficient vessels are to be preferred. Slow, "hull speed" boats usually consume much less fuel than speedboats, at least when not driving near full speed (watch the waves: causing waves is what draws power) – and of course nothing beats sailing, rowing or paddling in terms of "green" motive power.

When good infrastructure is not available, consider **leave no trace** principles. The principles about not causing erosion are valid also when the infrastructure is good.

See

Research your destination beforehand — some places (both natural sites and human structures) cannot cope with the current stress of the number of visitors, making for crumbling steps or trampled flora. Consider avoiding a visit to such places. There are often equally nice less known alternatives.

Once at the destination, and this should go without saying; seeing means just that: seeing. Don't take anything from a place that you shouldn't. "What's the harm in taking one small stone/flower?", you might ask; multiply by a couple of thousand or even million and you have your answer. This is especially true for vulnerable ecosystems such as Arctic and subarctic regions where plants can take centuries to grow a couple of centimeters or coral reefs where the stroke of a swim fin can cause harm. Instead take a photo of that flower. Often your smartphone camera can do – avoid using throw-away cameras, which produce worse quality. Respect all local prohibitions and taboos on taking pictures.

The use of live animals as tourist entertainment can be harmful, as performing animals are sometimes held in captivity in unhealthy or miserable conditions. Even in their natural habitat, whales and dolphins may flee boatloads of sightseers in the same manner they flee predators, disrupting feeding or normal activity. Wildlife in the wild is best viewed at a respectful distance.

Do

Take all your trash with you, or throw it into the bins provided. If the local bins are full or emptying may be costly (as when the sight is away from cities), ignore the bins and carry your waste out regardless. Avoid using excess packaging in the first place and consider leaving the packaging at home, using your own instead. Even seemingly "natural" waste like banana peels can take decades to decompose and cause major harm to ecosystems. Cigarette butts are effectively the filter – which is plastics. To say nothing of the stench and ugly sight of slowly rotting biological waste.

Wildlife may attempt to eat improperly disposed litter.

Unfortunately many attractions and activities will bombard you with tons of fliers, brochures, advertising and the likes when all you wanted is a ticket. If you can, politely decline them and if you have an "online ticket" only print what you actually need to print (read the fine print, regulations differ widely from "we accept the QR code on a display we can scan" to "print all fifteen pages and have photo ID handy or we will treat you as if you had no ticket at all"). If there are brochures or maps of e.g. a museum or park at the entrance, try and keep them in pristine condition so that you can hand them back upon leaving. Don't take more than one for your group and try to use digital alternatives over paper when possible.

Skiing in some areas can damage trees which in turn exposes the soil to (often catastrophic) erosion. If skiing is not permitted somewhere, there are usually *very good reasons* for that. The same goes for many other sports and driving with motor vehicles in the terrain.

Eat

Local food should go over imported food. The *point* of travel is to get to know other cultures, so step out of your comfort zone and try the local food, prepared by locals in a restaurant owned by locals. If you can't for the life of you live without a certain product from "back home", bring it with you on your trip in (note restrictions on some food) or try and find a local replacement. You'll save money and reduce the harm done through imports. If you are retiring abroad and find you can't stand the local food, you should ask yourself whether your new home is right for you after all.

Avoid "all-inclusive" resorts whenever possible. They rarely buy local foods and they encourage gluttony and waste as guests take far more food than they can comfortably eat, leaving behind mounds of uneaten food when they leave.

In some countries "novelty" foods are offered that often include endangered species; examples include turtles and their eggs, shark fins, whale meat and various types of monkeys. Do your research beforehand to avoid those foods, and on the other hand, to learn which local dishes you can eat without problems.

In general food served on ceramic dishes with real forks and knives is better for the environment than the same food served on throwaway dishes or in disposable wraps. Take particular care when it comes to Asian restaurants, as they often use disposable chopsticks. Just keep a pair you are comfortable with and leave the ones you are provided with unopened, so they may be used by the next customer.

If you have some utensils, you can make your own snacks from what you buy on the market (or supermarket), not resorting to ready-packed things with extensive one-portion wrapping. While a local restaurant or a bunch of bananas may be the best alternative, you do not always have (or want) that option. If you need dispensable bowls or spoons (because there is no water for washing the dishes, or whatever), you can wash suitable packages and dispensable spoons from when you could not avoid them, and throw them away only after the later use.

Drink

If the tap water is unsafe to drink, try buying bottled water in larger quantities. Not only will you (usually) save money, but there will also be less damage to the environment through packaging and transportation. If you want to reduce the weight you carry, leave the large container in the hotel and take a smaller bottle with you that you refill once you're back in your room. Do take into consideration that people tend to sweat – and drink – more in hot and humid weather, especially when they're not used to it. If you travel in a high income country, tap water can actually be *safer* to drink than bottled water regardless of what advertising may have led you to believe. The Wikivoyage article on water spells out the details.

