



The Almost Monthly Epic-Cure Newsletter

August, 2024

The Epic-Cure *Report Card* as of July 31, 2024

Life to Date <i>(since May 24, 2019)</i>		
Pounds In/Out	25,221,670	
Wholesale Value of Food Distributed	\$50,374,124	
Pounds of Food per Family:	73.51	<i>Average pounds per family per visit</i>
Equivalent Meals Served:	21,018,058	<i>Assumes 1.2 pounds per meal</i>
Families Served		
Number of Families Served this month:	5,693	<i>in Month of July 2024</i>
Number of Distributions this month:	64	<i>in Month of July 2024</i>
Pounds of Food/Household Goods		
Total Pounds In / Out:	940,343	<i>in Month of July 2024</i>
Total Pounds In / Out:	808,976	<i>Average of 3 prior months</i>
Operating Efficiency		
Wholesale value of food distributed for each \$1.00 spent on Operations since inception:		\$38.79
Wholesale value of food distributed for each \$1.00 spent on Operations in July:		\$82.38
Environmental Impact		
Metric Tonnes of CO ₂ e Diverted:	30,714	
Water Footprint (million Gallons)	1,923	<i>Equivalent to 2,913 olympic swimming pools</i>

Metric Tonnes of CO₂e diverted: Learn more about this calculation [here](#).

The Highlights:

- 25 million pounds of food/household goods rescued and distributed, life to date!
 - With a wholesale value of \$50 million.
- That's like 21 million meals.
- 940,000 pounds in July – that's a lot.



Upcoming Events

Shine A Light on Epic-Cure 5K Run & Concert: Saturday, October 12th



Registration is open for the 3rd Annual 2024 Shine a Light 5K run! This year's event will take place on October 12th at The AMP, and we cannot wait to see you there!

Whether you're an experienced runner or just starting out, this is the perfect opportunity to challenge yourself, meet new people, and have fun! We can't wait to see you at the starting line! Stick around for a FREE concert at the Front Porch of The Amp. The bar will be open, too!

[Shine A Light Event Tickets](#)

Thank you to these local heroes for stepping up and supporting this event. Together, we are making a real difference in our community. Thank you for standing with us in the fight against food waste and hunger.





Empty Bowls Fundraiser

Join us for a few special Happy Hours at [The Art House](#)! They're hosting a few creative evenings for local artists to craft bowls from donated clay and glazes, to benefit the Empty Bowls event they are having in November to support [Epic Cure, Inc.](#)

Event: The Art House Empty Bowls Fundraiser Happy Hours with Half Price Craft Beer & Wine

Dates: 8/27, 9/24, and 10/29

Time: 6pm to 8pm

Location: 3920 A1A S., St. Augustine, FL 32080

Let's come together to make a difference! All bowls created will be donated to support [Epic Cure Inc.](#) helping to end food insecurity in our community. Whether you're an experienced potter or a first-time wheel user, everyone is welcome to participate and lend a hand!

Or bring finished bowls to donate and network with local creatives!

Don't miss out on this opportunity to use your creativity for a meaningful cause. Let's fill empty bowls and hearts together!

Dinner will be provide by [Lotus Noodle Bar](#) & [Buena Onda Cafe St. Augustine](#)

[Event Tickets](#)



Volunteer Needs

Please check out our volunteer opportunities at [Volunteer Link](#). We especially could use help for:

- Thursday Hastings distributions – 3pm to 6pm
- Friday The Refuge Palatka – 11am to 3pm

We can always use more truck drivers and equipment operators for Palatka 7 days a week. If you would like to join that team, please email support@epic-cure.org.

2024 Goals Update

From our 2023 Annual Report:

With our partners at FoodRecovery.Org(formerly, the MEANS Database), we are developing an Uber-like app to identify, in real time, rejected pallets of food and household goods at the point of delivery and providing current information to food banks and well equipped food pantries with the information needed to react and acquire these rejected shipments, shipments that would otherwise be thrown away in landfills.

We seek adoption from all points along the food supply chain and believe that economic incentives for these companies will be compelling: possibly taking advantage of the enhanced tax deductions available to donors of food, reduced costs of delays for trucking companies, reduced insurance costs, and reduced environmental costs associated with reduced methane gas emissions from landfills.

Update: FoodRecovery.Org received a grant to begin the work to update their web based platform to accept and streamline the donation process. We met with the development team on July 31st, and they expect the project to be completed by January. From there, we still must seek funding to make it a mobile application.

- In 2023, we received a total of 10 rejected loads from 3 sources totaling 74,074 pounds.
- In 2024, we have so far received a total of 17 rejected loads from 8 sources totaling 321,421 pounds.

Having a reputation for speed, efficiency, and reliability (all thanks to our amazing truck drivers and warehouse volunteers) is helping us keep and grow our connections.



In The News: Zero Food Waste Coalition (ZFWC) has decided to spotlight Epic-Cure in LinkedIn! Thank you very much ZFWC team. We appreciate all you do!

ZFWC Member Spotlight: Epic-Cure Inc. [here](#).

Mission and Operation: Epic-Cure helps eliminate food waste by rescuing food and redistributing it to people in need while educating recipients on healthy eating, food preparation, and how they can play a part in the fight against food waste.

How they turn advocacy into action: Although Epic-Cure only has a few years under their belt in the food rescue field, they are making big strides in state policy advocacy to reduce food loss and waste. Epic-Cure, like many other food rescue organizations, has had to turn away food donations due to a lack of storage capacity. Less food rescued means more food ending up in landfills, and ultimately, fewer mouths fed.

Using the Zero Food Waste Coalition State Policy Toolkit as a resource, Epic-Cure shared this predicament with their Florida legislators and advocated for funding to increase their food rescue infrastructure. But this advocacy was not accomplished alone. Epic-Cure involved food donation recipients at their donation centers by offering them an opportunity to sign and send advocacy letters to state lawmakers. Epic-Cure made this process accessible by providing a stack of preprinted letters at the distribution center's sign-in desk. Food donation recipients were eager to use their democratic voice for a cause that resonates with their lived experiences.

Their Impact: In July 2024, the community's advocacy efforts were realized when Florida appropriated \$1.5 million to Epic-Cure to construct a 10,000-square-foot warehouse. Looking forward, Epic-Cure seeks to get involved in advocacy focused on food waste prevention further up the supply chain and welcomes collaboration with other groups in these spaces.

The Coalition is so grateful to work with dedicated member organizations like Epic-Cure who are making tangible progress in the fight against food waste!

Read the state policy toolkit mentioned above here: <https://shorturl.at/dAtLU>
Apply to join the Coalition here: <https://shorturl.at/EJL2F>



Exciting New Initiative

Help us to name this amazing initiative! Epic Cure® and Wildflower Healthcare are joining forces to launch a non-profit that collects and distributes donated medical supplies to those in need. Help us spread the word and donate medical supplies. Metal shelving is also appreciated!

This will be a division of Epic-Cure located on the loft of the St. Augustine warehouse. This new venture is dedicated to collecting and distributing donated medical supplies to medical missionaries, NGOs, free clinics, and patients in our local community who are in need.

Our mission is to bridge the gap in healthcare access by ensuring that essential medical supplies reach those who need them most. By partnering with generous donors, local missionaries, and local organizations, we aim to make a meaningful impact in the lives of countless individuals.

How You Can Help:

Donate Medical Supplies: We welcome new, unopened medical supplies. They can be dropped off at the Epic-Cure warehouse in St. Augustine. No medication please! For large donations, please contact support@epic-cure.org to schedule a driver and truck to pick up.

Spread the Word: Share our mission with your network to help us reach more people.

Shelving: We need 6 foot tall metal shelving. If you would like to donate a shelf, or funds to purchase shelving, please contact support@epic-cure.org.

Name suggestions can be submitted to support@epic-cure.org.

Stay tuned for more information on how to donate or get involved. We plan to be open and fully functioning in the next 3 months. Thank you for your support.

Sustain U.® - Cooking Class Update

We are looking forward to classes beginning again in September. In the meantime, we just had another Saturday Night Dinner at the Elks on August 3rd. The kids created and served picture-perfect lasagna, Caesar salad, and ice cream sundaes to the lucky Elks members who attended the dinner.



Lasagna - perfect



Handmade croutons for the Caesar salad



Hard at work...



Fine knife skills



Pondering the Ice Cream Sundaes!

← Chef Brian Dowd, a longtime volunteer and staunch advocate for Epic-Cure® and these wonderful Chefs-in-Training, helped them think through the presentation of a dessert that was well received, indeed.

Under construction – the lasagna was a hit! Notice the intensity of our young chefs. Lasagna is serious business.





