HumaneBeing

Helping us be humane beings

from looming crisis

to a sustainable future

We CAN play our part in making the world a better place for our children, for the animals and the planet if we :

✓ Make better lifestyle choices

✓ Drive policy change

This booklet explains the crisis and immediate actions we can all take

www.HumaneBeing.org.uk

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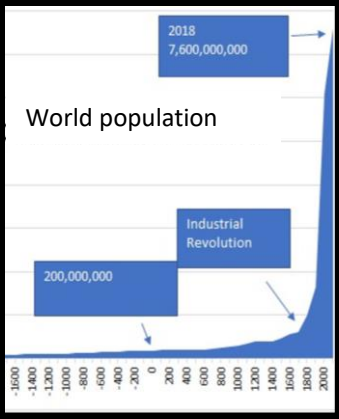
How we got here

Index

Pre industrial era	Demand in line with capability
Industrial era (mid 1700s)	Mass production Population growth Fossils fuels for energy
1804	Human population reaches 1 billion
Today	Human population 7.6 billion & continues to rise



This global growth means greater use of resources, energy, land for food/living/working and more waste to decompose, pollute or be recycled. As products became cheaper/more accessible, many countries developed a **throw away culture**. Motivated by sales & profit, manufacturers encourage this approach.

According to a UN report, humans now use 3 times more ecological resources than 40 years ago. We do this through overfishing, overharvesting forest and emitting more carbon dioxide into the atmosphere than ecosystems can absorb.

In rich countries (like the US/UK) the average consumption rate per person (i.e.. the amount of oils and other resources that the average person uses) are up to 30 times as high as they are in poor countries.*(National Geographic 2018)*

If we continue to live this way, **future generations will experience a very different world.** There will be unstoppable **climate chaos, floods, droughts, crop failures, mass extinction of species** and the natural world will suffer **irreparable damage**. This could lead to famines, wars and disease outbreaks. **Billions more animals will suffer** to provide food/products, for testing and for our entertainment.

Our lifestyles – need or greed ?

The in-Humane Being

A summary of the crisis

Industrialisation

Human population growth

Manufacturer drive for profit & "Can have, will have" culture

Consumer demand for products

Wasteful approach

Intensive livestock farming & over-fishing	**Fossil fuels for energy**	**Deforestation e.g. for cattle grazing & palm oil**	**Overuse of resources e.g. land, water**	**Chemical use & pollution**

Greenhouse gases, Soil erosion (wearing away of top soil), Acidification of water (impacts on coral and plankton) and soil, Habitat destruction, Eutrophication *(excessive algae - depletes oxygen),* Ocean dead zones

Climate chaos — **Ecological emergency** — **Extinction of species** — **Animal suffering**

Human suffering

Poverty, famine, floods , drought, disease, war

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The climate crisis explained

Our planet is warmer now than at any point in the past 650,000 years. This warming is caused by a build-up of greenhouse gases (GHGs) – carbon dioxide (CO_2) methane and nitrous oxide (N_2O) which trap heat – like the glass of a greenhouse. **Humans are the cause of this increase.**

(https://climate.nasa.gov/scientific-consensus)

GHGs stay in the atmosphere for years. Up to 1/3 of CO_2 can last thousands of years (the rest stays 20 – 200 years), N_2O 114 years and methane 12 years.

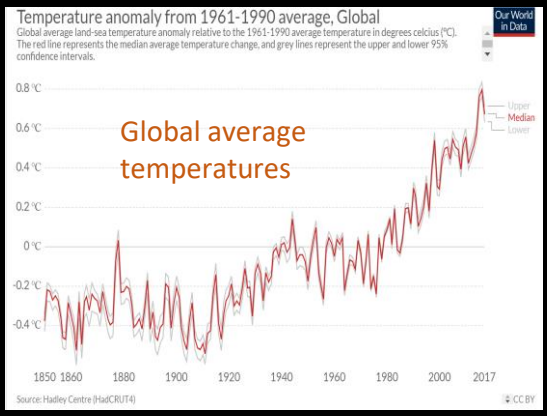
Our impact can be expressed as a carbon footprint - the total CO_2 equivalent emissions caused by an individual, event, organisation or product.

