



Inspire Citizens
Frankfurt International School

Thinking Like an Economic Changemaker

Future Now
Student Leadership

DOUGHNUT ECONOMICS | SDG 8

The aim of these two workshops is to make economics easier, less complicated and more accessible.

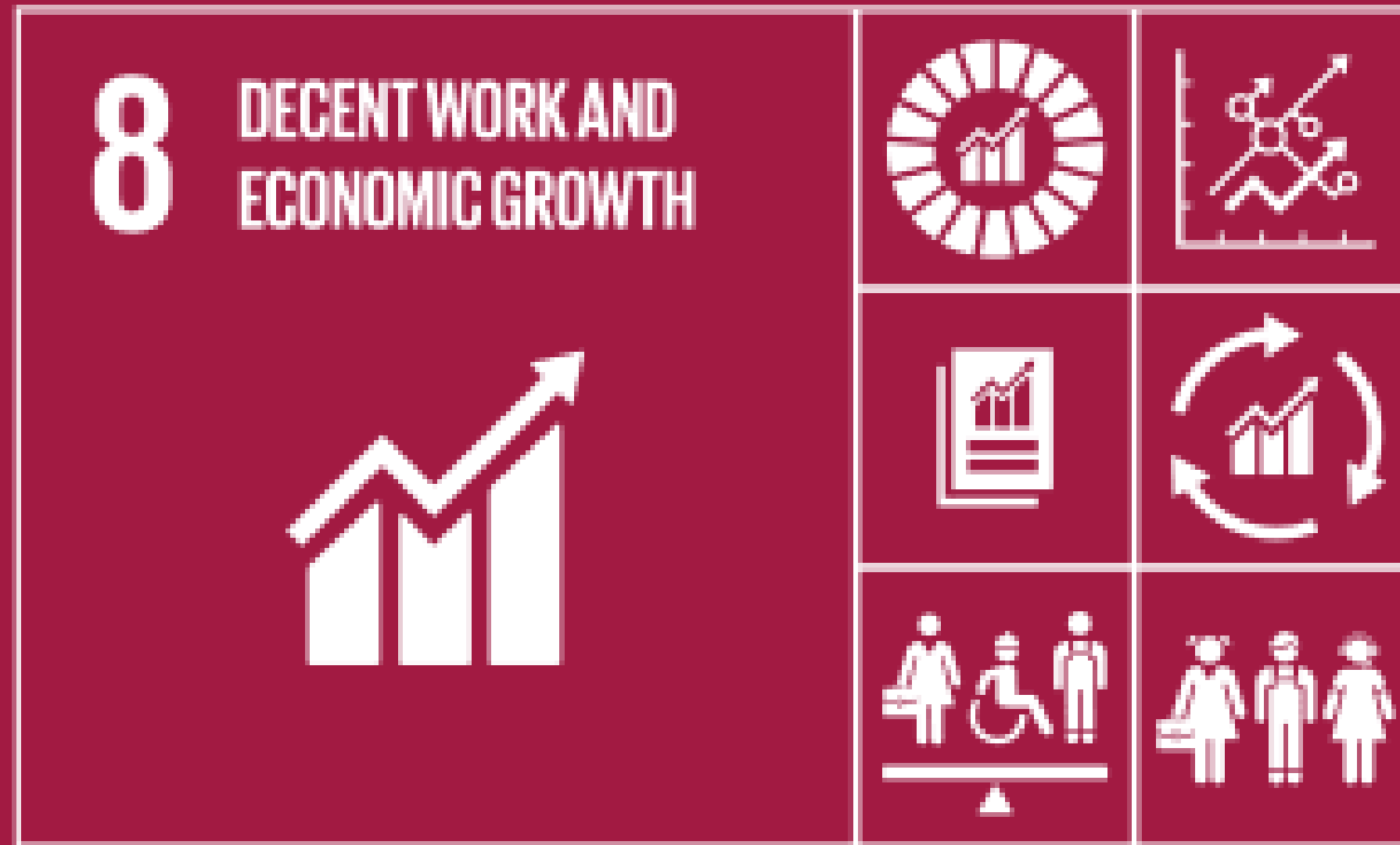
With our world at political, technological and financial tipping points, economics has never been so important to all of us and yet, it's made inaccessible and complicated by so many.

Part 1

**Decent Work, Economic Growth
& Income Inequality**

1.1

What is decent work & economic growth
& why does it matter?



What stories, targets or messages might these seven icons be trying to convey?

Icons are everywhere; some are so powerful and universal that we instantly recognize that they represent a brand, product, or message, without the need for any words.



SUSTAINABLE DEVELOPMENT GOALS



Using opposites to make sense of SDG 8. What would the opposite look like?

Sustained economic growth

Inclusive economic growth

Sustainable economic growth

Full employment

Productive employment

Decent work

8 DECENT WORK AND ECONOMIC GROWTH



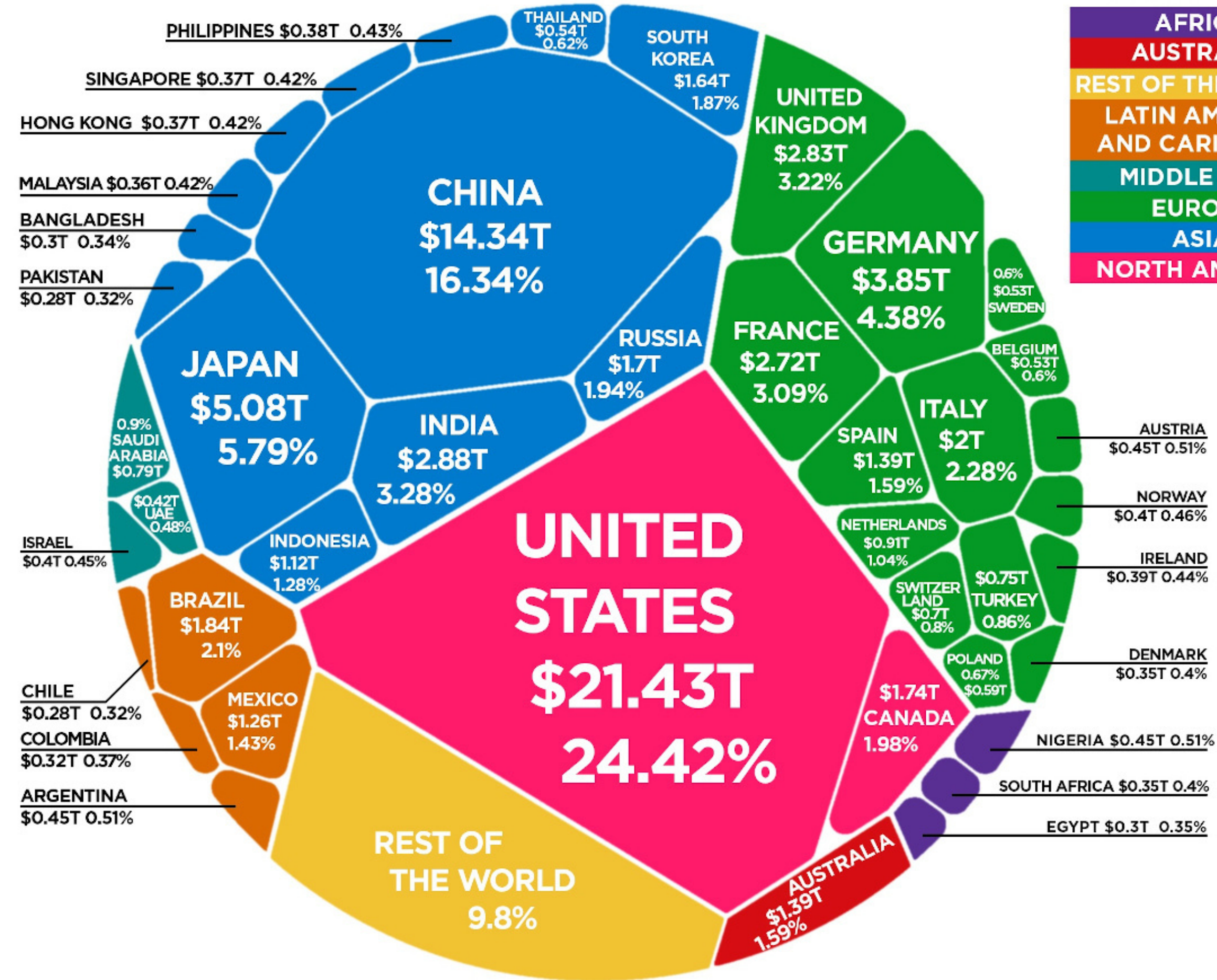
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

DECENT WORK AND ECONOMIC GROWTH: WHY IT MATTERS

1.2

Is GDP our best measure
of economic progress?

World's Region



How is the visualization connected to something you know about?

What new ideas or impressions do you have that extended your thinking in new directions?

What is challenging or confusing? What do you wonder about?

Article & Sources:

<https://howmuch.net/articles/the-world-economy-2019>

<https://databank.worldbank.org>

The \$88 Trillion World Economy in One Chart

The global economy can seem like an abstract concept, yet it influences our everyday lives in both obvious and subtle ways. Nowhere is this clearer than in the current economic state amid the throes of the pandemic.

This voronoi-style visualization from HowMuch relies on gross domestic product (GDP) data from the World Bank to paint a picture of the global economy—which crested \$87.8 trillion in 2019.

What values, lifestyles and points of view are represented in, or omitted from, this data?

Top 10 Countries by GDP (2019)

In the one-year period since the last release of official data in 2018, the global economy grew approximately \$2 trillion in size—or about 2.3%.

The **United States** continues to have the top GDP, accounting for nearly one-quarter of the world economy. **China** also continued to grow its share of global GDP, going from 15.9% to **16.3%**.

Rank	Country	GDP	% of Global GDP
#1	 U.S.	\$21.4T	24.4%
#2	 China	\$14.3T	16.3%
#3	 Japan	\$5.1T	5.8%
#4	 Germany	\$3.9T	4.4%
#5	 India	\$2.9T	3.3%
#6	 UK	\$2.8T	3.2%
#7	 France	\$2.7T	3.1%
#8	 Italy	\$2.0T	2.3%
#9	 Brazil	\$1.8T	2.1%
#10	 Canada	\$1.7T	2.0%
Top 10 Countries		\$58.7 trillion	66.9%

What is
GDP?

G

gross

D

product

domestic

P

From a GDP perspective,
nuclear warheads do just
as well as hospital beds or
apple pie.

”

David Pilling

Author of The Growth Delusion



What is economic success? Is GDP the measurement we need in 2021 and beyond?

The "beauty" of gross domestic product (GDP) is its single figure. It squishes all of human activity into a couple of digits, like a frog jammed into a matchbox. As this image of an unfortunate amphibian suggests, this condensing is also GDP's flaw.

How can the sum total of everything we do as human beings be so condensed and compressed?

How can our national economic activity be combined with something as complex, nuanced and contested as our wellbeing?

GDP's inventor Simon Kuznets was adamant that his measure had nothing to do with wellbeing. But too often we confuse the two. For seven decades, gross domestic product has been the global elite's go-to number. Fast growth, as measured by GDP, has been considered a **mark of success** in its own right, rather than as a means to an end, no matter how the fruits of that growth are invested or shared.

If something has to be sacrificed to get GDP growth moving, whether it be clean air, public services, or equality of opportunity, then so be it.

It is critically important we monitor societal progress and design responsive policies to 21st century challenges, such as climate change, the marginalization of more than a billion people, resource depletion and emerging pollution-driven health crises.

We need reliable metrics to know how we are performing on the health of our economy, sustainability and social harmony.

Unfortunately, our radar to track progress is far from satisfactory. Countries still use a 20th-century metric to measure wellbeing: Gross Domestic Product, or GDP.

- World Economic Forum

1.3

If GDP is completely broken,
is it time to focus on inequality instead?

What's the story of this infographic?

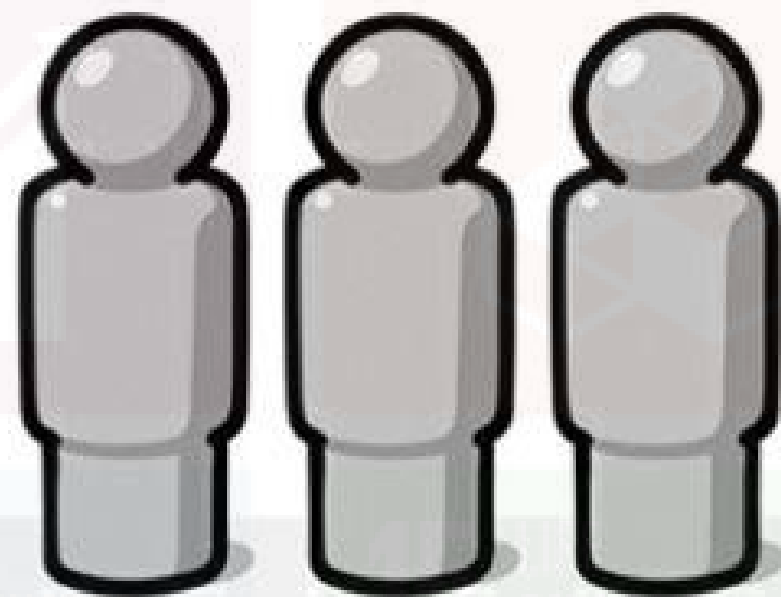
FOUR INCOME LEVELS

The world population in 2017. Billions of people on different income.



