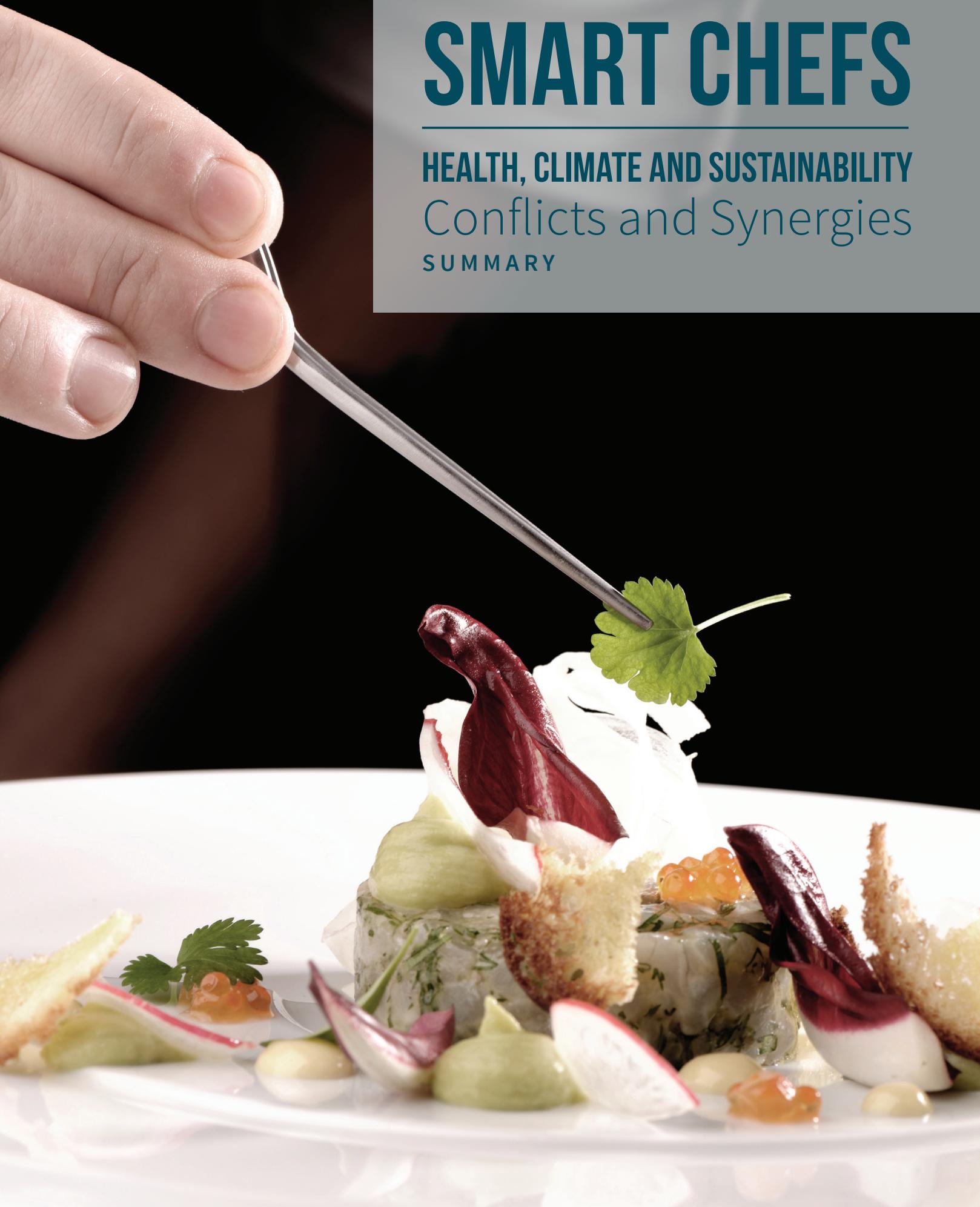


SMART CHEFS

HEALTH, CLIMATE AND SUSTAINABILITY
Conflicts and Synergies
SUMMARY



Project lead: J. Ellens
Organic chapter: I. O'Connor
Vitality chapter: A. Aleksandrowicz
Solutions: M. Klarmann

This summary was developed as part of Eaternity's Organic Footprint and Health Footprint projects. For all references and sources see the full report.

We thank our scientific partners, scientific advisory board, all experts, stakeholders and the Eaternity IT team who have contributed with their time and expertise to help in reflecting the scientific status quo.

Special thanks to the ZHAW Zurich University of Applied Science - Institute for Natural Resource Sciences, Wädenswil and Quantis, Switzerland for their collaboration on the Eaternity Database. The Eaternity Database contains major contributions of the ZHAW Agri-food Database. Comparisons in the CO₂-equivalent impact of organic and standard food production practices cited in this report were calculated in collaboration with Quantis and the ZHAW.

Reference: ZHAW Agri-food Database, www.zhaw.ch/IUNR/agri-food. LCIA also accessible through Eaternity Database (EDB - edb.eaternity.org).

PUBLISHED BY:

Eaternity
info@eaternity.ch
eaternity.org

MADE POSSIBLE BY:

ENGAGEMENT
A DEVELOPMENT FUND OF THE MIGROS GROUP

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holders, provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders.
© Eaternity, 2017

SMART CHEFS

Our food supply chain triggers 1/3 of all of the world's greenhouse gas emissions. No advancement in transportation and no energy revolution meets the potential to slow down global warming like the awareness for smart food choices. The most impactful answers to the Paris Climate Accord are hidden in our refrigerators; and not in our garages or heating systems.

If every Swiss was to eat climate-friendly 3 times per week, the impact on greenhouse gas emissions would equal 750.000 cars less on Swiss streets. The current output of every Swiss' eating habits are around 3 Tons of CO₂ per year. The food choices of the entire Swiss population combined cause enough carbon emissions to fill the Hallenstadion in Zurich 42'000 times. If we were to build a bridge with this amount of arenas, it would span from Zurich to Chicago; every year anew.

With educated, seasonal and regional food choices we can reduce this impact by more than 50%. Food is the most efficient way to reduce greenhouse gas emissions and reach the goal of maximum global warming of 2 degrees, set by the Paris Climate Accord.

SMART CHEFS



Agriculture is currently facing challenges that are deeply interwoven with climate change. Yields of important staple crops are expected to drop by 20%. Deforestation, biodiversity loss, land degradation and the use of scarce water are despite short-term gains further reducing the earth's capacity to grow enough food. Yet the demand for produce is constantly on the rise. The world's

If every Swiss was to eat climate-friendly 3 times per week, the impact on greenhouse gas emissions would equal 750.000 cars less on Swiss streets.

population is expected to increase by 20% in the coming 30 years. With 40% of the world's land already covered by agriculture our current food supply is under distress. Each individual has the power to support a sustainable agriculture and currently the world's population does not yet meet this goal. If everyone lived like a Swiss person, we would need 3 planets to sustain us. For India it is less than one planet but for Australia it's 5.