How much the planet warms in the 21st century depends on the decisions **we** make today. **We have until 2030 to stop climate chaos** & cap the temperature rise at 1.5^{O}C.

Insects (vital for crop pollination) & plants are almost twice as likely to lose half their habitat at 2^{O}C compared with 1.5^{O}C. 99% of corals would be lost with a 2^{O}C rise but more than 10% have a chance of surviving at 1.5^{O}C.

GHG levels are still rising and the world is on course for a disastrous minimum 3^{O}C of warming.

(www.earthday.org)



Climate change threatens the world's poorest & most vulnerable – displacing millions of people as climate refugees. The richer countries contribute the most to climate change but the poorest feel the most impact.

Feedback-loops accelerate warming – e.g. melting ice means less of the sun's heat is reflected back into space and more dark sea means more heat retention.

Climate change causes habitat destruction e.g. melting ice caps impacts on polar bears, walruses, seals and sea birds.

https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions

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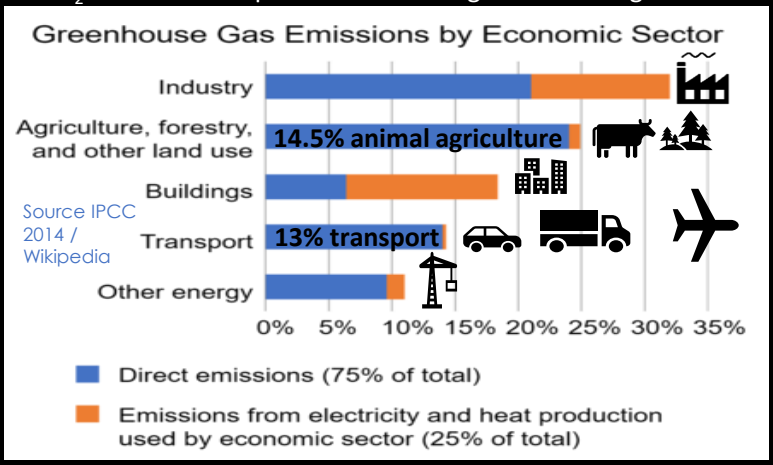
The causes of climate crisis

What is causing climate change ?

- **Humans** – all the things we make, buy and build require energy
- Burning **fossil fuels** for energy is the largest source of emissions of CO_2
- **Eating animals/animal products** means high levels of water and land use compared to a plant based diet and is the biggest contributor to land clearing (deforestation). Diets containing meat/dairy mean a high carbon footprint and contribute more to climate change than all transport – even using the most conservative figures (below)
- **Habitat destruction** (e.g. deforestation). Trees absorb CO_2. Killing them releases CO_2 into the atmosphere and adds to global warming



Some scientists believe animal agriculture is responsible for up to **51%** of GHGs if you factor in the whole process of changing crops to meat *(World Watch 2009)*

United Nations Food & Agriculture Organisation (UN FAO) Livestock's Long Shadow report 2006 "The livestock sector is a major player, **responsible for 18% of GHGs** (in CO_2 equivalent). **This is higher than transport**. Livestock produces 37% of methane (23x the global warming potential (GWP) of CO_2) and 65% of N_2O. (296x GWP)"

"The production of food from animal agriculture is a significant source of emissions in the UK, especially the production of GHGs and pollution of water sources. For cattle and sheep, the major issues are methane and ammonia production and nitrate leaching from grazed land/manure application (*which generates N_2O*). For pigs and poultry the main pollutants are ammonia and N_2O from the excreta plus leaching from manure application". (*DEFRA 2007).* Manure applied to crop fields run off into rivers, causing eutrophication, oxygen depletion and ultimately leading to **dead zones** – areas of the ocean that are devoid of plant and animal life.