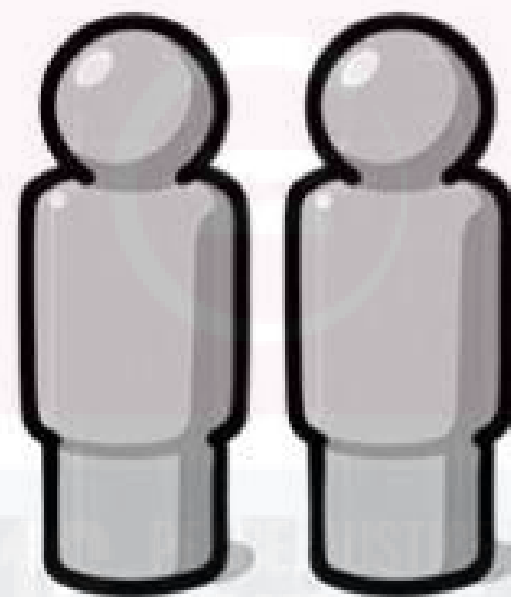
LEVEL 1

\$2



LEVEL 2

\$8



LEVEL 3

\$32



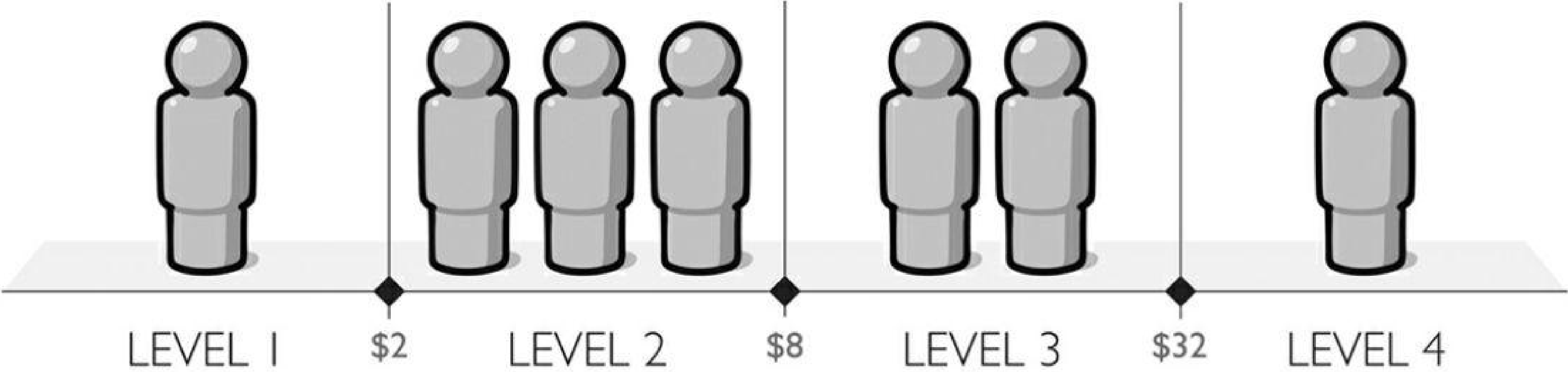
LEVEL 4

Income per person in dollars per day adjusted for price differences.

Source: Gapminder[3]

FOUR INCOME LEVELS

The world population in 2017. Billions of people on different income.



Income per person in dollars per day adjusted for price differences.

Source: Gapminder[3]

225

450

750

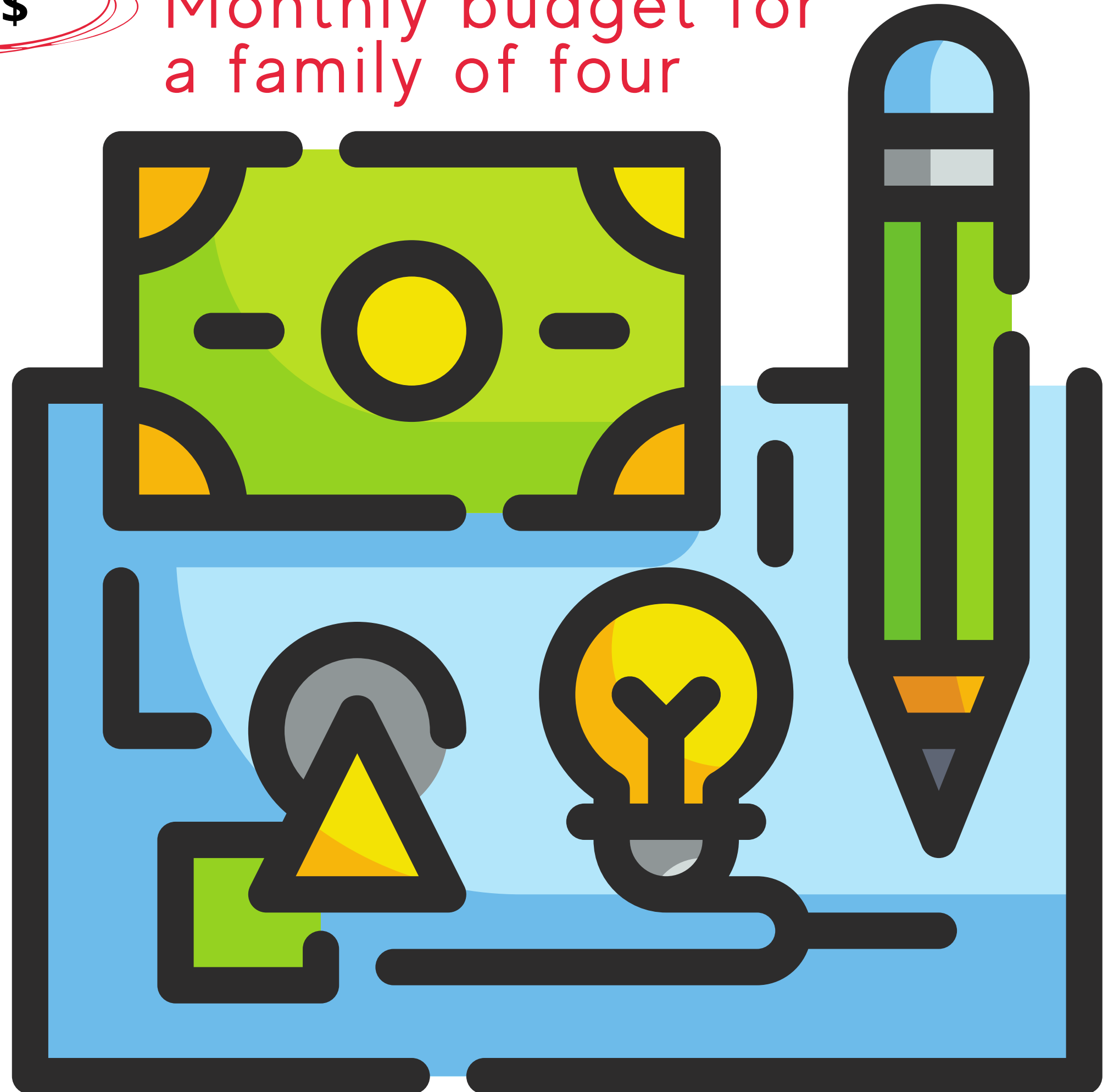
2000

Global Mall Items

Food 	Rice and beans once or twice a day	Beans, vegetables, and rice daily, plus meat/dairy about once a month	A variety of fast foods 3 times a day, such as hamburger, chicken sandwich, tacos, French fries, soda, and ice cream	High quality food 3 times a day, including eggs, meat, fish, fresh vegetables, fresh imported fruit, bread, milk, imported cheese, chocolate, and other desserts
	\$75	\$150	\$300	\$500
Water 	Untreated water collected from a lake and carried 2 miles by women and children	Untreated water collected from the village well 9 months a year, and from a river the other 3 months	Purified water brought by government trucks every week	Indoor plumbing with hot and cold running water, showers, and bathtubs
	No cost	\$75	\$200	\$400
Heat / Fuel 	Firewood cut from local forest, sometimes hours away; work done mostly by children	Coal purchased in the market and used for cooking and heating	Oil used for gasoline, cooking, and heating	Solar panels using the sun's energy to heat home and water; natural gas for cooking
	No cost	\$125	\$300	\$700
Education	Crowded school 1 hour away through grade 5 (free, but you must buy a uniform to attend)	Elementary, middle school, and high school located in the local village	K-12 education with college an option for most people	Graduate degree preparing people for professions such as doctor, lawyer, professor
	\$50	\$125	\$400	\$900
Health Care	Walk or be carried 10 hours to the nearest village clinic, where they have a dozen medicines	Good medical care available in a city 1 hour away by bus	High-quality health care and hospital anytime you are sick and for yearly checkups	High quality health care, including elective surgery such as knee repair and cosmetic and laser eye surgery
	\$75	\$200	\$500	\$700
Luxury Items	Radio running on batteries	Small color television in your house	Refrigerator and air conditioning in your house	Hawaii surf vacation, airline ticket, and hotel
	\$50	\$150	\$350	\$700

\$\$

Monthly budget for a family of four



Active Listening, Respectful Dialogue

STEP IN

What do you think this person might feel, believe, know, or experience? What was your strategy during this simulation?





















STEP OUT

What else would you like or need to learn to understand this person's perspective better? What questions do you still have?

STEP BACK

What did you notice about how your own perspective affects how you take somebody else's perspective?

LIFE ON THE FOUR INCOME LEVELS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
DRINKING WATER				
TRANSPORTATION				
COOKING				
EATING				
SLEEPING				



Water



Transport



Cooking



Plate of food



LEVEL 1

\$2





















Source: Dollar Street

LEVEL 1. You start on Level 1 with \$1 per day. Your five children have to spend hours walking barefoot with your single plastic bucket, back and forth, to fetch water from a dirty mud hole an hour's walk away. On their way home they gather firewood, and you prepare the same gray porridge that you've been eating at every meal, every day, for your whole life—except during the months when the meager soil yielded no crops and you went to bed hungry. One day your youngest daughter develops a nasty cough. Smoke from the indoor fire is weakening her lungs. You can't afford antibiotics, and one month later she is dead. This is extreme poverty. Yet you keep struggling on. If you are lucky and the yields are good, you can maybe sell some surplus crops and manage to earn more than \$2 a day, which would move you to the next level. Good luck! (Roughly 1 billion people live like this today.)



Factfulness

LIFE ON THE FOUR INCOME LEVELS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
DRINKING WATER				
TRANSPORTATION				
COOKING				
EATING				
SLEEPING				



Water



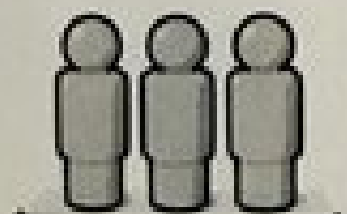
Transport



Cooking



Plate of food



\$2 LEVEL 2 \$8

Source: Dollar Street

LEVEL 2. You've made it. In fact, you've quadrupled your income and now you earn \$4 a day. Three extra dollars every day. What are you going to do with all this money? Now you can buy food that you didn't grow yourself, and you can afford chickens, which means eggs. You save some money and buy sandals for your children, and a bike, and more plastic buckets. Now it takes you only half an hour to fetch water for the day. You buy a gas stove so your children can attend school instead of gathering wood. When there's power they do their homework under a bulb. But the electricity is too unstable for a freezer. You save up for mattresses so you don't have to sleep on the mud floor. Life is much better now, but still very uncertain. A single illness and you would have to sell most of your possessions to buy medicine. That would throw you back to Level 1 again. Another three dollars a day would be good, but to experience really drastic improvement you need to quadruple again. If you can land a job in the local garment industry you will be the first member of your family to bring home a salary. (Roughly 3 billion people live like this today.)



Factfulness

LIFE ON THE FOUR INCOME LEVELS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
DRINKING WATER				
TRANSPORTATION				
COOKING				
EATING				
SLEEPING				



Water



Transport



Cooking























Plate of food



LEVEL 3. Wow! You did it! You work multiple jobs, 16 hours a day, seven days a week, and manage to quadruple your income again, to \$16 a day. Your savings are impressive and you install a cold-water tap. No more fetching water. With a stable electric line the kids' homework improves and you can buy a fridge that lets you store food and serve different dishes each day. You save to buy a motorcycle, which means you can travel to a better-paying job at a factory in town. Unfortunately you crash on your way there one day and you have to use money you had saved for your children's education to pay the medical bills. You recover, and thanks to your savings you are not thrown back a level. Two of your children start high school. If they manage to finish, they will be able to get better-paying jobs than you have ever had. To celebrate, you take the whole family on its first-ever vacation, one afternoon to the beach, just for fun. (Roughly 2 billion people live like this today.)



LIFE ON THE FOUR INCOME LEVELS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
DRINKING WATER				
TRANSPORTATION				
COOKING				
EATING				
SLEEPING				



Water



Transport



Cooking



Plate of food



\$32 LEVEL 4

Source: Dollar Street







LEVEL 4. You have more than \$32 a day. You are a rich consumer and three more dollars a day makes very little difference to your everyday life. That's why you think three dollars, which can change the life of someone living in extreme poverty, is not a lot of money. You have more than twelve years of education and you have been on an airplane on vacation. You can eat out once a month and you can buy a car. Of course you have hot and cold water indoors.

But you know about this level already. Since you are reading this book, I'm pretty sure you live on Level 4. I don't have to describe it for you to understand. The difficulty, when you have always known this high level of income, is to understand the huge differences between the other three levels. People on Level 4 must struggle hard not to misunderstand the reality of the other 6 billion people in the world. (Roughly 1 billion people live like this today.)