The good news is that the transition to a more sustainable food supply system is easy and it goes hand in hand with public health. To this day obesity, cardiovascular diseases, cancer and diabetes account for 70% of all deaths in Europe. Despite an over-supply of food we are suffering a high amount of disease. However, eating according to health recommendations will already reduce our climate impact by up to 35%.

Eaternity has developed indicators for health, land-use change, good animal treatment, seasonality and the water footprint to help the food service industry with making smart choices. In combination with Eaternity's Carbon Footprint tool we found significant conflicts and promising synergies between these indicators.

With eating-out on the rise in a modern society, the food service industry is facing a key-role, contributing to a sustainable agriculture and public health. Eaternity provides tools for smart chefs to measure, track and reduce the environmental impact of their restaurants and reduce disease risk along the way. By accessing our data solely by pushing a button, chefs are given what's needed to make smart choices. Large caterers and canteen operators have already signed on to Eaternity, taking on the challenge of reducing food related CO₂ emissions and contributing to a healthier society. The best among these food service establishments will be awarded the first ever climate-, health- and environmental Eaternity Award in 2018.

On the following pages we present the conflicts and the synergies we found between climate, health and sustainability. And we aim at explaining the science that builds the foundation for Eaternity's Climate Score, the Vita Score and the Organic Footprint.

J. Ellens
Head of Science
Eaternity

1/3

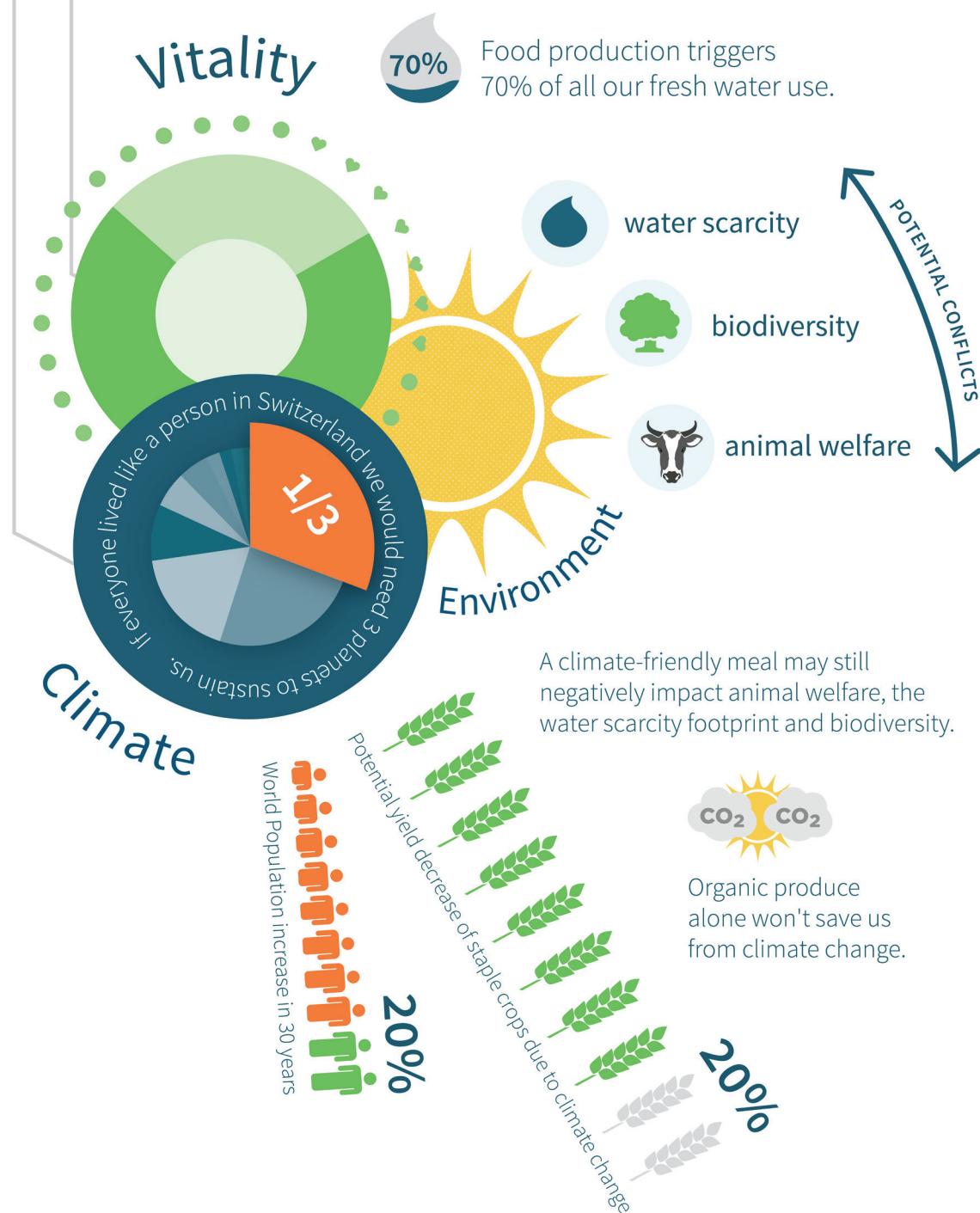
1/3 of our carbon footprint is connected to the food supply chain. This is more than all of the world's transportation.

70%

In Europe obesity, cardiovascular diseases, cancer and diabetes account for 70% of all deaths.



Only 10% of meals analyzed by Eaternity are mutually healthy and climate-friendly.





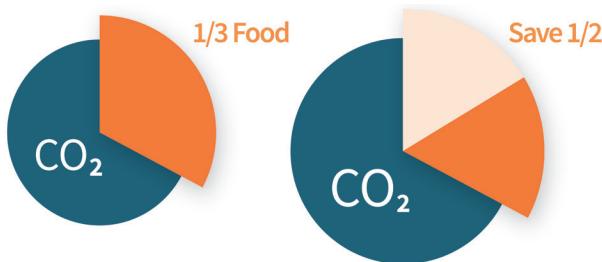
FOOD AND CLIMATE

Extreme weather events like heavy rain, hurricanes, heat waves and droughts are amplified in frequency and severity by climate change, just like mudslides, melting permafrost, acidification of the oceans, the loss of plant and animal species, the spread of disease, yield drops, and increasing water scarcity. Polar ice caps and alpine glaciers are melting at a rapid pace, which causes sea levels to rise. The flooding and the erosion of islands and coastal areas is the result. Climate change is not an event in the future. It's literally happening right now. The higher we allow the global temperature to rise, the higher the price we pay will be. There are worldwide efforts made to keep the rising temperatures within limits. At the Paris climate conference in 2015 a global agreement was reached to keep global warming below 2 degrees. These efforts are not going to prevent us from any damage. They only aim at keeping the consequences manageable for humankind.

1/3 of global greenhouse emissions are related to the food supply chain. How and what we eat contributes more to global warming than the world's shipping and transportation industry.

Over 80% of emissions caused by our food supply incur at production, with the most important contributors being deforestation (38%), peat degradation (11%) and

FOOD AND CLIMATE



1/3 of global greenhouse emissions are related to the food supply chain. How and what we eat contributes more to global warming than the world's shipping and transportation industry.

direct emissions from agriculture (50%) of which most are related to livestock, fertilizer, manure management and rice production.