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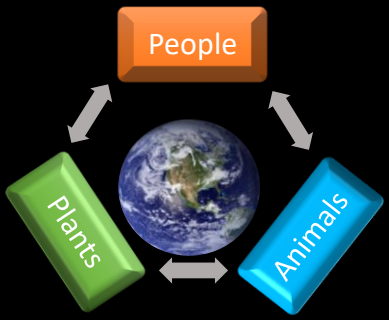
Ecological emergency

Ecology is about how the world works, the interdependence between people and the natural world, as well the consequences of human activity on the environment.

The Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services (IPBES) is an independent intergovernmental body, with 130 member states. Its 2019 report shows human actions have now significantly altered nature across the globe :



- **75% of the land-based environment** and about **66% of the marine environment have been significantly altered**.
- **Over 33% of the world's land surface and nearly 75% of freshwater resources are now devoted to crop or livestock production.**

Animal agriculture creates **64%** of man made ammonia emissions. This contributes to acid rain/acidification of ecosystems *(UN Food & Agriculture Organisation 2006).* Acid rain effects aquatic environments by increasing aluminium absorption from soil. The water becomes toxic to some aquatic animals and others in the food chain. Soil is robbed of essential nutrients which makes it hard for trees to absorb water. Humans can experience asthma and eye irritation as a result of acid rain in inhaled fog. *(National Geographic 2019)*

Overfishing has led marine scientists to say that **"the threat faced by our marine ecosystem is much larger than any other environmental threat like increasing pollution"**. They have also predicted commercial extinction (not viable for fishing) of marine life if this trend continues. (*Marine Science Today, 2014)*

'The scientific evidence is irrefutable: we are facing an ecological emergency & the risks of climate change & nature loss for humanity are serious. Governments can no longer turn a blind eye & this (IPBES) report must prompt our leaders into urgent and courageous political action. Healthy ecosystems are the foundation of our societies, our economies, our food production, our health – and yet we are destroying them at an alarming rate. With our lifestyles and levels of consumptions, we are robbing future generations of their livelihoods & they will hold us to account for our failure to act."

ESTER ASIN, Director of the WWF

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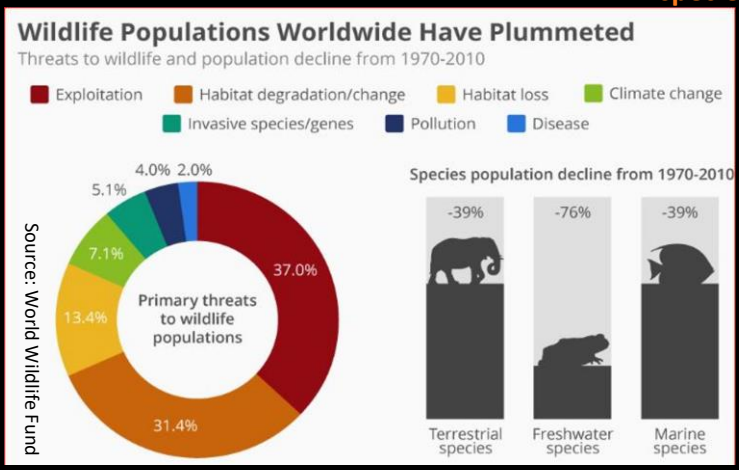
Extinction of species

52% of the world's wildlife species disappeared in just 40 years (1970 – 2010). **98%** entirely caused by humans

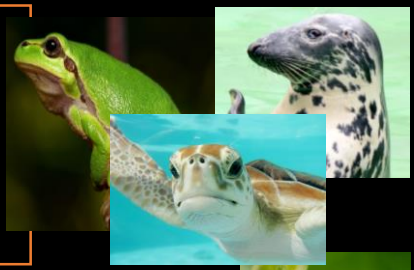


e.g. whaling has devasted populations

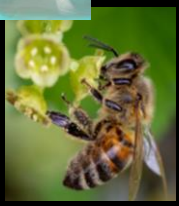
There have been 4 or 5 major extinctions (defined as the loss of at least 75% of species within a geologically short time period) in the Earth's history – most caused by CO_2 increase, 1 by an asteroid. Many scientists consider we are now in the **6th mass extinction of life** to occur in the Earth's 4.5 billion year history – caused by the climate crisis, destruction of wild habitat for animal farming, logging and development.