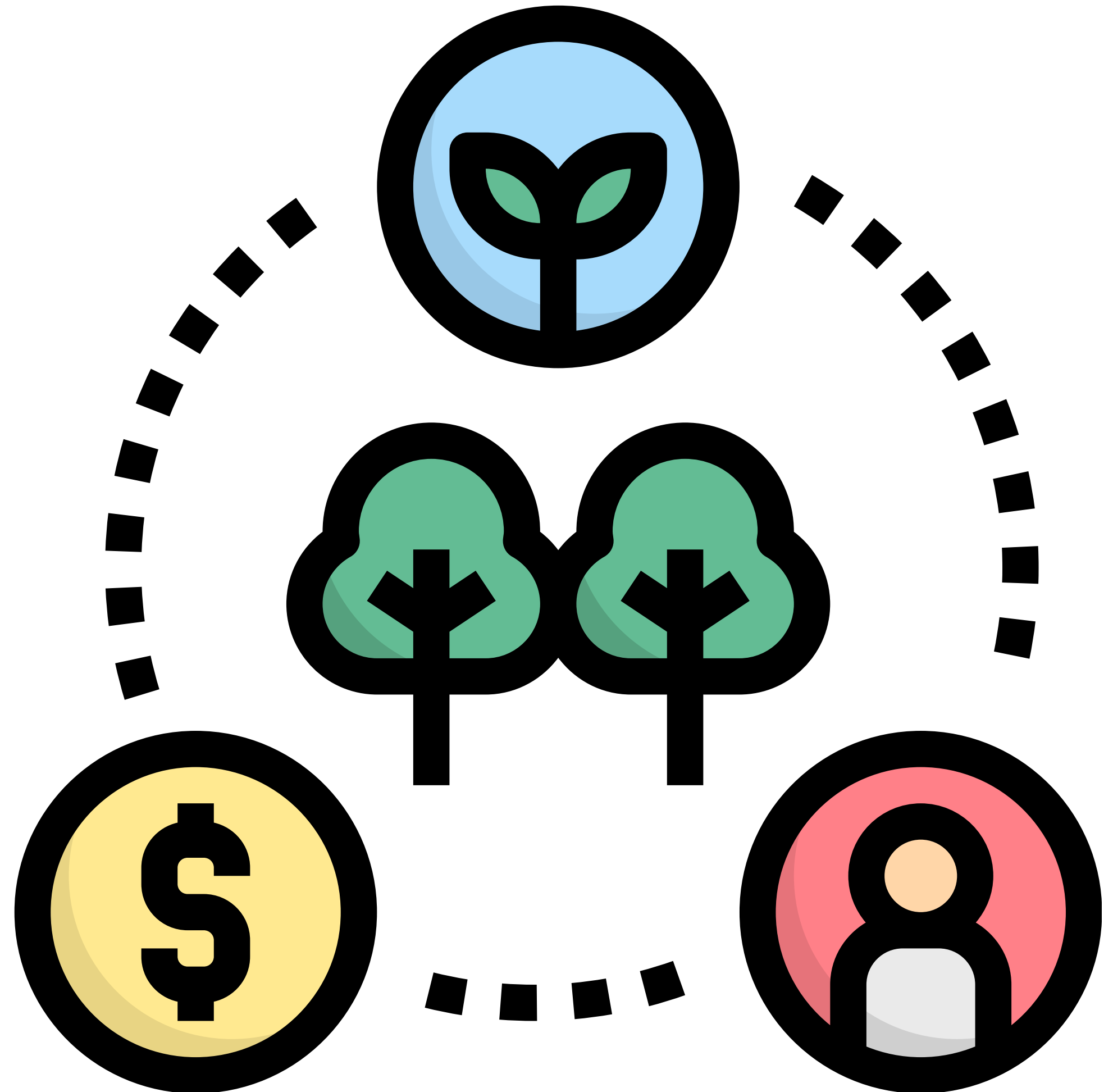


Factfulness

Global Mall Impacts

Food 	Rice and beans <u>Environmental:</u> locally grown, no pesticides <u>Social:</u> lack of essential vitamins results in more malnutrition	Beans, veggies, meat <u>Environmental:</u> may be locally grown/raised, may include some pesticide use <u>Social:</u> better nutritional value	Fast foods <u>Environmental:</u> beef production means high water/feed use, deforestation <u>Social:</u> convenient, but unhealthy, high fat related to heart disease	High quality food <u>Environmental:</u> beef production, imports use more energy, chemicals, pollution <u>Social:</u> healthy but cash crops take away from staple food production
Water 	Untreated water <u>Environmental:</u> use of lake, stream water degrades habitat <u>Social:</u> disease, death, poverty (time spent away from school, work, etc.)	Village well <u>Environmental:</u> high use degrades aquifer <u>Social:</u> disease, death, poverty	Water trucked in <u>Environmental:</u> truck uses fuel, pollution, global warming <u>Social:</u> less disease, more convenient	Indoor plumbing <u>Environmental:</u> energy use, metal, and plastic for pipes <u>Social:</u> fast, easy, safe, convenient
Heat / Fuel 	Firewood <u>Environmental:</u> deforestation, global warming, desertification <u>Social:</u> poverty (time away from school, work, food production), smoke linked to lung disease	Coal <u>Environmental:</u> air pollution, mining <u>Social:</u> easier to use than firewood, but may result in lung disease if cooking area is not ventilated, miners susceptible to lung disease	Oil/Gas <u>Environmental:</u> oil drilling, spills, pipeline impacts, pollution, loss of habitat, global warming <u>Social:</u> convenient, but results in dependency on oil/gas supplies	Solar panels <u>Environmental:</u> clean renewable source <u>Social:</u> convenient, expensive to install but saves money in the long run, no health risks
Education 	School: 1-hour walk <u>Environmental:</u> lack of education related to population growth <u>Social:</u> illiteracy, few job skills, poverty	School in village <u>Environmental:</u> educated people have resources and knowledge to protect environment <u>Social:</u> allows access to jobs, money, health care	K-12 education <u>Environmental:</u> better able to protect resources, but may consume more <u>Social:</u> better jobs, higher income, health care, quality of life	Graduate school <u>Environmental:</u> better able to protect resources, but high level of consumption <u>Social:</u> better jobs, quality of life, but may be more prone to stress
Health Care 	Clinic 10 hours away <u>Environmental:</u> high mortality linked to high birth rates, population growth impacts environment <u>Social:</u> illness, death, disease transmission, poverty	Medical care 1 hr away <u>Environmental:</u> low mortality linked to lower birth rates <u>Social:</u> less disease, lower mortality, may not get treatment except in critical situation	Hospital <u>Environmental:</u> low mortality linked to lower birth rates <u>Social:</u> less illness, disease, etc., but with high financial cost	Elective surgery <u>Environmental:</u> may use many resources, medicine, equipment <u>Social:</u> cure non-life threatening problems, increase quality of life and social status
Luxury Items 	Radio <u>Environmental:</u> energy, batteries toxic to soil <u>Social:</u> access to information, enjoyable	Color TV <u>Environmental:</u> energy resources to manufacture <u>Social:</u> entertainment, access to information	Refrigerator <u>Environmental:</u> global warming, resources to manufacture, energy <u>Social:</u> better health, fresh food	Surf vacation <u>Environmental:</u> air travel contributes to global warming, heavy use of resources <u>Social:</u> lower stress, enjoyable, but

Social & Environmental Costs of Choices



Active Listening, Respectful Dialogue

STEP IN

When you were choosing what to buy, did you think about the environmental & social impacts? Why or why not?

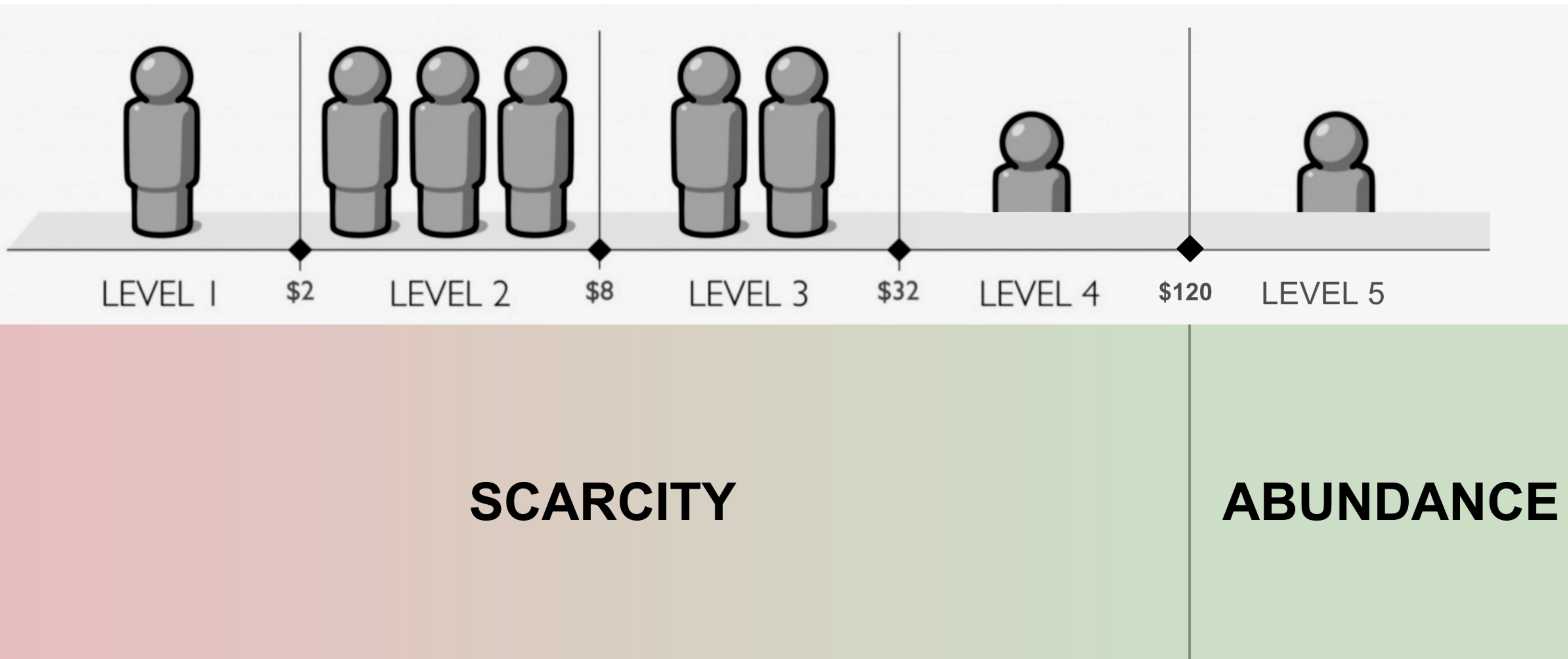
STEP OUT

What have you learned about how different economic choices affect social and environmental factors?

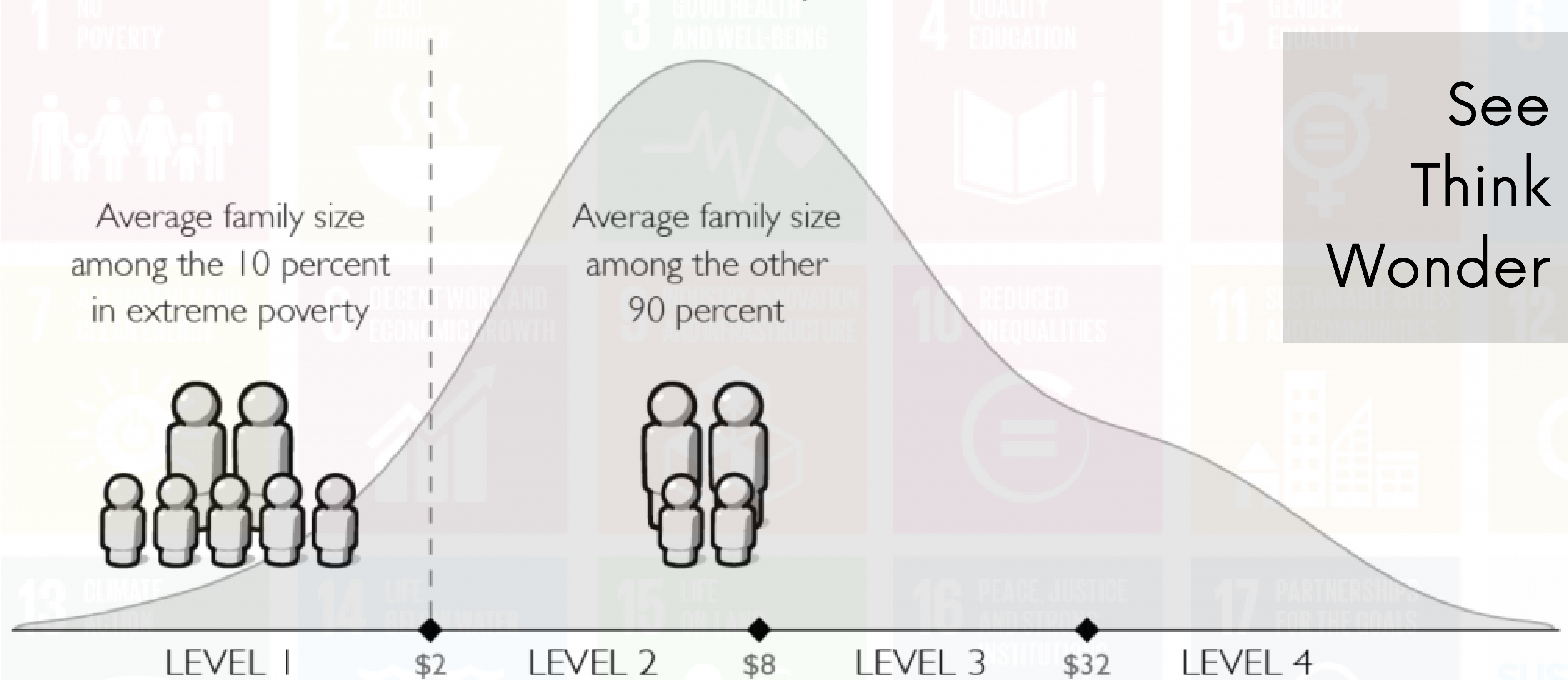
STEP BACK

Is economic inequality fair? Is it just a reality of life? Why or why not?
How important do you think economic inequality is toward solving other SDGs?

Is this a more accurate visualization?