MEASURING THE CARBON FOOTPRINT OF FOOD

All greenhouse gases related to the production of food are expressed in CO₂-equivalents. These emissions are converted into the amount of carbon dioxide with a similar climate impact. The carbon footprint of food is measured with a life cycle assessment (LCA). It is a systematic and quantitative analysis of the environmental impact of every single life stage of a product. LCAs account for transparency and comparability between impacts of production, transportation, storage and disposal.

On average 18 kg of plant protein is needed to raise 1 kg of animal meat protein. This leads to a luxurious environmental price we pay for animal products, contributing to over 60% of all of the food supply chain's greenhouse gas emissions. In contrast to animal

GREENHOUSE GASES

The impact of methane (28 times) and nitrous oxide (265 times) on global warming is stronger than carbon dioxide. Methane is produced by microorganisms in the stomach of cows and sheep. They support the ruminant's digestion. This process is called enteric fermentation. But methane emissions also originate in rice paddies, where waterlogged soil supports rapid bacteria growth. These bacteria produce methane. Nitrous oxide is related to synthetic and organic fertilizer use and manure management. Fertilizer that is not absorbed by plants is either washed out by rainfall or turned into nitrous oxide by bacteria and released into the atmosphere.

products, plant foods such as grains and vegetables have a relatively low carbon footprint. However, heated greenhouses and air transportation can significantly increase the carbon footprint of plant products.

FOOD CHOICES MATTER

Educated food choices have the potential to reduce carbon emissions of the food supply chain by at least 50%. The world's increasing population and the development of wealth combined lead to a rise in demand for food. With current trends proceeding the entire carbon budget of the world will be food related by 2050. Food therefore is at the core of meeting the goal of keeping global warming below 2 degrees.

Everyone understands that the world will not turn vegetarian entirely. There's even a case to be made for animal protein raised on steep alpine hills not suitable for vegetable farming. However, the awareness for the substantial environmental cost of animal protein is important, so everyone can make their contribution with a healthy ratio between animal protein and plant protein. To reduce our climate impact the most important food decisions are:



Product choice:

Consider a higher ratio of plant-based products vs. animal products



Seasonality:

Choose fresh produce and avoid greenhouse vegetables



Origin:

Avoid air transportation and favor short distances

Climate



Biodiversity
Climate
Nitrogen Cycle

To sustain our current lifestyle, **1.6** planets would be needed, yet we only have one.

A growing population and increasing wealth cause greenhouse gas emissions from the food supply chain to rise. This conflicts with the worldwide goal to keep global warming under 2° Celsius.



14 Gigatons per year

5 Gigatons per year

In order to prevent more harm, our food-related emissions need to drop by 60%.

By being just a few years late, displacement and destruction from global warming is expected to be worse than all wars in human history combined.



Menus that cause at least 50% less CO₂ emissions earn the Climate Score Award.

Improving One Menu at a Time

The world's increasing population and the development of wealth combined lead to a rise in demand for food. If current trends proceed the entire carbon budget of the world will be food related by 2050.

EATERNITY

Eaternity has a big appetite for change: We establish climate friendly meals in society. Eaternity has developed an innovative software for restaurants to track, measure and improve the CO₂-footprint of all their meals and purchases automatically. Anyone can check on their personal CO₂ emissions related to food in Eaternity's public web-app.

The food service industry is an important game changer. They take on a key-role in climate change. This is the reason why we focus on developing the best solution to make environmental information accessible to chefs in all the segments of the food service industry.

THIS IS CLIMATE CHANGE

When greenhouse gases like carbon dioxide, methane and nitrous oxide are released into the air, they trap the sun's heat at the earth. This causes a rise in the earth's temperature, which leads to climate change. While we've seen an average increase of 0.8 degrees since the 19th century, the pace has increased unprecedented in recent years. In the last three decades the earth's temperature increased by about 0.2 degrees per decade. As heat is not evenly distributed, northern regions heat up much faster than other regions. Climate change will completely alter how we can inhabit this planet.



ORGANICS AND ENVIRONMENT

By making smart food choices we can improve our environmental footprint tremendously. However, basing food decisions on the carbon footprint only may conflict with tropical deforestation, animal welfare and water scarcity. On the following pages we summarize current knowledge on climate and environmental impacts of farming in both, the organic and the conventional system.

SWISS BEEF, PORK AND CHICKEN

Organic products are known to improve animal welfare and to avoid tropical deforestation. However, organic farming can increase the carbon footprint when compared to non-organic standard production methods. This is especially true for meat products. Organic beef in Switzerland is raised grazing, which causes more greenhouse gases. A high amount of natural feed and more free space to move around makes the animal mature and fatten slower and produce more methane. The result is an at least 50% higher carbon footprint than the predominant non-organic standard production system.

ORGANICS AND ENVIRONMENT

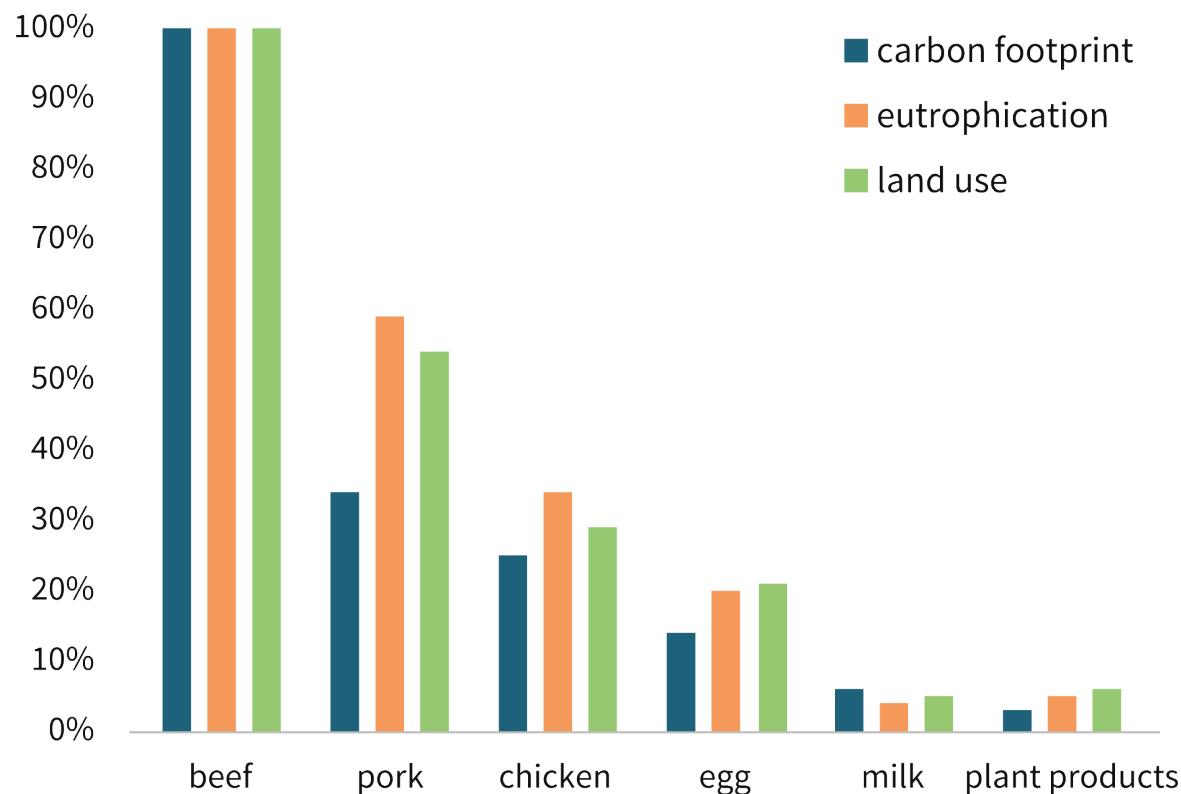
Organic farming can increase the carbon footprint when compared to non-organic standard production methods.