According to a UN report on biodiversity in 2019 **over 1 million species face extinction including : 40% of amphibian species, 33% of reef forming corals, over 33% of all marine mammals**

www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/



Climate change, habitat loss, pesticides, pollution & disease are also threatening **bees.** A UN report states that 1/3 of plant products eaten/used by humans rely on bee pollination directly or indirectly. This includes potatoes, apples, cotton, vegetable cooking oils, tea and many crops used to feed farmed animals.



Over 40% of insect species are threatened with extinction – driven mainly by habitat being lost due to intensive agriculture. Agro-chemical pollutants, invasive species and climate change are additional causes *(www.sciencedirect.com April 2019)*

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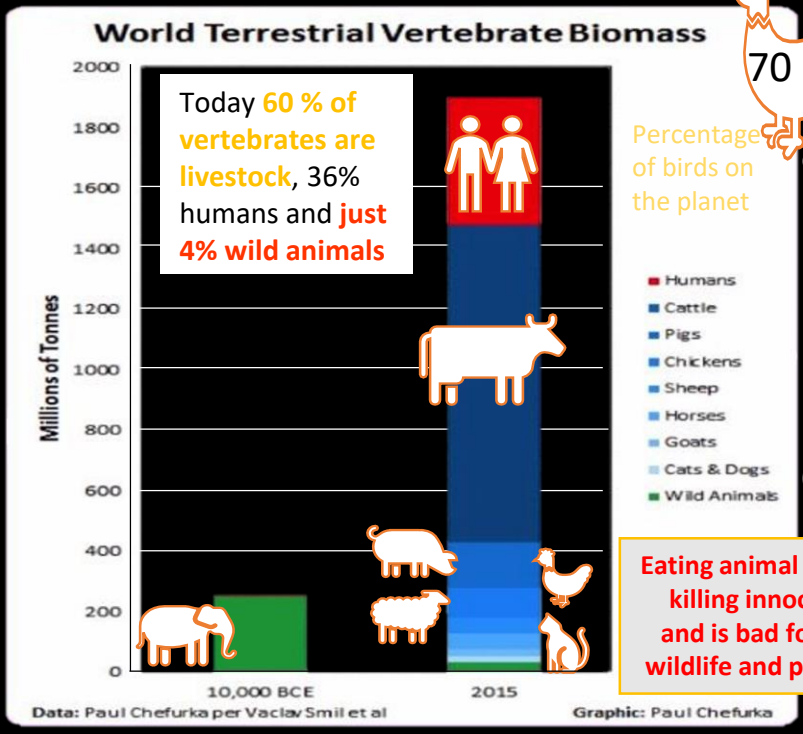
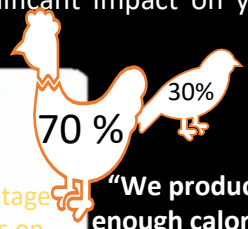
Extinction & other impacts of farming

Since humans became farmers, just 17% of wild mammal species remain (from mice to elephants). Of the birds on this planet, **70%** are chicken and poultry. Only **30%** are wild. Eating chicken has a significant impact on your carbon footprint *(see next page)*





"We produce enough calories to feed 10- 11 billion people worldwide but, the majority of this food goes to feed livestock, not hungry people" ***(One green planet 2017)*.**

Eating animal protein means killing innocent animals and is bad for the planet, wildlife and people's health

Excessive conversion of forests - that are rich in diverse species - to pastureland for grazing that does not support diverse ecosystems significantly reduces the biodiversity (number of species) - on which the planet depends.

