



Methods Paper for the Lifestyle Test – Europe

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Methodology in general

The [Lifestyle test](#) quantifies the individual's climate impact across four key domains: housing, transport, food, and other consumption. The carbon footprint includes the impact of daily activities determined by lifestyle choices, excluding greenhouse gas (GHG) emissions resulting for example from public services and financial activities. Thus, the lifestyle carbon footprint does not consider GHG emissions for example public health care or education services, business travels or investments.

In essence, to calculate the carbon footprint of a consumption category, the quantity of consumption (measured in kg, euros, kWh, km, etc.) is multiplied by the corresponding carbon emission factor (kgCO₂e * kg, euros, kWh, km, etc.).

The test calculates the carbon footprint using consumption-based accounting instead of production-based accounting. Production-based accounting focuses solely on direct emissions from domestic production activities within specified geographical boundaries. In contrast, consumption-based accounting covers both direct emissions in a country and embodied emissions of imported goods while excluding emissions associated with exported goods. The test employs the bottom-up Life Cycle Assessment (LCA) method and physical units, except for the other consumption domain for purchases. The carbon footprint of purchases and pets is calculated using the top-down environmentally extended input-output EEIO method and monetary units.

For a more in-depth understanding of the methodology behind consumption-based accounting, refer to the report "1.5-Degree Lifestyles: Towards a Fair Consumption Space for All" by Akenji et al. (2021), specifically pages 32 to 35. The consumption and emission intensity data are mainly the same as those used in the upcoming report by the Hot or Cool Institute (Hot or Cool, forthcoming).

The LifeStyle test is based on average consumption levels and carbon footprints, which are then adjusted according to users' answers. For example, in the housing category, heating emissions are estimated from average heating demand and adjusted based on the user's home type, building age, and renovation status. The final consumption is then multiplied by the emission intensity of the chosen heating method. While most calculations start from average values, in some cases it's more practical to ask users directly about their consumption levels. In the transport category, for instance, users enter their own driving distances rather than relying on average national car usage km/person/year as a baseline.

This method is chosen to ensure that the test remains user-friendly and that participants can answer the questions without needing to look up additional information. For example, in the case of heating, asking users to provide their heating consumption in kilowatt-hours (kWh) would be impractical, as most people may not know this information offhand.

This Europe version of the Lifestyle test is for users who live in Europe but outside of the countries included in the test. The European version of the test is based on the average European data. The list of actions proposed to the users, as well as their emission reduction impacts, are representative of the average European context.

There are considerable differences in the housing domain between European countries while food, mobility, and purchases are similar across Europe. For food and mobility, the amounts of CO₂ equivalent embodied in the consumption of a food item or the use of different transport modes do not vary much across Europe. On the other hand, the emission intensity of electricity consumption varies over ten-fold between European countries (European Environmental Institute, 2023). Heating demand also varies substantially between countries depending on the climate and building conditions. To accommodate these variations, we

incorporated an additional question into the test about the user's place of residence. The user can choose from four options: Eastern Europe, Southern Europe, Western Europe, and Northern Europe. The calculations within the housing domain then consider the user's response to this question.

Living

The climate impacts of living consider the construction and maintenance of buildings, the heating of dwellings and water, electricity, and water consumption. The following section describes how each question affects the calculations.

Household members

The energy consumption and construction of the user's home are evenly distributed among all household members.

Building type

Building type affects the heating and construction emissions. Specifically, the building type impacts the insulation, thereby affecting heating demand. The Lifestyle Test estimates the insulation type of a user's home based on the construction year and whether the building is energetically renovated or not. Older buildings are assumed to have inferior insulation compared to newer ones and renovation improves the insulation. The correlation between the insulation and heating demand is estimated using information from the following sources: BPIE (2023), GJETC (2020), Mastrucci et al (2021), and Savvidou & Nykvist (2020).

The construction and maintenance of buildings include GHG emissions from manufacturing of the building materials, land-use change of the building area, and construction, maintenance and demolition of the buildings. The climate impact of construction is affected by the building type. Detached houses and terraced houses have a construction and maintenance footprint of 6.9 kgCO₂e/y/m² and flats have a construction and maintenance footprint of 8 kgCO₂e/y/m² (Saari, 2001; Salo et al., 2016).