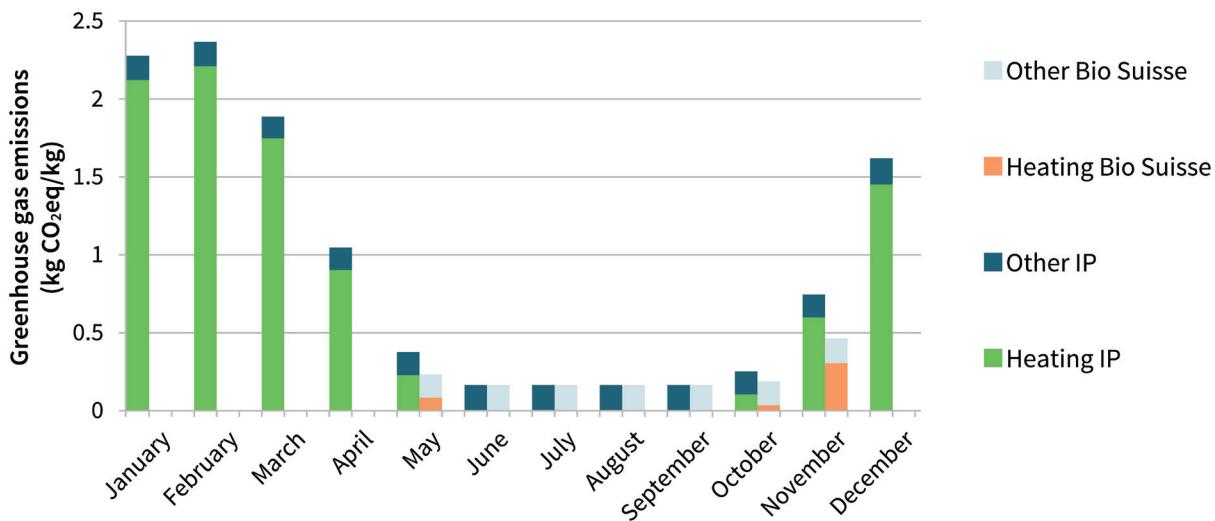
Also chicken from organic production in Switzerland have a higher carbon footprint than chicken from non-organic standard production. Organic chicken grow slower, live longer and therefore use more feed than standard chicken. The result is a 45% higher carbon footprint. For organic pork there is no conflict between animal welfare and climate impact. The carbon footprint of organically and conventionally produced pig meat is similar. What's conflicting is that opposed to standard farming, organically raised cattle stands for better treatment of the animals than governmental minimum requirements.

OTHER COUNTRIES

The trade-offs between animal welfare and climate impact for meat observed for Switzerland do not necessarily translate to other countries. In Germany organic beef from grazing production and organic chicken have a 12% and 28% lower carbon footprint compared to non-organic standard production. A main reason is that non-organic standard production uses mostly uncertified soy which is related to carbon emissions from deforestation. In Switzerland practically all soy used for feed is certified sustainable.

ENVIRONMENTAL IMPACT PER KG OF FOOD RELATIVE TO THE IMPACT OF 1 KG OF BEEF





*The carbon footprint of vegetables produced in greenhouses changes throughout the year:
Out-of-season vegetables grown in heated greenhouses cause higher carbon footprints.*

SWISS VEGETABLES

Generally speaking, there is no conflict between eating organically produced plants and reducing our climate impact. In comparison to animal products, plant products have a much lower carbon footprint than animal products. The carbon footprint of vegetables produced in greenhouses however changes throughout the year: Out-of-season vegetables grown in heated greenhouses cause higher carbon footprints. Bio Suisse (CH) restricts the use of peat and the amount of energy to heat greenhouses. Swiss organic greenhouse vegetables therefore are available during shorter time periods – but if they are available they have a relatively low carbon footprint.

ORGANIC MEALS

Although differences in the climate impact of organic and non-organic meat can be substantial, to reduce the climate impact of our food it is more important to follow the basic rules of eating climate-friendly: more plants,

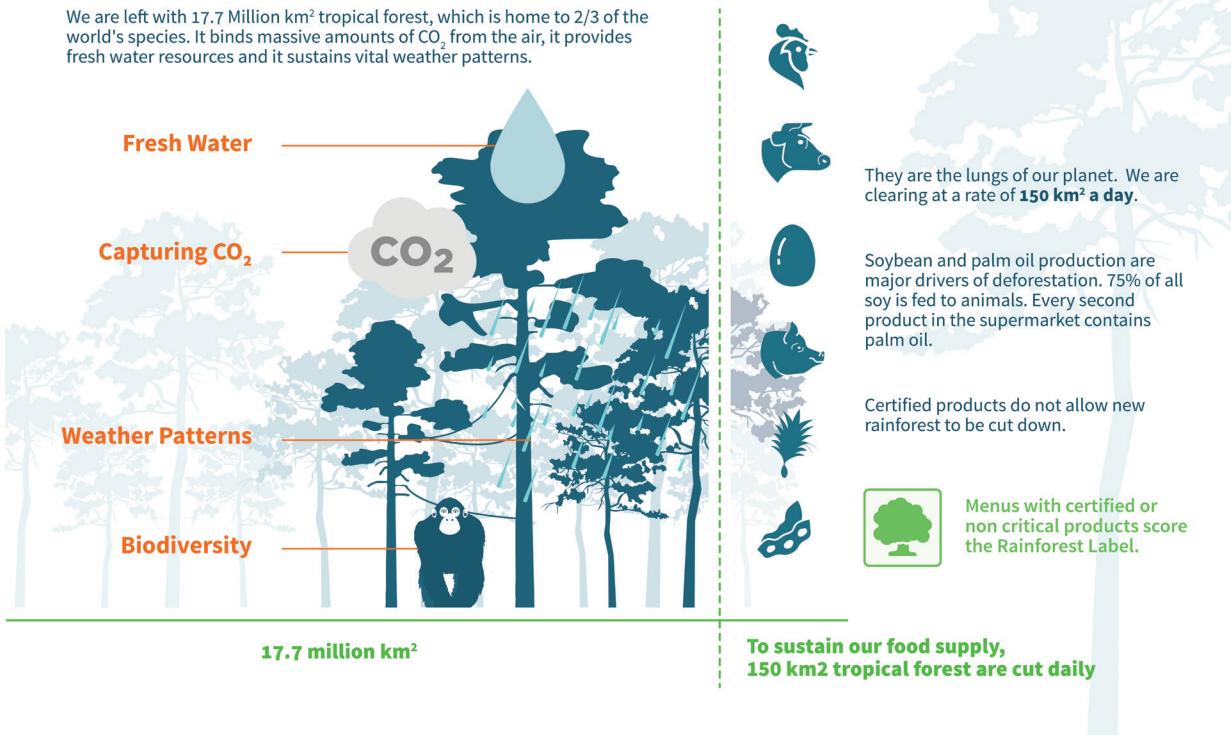
seasonal and regional produce. Our analysis of 1300 meals showed that despite an increase in the average carbon footprint of a meal by 10% by switching all ingredients to organic produce, eating climate friendly would still reduce the impact by 50%.