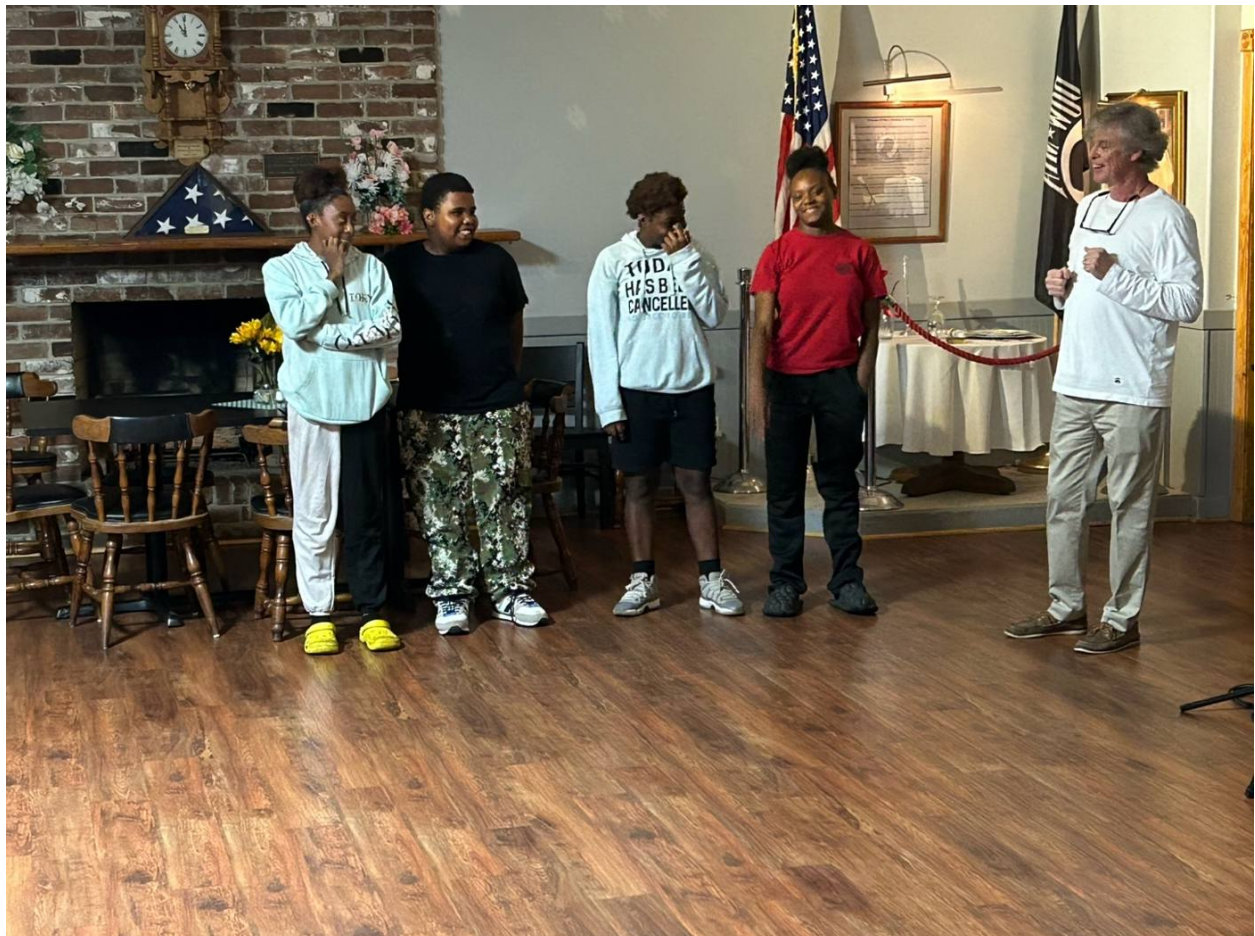
The team in action – with orders rolling in, our chefs have everything under control.



Our talented
Chefs in action!

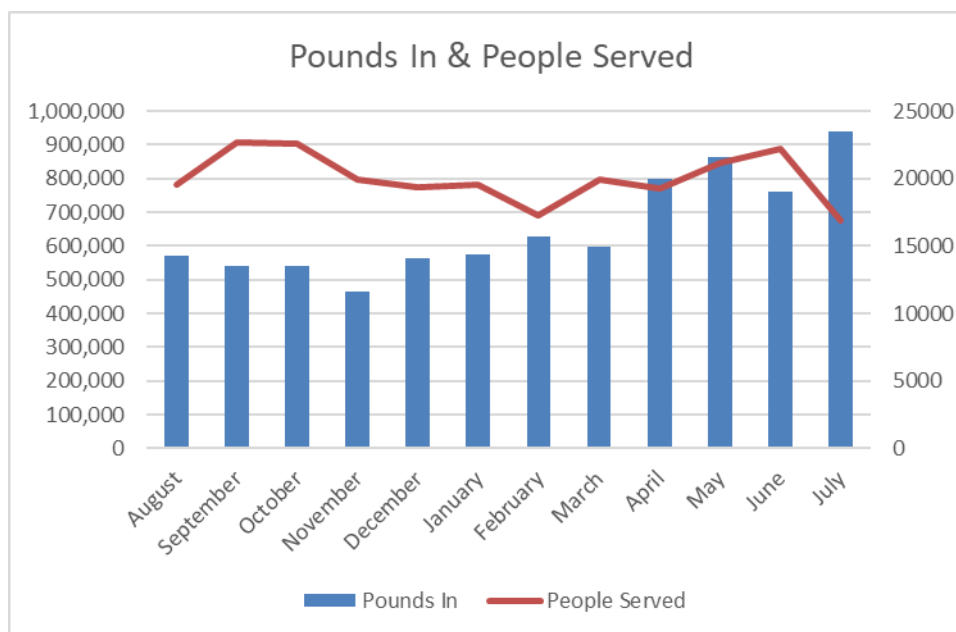


Time for some
recognition – it
was hard to
introduce
them over the
well-deserved
applause.





Here is our PIPS (Pounds In & People Served) Graph



Notes on the graph: People served were down due to the July 4th holiday.

We had a slight decrease in Pound In during June due to a funding gap for the donated dairy loads. Each load costs between \$750 to \$1,000 to transport from Jacksonville to the Palatka warehouse, and we only received a donation to cover one load.

A few months ago during a Florida Food Waste Coalition meeting, we learned of an organization called [Move For Hunger](#). Move For Hunger is a national non-profit organization that mobilizes transportation networks to deliver surplus food to communities in need. They now partner with our friends at [foodrecovery.org](#) to cover the cost of transporting those loads to us.

Pounds Out to Nonprofits, Food Banks, and Food Pantries

2024 through 07/31/2024

January	44,623
February	84,419
March	74,970
April	77,734
May	115,311
June	108,098
July	102,391
Total:	607,546

We add a couple of tables to give you more insight into our growth. The table at left tracks our newest initiative – providing food to other nonprofits, food banks, and food pantries. Our goal is to increase reach, that is, we intend to provide as much food as possible to as many people as possible. As we run up against funding limitations, the best way to serve the most people is to provide food to other food security agencies and nonprofits. There is a tradition of cooperation among nonprofits here in Northeast Florida, and we at Epic-Cure® intend to supercharge that tradition.

The table on the next page displays the kinds of food that we have been distributing to Epic-Cure® beneficiaries.



<u>2024 Monthly Food Intake (Pounds in) by Food Category</u>											
Month	Total Pounds	Bakery	Water	Dairy	Deli	Dry Goods	Frozen Misc.	Produce	Meat	Non-Food	Refrigerated
January	575,799	31,514	36,471	66,266	3,445	177,041	33,511	137,892	73,979	6,097	9,583
February	629,706	24,538	36,006	57,321	2,746	142,831	19,199	255,375	84,422	6,191	1,077
March	599,137	28,486	42,288	26,439	6,521	174,278	21,808	202,498	91,031	5,344	444
April	800,221	26,921	44,980	112,966	2,546	197,893	22,347	296,479	89,360	4,637	2,092
May	864,532	28,591	26,893	165,364	6,622	164,117	23,290	298,190	97,019	7,334	47,112
June	762,174	32,300	27,472	98,947	3,263	157,479	10,360	330,085	64,344	31,851	6,073
July	940,343	29,804	42,471	289,677	18,060	201,830	11,052	270,023	52,283	24,415	728
Totals:	5,171,912	202,154	256,581	816,980	43,203	1,215,469	141,567	1,790,542	552,438	85,869	67,109

Of the 5.2 million pounds of food distributed through July 31st, the greatest share is attributable to produce: 1.8 million pounds, or about 35% of the total. Dry goods, dairy, and meat round out the top four at about 24%, 16%, and 11% of the total, respectively.

(Fun)draising



This is our endlessly energetic for doing good partner, Marie McCloud. Every Friday she and her volunteers do a food distribution at The Refuge Church in Palatka that serves anywhere from 150 to 200 families. She amped it up in a big way when she got the community involved and provided free food, clothing and school supplies to 300 families on 8/2. During the event, she also raised \$500 to support Epic-Cure.