Electricity

The average electricity consumption in Europe (excluding electricity used for heating) is sourced from the Odyssee-Mure database, for the year 2019, value for EU28. Electricity consumption includes all household electrical uses, excluding space and water heating, as these are included under heating emissions when electricity is used for those purposes. The Lifestyle Test lacks specific questions regarding the user's electricity consumption. Consequently, all users are assumed to have the same electricity consumption, 1331 kWh/person/year (excluding electricity used for heating).

Despite the absence of personalized consumption data, the test includes a question allowing users to specify the type of electricity they use: "green", "ordinary", or "I don't know". Green electricity considers renewable electricity sources used in Europe while ordinary electricity represents the average grid electricity. Ordinary grid electricity is also used for users who answer they don't know their electricity type. The average emission intensity of grid electricity is calculated for four different areas: East (0.214 kgCO₂e/kWh), South (0.379 kgCO₂e/kWh), West (0.166 kgCO₂e/kWh) and North Europe (0.066 kgCO₂e/kWh), using data from EEA (2024) and ecoinvent 3.9. The emission intensity of renewable electricity is from ecoinvent 3.9.

Grid electricity includes both domestically produced and imported electricity. Emission intensity accounts for direct (from EEA, 2024) and indirect emissions (modelled using data from ecoinvent 3.9). Indirect emissions include production chain emissions from fuels, land-use emissions, and embedded emissions from renewable energy equipment like solar panels and wind turbines.

Primary heating method

The question about the primary heating method includes the common heating methods used in Europe. The Lifestyle test estimates the space heating consumption (kWh/person/year) by using the average space heating consumption in East (100 kWh/m²/year), West (100 kWh/m²/year), South (50 kWh/m²/year) and North Europe (150 kWh/m²/year) (Odyssee-Mure, 2019). The adjustment is made based on the user's responses regarding their home construction year, and the room temperature when space heating is in use.

The emission intensities of the heating options are from ecoinvent 3.9. For ground and air-source heat pumps, data comes from Lyons et al. (2022), using an average efficiency (COP) of 4 as an average for air and ground source heat pumps. If the user selects electric heating or a heat pump, the emission intensity is adjusted based on their answer to the electricity source question (ordinary or green).

Room temperature

Higher room temperatures require more heating than lower temperatures. An estimation of "a 2-degree rise in temperature equals a 10% increase in heat energy" is used in the test ([Motiva 2019](#)).

Showering

Showering forms the majority, over 70%, of the total residential water use ([EEA, 2020](#)). The water consumption during showers is estimated based on the user's shower duration, where 1 minute of showering is equivalent to 12 litres of water of which 40% is hot water (Motiva, 2020). The climate impact of water consumption considers tap water production, wastewater treatment and the energy required for water heating and emission intensities for these are sourced from ecoinvent 3.9.

Mobility

Driving

The carbon footprint of driving is calculated using the annual kilometres driven and the type of fuel used in the user's car. GHG emissions are evenly distributed among the typical number of occupants in the user's car. Emissions include the production and maintenance of vehicles, the use of road infrastructure, and direct and indirect emissions from fuel consumption. Direct emissions occur during fuel use, while indirect emissions come from producing and supplying the fuel. The production and maintenance of vehicles, as well as the use of road infrastructure, are modelled using ecoinvent 3.9. Emission intensities for vehicle production and maintenance vary depending on the fuel type, for example electric cars include emissions from battery production and maintenance.

Emission intensities of fuel consumption for petrol, diesel, and gas vehicles are sourced from ecoinvent 3.9 (Wernet et al., 2016). For electric vehicles, emissions are modelled based on average electricity consumption kWh/v-km (EV Database, 2024). It is assumed that vehicles are charged using national grid, and therefore the emission intensity considers the national electricity mix. Emissions from hybrid vehicles are modelled using data from Transport & Environment (2024), representing an average of conventional hybrids (HEVs) and plug-in hybrids (PHEVs).

Public transport

Public transport includes travel by bus, train, tram, and metro. The emission intensities of these modes are from Ecoinvent 3.9 (kgCO₂e/p-km) (Wernet et al., 2016). The test includes one question about public transport without differentiating between modes. To calculate GHG emissions, a weighted average emission intensity is calculated based on the average European shares between different modes (EuroStat, 2021). Emissions include the production and maintenance of vehicles, the use of road and rail infrastructure, and direct and indirect emissions from fuel consumption.