"We already produce enough to feed the world. It's overconsumption – especially of animal protein by the global middle class, inequality, waste and inadequate production/distribution systems - that stands in the way of enough food for everyone and space for wildlife. To feed the world in a way our one planet can sustain, we need to consume and produce food differently". *(Worldwide Fund for Nature. Appetite for Destruction)*

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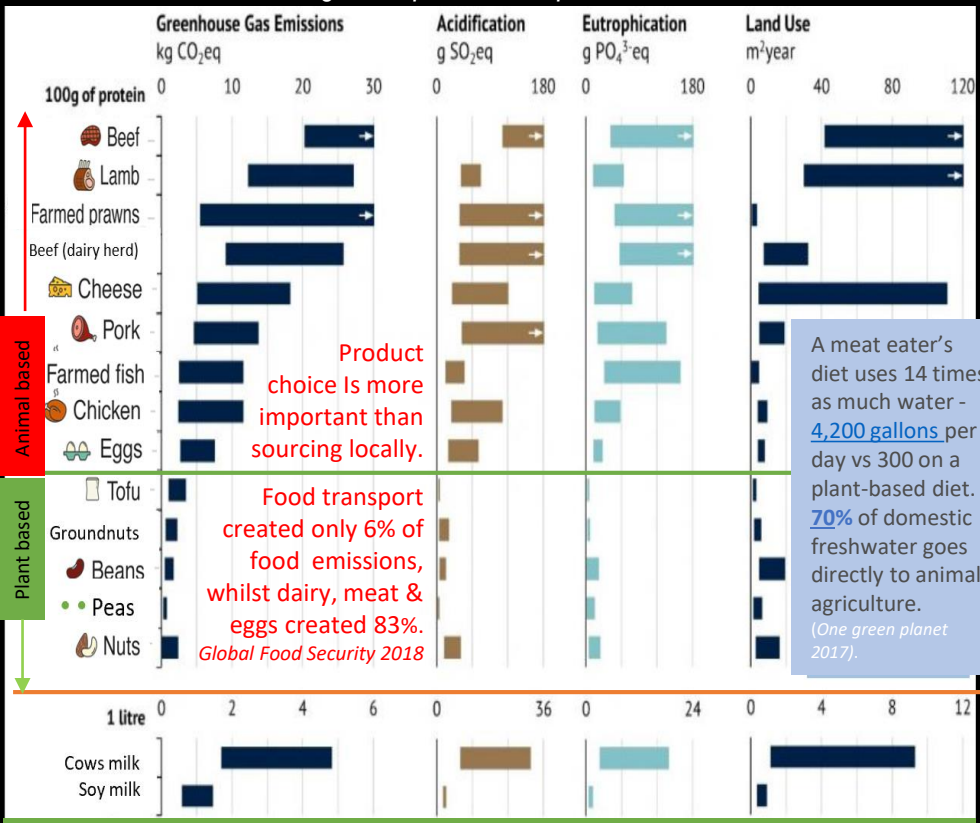
Impacts of farming - land, water, greenhouse gases

People who eat meat/diary beef use up to 160 times more resources and emit more GHGs than their plant-based counterparts as the graph below shows :

The study by Poore of Oxford University, published in Science 2018 , is based on almost 40,000 farms in 119 countries , covering 40 food products that represent 90% of all that is eaten.



A meat eater's diet uses 14 times as much water - 4,200 gallons per day vs 300 on a plant-based diet. **70%** of domestic freshwater goes directly to animal agriculture. *(One green planet 2017).*

The study showed that all plant based milks were better for the environment than cow's milk

The study concluded that: "Meat and dairy provide just 18% of calories/37% of protein, yet use the vast majority (83%) of farmland and produce 60% of agriculture's greenhouse gas emissions".

