

unisanté

Centre universitaire
de médecine générale
et santé publique · Lausanne

Eco-travel : which recommendations ?

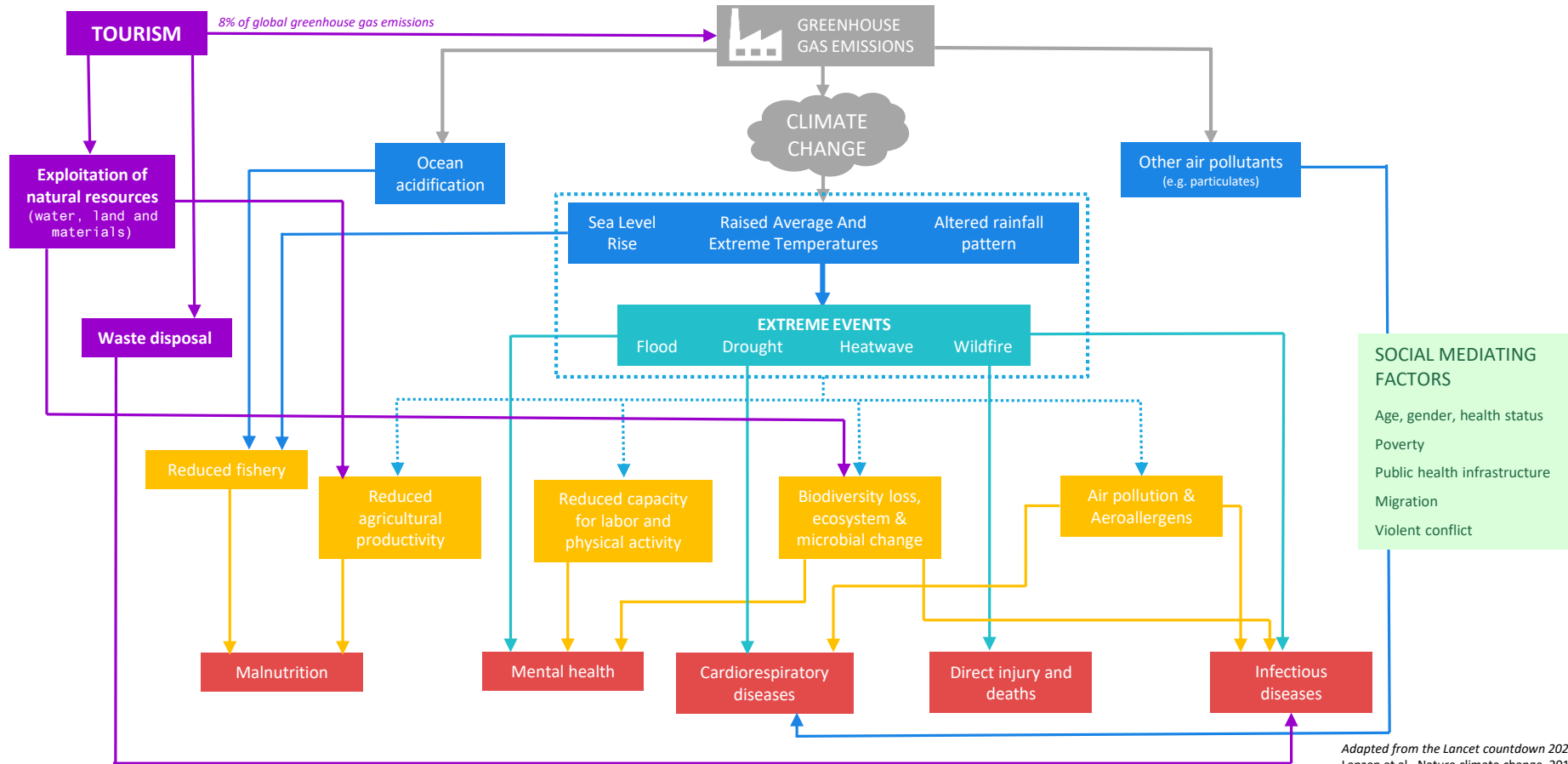
Alix Miauton

Tropical, travel and vaccination clinic, Unisanté

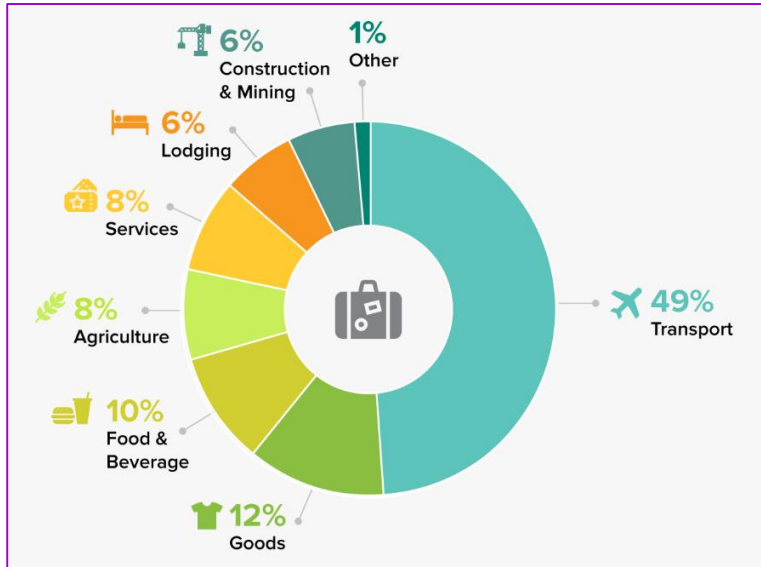
Swiss Society of Tropical and Travel Medicine

02 June 2022

Tourism, environment and health



Carbon footprint of global tourism



- **Rapid increase** in the recent years
 - 15% increase between 2009 and 2013 : from 3,9 to 4,5 GtCO₂e
- Majority of this footprint **exerted by and in high-income countries**
 - US tops the ranking, under both residence-based and destination-based accounting perspectives