Air travel

Emissions from air travel are estimated based on the number of hours a user spends flying in a year, considering the average airspeed of commercial planes of 800 km/h (GoFlex Air, 2024; The Aviation Factory, 2023; Thrust Flight, 2024).

The fuel consumption per passenger during a flight is influenced by various factors, including the air fleet, aircraft occupancy rate, and the allocation of emissions between passengers and cargo. In the Lifestyle test, the carbon footprint of flying incorporates not only direct and indirect emissions from fuel use but also embedded emissions from aircraft and airports, as well as the impact of increased atmospheric radiative forcing.

Air traffic contributes to atmospheric radiative forcing through the release of fine particles at high altitudes and alterations in cloud cover. While there is considerable uncertainty in these estimates, recent research, published in 2021 by Lee et al., suggests that 66% of the total climate impact of aviation comes from sources other than the direct impact of carbon dioxide in fuel. Consequently, to account for these additional causes of radiative forcing based on current knowledge, it is justifiable to multiply the carbon footprint calculated from fuel consumption by a factor of three (Lee et al., 2021).

Walking or biking

Walking and biking are considered to be carbon-free alternative means of transport and not part of footprint calculation. This question is asked to be able to offer more precise actions after taking the test in the action plan phase.

Food

Eating habits

The carbon footprint of food considers the diet composition, the quantities consumed and food waste. Energy required for cooking and cooling of food ingredients at home is included in the living section and grocery shopping trips are part of the transport section.

The amount of food eaten is evaluated by asking if the user eats less, average, or more compared to other people. The assumption in the test is that the user consumes 15% more or less than the average European.

To define the diet composition, the test asks how much the user eats from different food groups which affect the most to the carbon footprint, such as meat, fish, dairy, and beverage consumption. The food consumption data for the average European diet were taken from FAOSTAT (2020). Beverage consumption categories from FAOSTAT were complemented by juices (Statista, 2024a) and soft drinks (Statista, 2024b). The data from FAOSTAT's food balance sheets provide information on the foods available in the stores (kg/capita/year) and this data is then compatible with the emission intensities used in the calculations.

Emission intensities primarily come from the ecoinvent 3.9 database (Wernet et al., 2016). In instances where specific intensities are unavailable in ecoinvent, AGRIBALYSE 3.1 (2022) is used. The methods for calculating emission intensities in both databases are similar, ensuring comparability. The system boundary for emission intensities is cradle-to-store.

If the user eats less or no meat, fish, and dairy, these are substituted by plant-based alternatives. The substitution scenario is based on Eat Lancet report (Willett et al., 2019), where animal-based products are substituted by legumes, nuts, seeds, vegetables and grains.

The test questions ask about food consumption in a number of portions and average portion sizes are based on [EatForHealth](#) numbers (National Health and Medical Research Council, 2021). Some questions combine multiple food groups, considering the share of average European consumption between these groups.

Food categories

Beef

Beef is classified under its own category due to having a higher emission factor than other meats. The emission intensity is from ecoinvent 3.9 (Wernet et al., 2016) and it is converted from live weight to carcass weight using factors from Clune et al., (2017).

Pork, Chicken, fish, or eggs

The emission intensity of pork is slightly higher than other foods in the category but significantly lower than beef. The proportions of different foods are determined based on their average consumption in Europe (FAOStat, 2020). Emission intensities for produced pork and poultry are from ecoinvent 3.9 (Wernet et al., 2016). The emission intensity for fish is from ecoinvent 3.9. and for eggs from [AGRIBALYSE 3.1 \(2022\)](#). Emission intensities for pork, poultry, and fish from ecoinvent are converted from live weight to carcass/catch weight using factors from Clune et al. (2017).

Dairy products

The emission intensities are from ecoinvent 3.9. The cheese category includes soft and hard cheese products made from cow's milk and emission intensities are from [AGRIBALYSE 3.1 \(2022\)](#).

Beverages

The emission intensities for all beverage products are from [AGRIBALYSE 3.1 \(2022\)](#) or ecoinvent 3.9 (Wernet et al., 2016). The average share of coffee, tea, fruit and vegetable juices, soft drinks and alcoholic beverages was considered in the beverage consumption question (FAOStat, 2020).