And that **"A vegan diet is probably the single biggest way to reduce your impact on planet Earth, not just greenhouse gases but global acidification, eutrophication, land and water use."**

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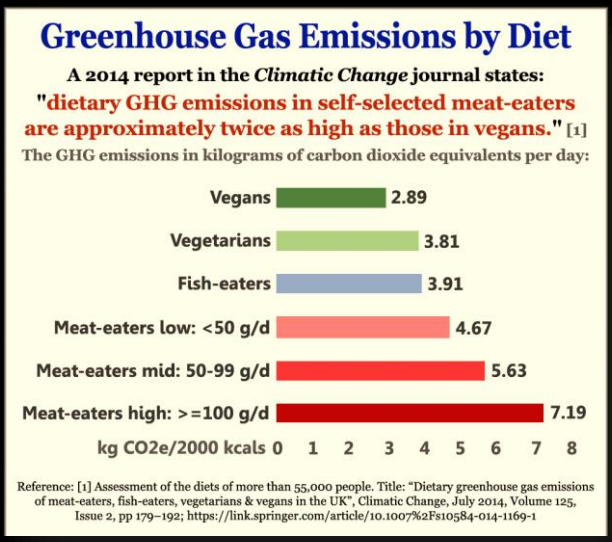
Impacts of farming on land, water, greenhouse gases



"Without meat and dairy, global farmland use could be reduced by more than **75%** – an area equivalent to the US, China, EU and Australia combined – and still feed the world". *Poore Science 2018*

"Even the very lowest impact meat/dairy products still cause much more environmental harm than the least sustainable vegetable and cereal growing"

(Poore, Science 2018)

Proportional land use per 100kg protein

Beef 13000 m² per 100kg (UK figures)

40 – 50 x that of soya

Joseph Poore – Land use (Food Unwrapped Channel 4)

On a standard western diet :

2 football fields feed **1** person per year

On a plant based diet 2 football fields feed **14** people per year

If everyone in the world ate a plant based diet **5 billion football fields** could be reforested

"All resources taken into account, one acre of land can produce 250 pounds of beef. The same acre of land can produce 50,000 pounds of tomatoes or 53,000 pounds of potatoes". *(One green planet 2017).*

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Impacts of deforestation

NASA Satellite map of fires in a 10-day period in May 2019. Most are lit by humans, to clear land for animal agriculture

Agriculture accounts for **80%** of tropical deforestation, while logging is the biggest single driver of forest degradation. Cleared land is used for cattle grazing, soybeans & palm oil (*Drivers of Deforestation & Forest Degradation)*

Since European settlement, **80%** of Australia's eucalyptus forests have been cleared for farming/development.

Projections suggest that between 2010 and 2030, 3 million hectares of untouched forest will be bulldozed in eastern Australia. The crisis is driven primarily by a booming livestock industry *(Guardian Mar 2018).*

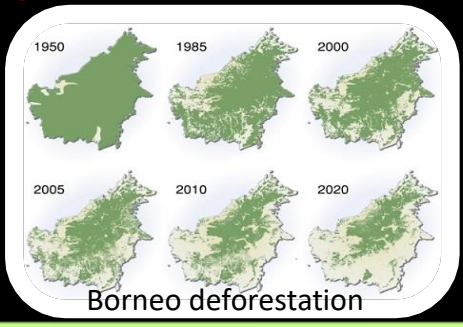
70% of soy is used for animal feed, 24% as biofuel and 6% for human consumption *(One Green Planet).*

Palm oil may be contained in up to **50%** of supermarket products. Up to **98%** **of orangutan habitat** in Borneo/Sumatra may be destroyed by 2022 without urgent action – mainly for palm oil.

Deforestation destroys habitats, kills, injures and displaces animals AND has a massive effect on climate change. Trees absorb CO_2, destroying them releases CO_2.

- Between 1990 - 2016, 502,000 miles^2 of forest was lost - an area larger than South Africa. At this rate all rainforests on Earth will be gone in less than 100 years.
- 1 football field of forest is destroyed every second *(Guardian 2018).*
- Loss of forest contributes between 12 - 17 % of annual global GHGs.
- About 17% of the rainforest in the Amazon has been destroyed in the past 50 years *(National Geographic 2019).* The majority (91%) from clearing/burning rainforest for cattle grazing.
- Up to **75%** of Brazil's emissions come from deforestation

Brazilian beef is eaten in the UK and worldwide. One Brazilian company – JBS – slaughters 13 million animals EVERY DAY



Borneo deforestation

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Chemicals, pollutants, and plastic

300-400 million tons of toxic sludge, heavy metals & solvents from industry are dumped annually into global waters *(IPBES 2019).*

Microplastics from washing synthetic clothing harm aquatic creatures, turtles & birds by blocking their intestines, reducing appetite, growth & reproduction. Their stomachs stuffed with plastic, some species starve and die. These microplastics also end up in fish eaten by humans.