 - Small-island destinations : some of the highest destination-based footprint per capita

Adapted from Lenzen et al., Nature climate change, 2018
<https://sustainabletravel.org/>

Travellers' awareness

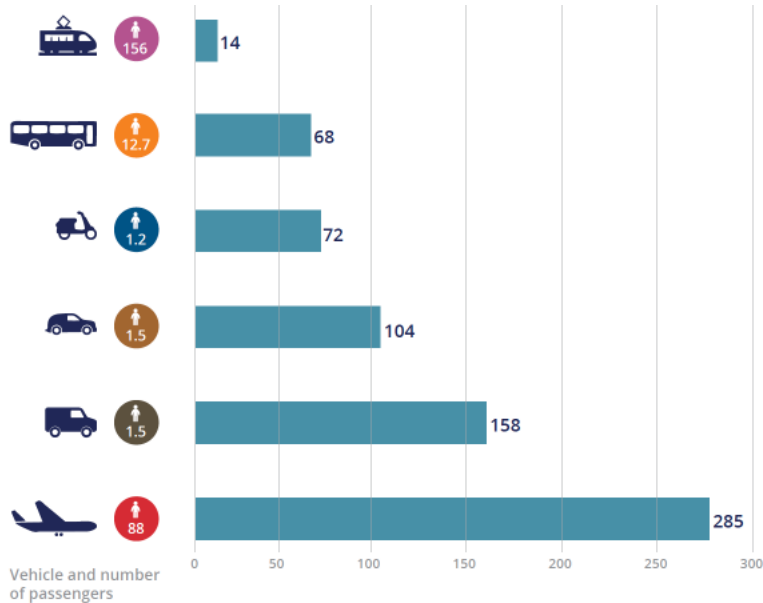
- 29'000 travellers from 30 countries (2021)
 - 83 % think sustainable travel is vital
 - 61% state that the pandemic has made them want to travel more sustainably

Booking.com's 2021 Sustainable Travel Report

- Vaccination and Travel clinic - Lausanne
88 travellers (2022)
 - 50% think that the clinic should provide recommendations to decrease the environmental impact of tourism (24% no , 22% no opinion)