Food waste

The food waste calculations include GHG emissions from biowaste treatment and the additional food production needed for the wasted food. The emission intensity of biowaste treatment is from ecoinvent 3.9 (Wernet et al., 2016). The majority of the climate impact of food waste is from food production rather than biowaste management.

Consumption

Living, mobility and food are the most significant contributors to the carbon footprint of an average European (Akenji et al., 2021). It would require a number of questions to make a comprehensive estimation of the carbon footprint of other sectors of personal consumption. In such a case, the effort it would require for a respondent to complete this section would no longer be in proportion to the significance of this sub-sector. Therefore, the Lifestyle test focuses on key aspects within this section, including GHG emissions from purchases, and pets.

Shopping habits

The test has a question on users' shopping habits and purchases, allowing them to specify whether they buy more, the same amount, or less than the average European. Consumption is adjusted by 30% accordingly. Purchases include furnishings, home care products, clothing, footwear, goods related to leisure activities and hobbies, audiovisual devices, and printed materials. The average consumption amounts are from [Eurostat, \(2020\)](#). The climate impact of purchases is calculated using emission intensities from exiobase 3.8 (Stadler et al., 2021). To align consumption amounts with exiobase emission intensities, conversion from consumer prices to basic prices is necessary.

Second-hand

Choosing second-hand items, such as clothing or electronics, contributes to a reduced climate impact by prolonging the use time of items. The Lifestyle test has a question on secondhand clothing and electronics which contributes on average to 28 % of all consumption of household goods in European countries ([Eurostat, 2020](#)). Users can indicate the frequency with which they purchase second-hand items (never, seldom, 50%, or always). The climate impact of clothes and electronics is reduced by 0%, 10%, 50%, or 80%, depending on the answer.

Pets

While pets bring joy and are often regarded as family members, it's essential to recognize that they also contribute to environmental impact through the consumption of natural resources, including food and various services and products. Given the diverse sizes of pets, ranging from tiny hamsters to horses, the Lifestyle Test asks about pet-related expenditures to calculate their associated GHG emissions.

EXIOBASE does not include all pet-related services in a single product category. Therefore, emission intensity was modeled using multiple EXIOBASE 3.8 categories.

Pet food is not listed as a distinct product in EXIOBASE, but is spread across broader food categories. For this study, it was mapped to “Food products nec”, “Meat products nec”, and “Products of vegetable oils and fats”, reflecting the typical composition of pet food. Pet medication does not appear as a separate product either. It was included under the broader product group “Chemicals nec”, which covers various chemical products including pharmaceuticals. Veterinary services fall under the broader “Health and social work” category in EXIOBASE. The data on the shares of spending on pet food, products, services, and medication are from AnimalhealthEurope.

Action Plans

After completing the Lifestyle Test, users receive personalized recommendations for actions to reduce their carbon footprint. These are tailored to their responses—for example, if someone follows a fully plant-based diet, they won't receive suggestions related to reducing meat or dairy consumption. Each recommended action is grouped under a relevant consumption domain, indicating where the emissions reduction primarily occurs.

For most actions, the reduction impact is calculated based on the user's answers. For instance, in the transport category, users answer to their driving or flying habits enable personalized mitigation estimates for actions that reduce driving and flying. However, for actions where the test does not collect specific information about individual habits (like waste sorting or washing clothes at lower temperatures), the mitigation impact is assumed to be the same for all users and is based on the average reduction potential in that country.

Some actions, such as “Take your family or friends on a nature hike” or “Give the gift of time”, do not have calculated reduction impact because they're impossible to reliably quantify. In addition to footprint-reducing actions, the test includes handprint actions such as “Crowdfund and invest in sustainable solutions” or “Vote for politicians who think sustainably”. A handprint action refers to a positive action user can take that helps others or society reduce their environmental impact but does not directly reduce their own climate impact and thus these actions also do not have calculated reduction number. Actions, which do not have calculated reduction impact, are labelled with a light bulb icon instead of a specific reduction number.