AVERAGE FAMILY SIZE BY INCOME, 2017



Average family size among the 10 percent in extreme poverty

Average family size among the other 90 percent

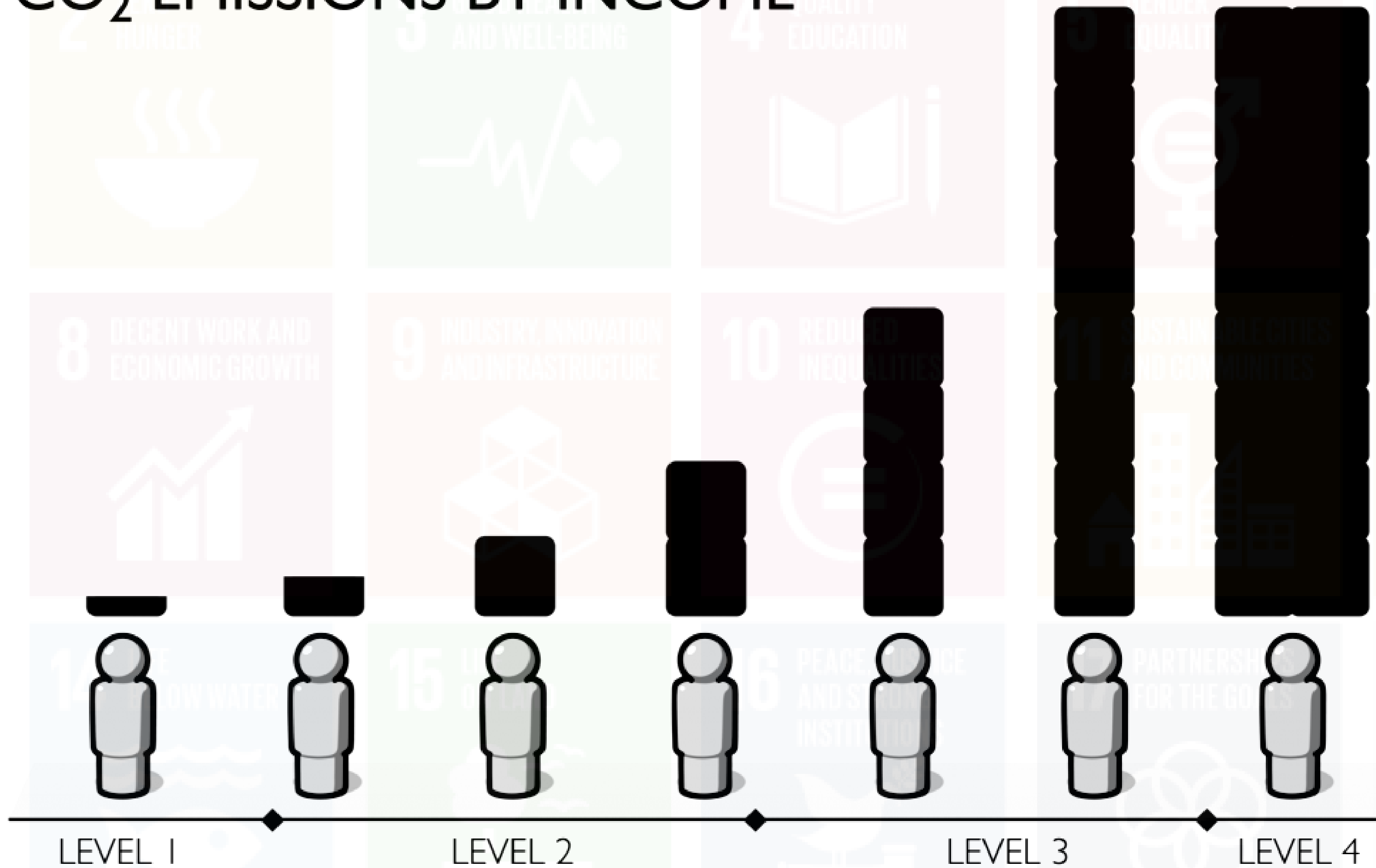
See Think Wonder

\$ per day adjusted for price differences.

Source: Gapminder[30] based on USAID-DHS[1], UNICEF-MICS & PovcalNet

CO₂ EMISSIONS BY INCOME

Think
Feel
Care

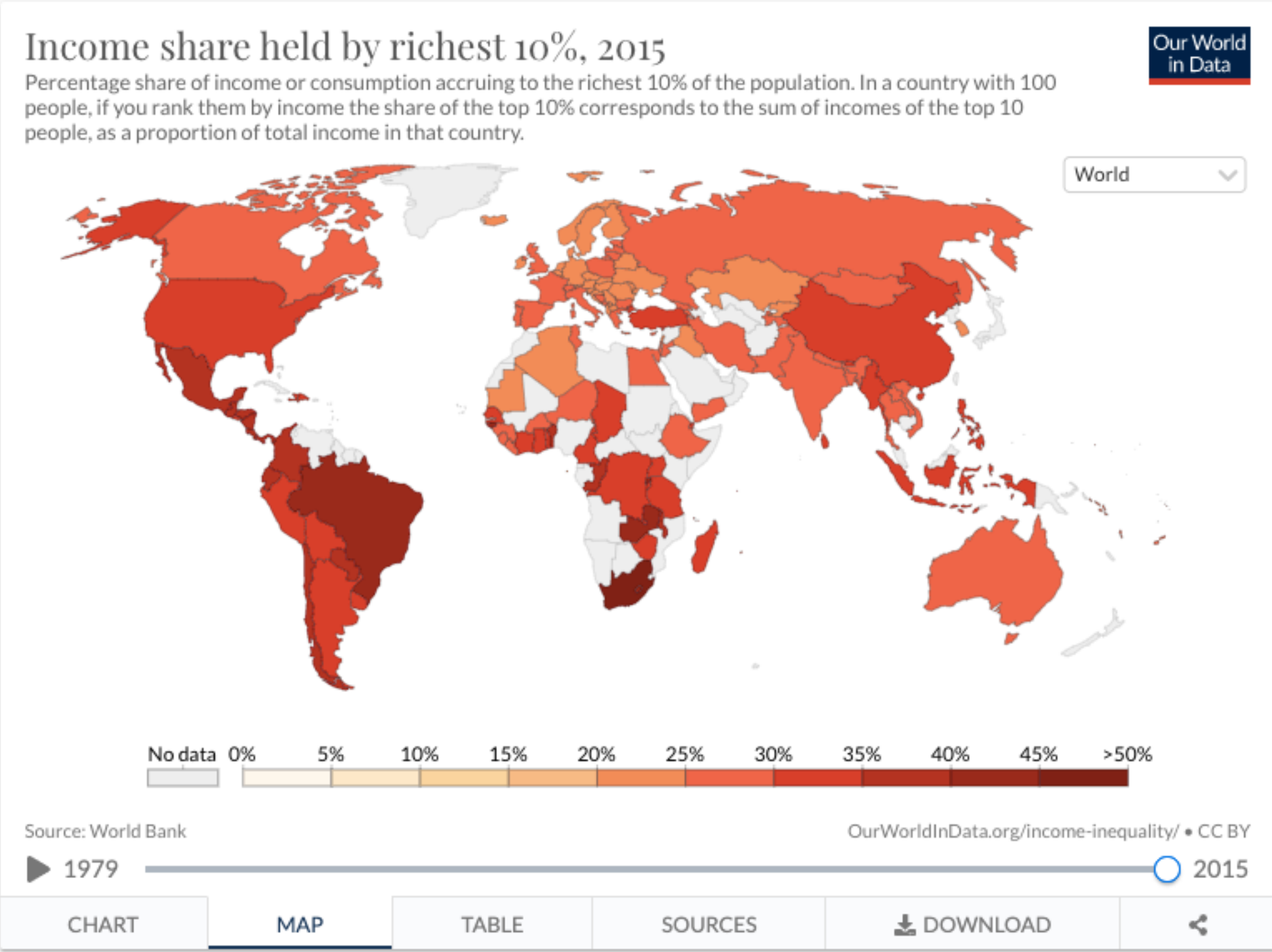


Source: Gapminder[51] based on CDIAC

Top income shares

This chart shows the share of total income going to the top income earners.

Shown is for each country what share of total incomes goes to the top 10%.



Extension: Our World in Data

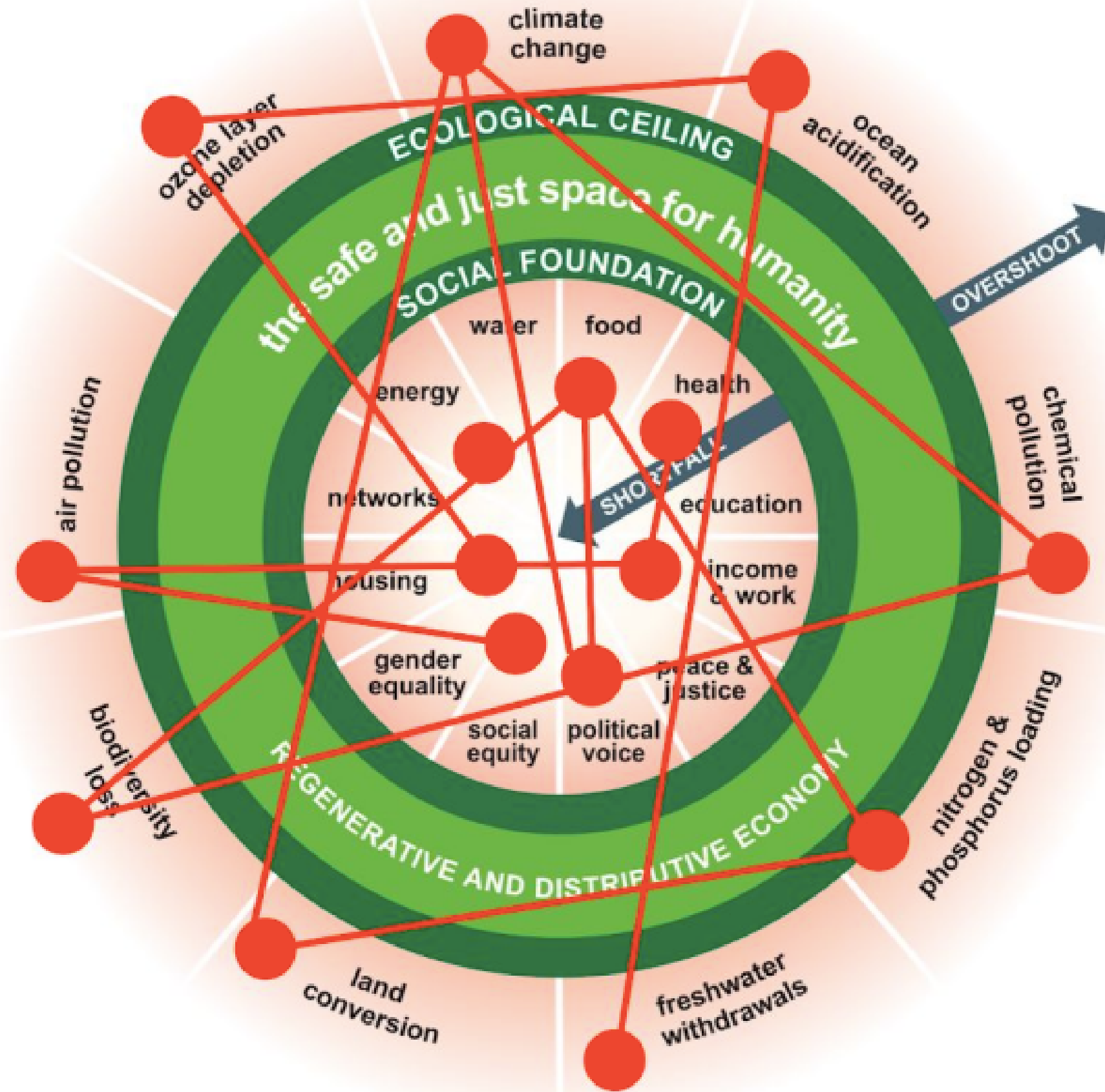
Part 2 (next session)

Rethinking Economics:

Adapting to the Social & Environmental

Consequences of Economic Choices

Part 2
Doughnut Economics:
Why,
What,
How

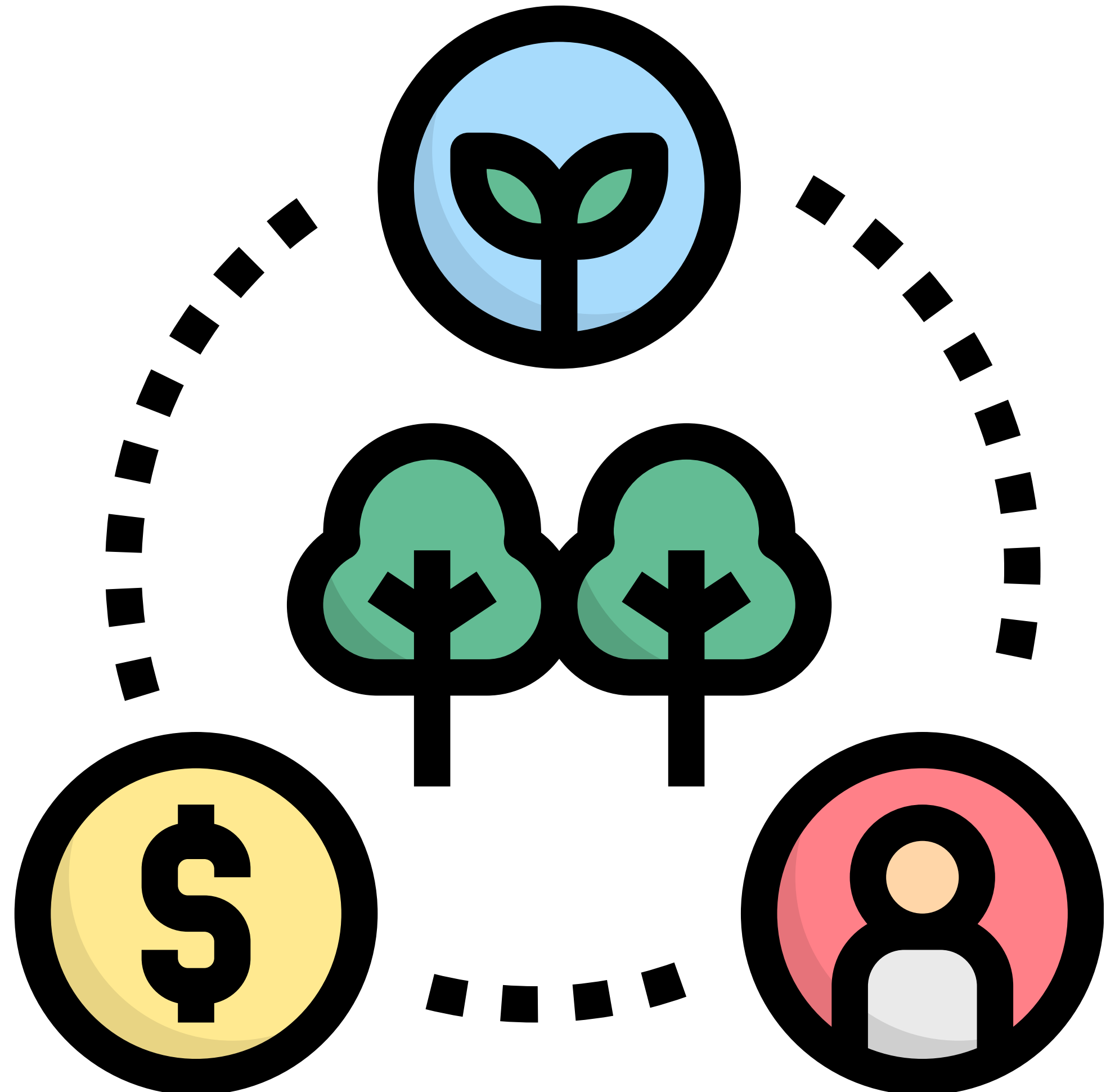


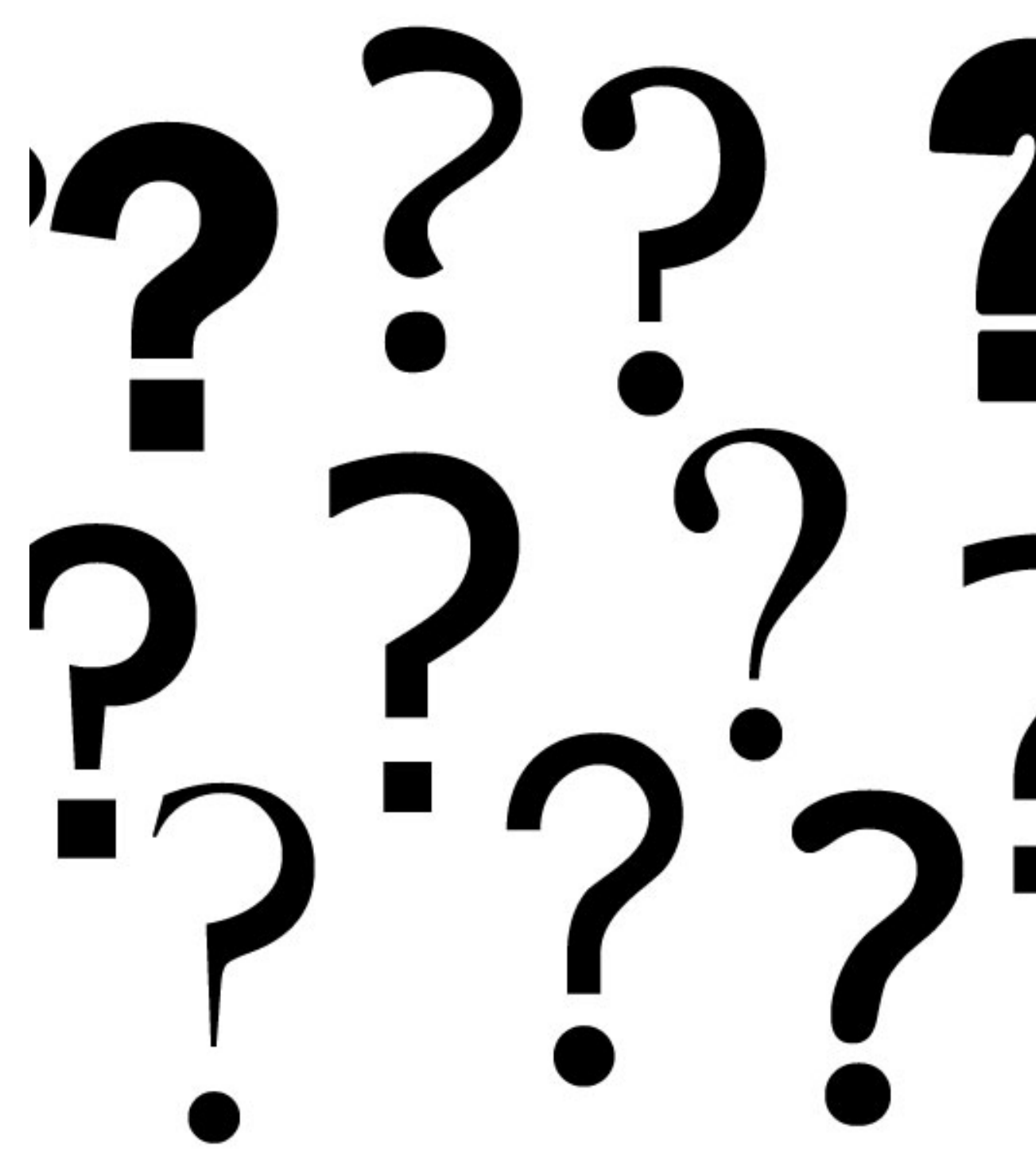
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Social & Environmental Costs of Choices

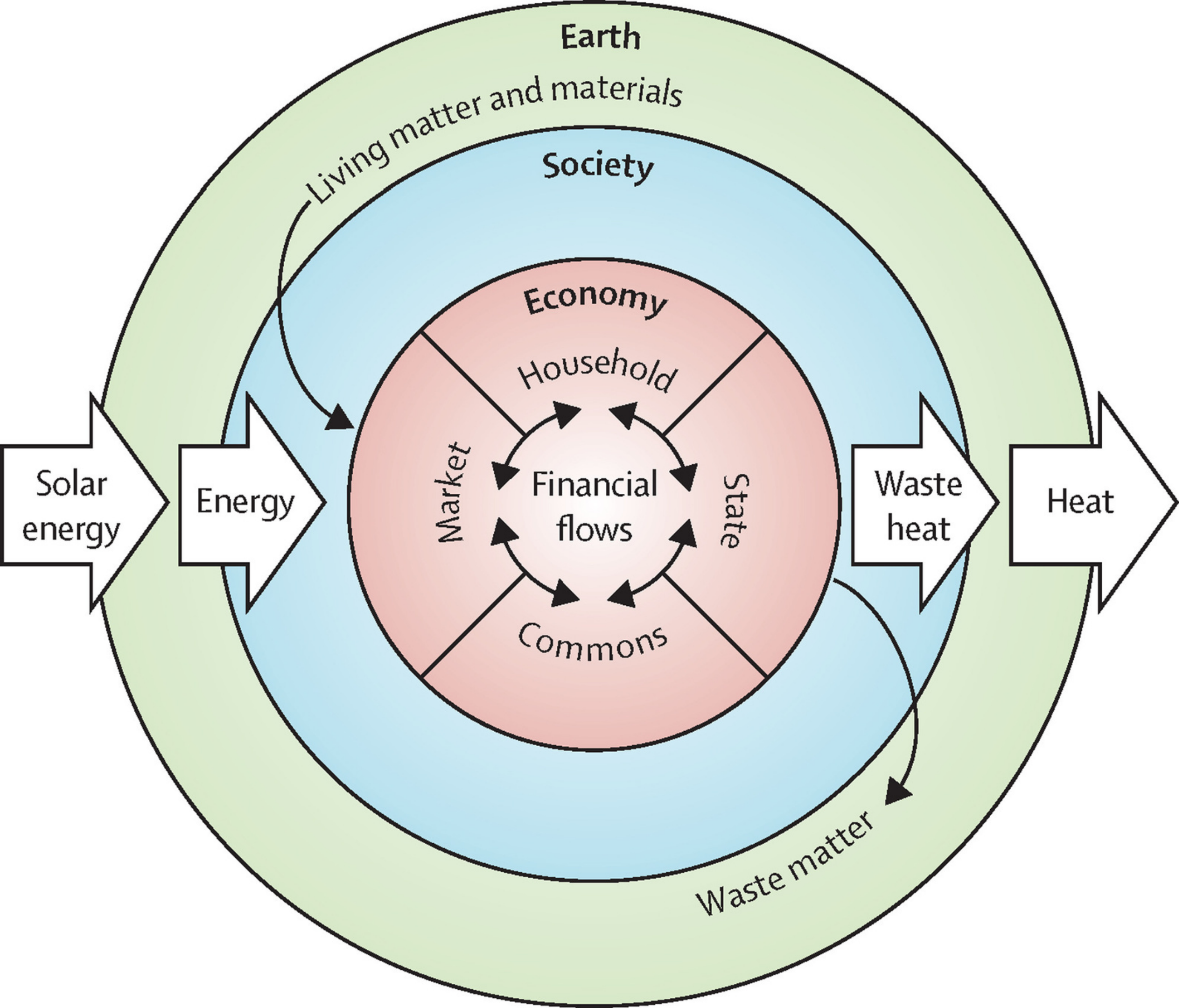




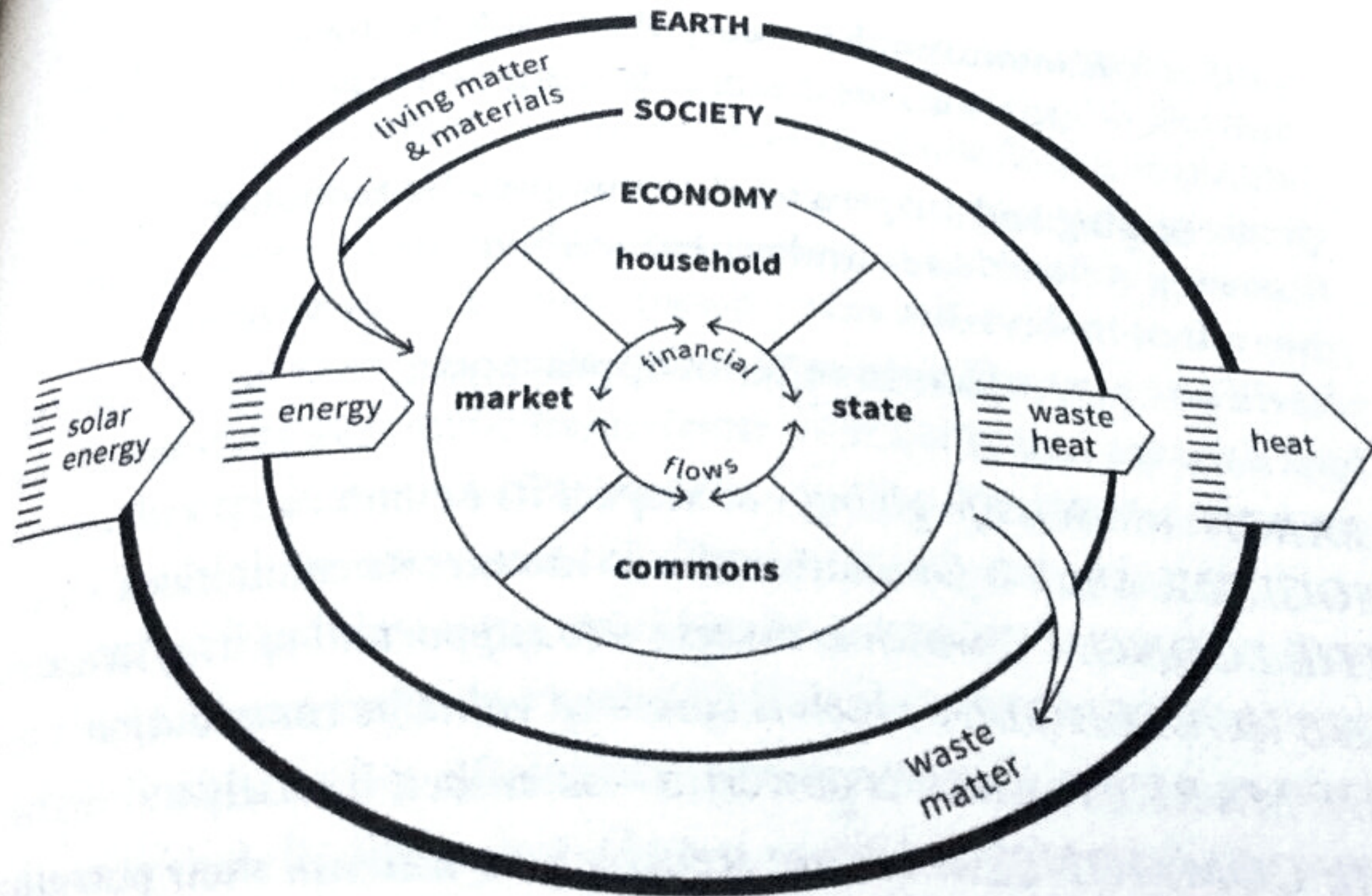
Is it time to end our fixation with GDP & Growth?

The Limitations of GDP

How might you envision alternative measure of well-being & describe what it includes?



What might be going on here that is different than focusing solely on GDP?



The Embedded Economy, which nests the economy within society and within the living world, while recognising the diverse ways in which it can meet people's needs and wants.

The Doughnut

This is the Doughnut.

The goal of the Doughnut is to meet the needs of all within the means of living planet.

In other words, to live in the safe and just space for humanity.