We love partners like this!!!

How might you help?

Join Us in the Fight Against Food Waste and Hunger: Your Monthly Gift Makes a Difference

Every day, millions of pounds of perfectly good food are thrown away, while countless families go hungry. We believe that this is a problem we can solve—together. As a 100% volunteer-run organization, we are deeply committed to rescuing food that would otherwise go to waste and redistributing it to those in need. But we can't do it alone.



Your support has already made a tremendous impact, but the need is ongoing. By becoming a recurring monthly donor, you can help us ensure that our efforts continue without interruption. With your consistent support, we can:

- **Rescue more food:** Every dollar you donate helps us save more food from being wasted, providing fresh, nutritious meals to families in need.
- **Expand our reach:** Regular donations enable us to grow our network, reach more communities, and deliver food where it's needed most.
- **Sustain our operations:** As a 100% volunteer-run organization, your monthly gift directly supports the logistics, transportation, and resources needed to keep our mission alive.

A monthly donation, no matter the size, creates a reliable foundation that allows us to plan and respond quickly to food insecurity in our communities. Your commitment helps us turn potential waste into hope, every single day.

Please consider setting up a monthly donation today. With your help, we can continue to fight hunger and reduce food waste, making a lasting impact on our environment and the lives of those we serve.

Together, we can build a future where no one goes hungry, and no food goes to waste. Thank you for standing with us in this crucial fight.

With gratitude,
Sunny & Ken

[Donate Now](#)

We at Epic-Cure® are data junkies. We also believe in taking the big picture view to provide context for the data which we consume. What follows is an attempt to understand the problems that humans face with our climate and our health. We have written of our attempts to eliminate food waste and greenhouse gas emissions. We have written about our seeking to utilize carbon offsets based on our realized efforts to eliminate food waste. To frame the climate conversation more robustly, we now turn to a brief survey of key metrics describing the evolution of the human condition. You will see that we have accomplished much in a couple of centuries. In fact, the accomplishments are highly laudatory. So, before we turn to the problems, let's survey the data.



The Good News: There are good reasons to believe that we have never lived in better circumstances than those we find ourselves in now. Let's begin with the single greatest predictor of food insecurity, poverty.

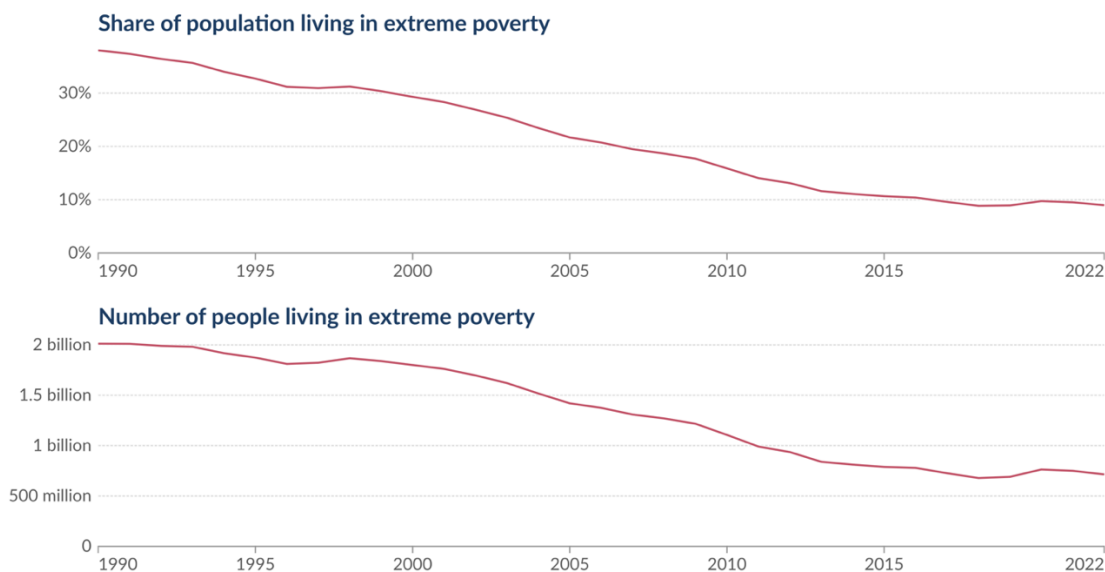
Let's start with extreme poverty. Most of the world's human population has lived in conditions of extreme poverty for the overwhelming majority of the time that humans have inhabited the earth. Everyone living today in extreme poverty wants "out." The UN defines extreme poverty as what it would take anywhere in the world to live off the equivalent of \$2.15 per day in the United States. In 1820, more than 75% of the world lived in extreme poverty (J. Hasell et al, "Poverty," Our World in Data (2022)). Today, less than 10% of the world's population lives in extreme poverty.

Not only is the percentage dropping, but so is the absolute number of people living in extreme poverty, which stood at 2 billion people in 1990 but fell by more than half to 648 million in 2019. To be sure, that is still too many people living in dire poverty. No one can, however, persuasively argue that progress has not been made. See the following chart.

The share and number of people living in extreme poverty, World



Extreme poverty is defined as living below the International Poverty Line of \$2.15 per day. This data is adjusted for inflation and for differences in the cost of living between countries.



Data source: World Bank Poverty and Inequality Platform (2024)

OurWorldInData.org/poverty | CC BY

Note: This data is expressed in international-\$¹ at 2017 prices. Depending on the country and year, it relates to income measured after taxes and benefits, or to consumption, per capita².

1. **International dollars:** International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent. Read more in our article: What are Purchasing Power Parity adjustments and why do we need them?

2. **Per capita:** 'Per capita' here means that each person (including children) is attributed an equal share of the total income received by all members of their household.



The COVID-19 global pandemic and its associated economic and social lockdowns did interrupt the declining trend in poverty. These data are perfectly coincident with our observation here at Epic-Cure® that food insecurity grew, post-pandemic. Here are the projected data indicating an increase of some 70 million people. That is one of the costs – the human cost – of the pandemic and the response to it, worldwide.

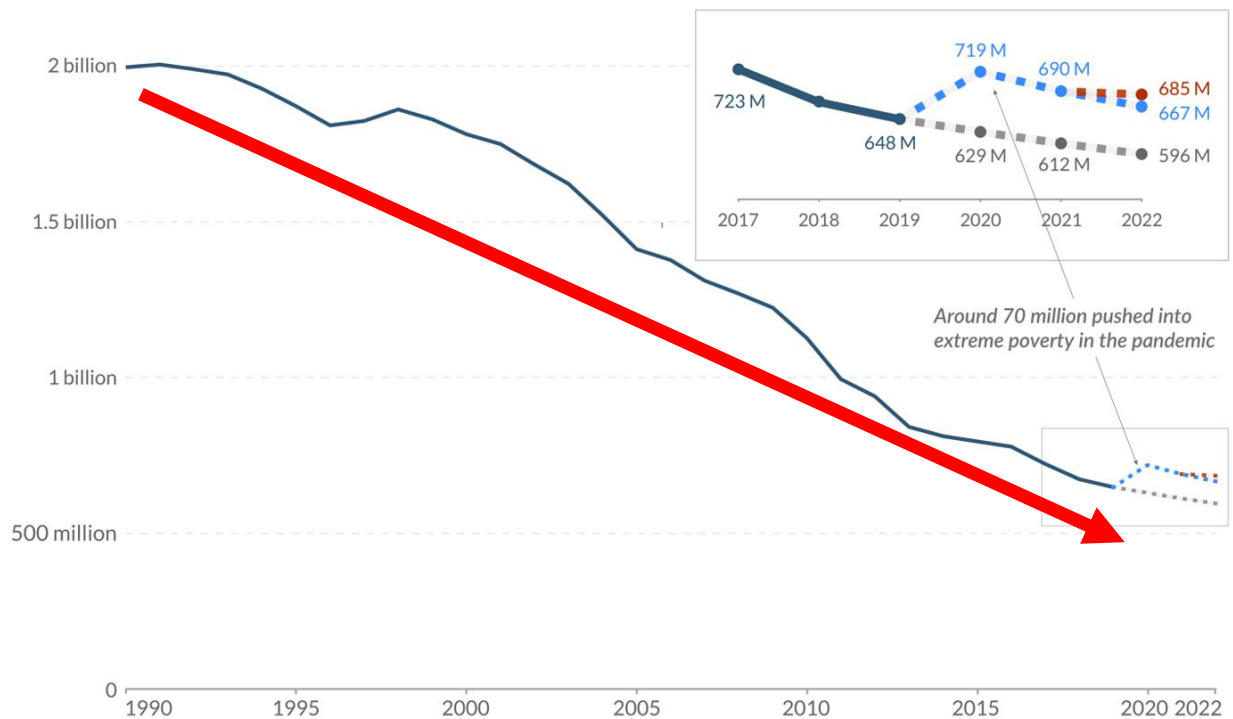
Good News:

The number of people living in extreme poverty globally

Our World
in Data

World Bank data on the number of people in extreme poverty, according to:

official estimates downside projection baseline projection pre-pandemic projection



Note: Extreme poverty is defined as living on less than the International Poverty Line of \$2.15. All data expressed in 2017 international-\$. Projections and scenarios are based on economic growth data and earlier forecasts, assuming that households' incomes grow in line with their country's GDP per capita. The downside projection for 2022 in addition assumes that recent food price inflation has impacted the incomes of poorer households more strongly.