Average carbon footprint in Europe

On the carbon footprint results page, users can compare their individual results with the average European carbon footprint. The average is calculated using the same data sources and methodology as those used in the Lifestyle test. The average European footprints cover the same categories as the test: living, personal transport, food and other consumption (purchases and pets) (Table 1).

Additional data sources

Some additional data sources are used to calculate the average European carbon footprint. These are not used in the Lifestyle test because the test directly asks the consumption amounts, for example driven kilometers or portions of meat and beverages.

Transport

For private car and motorcycle use and train and bus travel, in passenger-kilometres (p-km), are from EuroStat, 2021. Air travel data is based on figures from the International Civil Aviation Organization ARC 2022 Report (ICAO, 2024). Whenever possible, the reported figures exclude business travel to better reflect personal lifestyle emissions.

Food

Food consumption amounts are based on FAOStat (2020). Household food waste amount is from the Food Waste Index Report 2024 (UNEP 2024).

Table 1. The average European carbon footprint (kgCO2e/person/year).

TOTAL	7900
Living	1700
Transportation	2800
Food	1900
Other consumption	1500

Sources

AGRIBALYSE 3.1. (2022). *Homepage*. <https://doc.agribalyse.fr/documentation-en/>

Akenji, Bengtsson, Toivio, Lettenmeier, Fawcett, Parag, Saheb, Coote, Spangenberg, Capstick, Gore,

Coscieme, Wackernagel & Kenner. (2021). *1.5-Degree Lifestyles: Towards A Fair Consumption Space*

for All. Hot or Cool Institute, Berlin. [https://hotorcool.org/wp-](https://hotorcool.org/wp-content/uploads/2021/10/Hot_or_Cool_1_5_lifestyles_FULL_REPORT_AND_ANNEX_B.pdf)

[content/uploads/2021/10/Hot_or_Cool_1_5_lifestyles_FULL_REPORT_AND_ANNEX_B.pdf](https://hotorcool.org/wp-content/uploads/2021/10/Hot_or_Cool_1_5_lifestyles_FULL_REPORT_AND_ANNEX_B.pdf)

AnimalhealthEurope. (n.d.). Household expenditure on companion animal care products in Europe.

<https://animalhealtheurope.eu/facts-and-figures/household-expenditure-on-companion-animal-care-products-in-europe/>

BPIE Building Performance Institute Europe. (2023). *How to stay warm and save energy: Insulation*

opportunities in European home. <https://www.bpie.eu/publication/how-to-stay-warm-and-save-energy-insulation-opportunities-in-european-homes/#>

Clune, Crossin & Verghese. (2017). Systematic review of greenhouse gas emissions for different fresh food categories. *Journal of Cleaner Production*, 140, 766–783.

<https://doi.org/10.1016/j.jclepro.2016.04.082>

EEA European Environment Agency. (2020). Water use at home. [https://www.eea.europa.eu/signals-](https://www.eea.europa.eu/signals-archived/signals-2018-content-list/infographic/water-use-at-home)

[archived/signals-2018-content-list/infographic/water-use-at-home](https://www.eea.europa.eu/signals-archived/signals-2018-content-list/infographic/water-use-at-home)

EEA European Environment Agency. (2024). Greenhouse gas emission intensity of electricity generation in

Europe. <https://www.eea.europa.eu/en/analysis/indicators/greenhouse-gas-emission-intensity-of-1>

Eurostat. (2021). Passenger mobility by mode of transport and distance class

https://ec.europa.eu/eurostat/databrowser/view/road_pa_mov_custom_13926428/default/table?lang=en