TROPICAL DEFORESTATION

Tropical forests store massive amounts of carbon and house an incredible amount of plants and wildlife. The production of soy and palm oil are main drivers of tropical rainforest deforestation. In the carbon footprint of a product emissions related to deforestation and land-use change are accounted for. Even so, basing your food choices on the carbon footprint only still can lead to deforestation. For example, a margarine spread has a lower footprint than butter, but margarine often contains palm oil. As large amounts of palm oil can be produced on a relatively small area, its' carbon footprint on the product level is relatively low even when even when rainforest was cut.

ORGANICS AND ENVIRONMENT

Deforestation



Choosing foods from organic production typically ensures that no valuable nature areas or tropical rainforest was destroyed. There are also other certified labels that specialize to protect those valuable areas. In addition to buying certified products we can reduce the pressure on tropical forests by including more fresh products into our diet in favor of processed products which often contain palm oil and less meat and milk that are related to soy production. As of 2016 practically all (99%) imported soy for feed in Switzerland was certified responsible.

WATER SCARCITY

Globally we have enough fresh water resources, but water is not evenly distributed around the globe. Agriculture uses 70% of our fresh water supply, mainly for irrigation. In regions where water is scarce this is problematic. Enough data to compare the water footprint of products from organic and conventional agriculture is currently lacking. A comparison of the water scarcity footprint

with the climate impact however is possible.

Food choices that reduce climate impact can still increase water stress. For example, olives or nuts are often produced in areas where water is rather scarce. The scarce water footprint of the same product differs, depending on where it was produced. A tomato that is produced in Spain requires 44 times more irrigation water than in Switzerland. Because water in Spain is also more scarce than in Switzerland, the scarcity footprint of an average Spanish tomato is 2400 times higher than an average Swiss tomato.

All foods produced in Switzerland have a low water scarcity footprint, because water is not scarce in Switzerland. Olives, nuts, chocolate, coffee, milk products, rice and beef are foods that contribute the most to the water scarcity footprint of Swiss food consumption. The ranking of products probably is different in other countries.

Water Scarcity



663 million people in the world live without clean water.

Scarcity is different per region.

Switzerland

0.01



Water scarcity affects humanity and the ecosystem.

Humans travel long distances for fresh water.

LABOR

Poor water quality is a disease risk.

HEALTH

Fresh water supply is needed to grow food.

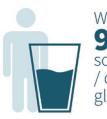
FOOD



To help we need to reduce world wide dependency on scarce water by 50%.



We use
182 liter
scarce water / day / person globally



We have
91 liter
scarce water / day / person globally



Spain

0.63

Water demand for produce



Beef
616 liter/kg



Pork
479 liter/kg



Tomatos
64 liter/kg



Apples
132 liter/kg

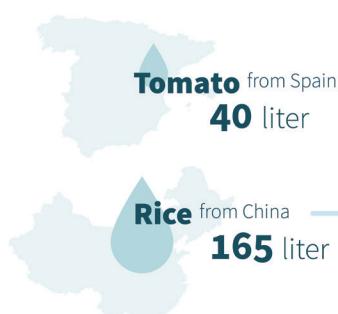


Rice
499 liter/kg



Olives
513 liter/kg

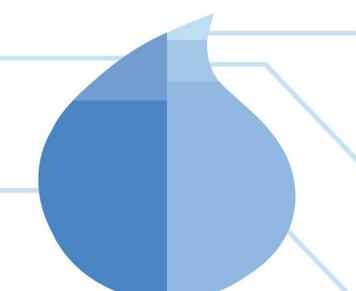
Water scarcity strongly depends on locality.



Tomato from Spain
40 liter



Menus with 50% less scarce water use on average earn the Water Footprint Award.



Apple from Switzerland
1.3 liter

Tomato from the Netherlands
13 liter

Beef from USA
185 liter



To bring global water consumption to a sustainable level we need to reduce our water scarcity footprint by 50%. Meals that substantially contribute to reducing the average water scarcity footprint by 50% receive the Water Footprint Award.

CONSUMER RESPONSIBILITY

To sum things up, we have gained transparency on the environmental synergies and conflicts of our food choices for 6 out of the 9 environmental indicators that experts approved to be most important. For 3 of those indicators there is no standard method established yet or not enough data available. Synergies exist between climate impact, total land use and the oversupply of nutrients (eutrophication). Reducing the carbon footprint of our diet also reduces the impact on land use and of the oversupply of nutrients. Potential conflicts exist between climate, animal welfare, tropical deforestation and water scarcity.

This is the most up-to-date guide we currently have to offer, aiming at reducing our environmental impact. Consumer behavior will play a major part in the establishment of environmentally sustainable diets. To support educated decision making, Eaternity included indicators for water scarcity, tropical deforestation and animal welfare into the Eaternity App.

Reducing the carbon footprint of our diet also reduces the impact on land use and of the oversupply of nutrients. Potential conflicts exist between climate, animal welfare, tropical deforestation and water scarcity.

Most important indicators	Carbon footprint	Water use	Land use	Aquatic Eutrophication (nutrients oversupply)	Ecotoxicity (toxic pollution)	Soil fertility	Biodiversity	Conservation of tropical rainforest	Animal welfare
Can impacts be calculated?	Yes	Yes	Yes	Yes	Yes	No	(No)	(Yes)	(Yes)
Comparison organic/conventional possible?	Yes	No	Yes	(Yes)	(No)	No	No	(Yes)	(Yes)
Transparency gained?	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes



VITALITY

Investigating the link between nutrition, health and climate we aim for applicable guidelines for meals that are good for the well-being of the individual and the health of the environment. Eating healthy inevitably helps tackling climate change. There is great overlap between recommendations for well-being and for climate-friendly meals. In order to expand the amount of meals that are mutually climate-friendly and healthy in a steep upwards curve, adjusting our diet in line with health recommendations will lead already to improvements. Changing the modern diet in consideration of health guidelines lowers greenhouse gas emissions. The top priority for health as well as climate is to eat more fruits, vegetables and whole-grains.