Source: World Bank Poverty and Inequality Platform; World Bank Poverty and Shared Prosperity (2022)
OurWorldinData.org – Research and data to make progress against the world's largest problems.

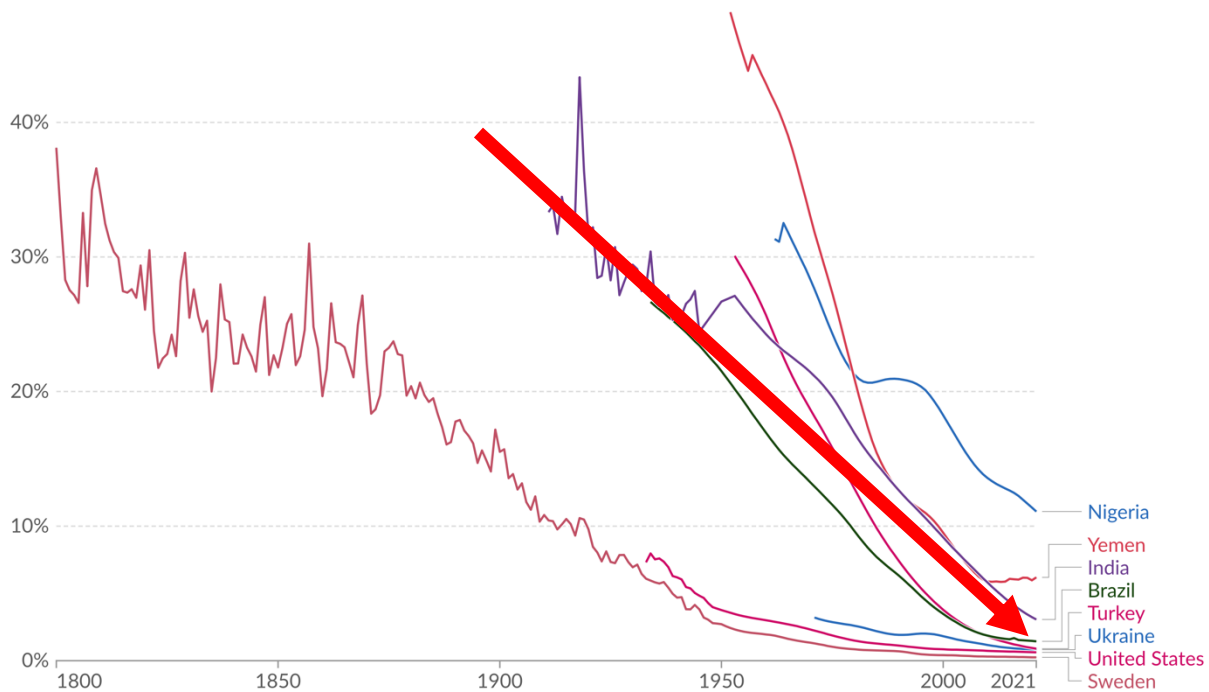
Licensed under CC-BY by the author Joe Hasell.



Good News (continued):

Child mortality rate, 1800 to 2021

The estimated share of newborns¹ who die before reaching the age of five.



Data source: UN IGME (2023); Gapminder (2015)

OurWorldInData.org/child-mortality | CC BY

1. **Newborn:** A newborn is defined as a baby born alive, and usually refers to neonates – under 28 days old. Read more in our article: How do statistical organizations define age periods for children?

Child mortality rates (children from birth to 5 years old) have declined massively over the past two centuries.

The data going back to 1900 are for Sweden. The Swedes understood early the high value of time series data (data over time) to providing insights on where to direct energy and thought.

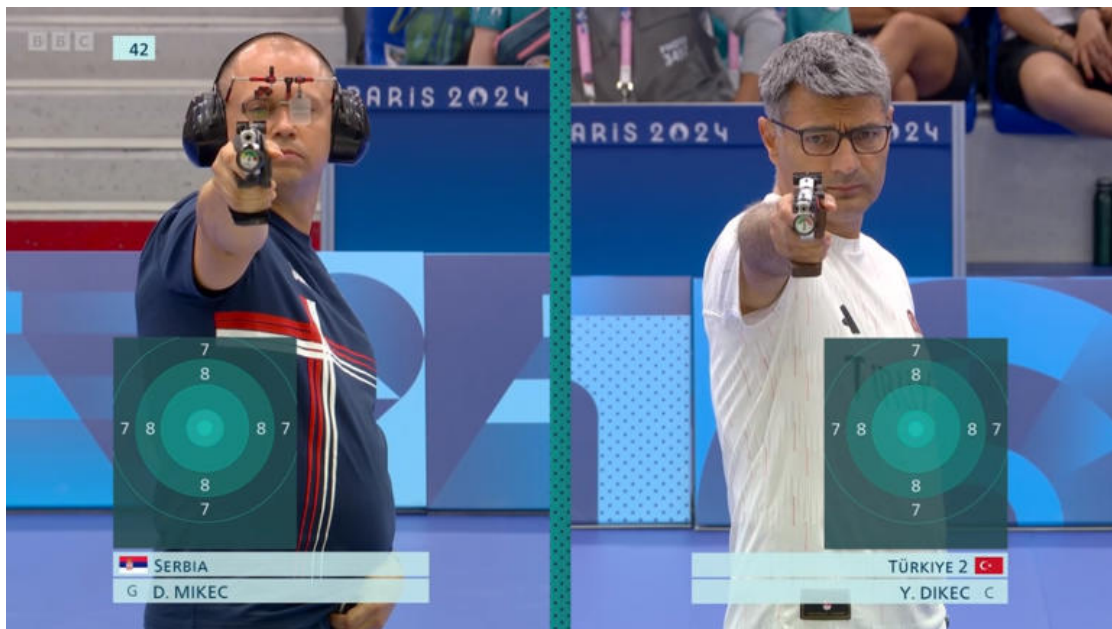
For our purposes, we did not want to exhibit world or continental data because it might not provide insights on the dispersion of the recorded outcomes, and to map all countries would be to create a blob (technical term) of indistinguishable colored lines. Instead, we prefer to show some samples from developed and less developed economies. We do not pretend to make this a comprehensive data analysis; however, you will find that the representatives are illustrative: for less developed economies, we have chosen Nigeria (African continent), Yemen (Middle East/Western Asia), Brazil (South America), Ukraine (Central Europe – and in the news a bit, these days), Sweden (Europe), India (Asia), and the U.S. (North America (and our home)).



What about Turkey? It is on the list. Well, here is precisely why we chose to include Turkey.



Love that picture of Dikec, the silver medalist, with no special sighting gear and no sophisticated hearing protection (he wore only foam ear plugs). He is just a guy standing there and shooting his pistol. Now compare that picture to the next one.



Fun! The guy on the left (Micek) won the Gold. He had a little help from his kit, no? And now, back to our regularly scheduled programming.