- Eurostat. (2022). *Dataset / Eurostat*. Final Consumption Expenditure of Households by Consumption Purpose (COICOP 3 Digit). <https://data.europa.eu/data/datasets/e3td1ejcprfbhotIntxwa?locale=en>
- EV Database. *Energy consumption of full electric vehicles*. Retrieved April 4, 2025, from <https://ev-database.org/cheatsheet/energy-consumption-electric-car>
- FAOSTAT (2020). Food Balances (2010-). <https://www.fao.org/faostat/en/#data/FBS>
- GJETC. (2020). Energy efficiency in buildings, particularly for heating and cooling. <http://www.gjetc.org/wp-content/uploads/2021/03/GJETC-WG-2-output-paper.pdf>
- GoFlex Air. (2024). How fast do commercial airplanes fly? <https://aviex.goflexair.com/flight-school-training-faq/commercial-plane-speeds>
- ICAO International Civil Aviation Organization. (2024). *Presentation of 2022 Air Transport Statistical Results* [Data set]. https://www.icao.int/sustainability/WorldofAirTransport/Documents/ARC_2022_Tables_final_12032024.pdf
- Lee, Fahey, Skowron, Allen, Burkhardt, Chen, Doherty, Freeman, Forster, Fuglestvedt, Gettelman, De León, Lim, Lund, Millar, Owen, Penner, Pitari, Prather, Sausen & Wilcox. (2021). The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018, *Atmospheric Environment*, 244. <https://doi.org/10.1016/j.atmosenv.2020.117834>.
- Lyons, L., Georgakaki, A., Kuokkanen, A., Letout, S., Mountraki, A., Ince, E., Shtjefni, D., Joanny, G., Eulaerts, O. D., & Grabowska, M. (2022). Clean Energy Technology Observatory: Heat Pumps in the European Union – 2022 status report on technology development, trends, value chains and markets (EUR 31268 EN). Publications Office of the European Union. <https://doi.org/10.2760/372872>
- Mastrucci, van Ruijven, Byers, Poblete-Cazenave & Pachauri. (2021). Global scenarios of residential heating and cooling energy demand and CO2 emissions. *Climatic change*, 168(3-4), 14. <https://doi.org/10.1007/s10584-021-03229-3>
- Motiva. (2019). *Hallitse huonelämpötiloja*. https://www.motiva.fi/koti_ja_asuminen/energiatehokas_arki/hallitse_huonelampotiloja

Motiva. (2020). Kestävä veden käyttö – vedenkäyttöselvitys.

https://www.motiva.fi/files/17613/Kestava_veden_kaytto_-_vedenkayttoselvitys.pdf

National Health and Medical Research Council. (2021). *Serve sizes*. Eat For Health.

<https://www.eatforhealth.gov.au/food-essentials/how-much-do-we-need-each-day/serve-sizes>

Odyssee-Mure. (2019). Energy Efficiency Database. Retrieved May 15, 2025, from

<https://www.indicators.odyssee-mure.eu/energy-efficiency-database.html>

Pylsy, Lylykangas & Kurnitski. (2020). Buildings' energy efficiency measures effect on CO2 emissions in combined heating, cooling and electricity production. *Renewable & sustainable energy reviews*,

134. <https://doi.org/10.1016/j.rser.2020.110299>

Saari. (2001). *Rakennusten ja rakennusosien ympäristöselosteet*.

Salo, Nissinen, Mattinen, Manninen, Dahlbo & Judl. (2016).

Ilmastodieetti - mihin sen antamat ilmastopainot perustuvat?.

https://wwwp5.ymparisto.fi/ilmastodieetti_storage/documentation/Laskentaperusteet.pdf

Savvidou & Nykvist. (2020). Heat demand in the Swedish residential building stock –

pathways on demand reduction potential based on socio-technical analysis, *Energy Policy*, 144.

Stadler, Wood, Bulavskaya, Södersten, Simas, Schmidt, Usubiaga, Acosta-Fernández, Kuenen, Bruckner, Giljum, Lutter, Merciai, Schmidt, Theurl, Plutzer, Kastner, Eisenmenger, Erb, Koning & Tukker.

(2021). *EXIOBASE 3* (3.8.2). Zenodo. <https://doi.org/10.5281/ZENODO.5589597>

The Aviation Factory. (2023). How much faster is a private jet than a commercial airplane?

<https://www.the-aviation-factory.com/en/blog/how-much-faster-is-a-private-jet-than-a-commercial-airplane/>

Thrust Flight. (2024). How fast do commercial airplanes fly? <https://www.thrustflight.com/how-fast-do-commercial-airplanes-fly/>

TNMT. (2021). *Carbon emissions by transport type*. Retrieved from <https://tnmt.com/infographics/carbon-emissions-by-transport-type/>

