

# Where potential lies

*Exceeding the planetary boundaries is risky, even if the consequences cannot often be directly seen or arise only later. Species diversity is declining and the climate is warming. Therefore, we should take every opportunity in Switzerland and worldwide to reduce the environmental impacts caused by consumption and production.*



**Clean energy:** One action that has particularly considerable potential to reduce the total environmental impact (-9%) and the greenhouse gas footprint (-12%) is the consistent implementation of the federal energy strategy. Efforts need to be made not only in the promotion of renewable energies, but also in the important area of housing (insulation, living space, heating technology).



**Sustainable mobility:** The expected increase in traffic and the rising demand for air travel will enlarge Switzerland's environmental footprints. Environmentally-conscious travel behaviour, alternative engine systems and lighter vehicles are opportunities to reduce them.



**Healthy diets:** By consuming just 300g of meat per week, we can reduce our environmental footprint for nutrition by around 18% compared to the Swiss average. This type of conscientious reduction in meat consumption is also one of the recommendations of the Swiss Nutrition Society



(SGE). Reducing food waste (e.g. nose to tail eating), changing farming methods (fertilisers, pesticides) and seasonal eating are other ways to leverage the effect in the area of nutrition.

**Optimised supply chains:** On average, three-fourths of Switzerland's environmental impacts occur abroad. Swiss companies have considerable leverage in their foreign supply chains to reduce footprints by promoting clean, resource-efficient technologies.



Picture: Peter Baracchi/FOEN

# New ways forward

*The comparison of our footprints with the planetary boundaries shows: We are already deep within the red zone. This means that we are putting the sound conditions for our society and economy in jeopardy. To forge new ways forward, consumers, companies, scientists and the government all need to get involved.*

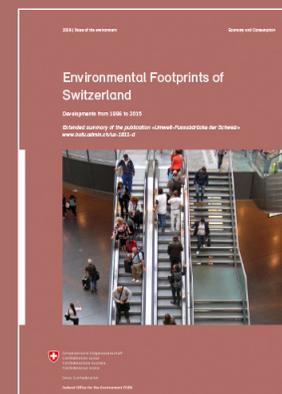
**Consumers:** Environmentally-conscious mobility including less air travel, the use of more energy-efficient, non-fossil heating systems, and modest consumption of animal food products have a considerable effect.

**Companies:** Effective standards and resource-conserving business concepts, technologies and circular models are in greater demand than ever. Costs can be reduced by improving resource efficiency throughout the entire supply chain.

**Scientists:** The connections between consumption, production, technology and behaviour are complex. Researchers need to develop practical solutions.

**Government:** By promoting promising technologies and setting goals and incentives, the government can help achieve the necessary transformation both nationally and internationally. Investments such as in transport infrastructures should be rigorously reviewed to ensure that they are future proof.

> Further information about the environmental footprints: [www.bafu.admin.ch/uz-1811-e](http://www.bafu.admin.ch/uz-1811-e)



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Urs Keller, Ex-Press

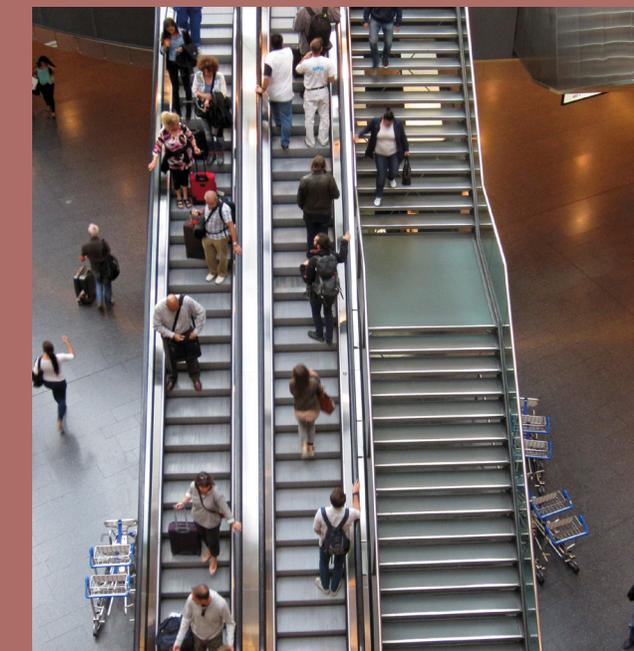
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# Environmental Footprints of Switzerland

Developments from 1996 to 2015



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Confédération suisse  
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Swiss Confederation

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# Switzerland's footprints ...

From smartphones and cars to lunch menus: What we own and consume impacts the environment. And not only when we use and dispose of consumption goods, but also when raw materials are extracted and goods are produced. By importing many of our products, we impact the environment abroad in particular.