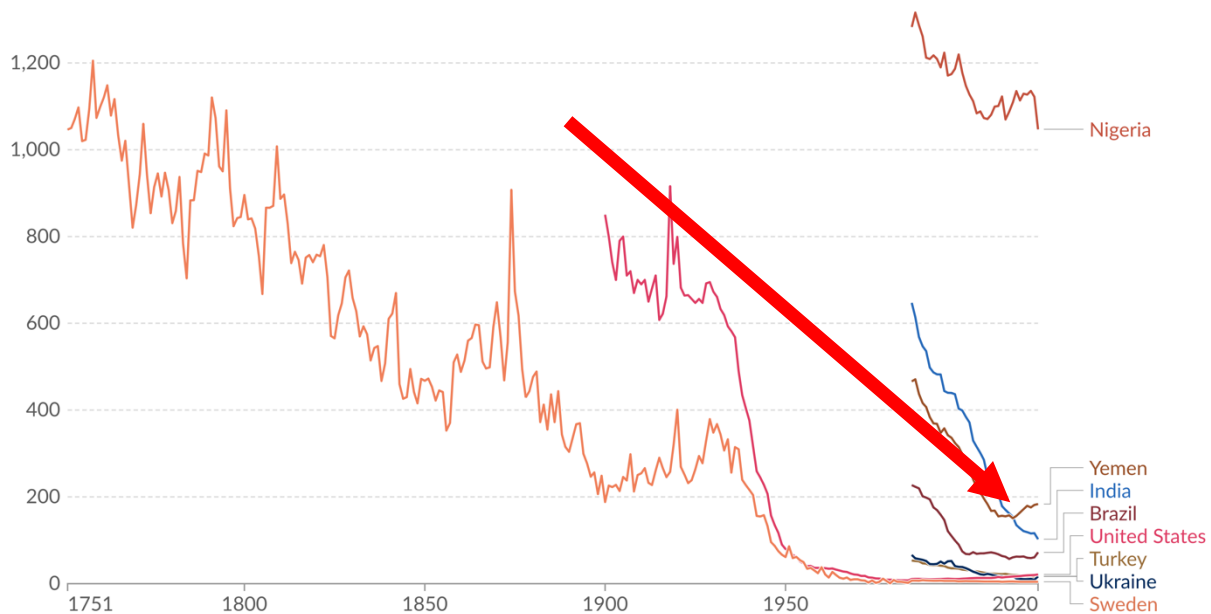


More Good News:

Maternal mortality ratio, 1751 to 2020

Our World
in Data

The estimated number of women who die from maternal conditions¹ per 100,000 live births, based on data from death certificates, large-scale surveys, and statistical modeling.



Data source: UN MMEIG (2023) and other sources

OurWorldInData.org/maternal-mortality | CC BY

Note: Prior to 1985, only reported data are available, which are likely to underestimate the true maternal mortality rate. From 1985, estimates are shown, which aim to adjust for underreporting and misclassification.

1. Maternal mortality: Maternal mortality relates to the death of women during or shortly after pregnancy. This is defined differently by different organizations. According to the ICD-11, maternal deaths are defined as the deaths of women while pregnant or within 42 days of termination of pregnancy, from maternal conditions, but excluding accidental or incidental causes of death. Maternal conditions are defined from the "underlying cause of death" on death certificates. In the WHO Mortality Database and IHME GBD (estimates up to 2019), maternal deaths up to 1 year of termination of pregnancy are also included. In countries where cause of death data is lacking, estimates (such as in the WHO GHO and IHME GBD) include deaths during or shortly after pregnancy, irrespective of the cause — this means they include causes incidental to the pregnancy. Read more on our page: Maternal mortality.

Maternal mortality rates have declined massively over the past two centuries.

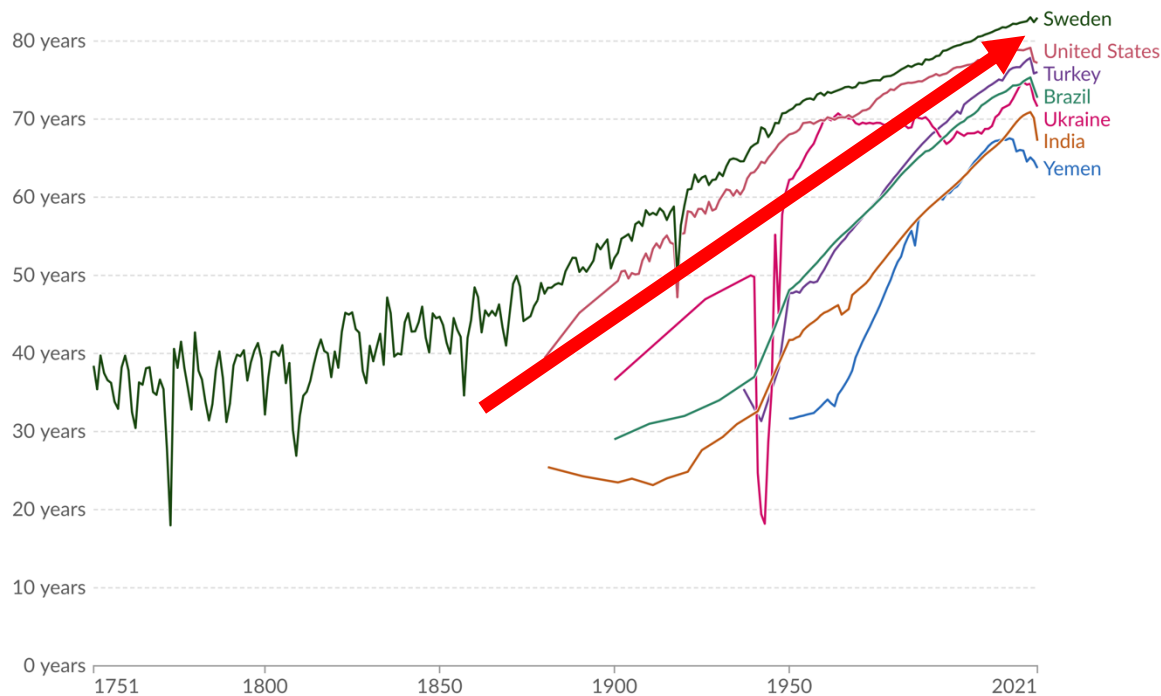


Still More Good News:

Life expectancy

The period life expectancy¹ at birth, in a given year.

Our World
in Data



Data source: UN WPP (2022); HMD (2023); Zijedman et al. (2015); Riley (2005)

OurWorldInData.org/life-expectancy | CC BY

1. **Period life expectancy:** Period life expectancy is a metric that summarizes death rates across all age groups in one particular year. For a given year, it represents the average lifespan for a hypothetical group of people, if they experienced the same age-specific death rates throughout their whole lives as the age-specific death rates seen in that particular year. Learn more in our article: "Life expectancy" – What does this actually mean?

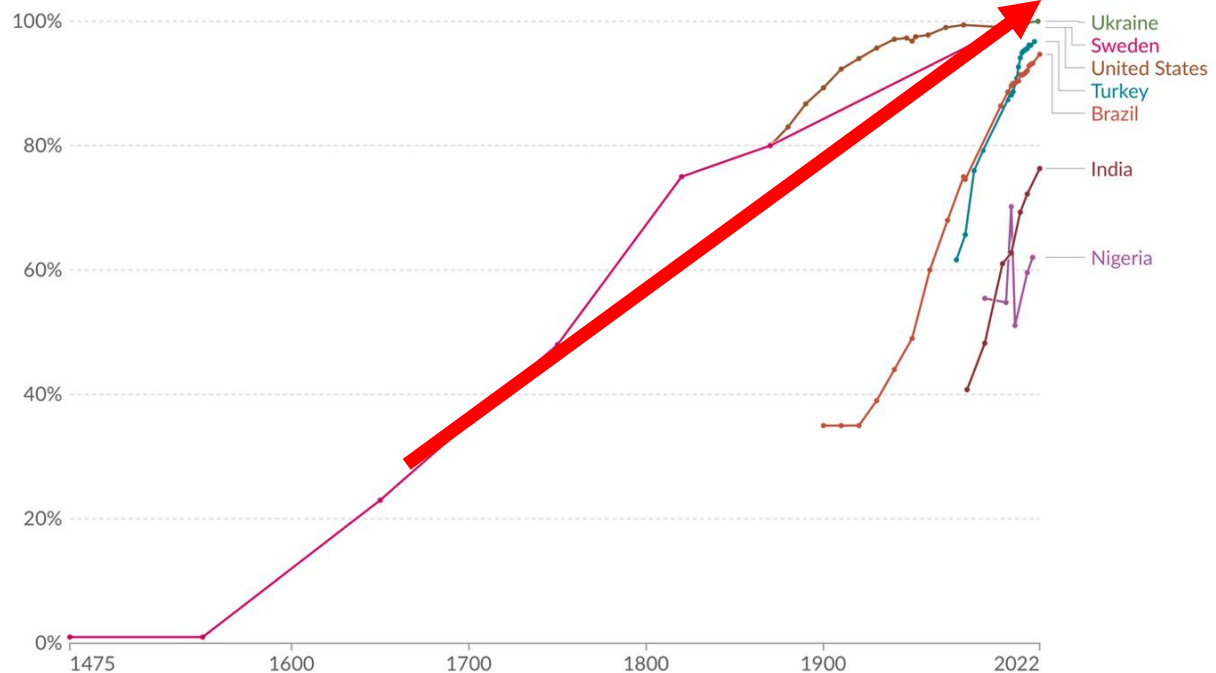
Life expectancy rates have increased massively over the past two centuries.



**At the risk of more redundancy than is tolerable ...
More Good News (it is piling up):**

Literacy rate, 1475 to 2022

The share of adults aged 15 and older who can both read and write.



Data source: World Bank (2023); Various sources (2018)

OurWorldInData.org/literacy | CC BY

Note: Specific definitions and measurement methodologies vary across countries and time.