- Transport & Environment. (2020). *The plug-in hybrid con: Electric in name only*. https://te-cdn.ams3.cdn.digitaloceanspaces.com/files/2020_09_UK_briefing_The_plug-in_hybrid_con.pdf
- United Nations Environment Programme (UNEP). (2024). *Food Waste Index Report 2024: Think Eat Save – Tracking Progress to Halve Global Food Waste*. Nairobi: UNEP.
<https://www.unep.org/resources/publication/food-waste-index-report-2024>
- Wernet, Bauer, Steubing, Reinhard, Moreno-Ruiz & Weidema. (2016). The ecoinvent database version 3 (part I): Overview and methodology. *The International Journal of Life Cycle Assessment*, 21(9), 1218–1230. <https://doi.org/10.1007/s11367-016-1087-8>
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., De Vries, W., Majele Sibanda, L., ... Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), 447–492. [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4)

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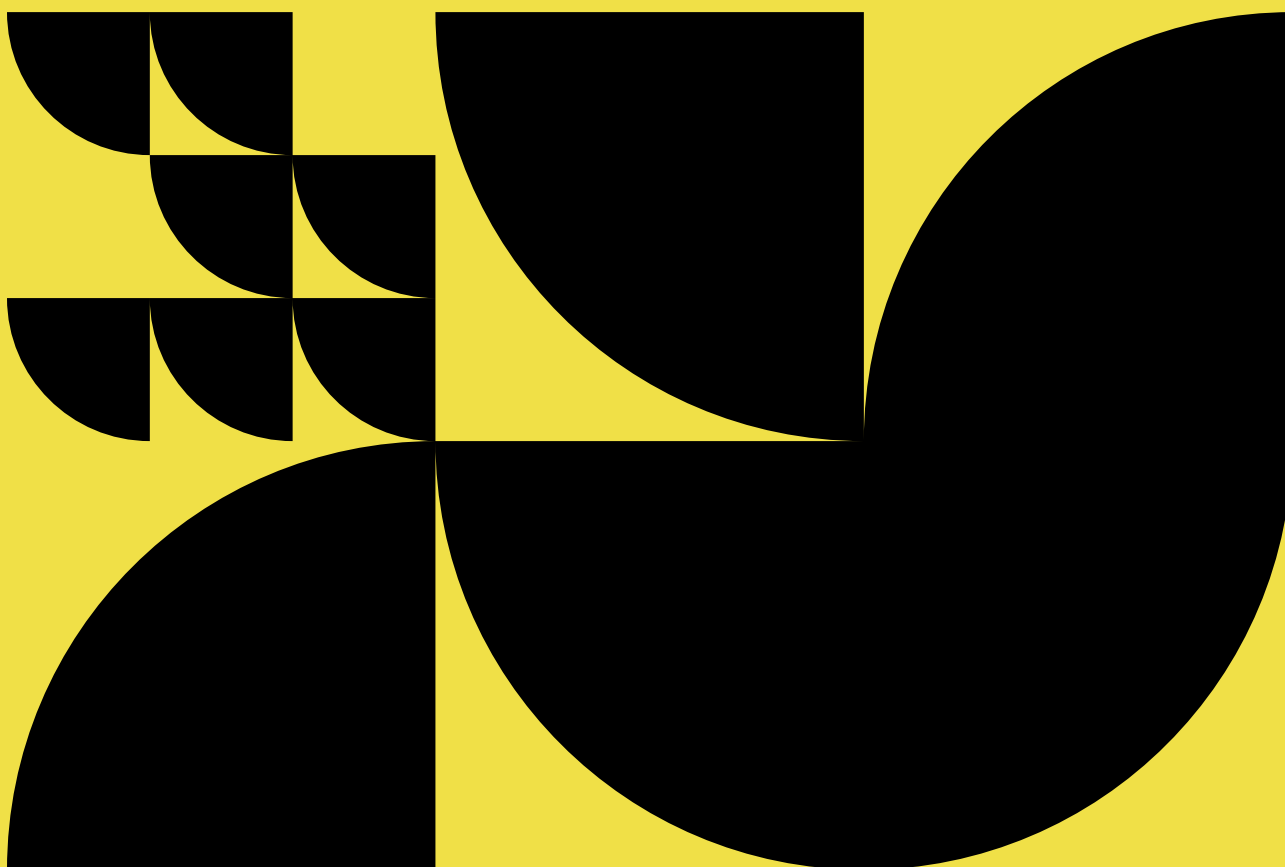
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