MODERN DIET

Modern societies increasingly consume high energetic foods rich in added sugars, fats and salt. In addition to that, we're used to the intake of high amounts of red and processed meats. These foods are related to noncommunicable diseases,

VITALITY

dominant being: cardiovascular disorders, diabetes and neoplasms (cancer).

In modern society diet-related health issues are widespread, while a general lack of nutrients is on the whole less worrisome. In Europe, 70% of deaths are caused by the above noncommunicable diseases.

A prime conflict of the modern diet with current health guidelines is the lack of fruit and vegetable consumption. Even when not stressed in the same way as fruits and vegetables by general health recommendations whole grains are equally important.

Several methodological approaches tackle the problems by defining a healthy and well balanced diet. Traditionally, the focus has been on providing the body with a healthy amount and a well balanced ratio of nutrients. A more novel approach is to promote food groups which are known to reduce the risk of lifestyle diseases.

NUTRIENT BASED GUIDELINES

Most nutritional organizations focus their recommendations mainly on the intake of macronutrients, vitamins and minerals, which are needed to maintain well-being. The healthy intake of these

substances is dependent on age, gender and level of physical activity. This segmentation makes it difficult to apply nutrient based guidelines in everyday cooking. However, to make it easier, it is

In modern society diet-related health issues are widespread, while a general lack of nutrients is on the whole less worrisome. In Europe, 70% of deaths are caused by the three dominant noncommunicable diseases.

current law that all packaged foods display basic nutrient based information.

Researchers developed several nutrient-based health indicators, which show which meals follow the guidelines closely and which do not. We used three of these indicators to analyze approx. 600 meals served in Swiss restaurants. We found that between 21% and 33% were classified as healthy, depending on which of the 3 different, nutrient-based, peer-reviewed health indicators we were looking at. Moreover, on average only 10% of all cooked meals were both healthy and climate friendly. There is a lot of room for improvement at low effort. By implementing minor changes, such

Nutrition

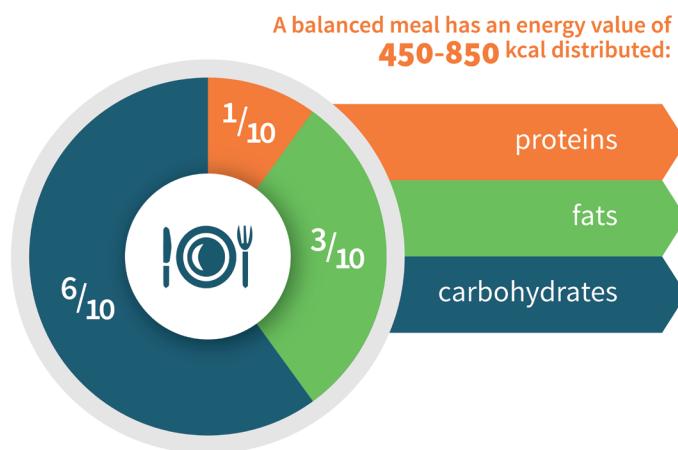
671 Million people are obese, making obesity the number one health problem in the world. Direct results are: diabetes, cardiovascular diseases, cancer, joint injuries among others.

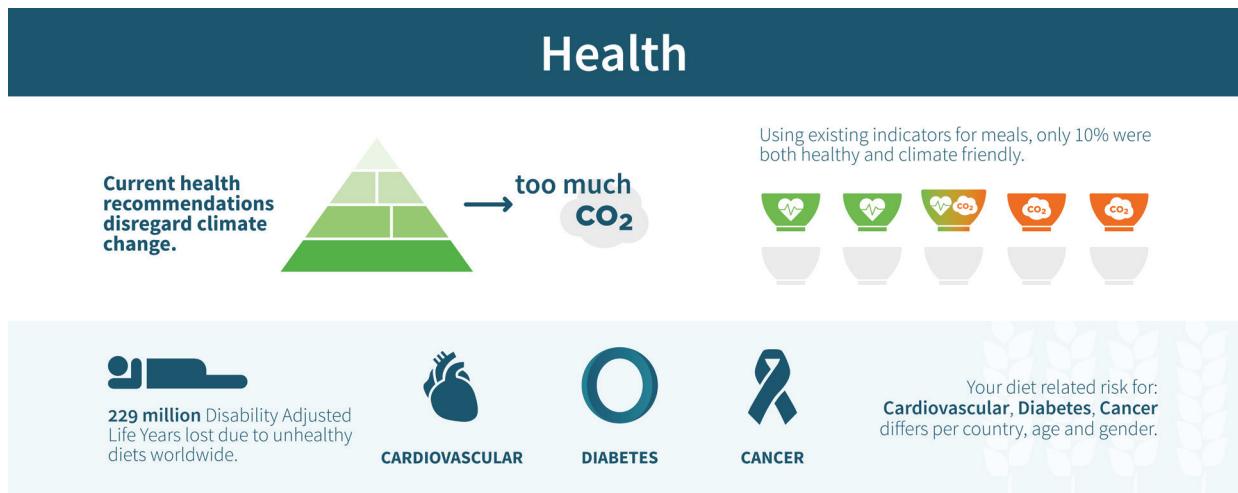
At the same time 795 Million people suffer from hunger.

A balanced diet secures the means to live healthy without wasting food along the way.



Balanced menus with a good energy value score the Nutrition Label.





WHAT IS DALY?



as changing the side dishes, many more meals would be healthy and climate friendly in equal parts.

FOOD-GROUP BASED GUIDELINES

Because nutrient based guidelines are difficult to use in everyday cooking, food-group based guidelines were developed. Famous depictions such as the pyramid and the plate rely on the nutrient studies and show which food groups should be eaten in which proportions in order to most likely cover the daily nutrient requirements. The most popular used food-groups are: fruits and vegetables, starchy carbohydrates (potatoes, bread, pasta, etc.), dairy, fish, meat and protein-rich meat substitutes, as well as fats and oils.