First Impressions

Parts

Purposes

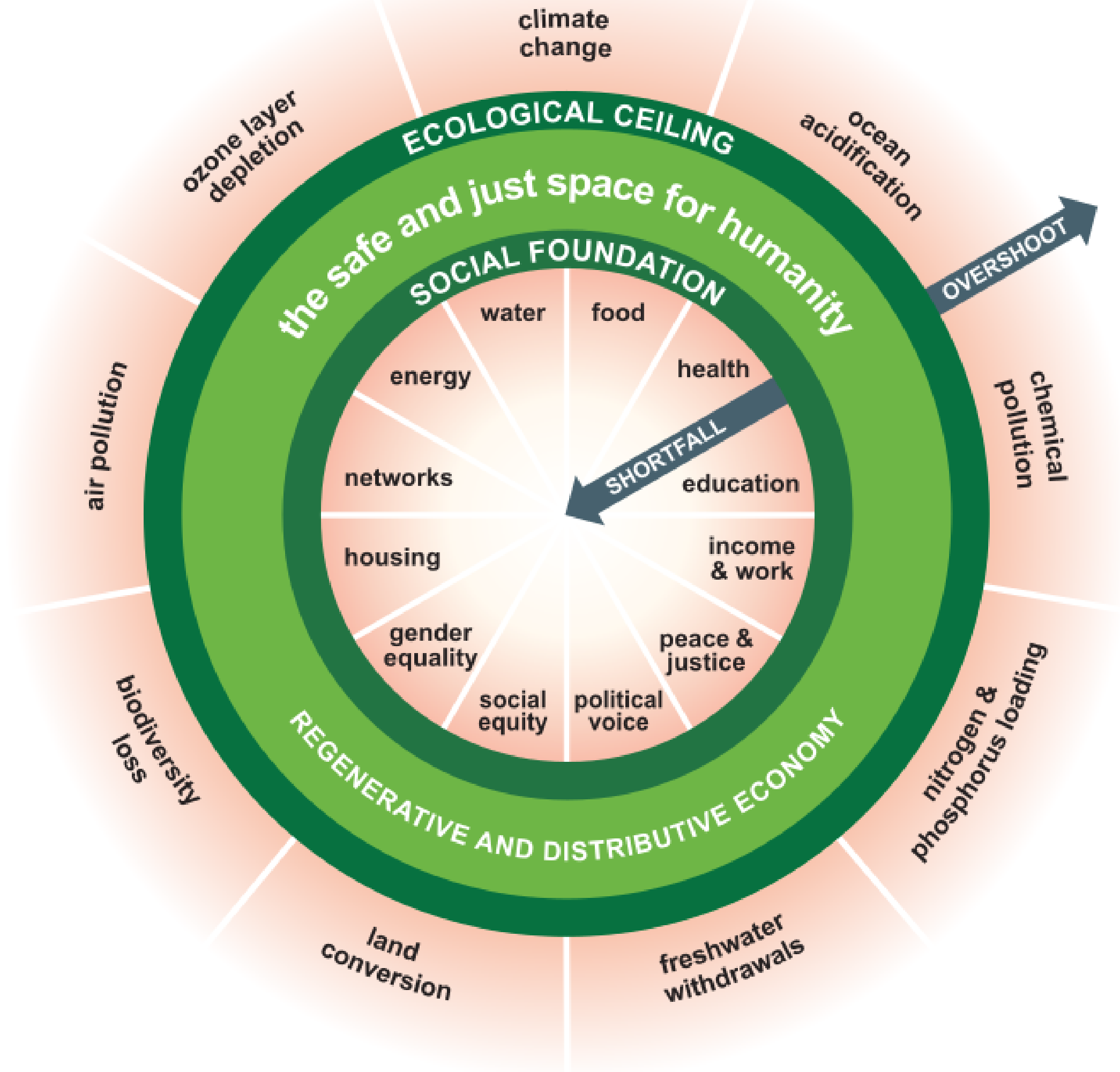
Complexities

What are the various parts and components of this economic model or tool?

What might be the purpose of each of these parts and how do you think they were identified?

How do you see this economic model or tool being interconnected?

Why do you think this economic model or tool was created in contrast to what we've learned about GDP?

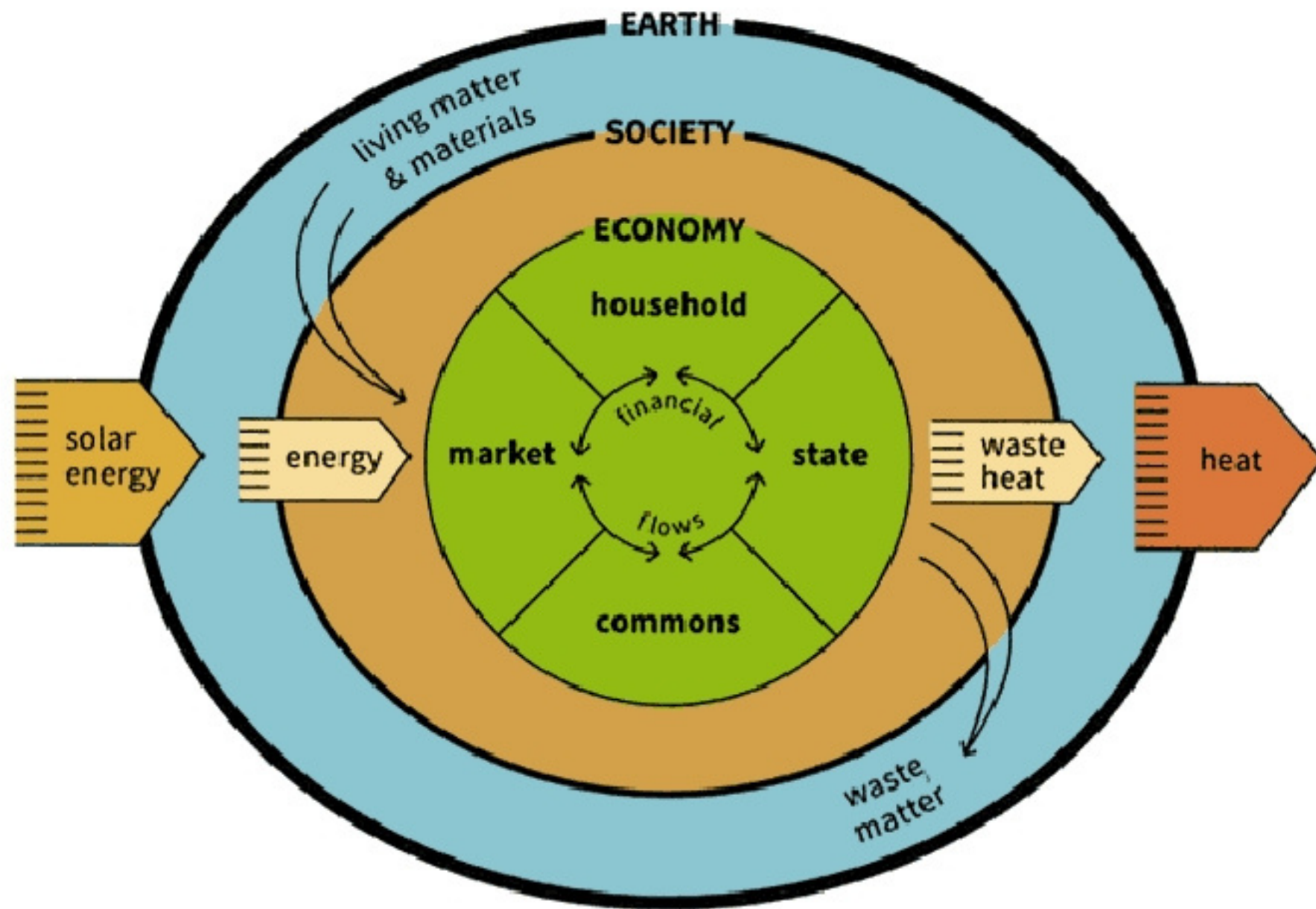


What is doughnut economics?

Kate Raworth, 2017: Doughnut Economics

The Embedded Economy Model

This model is from Page 71 and is called the Embedded Economy model



The Doughnut Model

This model is from Page 44 and is called the Doughnut model

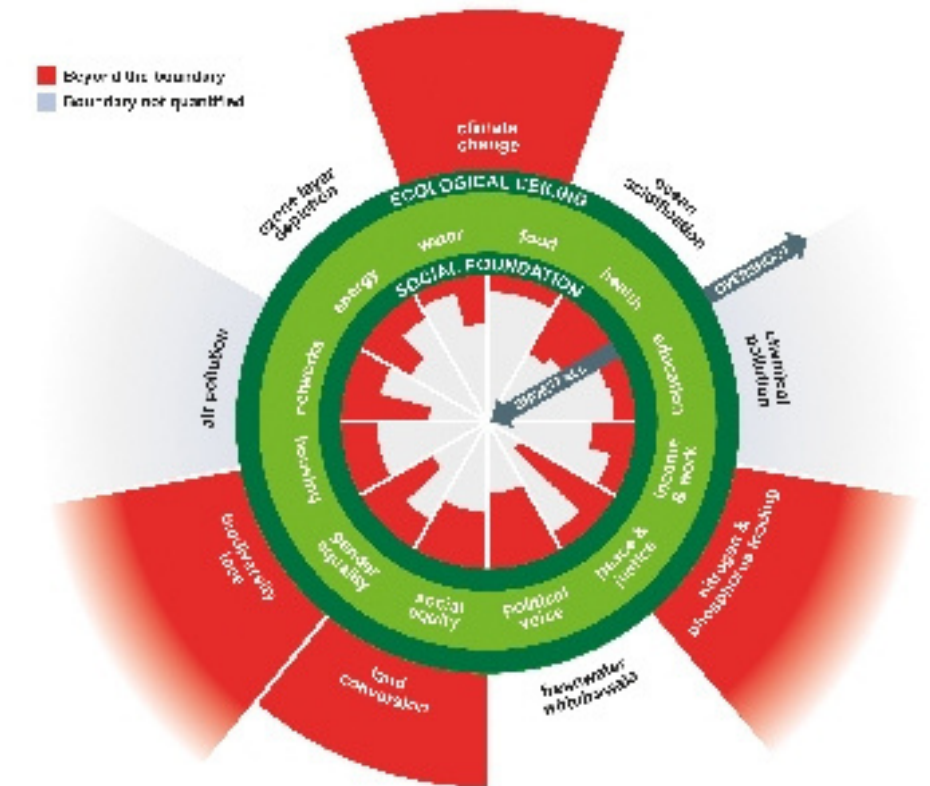
The Embedded Economy model is actually a good model of the whole earth as a collection of systems.

The Doughnut model at the right is like a Balanced Scorecard for the planet.

The planetary boundaries (exceeding the outer ring of the doughnut) show the damage that is being done to the planet.

The inner ring represents the minimum needed for the people on earth and their well-being. Falling short of the inner ring means that people are not in a safe place.

The inner ring is roughly aligned to the United Nations Sustainable Development Goals.





climate change
freshwater use

ENVIRONMENTAL CHANGE

making the world safe and just space for humanity

SOCIAL FOUNDATION

food water income

health education resilience

gender equality voice

social equity jobs

energy

INCLUSIVE AND SUSTAINABLE ECONOMIC DEVELOPMENT

women's empowerment

labor force

b

Seven ways to think like a 21st century economist

Seven Ways to Think:	From 20th-Century Economics	To 21st-Century Economics
1. Change the Goal	GDP	the Doughnut
2. See the Big Picture	self-contained market	embedded economy
3. Nurture Human Nature	rational economic man	social adaptable humans
4. Get Savvy with Systems	mechanical equilibrium	dynamic complexity
5. Design to Distribute	growth will even it up again	distributive by design
6. Create to Regenerate	growth will clean it up again	regenerative by design
7. Be Agnostic about Growth	growth addicted	growth agnostic

7 Ways to Think Like a 21st-Century Economist

1 minute videos

1. Change the goal: from GDP growth to the Doughnut

For over half a century, economists have fixated on GDP as the first measure of economic progress, but GDP is a false goal waiting to be ousted. The 21st century calls for a far more ambitious and global economic goal: meeting the needs of all within the means of the living planet. Draw that goal on the page and – odd though it sounds – it comes out looking like a doughnut. The challenge now is to create local to global economies that ensure that no one falls short on life’s essentials – from food and housing to healthcare and political voice – while safeguarding Earth’s life-supporting systems, from a stable climate and fertile soils to healthy oceans and a protective ozone layer. This single switch of purpose transforms the meaning and shape of economic progress: from endless growth to thriving in balance.



Discussion questions:

1. What is problematic about having GDP growth as the economic goal?
2. What do you think are the key factors that determine whether or not humanity can thrive within the Doughnut? (eg technology, inequality, population, governance...)

2. See the big picture: from self-contained market to embedded economy

In April 1947, an ambitious band of economists crafted a neoliberal story of the economy and, since Thatcher and Reagan came to power in the 1980s, it has dominated the international stage. Its narrative about the efficiency of the market, the incompetence of the state, the domesticity of the household and the tragedy of the commons, has helped to push many societies towards social and ecological collapse. It's time to write a new economic story fit for this century – one that sees the economy's dependence upon society and the living world. This story must recognize the power of the market—so let's embed it wisely; the partnership of the state—so let's hold it to account; the core role of the household—so let's value its contribution; and the creativity of the commons—so let's unleash their potential.



Discussion questions:

1. What role has the neoliberal story played in your country's economy over the last 30 years?
2. What do you think are essential elements of a new economic story?

3. Nurture human nature: from rational economic man to social adaptable humans

The character at the heart of 20th century economics—'rational economic man'—presents a pitiful portrait of humanity: he stands alone, with money in his hand, a calculator in his head, ego in his heart, and nature at his feet. Worse, when we are told that he is like us, we actually start to become more like him, to the detriment of our communities and the planet. But human nature is far richer than this, as emerging sketches of our new self-portrait reveal: we are reciprocating, interdependent, approximating people deeply embedded within the living world. It's time to put this new portrait of humanity at the heart of economic theory so that economics can start to nurture the best of human nature. Doing so will give us—all ten billion of us to come—a far greater chance of thriving together.