Transport

Grams of CO₂ per passenger-kilometer



European Environment agency

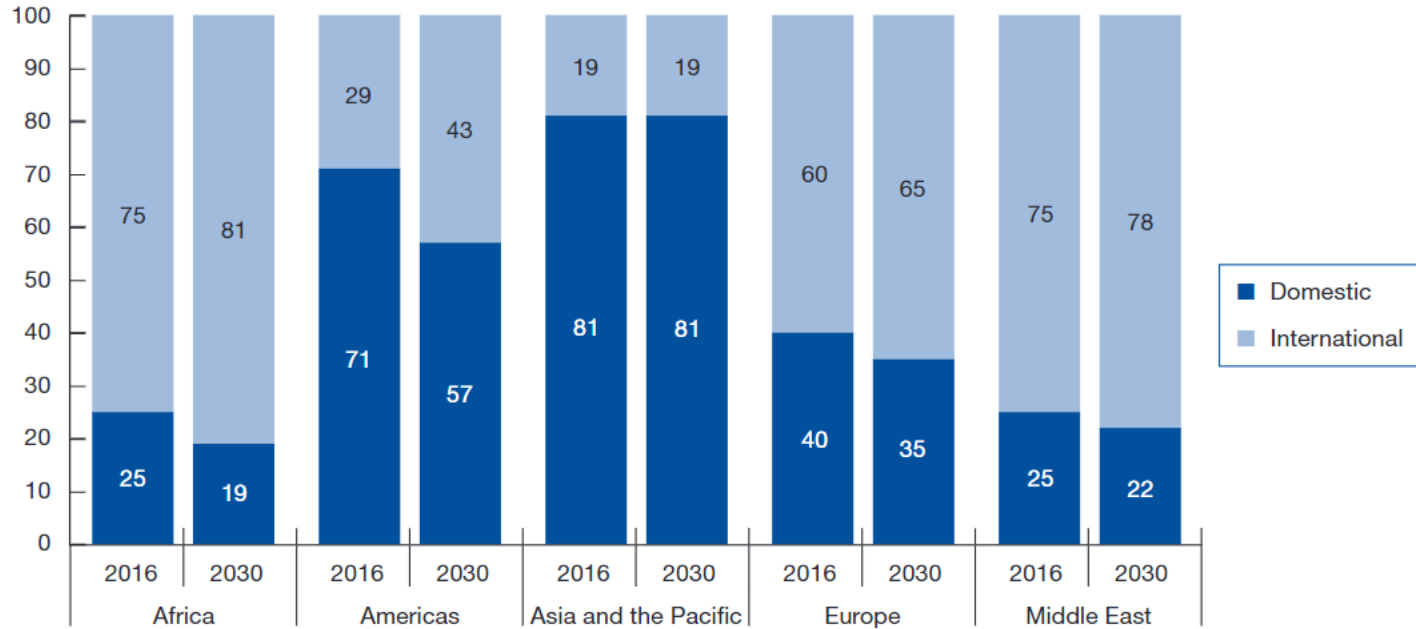
- Promote local tourism
- Travel by foot, bike, train
- For trips > 6 hours, direct flights better than indirect flights
- Carbon footprint calculator for transport :

<https://co2.myclimate.org/>



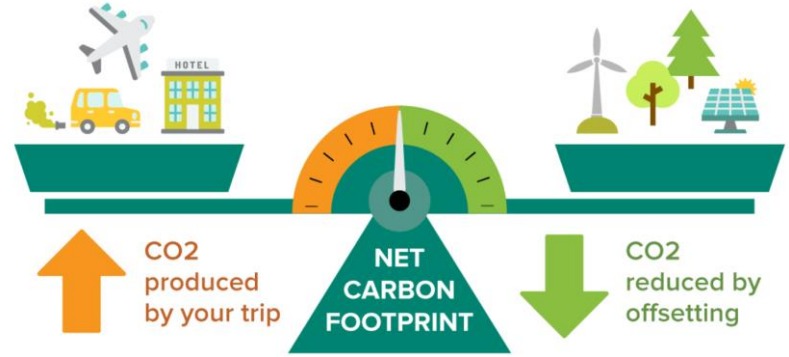
Transport

Domestic and international transport-related emissions from tourism, 2016 and 2030



Carbon offsetting

- **Ethical** problems :
 - Allow polluters to go on polluting
 - Not a long-term solution
 - Incentive to avoid regulating certain sectors and industries
- Concerns about carbon offset **quality**
 - Not representing valid GHG reductions
 - Harm to local communities



⇒ Not a primary solution but **complementary/interim**

⇒ **Choose verified labels** (*Gold Standard, Verified Carbon Standard*)

Ecotourism

“responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education”

Main principles :

- **Minimize** physical, social, behavioral, and psychological **impacts** of tourism
- Build **environmental and cultural awareness** and respect
- Provide positive experiences for both visitors and hosts
- Provide **direct financial benefits for conservation**
- Design, construct and operate **low-impact facilities**

Labels disparity / greenwashing : recommend to choose **reliable labels** (e.g. EU ecolabel)

General recommendations for ecotourists



Avoid mass tourism destinations

(receiving a massive volume of tourists without regulation)

Pick **nature-friendly accommodation** (with water and energy saving measures)



Support local communities - stay in locally owned accommodation and buy produce from local people

Protect resources - limit many showers or use air conditioning. Limit changes of towels and sheets to what is strictly necessary. Avoid activities involving swimming pools or golf courses.