THE GLOBAL BURDEN OF DISEASE (GBD) PROJECT

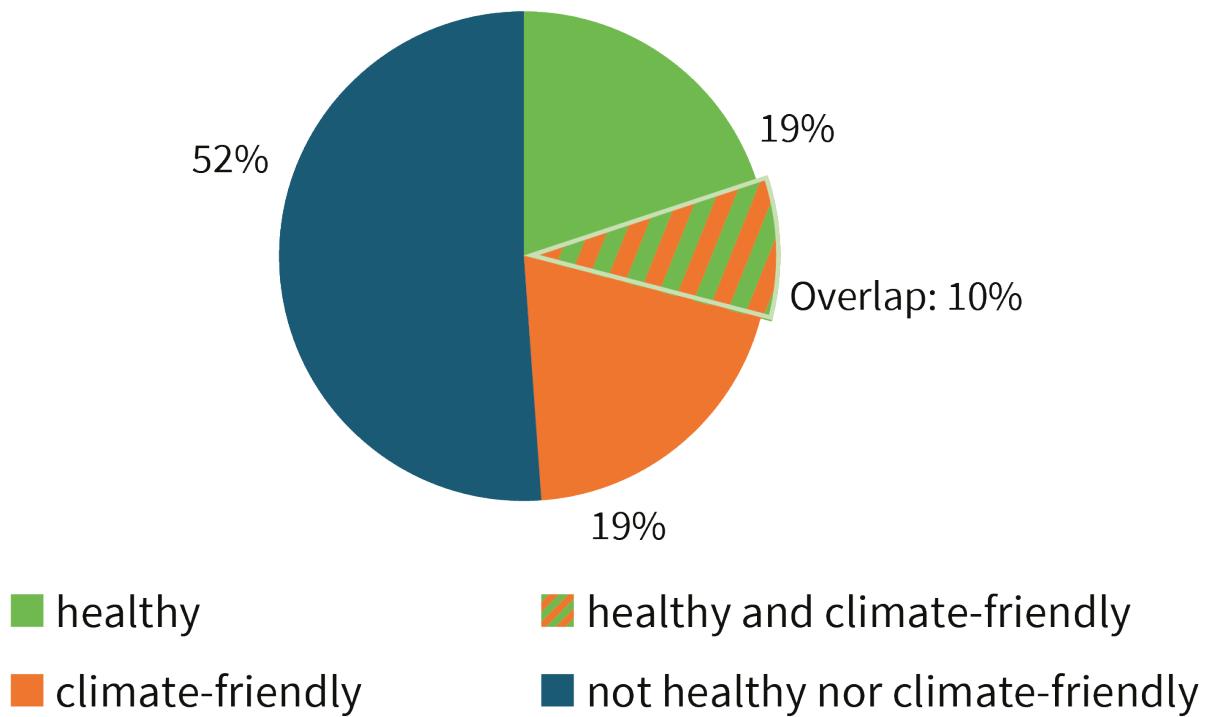
The Global Burden of Diseases, Injuries and Risk Factors Study (GBD) is a collaboration between over 2'300 scientists, based on 15'500 studies,

funded by the Bill and Melinda Gates Foundation. It constitutes the largest epidemiological study today. The GBD Project's aim is to provide means to an informed debate towards better global human

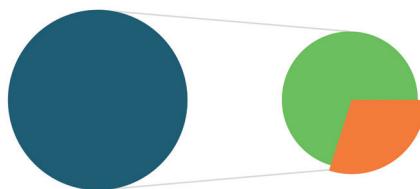
A prime conflict of the modern diet with current health guidelines is the lack of vegetables and fruits. Even though not stressed in the same way as fruits and vegetables, the lack of whole grains is a major factor linked to food related disease as well.

health. GBD data include global, regional, and country-level estimates for mortality, disability, disease burden, life expectancy, and risk factors (for example dietary risk factors). Results of GBD studies on dietary risks are given in Disability Adjusted Life Years (DALY), a measure of an overall disease burden. DALY is expressed as the number of years lost due to ill-health, disability or early death.

Overlap healthy and climate-friendly meals



ONLY 10% OF ALL MEALS ARE BOTH, HEALTHY AND CLIMATE-FRIENDLY. 1/3 OF ALL CLIMATE-FRIENDLY MEALS ARE ALSO HEALTHY AND VICE VERSA.



DALYs for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for people living with a health condition or its consequence. It can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. Therefore, DALYs depend on the population characteristics such as country, gender and age. The GBD data are the basis of our calculations of our Vita Score.

THE VITA SCORE

We have created a formula to transfer GBD results into an applicable score for meals – the Vita Score. The main idea behind the indicator states that current common western diet provides our bodies with enough nutrients to keep them functioning, but it can negatively affect our health by contributing to diseases such as diabetes, cardiovascular diseases and different types of cancer.

VitaScore

A NEW APPROACH. Meal related risk indicator based on the Global Burden of Disease project's results.

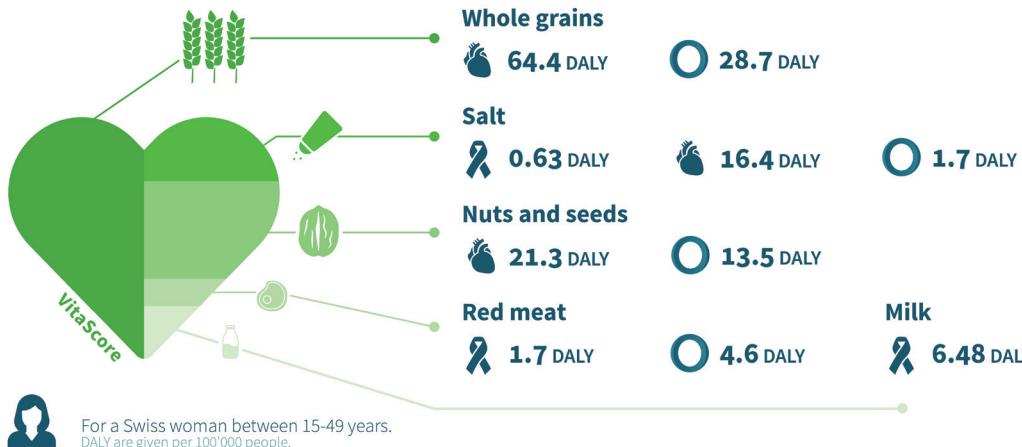


Menus with at least 20% less diet related risk points earn the Vita Score Award.

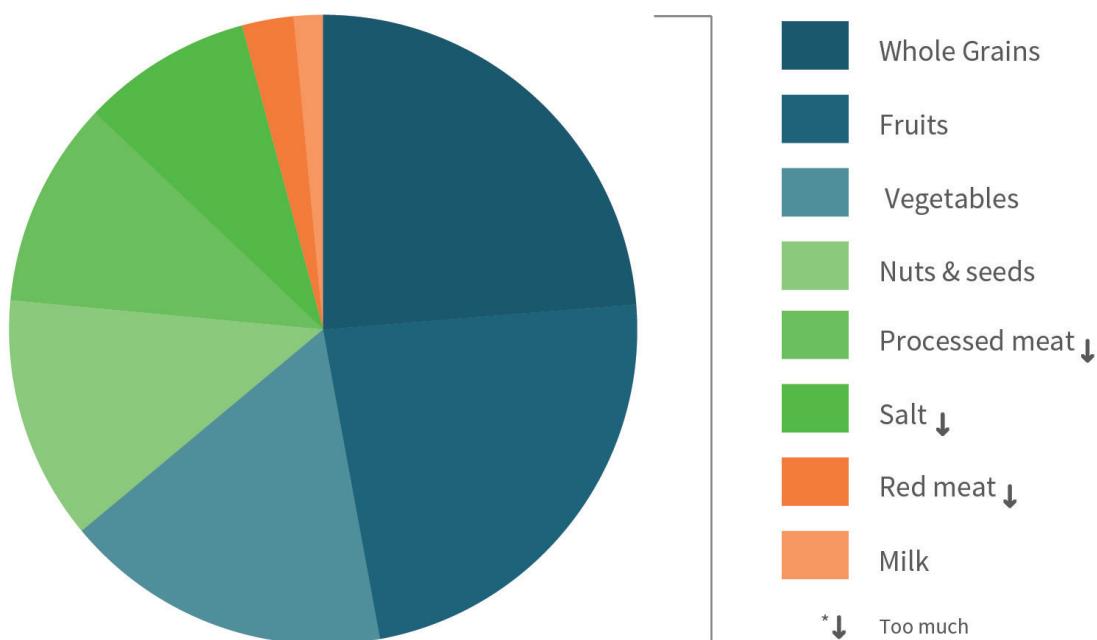
Dietary Risk Factors

Each meal counts. We look at 8 diet related risk factors. Better ingredients score less risk points.