Literacy has increased worldwide.

And along with it, the prospects for improved socio-economic circumstances have risen.



The Not So Good News: Let's turn next to some of the things that we know need our (society's) attention, starting with undernourishment. Undernourishment is different from our chief concern at Epic-Cure® - food insecurity. It is the most negative case and is defined as solely determined by the sufficiency of energy (calorie) intake. It does not consider the quality or diversity of someone's diet.

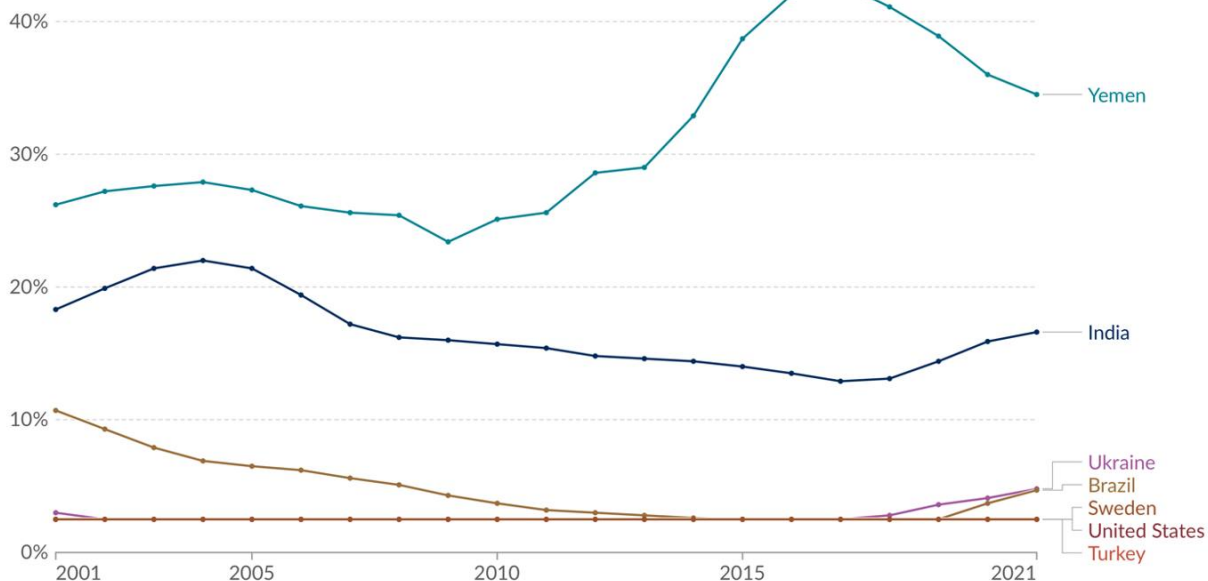
This chart measures the share of people who do not get enough calories to live a healthy life and is based on a comparison of calories consumed versus the number of calories needed to maintain an active, healthy life. One might object that such a project is inherently difficult to successfully undertake. So, leaving aside the axiom that there are "lies, damned lies, and statistics," the data scientist use a "parametric probability density function" across these variables: (1) average availability of calories (energy), (2) levels of inequalities in food consumption within a population (the Coefficient of Variation (CV) of energy intake), and (3) demographic information to assess the distribution of energy requirements (minimum energy requirement). Understand? Neither do we. But, trusting the statisticians, we take it to mean that they have come up with a measure of the probability across a population that someone has a daily energy intake that is lower than the minimum requirements.



Share of the population that is undernourished

Share of individuals that have a daily food intake that is insufficient to provide the amount of dietary energy required to maintain a normal, active, and healthy life.

Our World
in Data



Data source: Food and Agriculture Organization of the United Nations (2023)

Note: Countries and regions with rates below 2.5% are coded as "2.5%" in the FAO dataset.

OurWorldInData.org/hunger-and-undernourishment | CC BY

Work remains to remedy worldwide problems with undernourishment ...

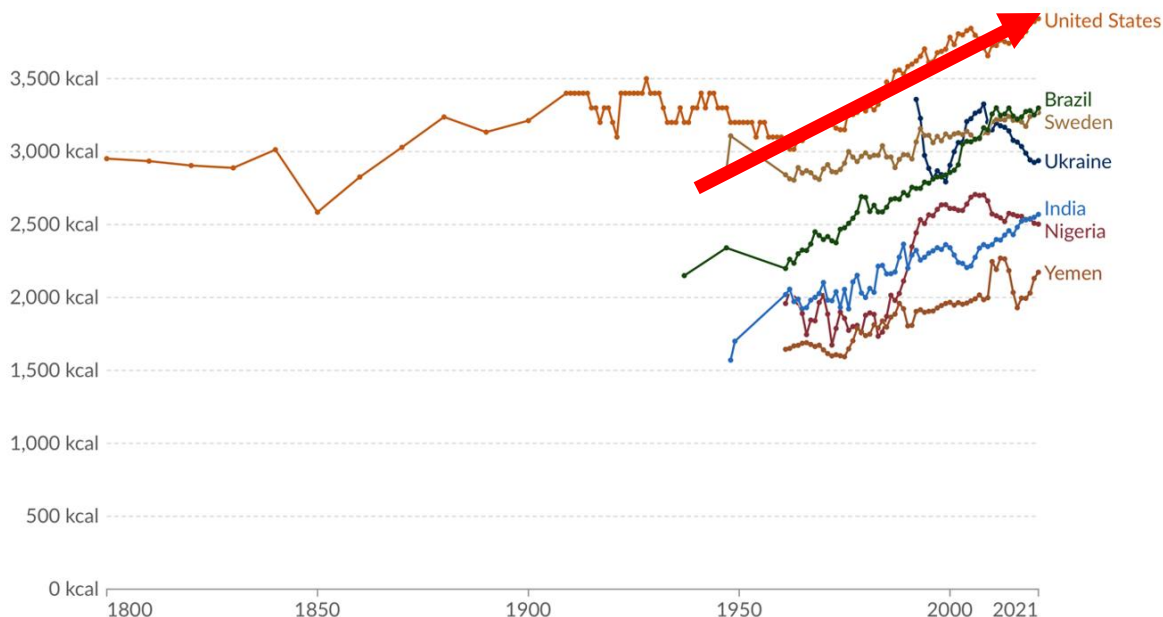
There are troubling recent trends in India, Ukraine, and Brazil. Much of the developed world stands with less than 2.5% of their populations suffering undernourishment, and in our view, that level, too, is unacceptable, especially since, as seen on the following chart, the supply of food has increased, on average.



Daily supply of calories per person, 1800 to 2021

Our World
in Data

Measured in kilocalories per person per day. This indicates the calories that are available for consumption, but does not necessarily measure the number of calories actually consumed, since it doesn't factor in consumer waste.



Data source: Food and Agriculture Organization of the United Nations (2023) and other sources
OurWorldInData.org/food-supply | CC BY

... while the calories available to us are growing.

In recent years, Nigeria and Ukraine are exceptions to the growing availability, worldwide, of food/calories.

Prosperity drives food supply. As an economy grows, its availability of key nutritional components like calories, protein, and fat also grow. In other words, as we get richer, our food supply, including that of important micronutrients, grows.

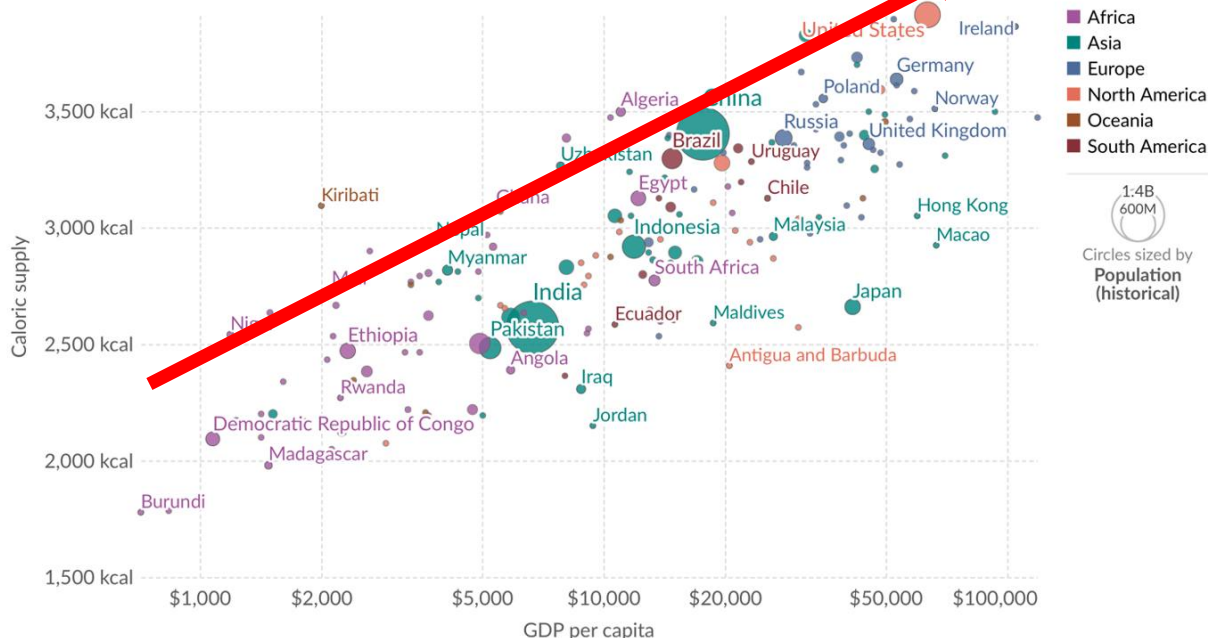
Let's look at another chart, one on which we will overlay an arrow indicating the direction (the correlation) of increasing Gross Domestic Product (GDP, the economic output of a country – goods and services produced in that country in a year) and increasing consumption of calories (food energy).