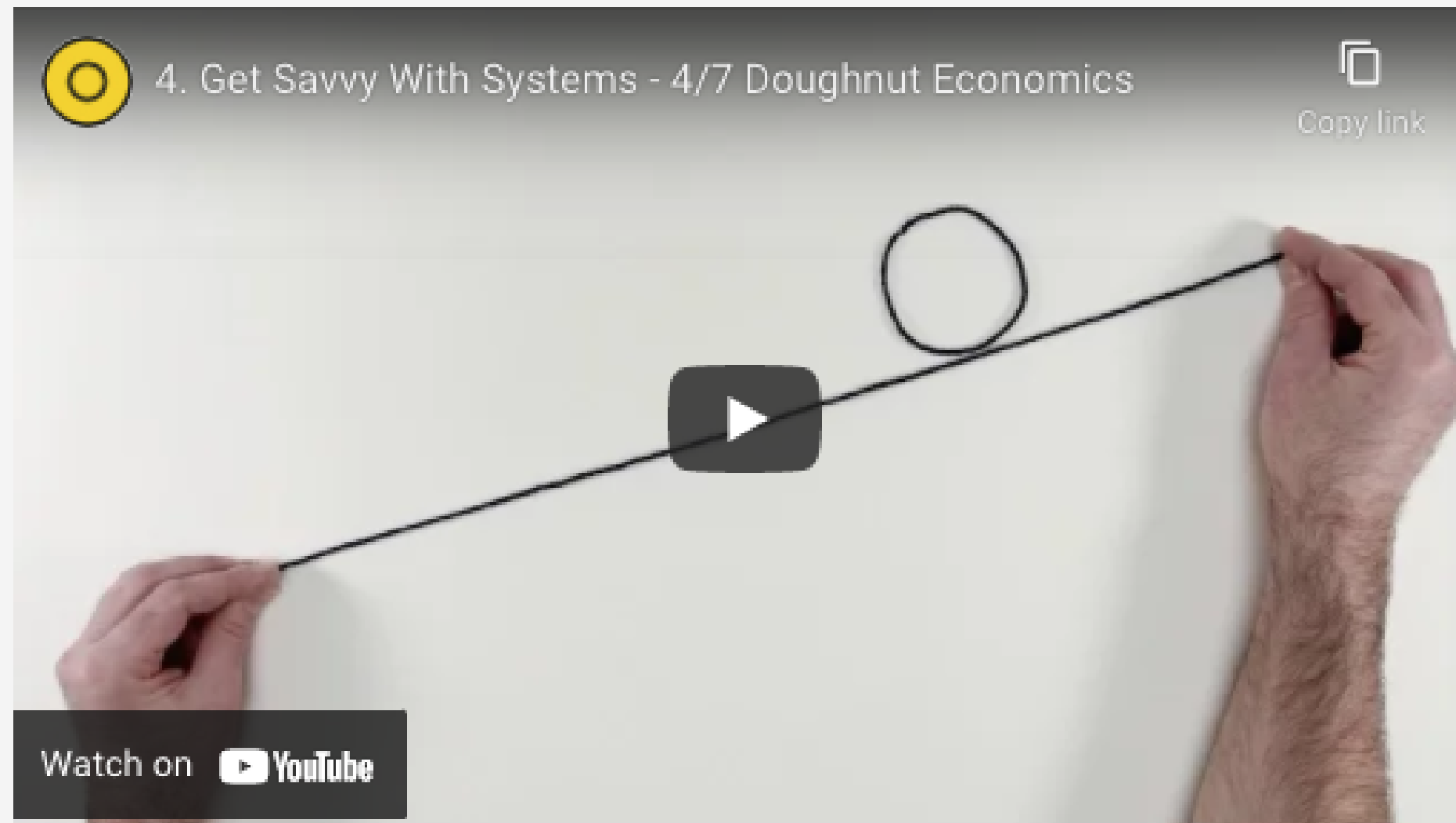


Discussion questions:

1. What do you think should be the core characteristics of humanity in a 21st century economic model?
2. If human behaviour is influenced by the models that we create of ourselves (ie the models are performative) then is it even useful to create such models of humanity in economic theory?
3. How can economic policies best nurture human nature, to bring out humanity's capacity for cooperation and mutual aid? What are some examples?

4. Get savvy with systems: from mechanical equilibrium to dynamic complexity

Economics has long suffered from physics envy: awed by the genius of Isaac Newton and his insights into the physical laws of motion, 19th century economists became fixated on discovering economic laws of motion. But these simply don't exist: they are mere models, just like the theory of market equilibrium which blinded economists to the looming financial crash of 2008. That's why 21st-century economists embrace complexity and evolutionary thinking instead. Putting dynamic thinking at the heart of economics opens up new insights for understanding the rise of the one percent and the boom and bust of financial markets. It's time to stop searching for the economy's elusive control levers (they don't exist), and instead start stewarding the economy as an ever-evolving system.



Discussion questions:

1. Does it make sense to talk of 'economic laws'? (think: laws of supply and demand, law of diminishing returns)
2. What are some examples of tipping points and feedback loops in the economy?
3. If the economy is a complex system that can't be controlled but only stewarded, what is the role of the economist? What are the skills required to be a good economist?

5. Design to distribute: from 'growth will even it up again' to distributive by design

In the 20th century economic theory whispered a powerful message when it comes to inequality: it has to get worse before it can get better, and growth will eventually even things up. But extreme inequality, as it turns out, is not an economic law or necessity: it is a design failure. Twenty-first century economists recognize that there are many ways to design economies to be far more distributive of value among those who help to generate it. And that means going beyond redistributing income to pre-distributing wealth, such as the wealth that lies in controlling land, enterprise, and the power to create money.



Discussion questions:

1. What policies could make an economy distributive by design?
2. What are some options for housing and land ownership?
3. What are some options for money creation?
4. What are some options for business ownership?
5. Where are these kinds of policies in practice today?
6. What are their effects and what challenges might they raise?

6. Create to regenerate: from 'growth will clean it up again' to regenerative by design

Economic theory has long portrayed a clean environment as a luxury good, affordable only for the well-off—a view that says that pollution has to increase before it can decline, and (guess what), growth will eventually clean it up. But as with inequality there is no such economic law: environmental degradation is the result of degenerative industrial design. This century calls for economic thinking that unleashes the potential of regenerative design in order to create a circular, not linear, economy—and to restore ourselves as full participants in Earth's cyclical processes of life.

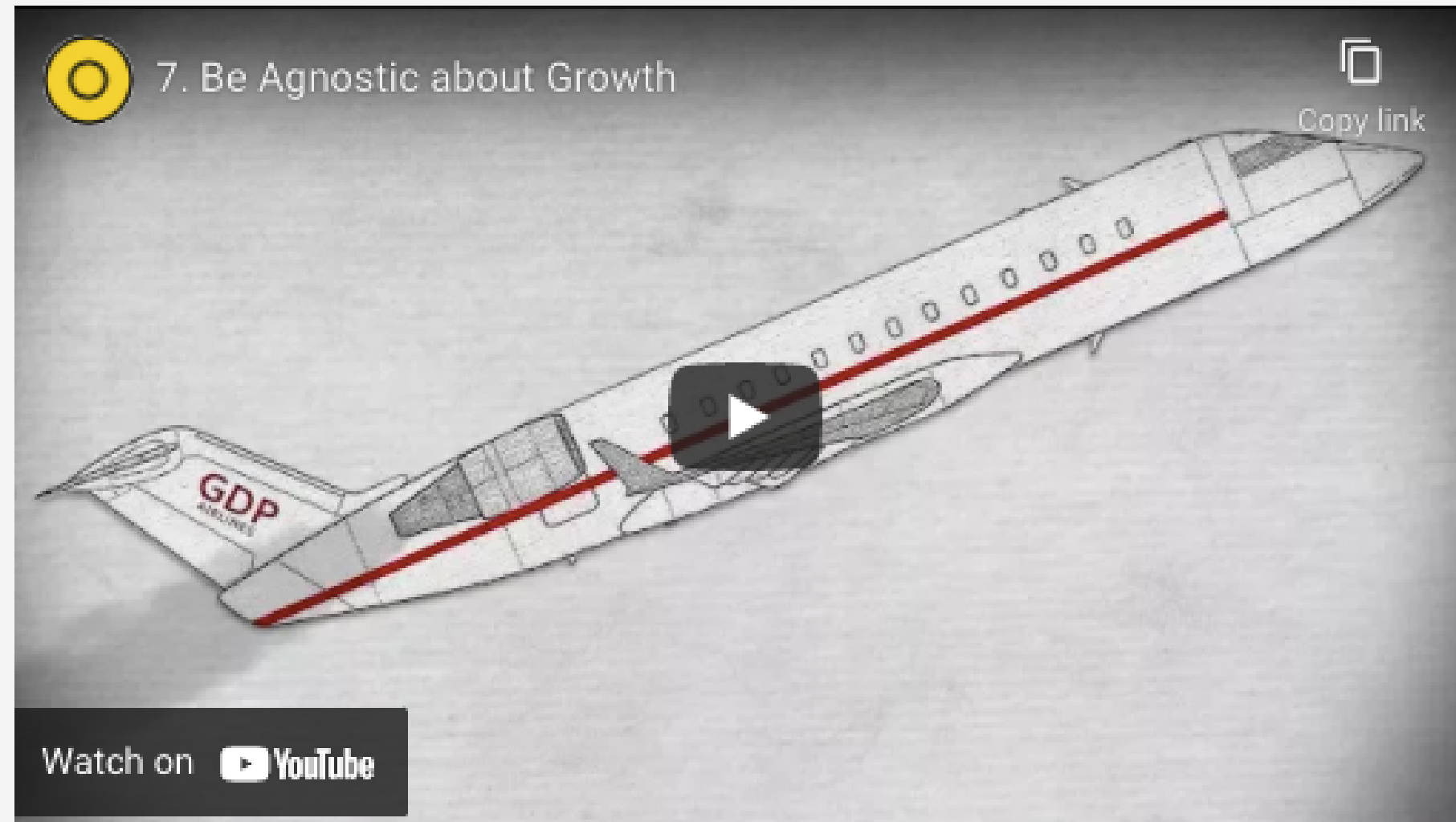


Discussion question:

1. Why doesn't growth clean up after itself?
2. What are the principles of a circular economy?
3. What are the opportunities and challenges of creating circular economies?

7. Be Agnostic about Growth: from growth-addicted to growth-agnostic

To the alarm of governments and financiers, forecasts for GDP growth in many high-income countries are flat-lining, opening up a crisis in growth-based economics. Mainstream economics views endless GDP growth as a must, but nothing in nature grows forever, and the economic attempt to buck that trend is raising tough questions in high-income but low-growth countries. That's because today we have economies that need to grow, whether or not they make us thrive. What we need are economies that make us thrive, whether or not they grow. That radical flip in perspective invites us to become agnostic about growth and to explore how our economies—which are currently financially, politically and socially addicted to growth—could learn to live with or without it.

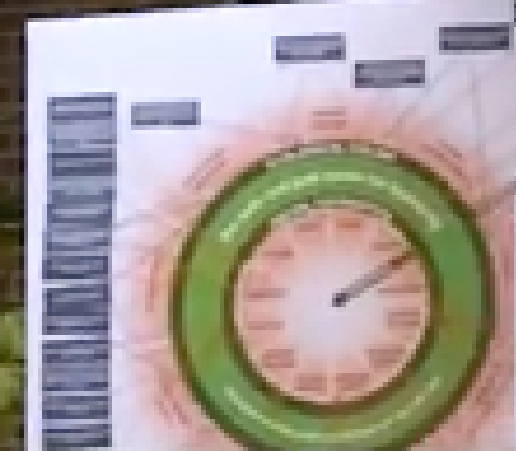


Discussion questions:

1. How are economies currently dependent upon endless growth (financially, politically, socially)?
2. Is it possible for an economy to become agnostic about growth?
3. Should GDP be measured at all?