	Diet low in Whole Grains between 100 g and 150 g per day		Diet low in Fruits between 200 g and 300 g per day
	Diet low in Nuts and Seeds between 16 g and 25 g per day		Diet high in Salt between 1 g and 5 g per day
	Diet low in Vegetables between 290 g and 430 g per day		Diet high in Processed Meat between 0 g and 4 g per day
	Diet high in Red Meat between 16 g and 25 g per day		Diet low in Milk between 350 g and 520 g per day



SEE BELOW WHAT TYPES OF FOOD CONTRIBUTE IN WHAT RATIO TO A MINIMUM RISK DIET.



SOLUTIONS



Our shared responsibility for current and future generations demands actions that are not taken blindly, but fact based. And the facts indicate that the choices of each individual are the backbone of a global solution. If we, the community including everyone on this planet, continue consuming products that are not within our planetary boundaries, displacements and destruction will be worse than all wars in human history combined. Let's act today.

Eaternity's focus is the link between food and climate change. In our latest study we underscore challenges in the two most prevalent sustainability recommendations for diets: Organic and Healthy.

It's particularly difficult to address the need for change in global warming, as the arch from cause to effect spans 20-30 years. Once the damage becomes obvious it will be too late to act. It's a challenge to ask for profound changes when the need for change has not been felt entirely as of yet.

The only way is to rely on scientific predictions. Science is complex and complexity is a tough sell. But that being said, the solutions to a complex matter can sometimes be very simple. As simple as following a guideline.

With our work we aim at providing the data and the tools for joint climate action. We are inviting institutions who are recommending healthy diets and who are representing organic agriculture to join us. We encourage solutions which are both, accessible and tempting, for every consumer.

Our science tells us that key-aspects for the sustainable development of our food system are still missing. The

picture is not yet whole. We are missing opportunities at targeting consumers who are willing and able to make choices that are compatible with our goal to keep global warming below 2° Celsius, as written in the Paris Climate Accord. And we can proof that economic values along the production chain can be kept up and still everyone involved can actually make a decent living.

At Eaternity we are focusing on helping the restaurant industry taking on the key-role they are facing in climate change and public health. We have crafted simple to use tools for smart chefs who decide to join us in acting now.

Our Eaternity App is a solution that provides simple indicators for healthy meals, a nutritional balance, a low water footprint, good animal treatment, minimal deforestation, seasonal production, local production, and low greenhouse gas emissions. Every single one of these scores or footprints come with an award for menus that contribute to the overall goal.

At the same time, the data for all our indicators is available for everyone for commercial and for non-commercial use outside the food service industry. Because in the end we're not a tech start-up or a money-driven corporation. What moves our growing company, and what reunites us every day as a team at Eaternity, is our huge App'etite for Change.

*Manuel Klarmann
Chief Executive Officer
Eaternity*

5 Health Aspects

- + GBD Risk Factors
- + Micro- and Macronutrients
- + Energy Values
- + Balanced Eating
- + Allergens

7 Life Cycle Assessment Modules

- + Product Footprint Database
- + Greenhouse Heating
- + Transportation & Origin
- + Farming procedure
- + Preservation
- + Processing
- + Waste

8 Indicators

- + Vita Score
- + Nutritional Balance
- + Climate Score
- + Water Scarcity
- + Animal Treatment
- + Deforestation
- + Regionality
- + Season



Reduce the risk of food related diseases.

80% of heart disease, stroke and diabetes type II and 40% of cancer could be avoided.



Reduce food-related carbon emissions by 50%.

If every Swiss ate 3 climate friendly meals per week, the impact would equal 750.000 cars off the street.



Minimize land use change.



Cut down water footprint by 50%.



Promote better animal treatment.



Choose local, to avoid transports.



Eat seasonal produce.

SOLUTIONS



Menus that cause at least 50% less CO₂ emissions earn the Climate Score Award.*



Menus with at least 20% less diet related risk points earn the Vita Score Award.*



Menus with 50% less scarce water use on average earn the Water Footprint Award.*



Balanced menus with a good energy value score the Nutrition Label.



Menus with certified or non critical products score the Rainforest Label.



Menus with good animal treatment, or no animal products, score the Animal Treatment Label.



Menus with only minor emissions from greenhouses score the Season Label



Menus with ingredients traveling on average less than 200 km score the Local Label



Menus that double the profit of an average offer score the Profit Label.



The Eaternity Award is reserved for the 20% best menus in all the categories.*

THE EATERNITY APP

We follow the design philosophy that puts humans in the center - the easier and the more intuitive the usability of the tool, the more successful and fulfilling the work will be. The Eaternity App playfully accounts for the aspects of profitability, healthiness, sustainability and climate impact of a meal – all at once. All scores provide insights that are helpful and challenge you in reaching for the best recipe. Your produce's specifics like origin and processing methods are automatically extracted from your data. They don't need to be edited manually. You may get started with evaluating your scores by simply knowing what to call your menu. Effortlessly you are in charge to provide the best experience for your guests; while building trust in your skills and climbing up the ranks of a true climate hero.

* We have calculated over 76'000 menus. These menus are our baseline for comparisons.



Brie Fondué, Apricots, Gingered Chicken

Gingered Chicken

Chicken, skin-on	2 breasts
Rosemary	2 sprigs
Fresh ginger root	1 cm
Salt	1/2 tsp.
Butter	1 Tbsp.
Honey	2 Tbsp.
Water	1/2 Tbsp.

Grilled Apricots

Apricot (can be frozen)	1
Champagne vinegar	1 tsp.
Chilly flakes	1/8 tsp.
Honey	1/2 tsp.

Brie Fondué

White wine, dry	1/2 cup
Brie, Swiss	120 g
Mascarpone	80 g
Black pepper, whole	
Nutmeg	
Mint	1 sprig

VALUES PER PORTION

Cost CHF 4.32 >

Profit ①①①①① >

Nutrition 632 kcal 🔥 >

Vita Score 💗💗💗💗💗 >

Climate Score CO₂ CO₂ CO₂ CO₂ CO₂ >

Environment 🌍🌳🐄📍☀️ >

Climate Score (rating: 2 of 5)

CO₂ 1572 g CO₂eq per portion
1% better than average.

Water Footprint (rating 5 of 5)

2.4 L per portion
89% better than average.

Vita Score



13% worse in comparison to an average menu.

Score 2 von 5 >

Risk points 375 >

Award < 260 <



Menus with at least 20% less diet related risk points earn the Vita Score Award.

We establish
climate-friendly
meals in society.



eaternity
App'etite for Change.
www.eaternity.org