To transform perishable animal skin into durable leather, workers soak animal hides in toxic baths containing nearly 40 different acids & several heavy metals including chromium, a known carcinogen. The hides absorb just 20% of these chemical brews; the rest is waste and is piped into rivers.

The chance of coral reefs (home to more than 25% of marine life) becoming diseased increases from 4% to 89% after coming in contact with plastic.

✘ 5 minutes to drink
500 years
to break down

"The fashion industry produces **10% of the global carbon footprint** and is the second greatest polluter of local freshwater in the world" (*Wikipedia).* **The GHGs produced by fashion are more than all the aeroplanes flying in the world!**

Each *year approx. 80 billion garments* are sold globally and Americans alone throw away 15 million tons of clothing — most worn just a few times. This trend completely disregards the toxic toll each garment takes on environment and human health

100,000 marine mammals and sea turtles die each year - trapped in plastic or from eating it

46% of plastic in the ocean is from discarded fishing tackle *(National Geographic)*

8 billion kg of plastic is thrown into the ocean annually

1 million seabirds killed by eating or getting trapped in plastic each year
(www.earthday.org)

Our lifestyles – need or greed ?

What is fossil fuel and why is it bad ?

Fossil fuels come from decayed plants/animals converted under heat and pressure to crude oil, coal, natural gas or heavy oils in the earth's crust over hundreds of millions of years. In 2017 the world's main energy sources were petroleum (34%), coal (28%) and natural gas (23%) - amounting to an 85% share of total energy use (*Wikipedia).*

The burning of fossil fuels by humans is the largest source of emissions of CO_2

Fracking is the process of drilling down into the earth before a high-pressure water/sand/chemical mixture is directed at the rock to release the gas inside. Fracking produces CO_2 & uses the equivalent of approximately 10 Olympic swimming pools of water per frack, which must be transported and disposed of as toxic/ radioactive waste at significant environmental cost. As well as earthquake concerns, environmentalists say potentially carcinogenic chemicals escape & contaminate groundwater, affecting animals & humans. Fracking has been suggested as a 'cleaner' alternative to coal, but recent studies on methane gas leaking from wells contradict this. Methane is an even more potent greenhouse gas than CO_2. **"The arguments against fracking on public health and ecological grounds are overwhelming"** (*Medical professionals - letter in British Medical Journal 2014)*

Recent analysis shows that burning just the oil, coal and gas already in production will take us over 2° of warming. The planet does not need another fossil fuel.

Renewable energy is energy that is collected from renewable sources, which are naturally replenished e.g. wind, sunlight, rain, tides, waves & geothermal heat (heat from under ground – used in ground source heat pumps).