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[Link](#)



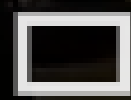
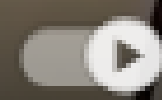
KATE RAWORTH

CITY OF AMSTERDAM

CIRCLE ECONOMY

Play (k)

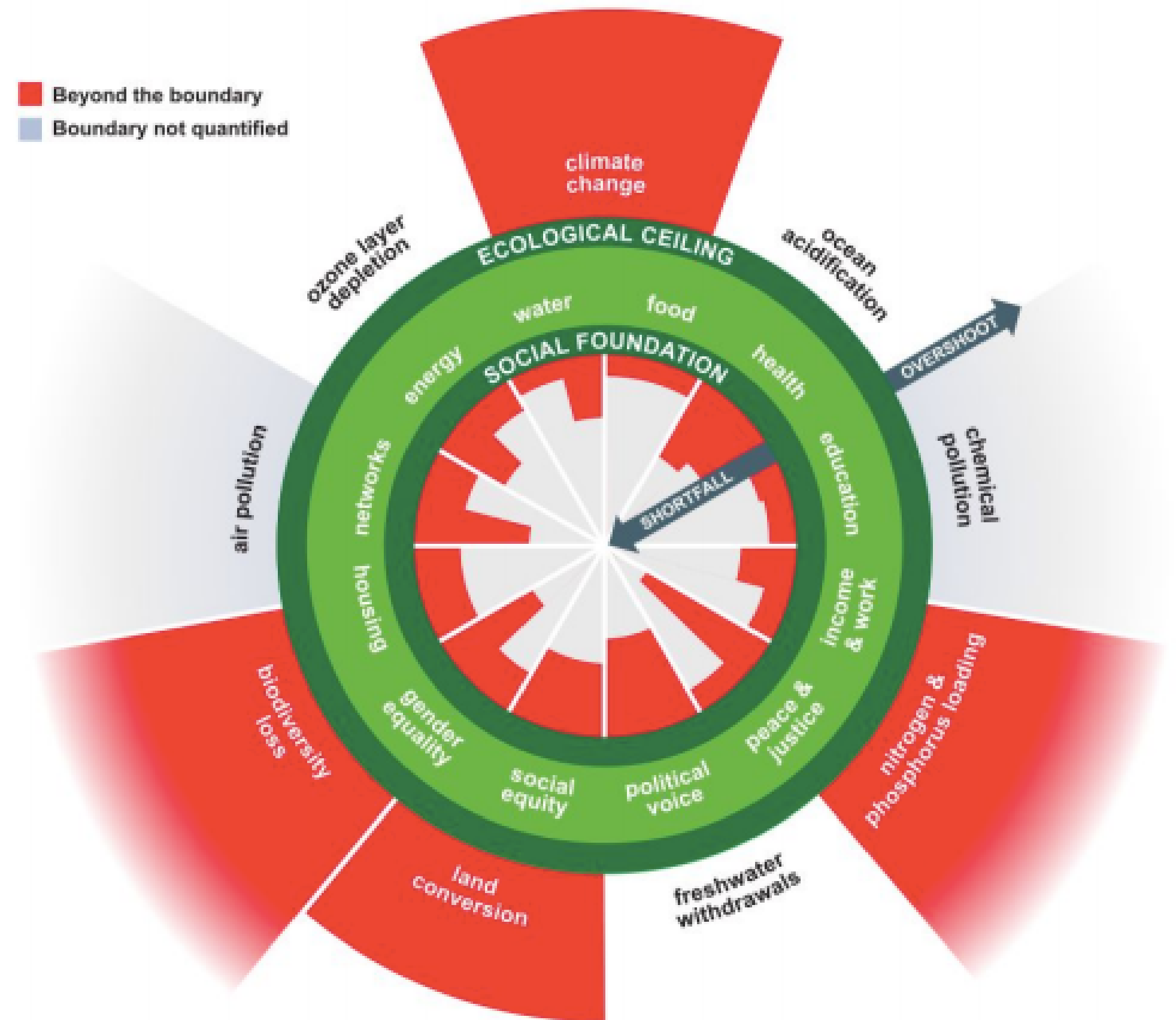
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Humanity's 'Selfie'

Humanity is currently living far outside the Doughnut, on both sides – social and ecological – as all of the red wedges show.

Billions of people still cannot meet their most essential needs while humanity has already overshoot multiple planetary boundaries.



Explore the 21 Dimensions

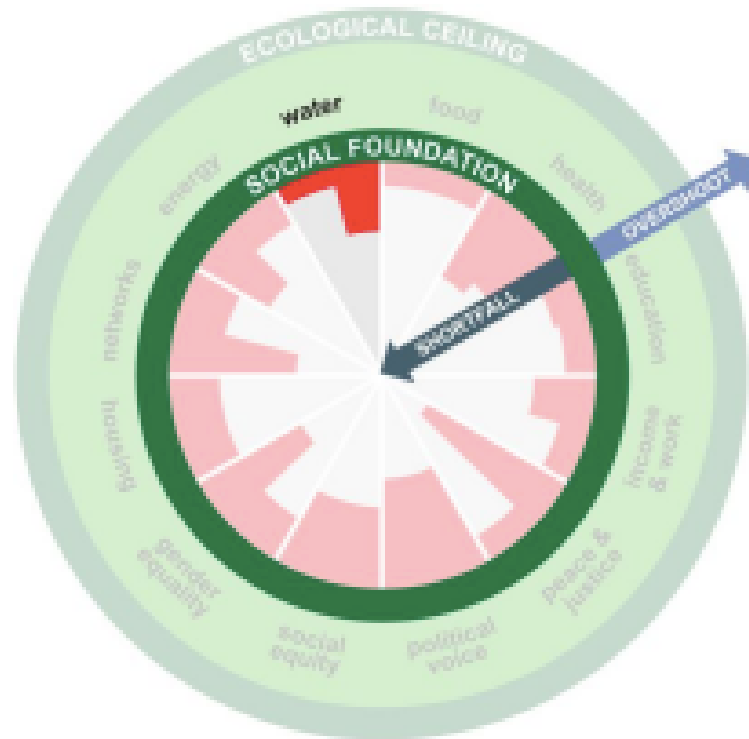
As you explore each of the 21 Dimensions of the Doughnut, some questions you might want to consider are:

- How does this issue show up in your country?
- What kinds of policies or actions could help tackle the issue?
- How is this dimension related to other Doughnut dimensions?



Water & Sanitation

Access to clean water and decent sanitation. Water is a daily essential for drinking, bathing, cooking, and washing clothes. However, billions of people still don't have access to safe drinking water, or to a hygienic toilet. This exacerbates the spread of diseases like cholera and diarrhea, which cause millions of preventable childhood deaths every year.

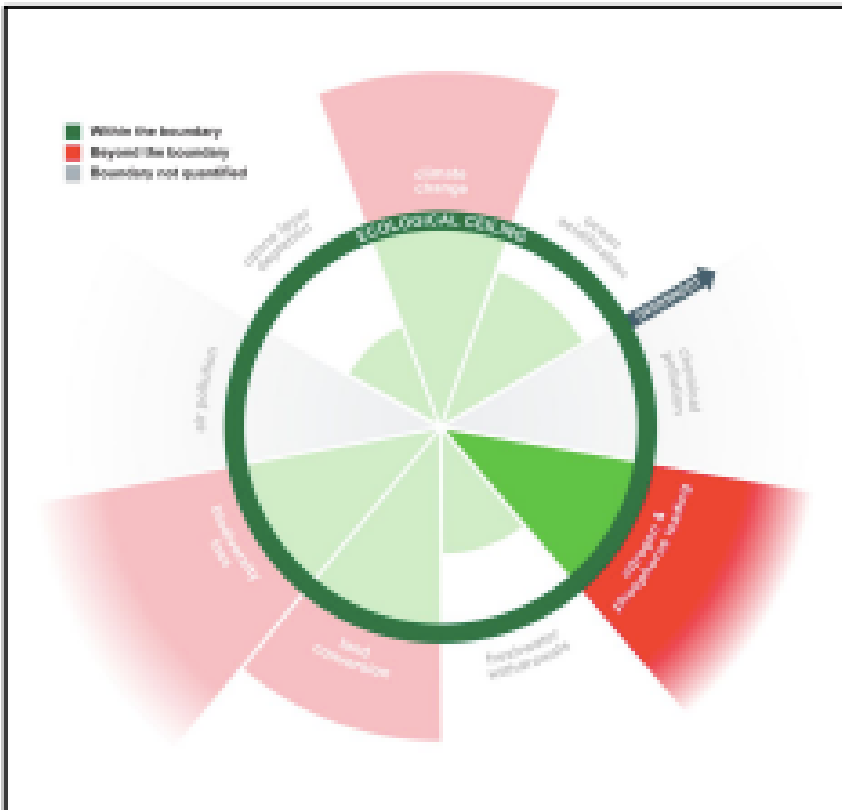


Illustrative Indicators	Population without access to improved drinking water	Population without access to improved sanitation
% of global population	9%	32%
Year and source	2015 (WHO / UNICEF)	2015 (WHO / UNICEF)



Nitrogen & phosphorus loading

Reactive nitrogen and phosphorus are widely used in agricultural fertilizers but only a small proportion of what is applied is actually taken up by crops. Most of the excess runs off into rivers, lakes and oceans, where it causes algae blooms that turn the water green, brown or even red. These blooms can be toxic and they kill off other aquatic life by starving the water of oxygen.



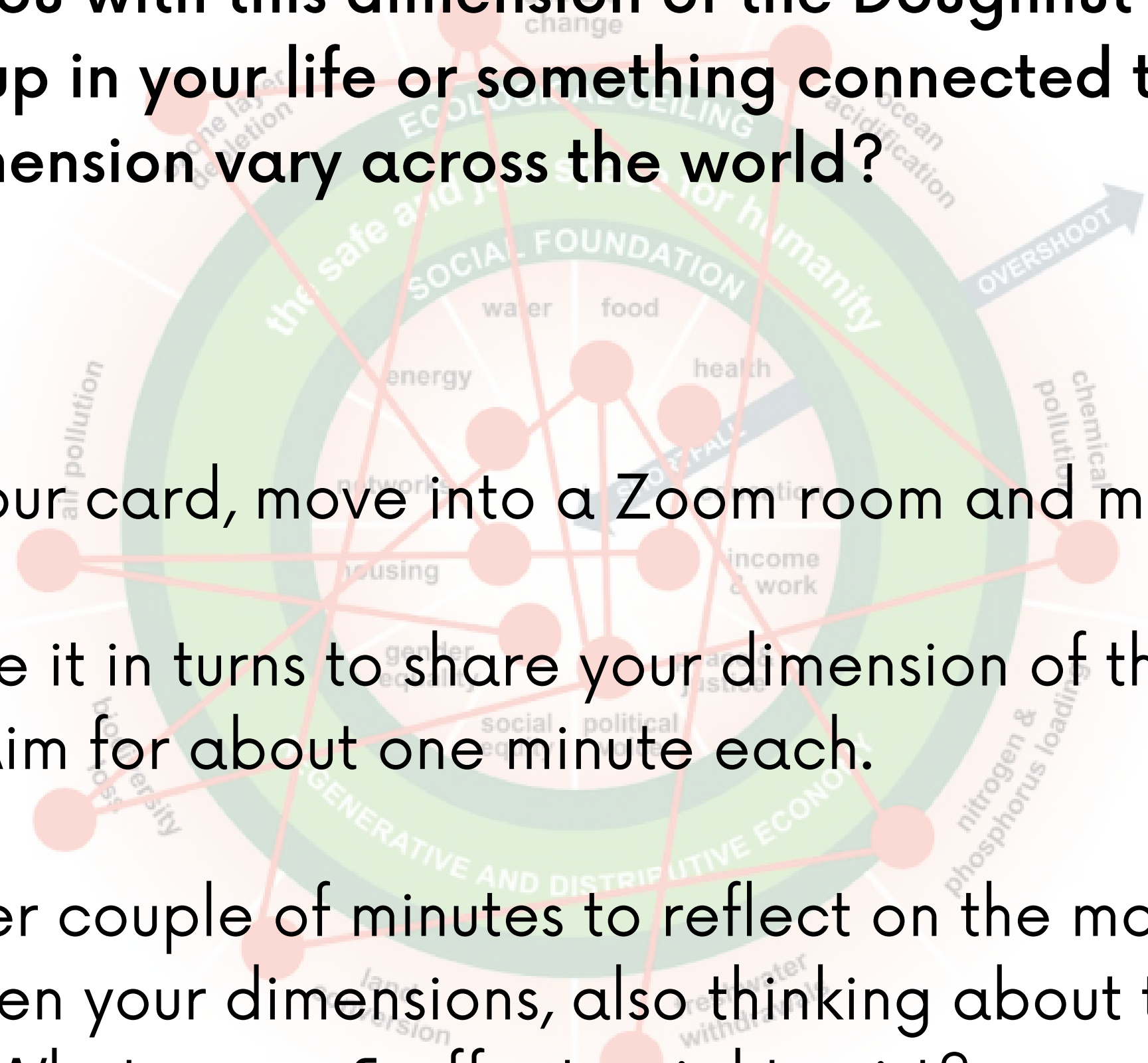
Control Variable	Phosphorus applied to land as fertilizer, millions of tons per year	Reactive nitrogen applied to land as fertilizer, millions of tons per year
Planetary Boundary	at most 6.2 million tons per year	at most 62 million tons per year
Current value, (% of PB) & trend	~14 million tons per year and rising (229%). Worsening	~150 million tons per year and rising (217%). Worsening
Source	Steffen et al., 2015	



How familiar are you with this dimension of the Doughnut?
How does it show up in your life or something connected to your life?
How might this dimension vary across the world?

Systems thinking:

- Once you have your card, move into a Zoom room and meet a small group
- In your group, take it in turns to share your dimension of the Doughnut with the other people. Aim for about one minute each.
- Then take a further couple of minutes to reflect on the many possible connections between your dimensions, also thinking about the directionality of the connection. What cause & effects might exist?



Food and Climate Change

Industrial food systems are very carbon intensive. Land clearance and deforestation significantly reduce carbon sequestration; in addition, tilling the soil releases carbon dioxide. Cattle farming generates methane. Tractors, processors and food transporters are all intensive users of fossil fuels.

Food and Ocean Acidification

Carbon dioxide in the atmosphere dissolves in the ocean and reacts to make it more acidic. This weakens ocean-based food systems as well as the livelihoods of those based on those systems.

Food and Chemical Pollution

This includes all 'novel entities' or human-created substances that are not naturally occurring in the world. In relation to food systems, this includes pesticides and herbicides, possibly genetically modified organisms, and plastics used in food packaging.

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E = Excited

What excites you about Doughnut Economics? What's the upside?

W = Worrisome

What do you find worrisome about Doughnut Economics? What's the downside?

N = Need to Know

What else do you need to know or find out about Doughnut Economics?

What additional information would help you to evaluate things?

S = Stance or Suggestion for Moving Forward

What is your current stance or opinion on Doughnut Economics?

How might you move forward in your evaluation of this idea or proposition?





Frankfurt Doughnut Coalition Community Meet

Our regular fortnightly OPEN session to meet and discuss everything Doughnut Economics in Frankfurt.

 **Wednesday, May 5, 2021**

 **1:00 AM - 2:00 AM (China Standard Time)**

 **Online**

Posted by Yuge Lei

How might we collaborate with local partners?

How might we downscale the Doughnut at FIS?



Young Learners Economics Toolkit

Send a Clear Visual Message: Icons & Infographics

Understand Essential Language: Opposites

Redefine Success & Well-Being: Move Beyond GDP

Make Sense of Economic Inequality: Connect Data with Human Stories

Think Like a 21st Century Economist: Doughnut Economics

Think Through the Lens of Complex Systems:

Social & Ecological Interdependence

"Glocalize" a Global Framework: Downscaling