Daily per capita supply of calories vs. GDP per capita, 2021

Daily per capita supply of calories is measured in kilocalories per person per day. Gross domestic product (GDP) per capita is measured in constant international-\$, which adjusts for inflation and cross-country price differences.

Our World
in Data



Data source: Food and Agriculture Organization of the United Nations (2023) and other sources
OurWorldInData.org/food-supply | CC BY

As per capita income increases, the calories consumed increases, thereby improving the wellbeing of nations. The disparity is, however, wide, and these data do nothing to differentiate between healthful and unhealthy calories.

Bad News in Health Risk Factors for the World (and the Food Insecure):

Recently, Epic-Cure® surveyed its patrons and reported statistics concerning the prevalence of certain health conditions that are widely believed to be associated with food insecurity. The predominant health conditions that were reported by our beneficiaries included the following, in order of greatest to least in number:

1. High blood pressure,
2. Arthritis,
3. Diabetes,
4. Asthma,
5. ADHD,
6. Coronary heart disease,



7. COPD, and
8. Stroke.



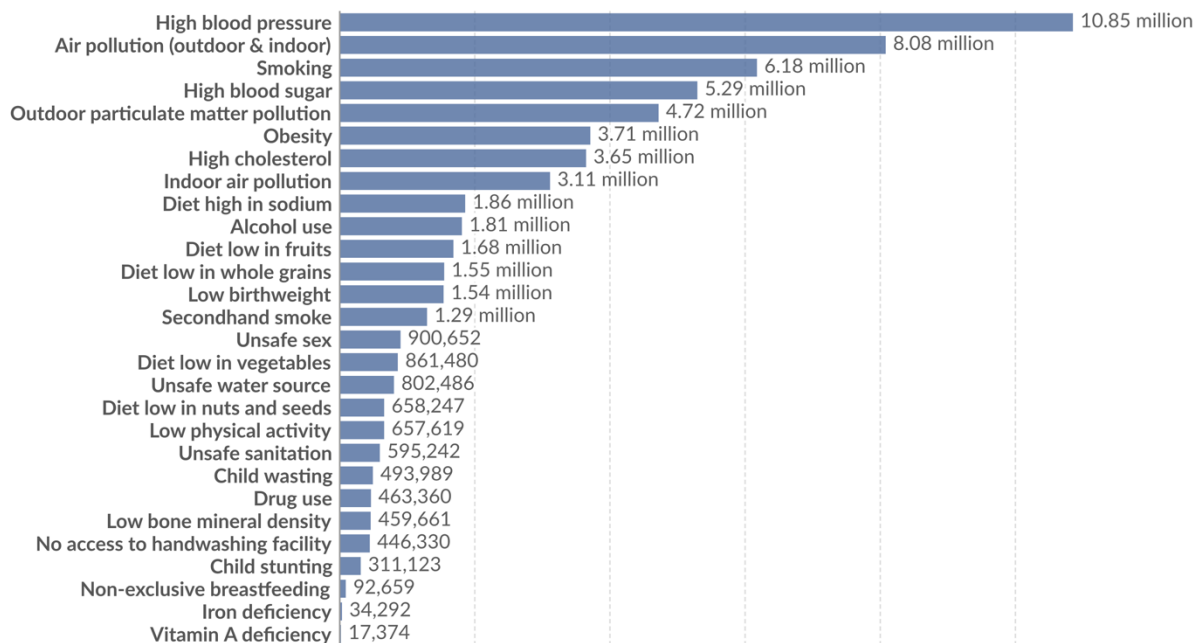
Notice that many of the risk factors identified by our patrons appear on the following chart. Particularly troubling are High Blood Pressure (#1 worldwide and for our patrons) and High blood sugar (Diabetes in our survey was #3).

Please note the importance of air pollution – indoor and outdoor – which is #2 worldwide. While the estimates in the chart have wide uncertainties (i.e., large margins for error), note that Epic-Cure’s surveys poll our patrons directly, introducing the uncertainties of self-reporting. That said, we believe that the proportions/rankings are highly informative.

Deaths by risk factor, World, 2021



The estimated annual number of deaths attributed to each risk factor¹. Estimates come with wide uncertainties, especially for countries with poor vital registration².



Data source: IHME, Global Burden of Disease (2024)

OurWorldInData.org/causes-of-death | CC BY

Note: Risk factors¹ are not mutually exclusive. The sum of deaths attributed to each risk factor can exceed the total number of deaths.

1. Risk factor: A risk factor is a condition or behavior that increases the likelihood of developing a given disease or injury, or an outcome such as death. The impact of a risk factor is estimated in different ways. For example, a common approach is to estimate the number of deaths that would occur if the risk factor was absent. Risk factors are not mutually exclusive: people can be exposed to multiple risk factors, which contribute to their disease or death. Because of this, the number of deaths caused by each risk factor is typically estimated separately. Read more: How do researchers estimate the death toll caused by each risk factor, whether it's smoking, obesity or air pollution? Read more: Why isn't it possible to sum up the death toll from different risk factors?

2. Civil Registration and Vital Statistics system: A Civil Registration and Vital Statistics system (CRVS) is an administrative system in a country that manages information on births, marriages, deaths and divorces. It generates and stores 'vital records' and legal documents such as birth certificates and death certificates. You can read more about how deaths are registered around the world in our article: How are causes of death registered around the world?



Some more bad



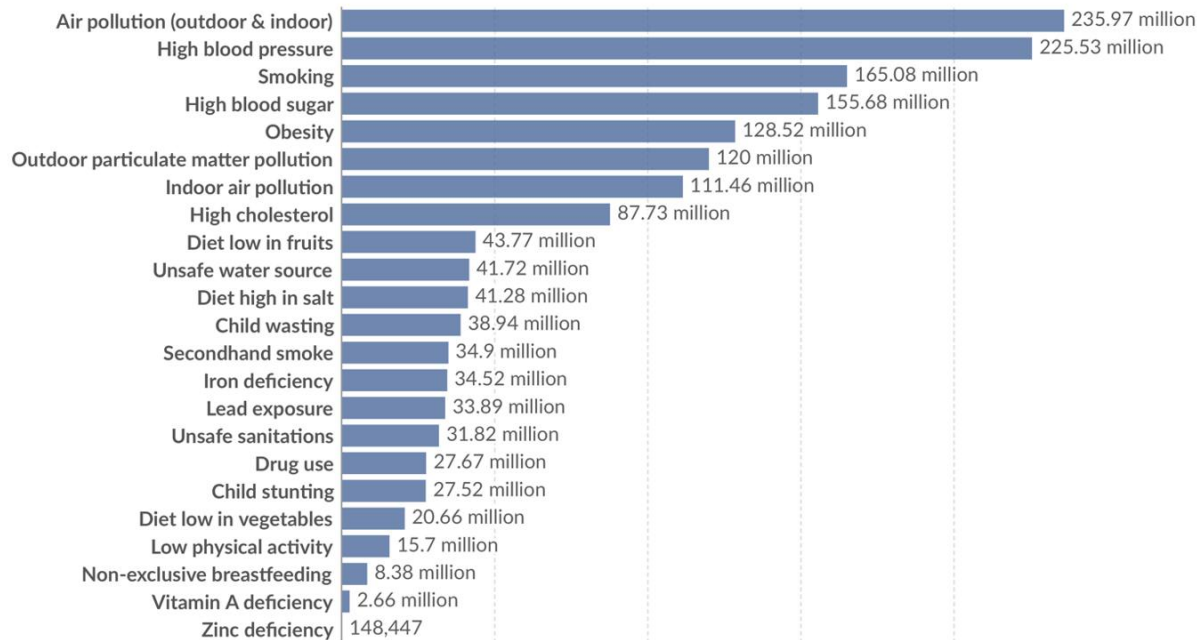
news: Estimated Deaths by

disease burden:

Disease burden by risk factor, World, 2021

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Disease burden is measured as Disability-Adjusted Life Years (DALYs). One DALY is the equivalent of losing one year in good health because of either premature mortality or disability. One DALY represents one lost year of healthy life.