Picture: Meike Seele, Ex-Press

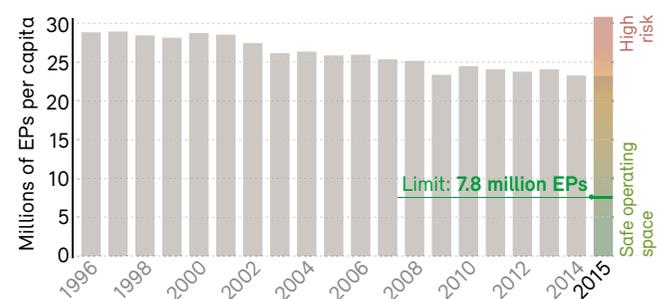
Nature knows no national boundaries; climate-damaging greenhouse gases, for example, spread over the entire globe. So-called footprint indicators can be used to measure the environmental impact caused by a product from its production to its disposal – regardless of where the environment is impacted. These indicators complement others that focus on the environmental impacts in Switzerland. They also provide insight into types of environmental pollution that are less obvious than plastic waste in the landscape. After all, we often do not notice the negative consequences of fertilisers, pesticides, heavy metals, particulate matter and greenhouse gases until our living space and our health have been damaged by them.

## ... are too large

Our planet's carrying capacity has limits. Interdisciplinary research is able to estimate them and derive where the safe operating space is. It reveals the degree of risk to such areas as climate and biodiversity that is caused by the environmental impact of our way of life.

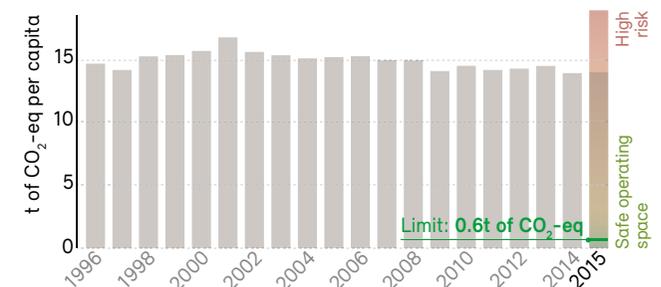
When extrapolated, Switzerland's environmental footprints lie outside the safe operating space – at least if we assume that poorer countries may also utilise as many resources per capita as the Swiss in the medium term.

**Total environmental impact:** This footprint indicator considers various environmental impacts and expresses them in eco-points (EPs).

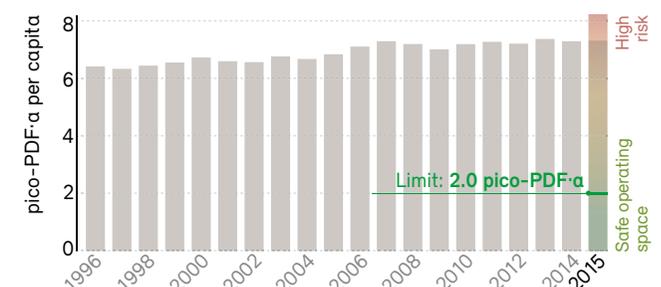


The EPs per capita amounted to 23.4 million in 2015 (-19% compared to 1996), primarily thanks to progress achieved in Switzerland. However, three-fourths of our consumption's environmental impact is generated abroad. The total environmental impact is three times higher than the limit of the safe operating space, which is derived from Swiss environmental goals and the planetary boundaries.

**Greenhouse gas footprint:** Greenhouse gas emissions caused by our consumption are overall relatively stable and amounted to 14 tonnes of CO<sub>2</sub>-equivalents per capita in 2015. When extrapolated to the world's population, we exceed the boundary of the safe operating space (0.6 tonnes per capita) by more than twenty times.



**Biodiversity footprint:** Our consumption requires large areas of land in Switzerland and abroad; this harms species diversity. Per capita, the footprint has increased by 14% to 7.4 pico-PDF-a within 20 years – especially abroad. Extrapolations reveal that the limits of the safe operating space are exceeded by nearly four times.



1 pico-PDF-a = potential loss of 1 trillionth of global species diversity (weighted with endangerment and vulnerability) compared to the reference state (natural habitat).

## Planet under pressure

The world map provides examples of countries and products that are particularly relevant to Switzerland's biodiversity, water, and greenhouse gas footprints. It shows that Switzerland imports large quantities and particularly environmentally-harmful products from these countries.

- **Greenhouse gas footprint:** In addition to driving, flying and heating with oil and natural gas, greenhouse gases are generated by, among others, agriculture and the production and transport of products. Many of our

everyday products come from China, where electricity from coal is frequently still used to manufacture products.

- **Biodiversity footprint:** Particularly relevant are countries with a high degree of species diversity and that cultivate products like coffee, cocoa, cotton, palm oil and soybean (for animal feed).
- **Water footprint:** Dry regions, where irrigation in agriculture and cooling water use in nuclear and coal power plants further exacerbate water scarcity, are particularly affected.