Eat local food and drink - avoid products that have been imported

Limit waste (e.g. plastic water bottles)

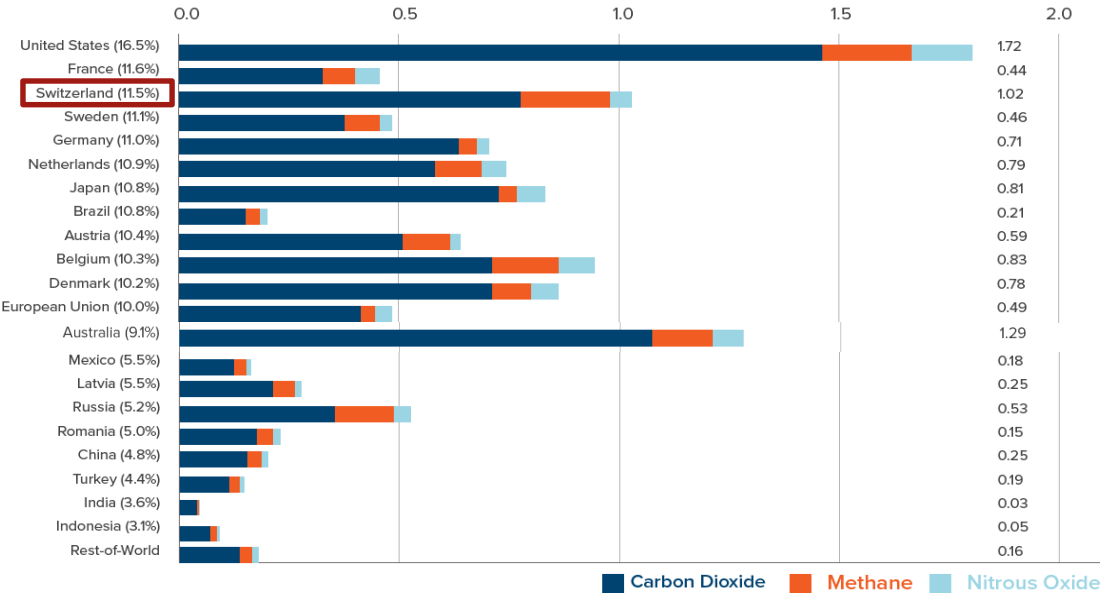


Limiting plastic water bottles

								
TYPE OF GERM	BOIL (for 1 min., or 3 mins. at elevations above 6,500 feet)	FILTER	PURIFIER	CHLORINE TREATMENT (disinfectant)	IODINE (disinfectant)	CHLORINE DIOXIDE (disinfectant)	COMBINING FILTER AND DISINFECTANT	UV LIGHT USED IN CLEAR WATER
BACTERIA (such as <i>Campylobacter</i> , <i>Salmonella</i> , <i>Shigella</i> , <i>E. coli</i>)	✓	✓ 0.3 micron or smaller filter	✓	✓	✓	✓	✓ 0.3 micron or smaller filter, plus disinfectant	✓
VIRUSES (such as norovirus, hepatitis A, enterovirus, rotovirus)	✓	✗	✓	✓	✓	✓	✓	✓
PARASITE <i>Giardia</i>	✓	✓ Filter certified for "cyst" and "oocyst" reduction	✓	!	!	✓	✓ Filter certified for "cyst" and "oocyst" reduction, plus chlorine dioxide	✓
PARASITE <i>Cryptosporidium</i>	✓	✓ Filter certified for "cyst" and "oocyst" reduction	✓	✗	✗	!	✓ Filter certified for "cyst" and "oocyst" reduction, plus chlorine dioxide	✓

Health care's climate footprint

Health care footprint per capita (tCO₂e/capita)



- Health care system : 4.4% of global net emissions
- Pharmaceuticals and chemicals supply chain : 32% of GHG emissions (NHS study)
- Encouraging **more rational laboratory investigations and antimicrobial prescriptions**

*“Less is more”
Smarter medicine*

From travel doctor to eco-doctor...