Data source: IHME, Global Burden of Disease (2024)

OurWorldInData.org/burden-of-disease | CC BY

Note that high blood pressure and air pollution – indoor and outdoor – continue to dominate deaths and disease risk factors.

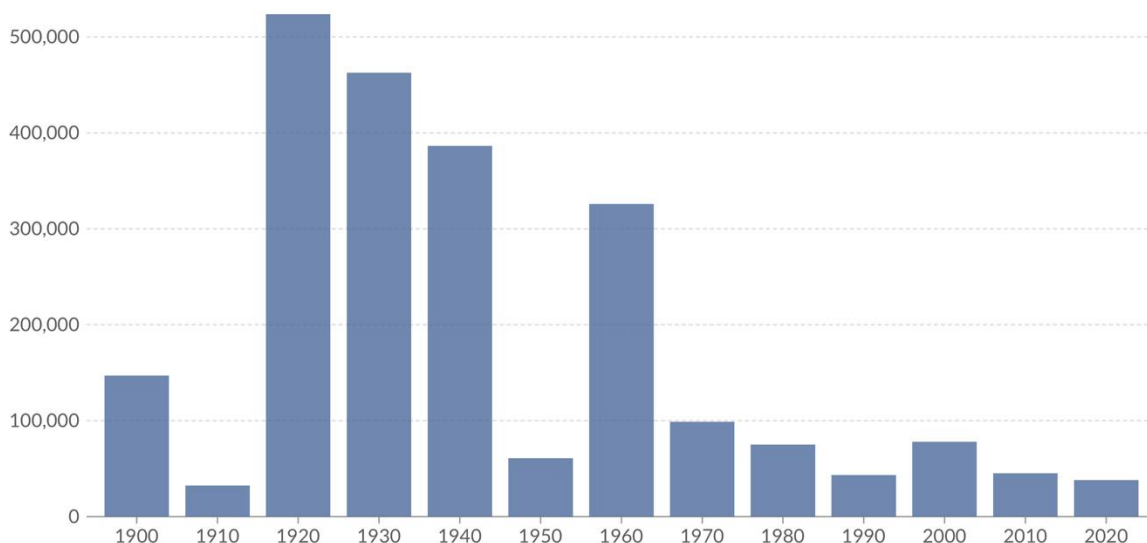
We believe that a deeper dive into the risk factor posed by air pollution is warranted. It is a killer. With more than 8 million estimated deaths annually associated with it in 2021, this risk factor is materially more important than one that is regularly in the news: deaths due to natural disasters, which stood at 38,059 in 2020 (average for the decade). Again, that is 8 million vs. 38 thousand. Granted, we are off by a year. So, let's look at the Deaths by Natural Disaster statistics across time. See the next chart.



Decadal average: Annual number of deaths from disasters, World



Disasters include all geophysical, meteorological and climate events including earthquakes, volcanic activity, landslides, drought, wildfires, storms, and flooding. Decadal figures are measured as the annual average over the subsequent ten-year period.



Data source: Our World in Data based on EM-DAT, CRED / UCLouvain, Brussels, Belgium – www.emdat.be (D. Guha-Sapir) CC BY

Note: Decadal figures are measured as the annual average over the subsequent ten-year period. This means figures for '1900' represent the average from 1900 to 1909; '1910' is the average from 1910 to 1919 etc. Data includes disasters recorded up to April 2024.

The values for each data point above follow:

Decade	10 yr. Avg. Annual Deaths	Decade	10 yr. Avg. Annual Deaths
2020	38,059	1950	61,040
2010	45,311	1940	386,712
2000	78,113	1930	462,795
1990	43,327	1920	523,892
1980	75,203	1910	32,430
1970	98,860	1900	147,241
1960	325,894		

Note that the further back we go in time, the less confidence we have with the integrity of the data. It is entirely possible that many data are simply missing from the earliest decades of the twentieth century, to say nothing of the quality of observations or record keeping integrity.



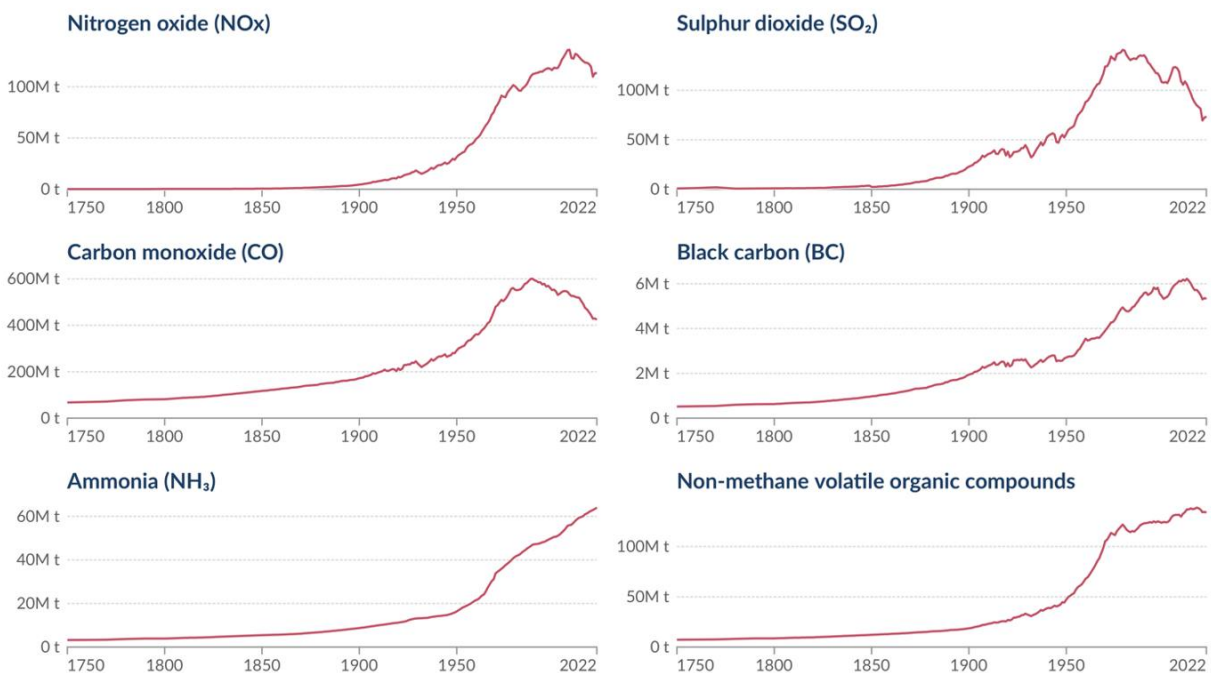
More bad news that needs our attention (and will receive it in the next issue of the AMEC Newsletter):

Emissions of Air Pollutants have risen over the past 200+ years. Action taken by developed countries around the world has, however, shown great promise, as shown in the charts below for Nitrogen Oxide, Sulphur Dioxide, Carbon Monoxide, and Black Carbon. Concern remains for emissions levels of Ammonia and Non-methane volatile organic compounds.

Emissions of air pollutants, World, 1750 to 2022



Air pollutants are gases that can lead to negative impacts on human health and ecosystems. Most are produced from energy, industry, and agriculture.



Data source: Community Emissions Data System (CEDs) 2024.

OurWorldInData.org/air-pollution | CC BY

This survey of data has been, we hope, illuminating for you. More to the point, we hope it has made you begin to ask more questions within the context of the possibility for positive change. So much progress has been made.



What's next? We will look at the topics of Air Pollution and Climate Change, where so much more progress must be made.

One thing is certain: if we drop our ill-informed and adversarial narratives and instead focus on the human capacity for positive change, we can address air pollution and climate change. Next, we will argue that much has already improved while more progress can and must be made. These are matters for **the** most important thing: human flourishing.

Awareness:

An easy, impactful way that you can help us is to please ...

Save And Drop Off Your Grocery Store Plastic Bags.

You will help reduce waste by allowing us to re-use them. You will save us money by reducing the number we have to purchase.

Transparency:

Anyone who wishes to see *Epic-Cure's financial statements* need only ask.

- Our CPA-Audited financial statements and tax returns for fiscal years 2021, 2022, and 2023 have been released and are available upon request.
 - Also available on our website.
 - Click here to view: [Epic-Cure's Financial Statements](#)

Please email your requests to Sunny Mulford: sunny.mulford@epic-cure.org