

Human Baseline Starts with the Population

Human Baseline's first tool makes population and a chosen daily kcal figure inspectable before foods, nutrients, prices and delivery are modelled.

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[HTTPS://HEDEGREENRESEARCH.COM/ARTICLES/HUMAN-BASELINE-STARTS-WITH-THE-POPULATION/](https://hedegreenresearch.com/articles/human-baseline-starts-with-the-population/)

A first tool for making the food question measurable

Human Baseline begins with a question I do not think we should accept as settled: why should anyone have to go hungry? That question does not become a working food system because I believe it matters. It has to survive quantities, costs, practical constraints and the possibility that an attractive idea fails when someone tries to operate it.

The first tool starts with something smaller. Choose a population, choose a daily energy figure for each person, and see the total. It is not a diet planner or an agricultural model. It is a way to make the scale of the question visible before arguing about how to supply it.

One visible assumption

The calculation is deliberately simple:

Population × chosen kcal per person per day.

The same number applies to everyone, including children and infants. That does not mean everyone has the same biological needs. It means this particular scenario uses one visible planning figure instead of presenting a detailed nutritional reference as the only permissible starting point.

The initial value is 3,000 kcal. It is an editable example, not a recommendation. Change it, and the totals change. If you want a larger energy margin, include it in the number you choose. The tool does not quietly add another buffer, a waste allowance or separate pregnancy and breastfeeding corrections behind it.

This makes the assumption easy to challenge. Someone can disagree with the chosen figure, replace it and inspect the result without first accepting my preferred model. The first public layer should make the question accessible, not ask the reader to trust a complicated answer before seeing the multiplication.

What the tool shows

The app uses a fixed Eurostat population capture for the 27 EU countries: population on 1 January 2025, by age and reported sex. You can explore a country, compare selected countries or see EU27 together. A custom calculation accepts your own headcount without pretending to know the ages or identities of those people.¹

For each scenario it shows daily kcal, annual kcal and an average month. Annual means the chosen day repeated 365 times. An average month is that annual amount divided by twelve, not a prediction for a particular calendar month. The exact calculation and a downloadable scenario record remain available underneath the large, readable totals.

For example, one million people at 3,000 kcal per person per day gives three billion kcal each day. Repeat that day for a year and it becomes 1.095 trillion kcal. The average month is 91.25 billion kcal. Those numbers are arithmetic consequences of the selected inputs, not independent evidence that a farm or a supply chain can provide them.

The age and sex breakdowns are still visible as context. They do not alter the uniform calculation. Nor should their subtotals be added again to the population total. The interface starts in English and also offers Danish, Spanish and German, with explanations attached to the numbers rather than hidden in a separate technical document.

A margin is not a meal

A higher kcal figure buys more room in an energy scenario. It does not automatically answer what people eat, whether the diet contains the nutrients they need, how much survives processing and storage, or whether someone can actually receive it.

The official population is also a starting point, not a claim that every person who needs food appears in the count. A provision system would need to handle people outside that statistical frame. That includes the practical difference between an annual population snapshot and the people present when food must be supplied.

These distinctions should not be used to make the first calculation impossible. They should keep us from calling it more than it is. There is value in knowing the energy volume we are planning around while leaving nutrition, production and delivery open to their own tests.

The next layer has to show its work

The next question is what a selected energy volume corresponds to in actual food. How many tonnes would it mean if the energy came from one specified food? What changes when several foods are combined? Only then do nutrient coverage, prices, production conditions and distribution have something concrete to attach to.

A potato-only calculation would be a useful conversion example, not a proposed complete diet. A price attached to that quantity would be another layer, not proof that the food can be supplied reliably at that price. Each step needs its own source, unit, assumptions and visible failure conditions.

This small population-and-energy edition will stay separate from the more developed food engine. Its code, source capture and scenario format provide a starting point that can be inspected again later. More detailed research is not discarded; it simply does not have to stand between a reader and the first useful question.

Human Baseline is still an investigation into what it would take to move survival out of the daily contest. This tool does not settle that investigation. It gives it a transparent first calculation.

Inspect the tool

Open the Human Baseline population and energy tool (<https://human-baseline-population-energy-bvvlg9n8pezxxdgrcuphks.streamlit.app/>) to explore a country, compare countries or enter your own population. The source code, population capture and calculation checks (<https://github.com/DennisHedegreen/human-baseline-population-energy>) are available in the dedicated repository. The assumptions should remain visible enough for someone else to change an input, reproduce a result or find an error.

— Dennis Hedegreen

Source note

1. Eurostat, DEMO PJAN: Population on 1 January by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table), 2025 observations captured 5 October 2026. Country selection, reshaping, interface translations and scenario calculations by Hedegreen Research. Eurostat is not responsible for this adaptation or its results. The tool uses the preserved capture, not a fresh live query on each visit.

RELATION MEMORY

MATURES FROM [Why Should Anyone Go Hungry?](#) · The earlier human question becomes an inspectable first arithmetic layer, not a proof of completed food provision.

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