- **Travellers' diarrhea (TD)**

- Mitigate risk factors where possible
- Risk-based management strategies to reduce antibiotic usage and its consequences (AMR)

=> Antibiotic treatment only for **severe TD** ?

Adler et al., JTM, 2022
Riddle et al., JTM, 2017

- **Stand-by antibiotics for TD - *Finnish study on 314 travellers***

- SBA carriers treated mild/moderate TD with antibiotics more frequently (35% vs 4%)
- No difference in healthcare visits and antibiotic treatment for severe/incapacitating diarrhea
- 67% of severe diarrhea managed without antibiotics

Vilkman et al., TMID, 2019

From travel doctor to eco-doctor...

- **Malaria prevention**

Stick to the SECTM malaria prevention recommendations, updated in 2019

- **Tailored approach** based on micro-epidemiological analysis of risk by country, travel characteristics and risk factors of the traveller
- **Limitation of the use of stand-by emergency treatment**
 - Improvement of access to diagnosis and treatment of malaria
 - SBET is not properly used by travellers
- ⇒ **SBET only recommended** when travelling to a low malaria risk area **in specific risk situations** (e.g. unable to obtain a diagnosis/treatment within 48h)

From travel doctor to eco-doctor...

- **Fever in the returning traveller**

Often many investigations, but :

- Only 33% of fever diagnoses due to tropical infection :
 - Malaria 22%
 - Dengue 5%

⇒ Importance of **sequential investigations**

⇒ Excluding malaria and dengue (RDTs) before other microbiological investigations

⇒ Limit more extensive analysis to fevers without apparent source

Eco-counseling : challenges & pitfalls

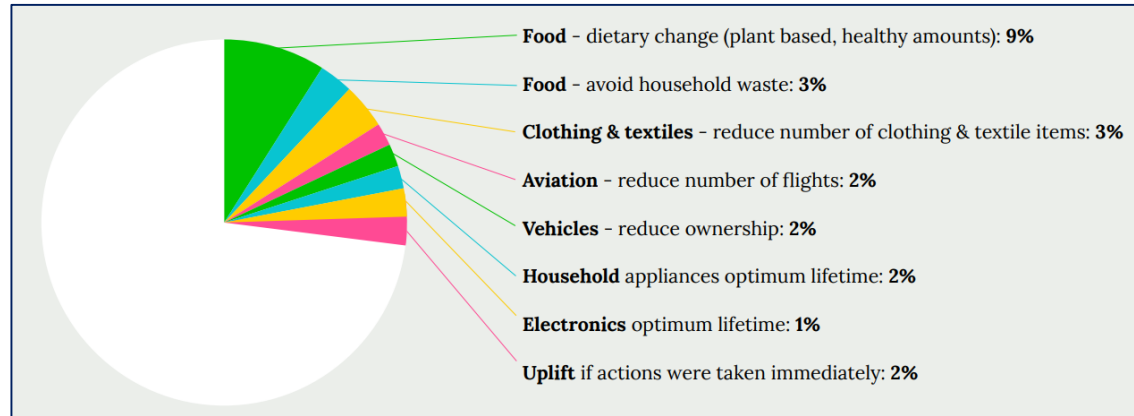
- Importance of **non-judgmental guidance**/advice and humility
 - Most doctors travel more than their patients
 - Non invasive advice : flyer ? visible poster ?
- **Large amount of information** already provided during the consultation
- Most travelers do not consult a travel clinic : important role of GPs
- **No evidence of effectiveness** of such interventions
- Significant **gap between awareness and action**

Eco-counseling : challenges & pitfalls

- **Limitation of individual behaviour and lifestyle change**

Citizen have direct influence on (only) 25-27 % of the consumption emission savings need by 2030

Consumption emissions savings needed by 2030 in North American and European countries



University of Leeds, C40, Arup, 2021

⇒ Great opportunity for individual action, but **change by governments and industry is crucial**

Take home messages

- Climate change is **adversely affecting human health**
- The **tourism** industry **contributes significantly** to the emission of **GHG**
- **Health professionals** have a **key role** to play in :
 - **Promoting** healthy **behaviours** with **low environmental impact** among patients
 - **Avoiding unnecessary** medical tests, treatments and procedures
 - Supporting action to **reduce the environmental footprint of healthcare systems**

unisanté

Centre universitaire
de médecine générale
et santé publique · Lausanne

Thank you !



unisanté

Centre universitaire
de médecine générale
et santé publique · Lausanne