If there is a deposit on your can/bottle, return it. Chances are it will be reused or recycled that way. When there is no deposit, the material may still be reused if you use waste bins specifically for glass or metal. Plastic bottles (even if they are recycled) are less often reused than glass bottles, making them more

ecologically damaging. Of course this only applies if you (can) return the bottles and they are indeed reused. Melting down a glass bottle and casting a new one uses more energy than the same process does for plastic bottles, but glass bottles usually are washed and refilled more times before that happens. For glass bottles, try to avoid breaking them. Glass shards are dangerous to both people and animals and they remain dangerous for a long time.

Local alcoholic drinks are usually both cheaper and better than the standard imported fare. When in Kentucky drink local whisky instead of imported vodka, when in Nicaragua drink local rum instead of wine that had to travel halfway around the globe to get to your table. Naturally, the same goes for non-alcoholic drinks. Avoid "prestigious" bottled waters from exotic destinations, especially when good, clean water is available locally.

A bottle reverse vending machine that takes bottles and returns the deposit.

Sleep

Consider what standard is necessary for you. Five star hotels in an otherwise less developed environment usually need a lot of resources and may have a big impact on local nature. They are also more likely to import (next to) everything, leaving much less money in the local economy than more modest or locally owned accommodation. When out in the wilderness, try to stick to the rules of leave-no-trace camping. Camping can be an environmentally friendly way of accommodation even if you visit a big city; look beforehand whether there's a camping site accessible by public transport at the outskirts of the city.

A fire pan is a simple tool that keeps campfire residue to a minimum.

If your hotel lets you, dry and reuse your towel as long as you're comfortable with it. This might require some firm but polite insistence in some places, but even using the same towel twice instead of once reduces the need to wash towels by 50%.

When you travel in places where electricity is not centrally provided (very remote destinations and some third world countries in general), hotels with solar panels on the roof are to be preferred over those with a diesel fueled generator. Not only are they much cleaner environmentally, the solar panels are silent whereas a generator is not, so will have better nights and brighter days in a hotel with solar-based backup electricity.

Flora and fauna

If you ever had to fill out a customs or immigration declaration in countries such as the US, you might have stumbled over questions regarding visits to farms or contact with fresh soil. This has a very serious reason: Seeds and

Did you know?

In the Addo Elephant National Park in South Africa dung beetles have right of way. If

plant disease of all kind can easily be carried around in the nooks and crannies of hiking boots. As some invasive species or plant diseases can have devastating consequences (a soil-borne fungus has all but exterminated the once dominant Gros Michel variety of bananas for instance and similar things might soon happen to the now dominant

Cavendish), you should really avoid carrying them under your feet. So clean your boots as thoroughly as you can, especially when you're about to board a vehicle of some kind that will carry you (and your boots) hundreds of kilometers away to some region unaffected by whatever is on your soles.

While a certain amount of wildfires are healthy or even "natural" in certain climates, humans are both the main cause and the only thing that can prevent the most dangerous and destructive wildfires. Every year, fires consume untold amounts of valuable property as well as natural forests and sometimes wildfires even take human lives. Do not smoke in the forest during the dry months: Cigarette butts are a common cause of wildfires, matches thrown away too early are also a risk. Under certain circumstances even a piece of glass can become a lens and thus cause wildfires. In short: Don't litter. If you make a campfire, make sure that local rules allow it in the time and place you intend to, and keep to the rules of fire safety described in the article. Also keep in mind the old saying "The bigger the fool, the greater the fire".

Travel in developing countries entails getting up close with local fauna, even if you stay in a mid-range hotel in a major city. If you can't handle the thought of geckos or spiders in your dwelling, maybe those places are not for you. For the record, both are (for the most part) harmless to humans and keep the most dangerous animals there are in check - mosquitoes. When trying to control pests stick to the less harmful methods. DDT is right out, but check drawbacks also of the alternatives. Let animals you don't know live (unless they are an immediate threat to life and limb), because many of them are threatened and some of them may be protected by local law. Use nets around your bed to keep the risk of tropical diseases like Malaria to a minimum. Where mosquitoes don't carry dangerous diseases, try to keep chemicals at a minimum, using long sleeves and untreated mosquito hats and mosquito nets as appropriate.

Buy

Take care what you buy and buy local whenever and wherever possible. The tacky souvenir you buy at the airport for twenty dollars may be available at the local market for five bucks and there will be more money going to the common people rather than some corrupt government official taking their cut. A surprisingly large amount of "authentic" souvenirs will be made in China (even in places about as far as you can get from China!), which is not what you want unless you actually *are* in China and even then, there can be a huge difference between tacky throwaway crap and stuff you would genuinely enjoy having on your mantelpiece.

Being eco-friendly by buying local does however not mean that products made from rare or "exotic" species are OK — quite the contrary. In addition to often being illegal under local law, you incentivize the hunt, unsustainable collection and even possible extinction of those organisms and as many of those are

protected by international agreements such as CITES or prohibited under the law of your country of origin, they will likely be confiscated by customs and you may be in for a heavy fine or even a prison sentence.

Economic issues

Tourism can be both boon and bane to the local economy. On the one hand, tourist dollars can lift rural communities out of poverty and the dependence on varying harvests or the ups and downs of world market prices for cash crops. On the other hand, tip heavy tourists can severely distort local wages and if a waiter at a cocktail bar can make more in tips on one good evening than a doctor does in a month, young people will wonder whether they should even study to become a doctor in the first place.

On another note, the more "developed" the tourist infrastructure of a place, the more money will end up in the hand of multinational investors, with the locals getting surprisingly low paying jobs in luxury and all-inclusive resorts if that. Not all foreign investment in tourism is bad or evil, and the investors often do have a genuine long term interest in keeping the nature and culture of the place they invest in intact and the tourists coming, but more often than not, soulless hotel complexes built with little regard to local architecture destroy the very "authentic unspoiled exotic place" feeling they are trying to sell to tourists.

Often (not always) the dividing line is between speaking the local language and not speaking the local language. If you are in a tourist facility where everyone speaks your language and you have no contact to the locals beyond the cocktail bar, you are unlikely to perceive the problems inherent in mass tourism. If on the other hand, you stay in a small guesthouse where you talk to the (local) owner on a daily basis and take a tour with a local guide trying to make ends meet, your trip will likely be both more rewarding to you and better for the local economy.

Back home

CO$_2$ emissions

Traveling, or transport in general, is one of the biggest sources of global carbon emissions (26% of global CO$_2$ in 2004), the cause of climate change.

By choosing a different mode of transport, you can alter your CO$_2$ contribution significantly. According to a Union of Concerned Scientists analysis, **buses**, **trains** and **ferries** are almost always **less environmentally damaging** than cruise ships, planes or cars. The amount of greenhouse gases emitted depends on how great a distance is travelled and how many people are travelling in the same vehicle, as well as the fuel used – for electric vehicles the way in which electricity is generated. Also with public transport, the percentage of seats (not) taken are an important factor. However, using a less popular service running anyway will not cause additional emissions (and it running may avoid several people buying a car).

The Union of Concerned Scientists developed a set of tips for travelers in the United States based on their analysis.

Walking and **cycling** are the greenest options. A couple traveling on a bus (motor coach) will generate nearly 50 percent less greenhouse gas emissions than they would driving a fuel-efficient hybrid car. On the other end of the spectrum are **big SUVs** and **first-class flights**, especially general aviation, that generally pollute the most. A passenger occupying a first-class seat is responsible for twice as much carbon dioxide pollution as one in a standard coach seat. A large, inefficient SUV emits nearly four times the greenhouse gas of a highly efficient hybrid. If electric cars or hybrids are not available, those who rent a car should consider an efficient conventional car, which will cut pollution and fuel costs. Many car rental agencies now offer both efficient conventional vehicles and low-polluting hybrids. Consider the type of trip you are taking, as hybrids have little advantage where you can keep a steady speed, but can minimize the losses of constant braking and accelerating in an urban area (where a fully electric car would be ideal).

For couples and solo travelers, a **nonstop coach flight** almost always **beats an average car**. Air travel is often assumed to be the worst option for vacation travel, but auto pollution can add up, especially when vacationers drive long distances or travel with few passengers. If traveling alone or with one other person, vacationers are usually better off flying direct in coach than getting behind the wheel. This is especially true for trips of more than 500 miles.

When flying, consider taking a train for at least one leg if there is no direct connection between your home airport and your destination. For example, instead of flying indirectly from Amsterdam to Antananarivo, take a Thalys train to Paris and then a direct flight to Antananarivo from there.

Also, vacationers should **schedule** their trip wisely. Sitting in traffic eats up gas, which means more greenhouse gas are emitted. Altering vacation schedules to avoid peak travel periods can save consumers time and money – and cut pollution. The *sweet-spot* for a modern sedan car, is usually around 90km/h, which gives the greatest number of kilometers per liter of fuel. It is often lower for a SUV. Allowing extra time for your trip can reduce fuel costs and carbon emissions.

Of course this study fails to mention Amtrak, which is comparable in efficiency to buses on most routes. On other continents there are different low-emission options available, like extensive rail links, coastal ferries, etc.

See also

- Air pollution
- Animal ethics
- Stockholm environmentalist tour, describing a city which has been a forerunner in the green movement and sustainable technology
- Responsible travel
- Staycation
- United States without a car – for getting around the most car-dependent country on earth without one and thus reducing your carbon footprint