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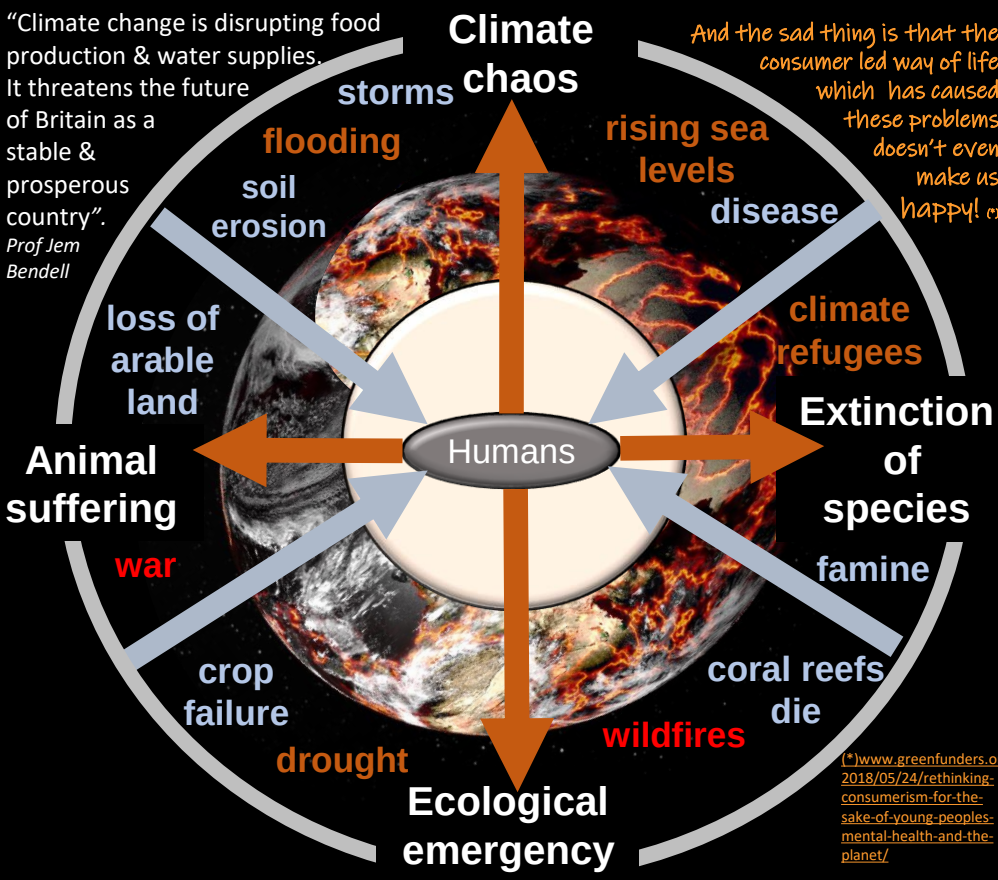
What the future could look like if we continue living as we are

"Climate change is disrupting food production & water supplies. It threatens the future of Britain as a stable & prosperous country". *Prof Jem Bendell*



And the sad thing is that the consumer led way of life which has caused these problems doesn't even make us happy! ☹

(*)www.greenfunders.org/2018/05/24/rethinking-consumerism-for-the-sake-of-young-peoples-mental-health-and-the-planet/

"The physical signs of climate change (ice sheets melting, record hot oceans, retreating glaciers) & the impacts on people are accelerating as record GHG levels drive global temperatures to increasingly dangerous levels. Last year most of the natural hazards that affected nearly 62 million people were linked to extreme weather & climate events including floods, storms, heatwaves and wildfires" *The World Meteorological Organisation's State of the Climate report 2018*

The UN also warned that global soils face exhaustion with **only 60 harvests left** (100 in the UK) **before they are too degraded to feed the planet**. Soil erosion is made worse by the loss of hedgerows, agricultural machinery, over-grazing, climate change and intensive agriculture

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The harsh reality for billions of animals

While animal agriculture and consumer driven lifestyles are killing the planet, they are also killing billions of thinking, feeling, intelligent animals every year.

Chemical use and pollutants are poisoning animals - driving some to extinction

Deforestation kills animals directly as they are caught in the fires which destroy their homes. The survivors are left with smaller & smaller habitats. Many fires are set deliberately to clear land for agricultural purposes

Wildfires are on the increase – driven by climate change

Our waste is choking the oceans and the animals who live there

Animal agriculture and our overuse of resources are driving many animals to extinction

Fossil fuel spills wreak havoc directly on marine mammals and birds. A 2009 study using US & European data estimated the number of birds killed per unit of power generated & concluded that fossil fueled power stations were responsible for killing 15 times more birds than wind turbines per unit generated. This means that wind farms killed approx. 7000 birds in the US in 2006 but fossil-fuelled power plants killed 14.5 million. In other words, for every one bird killed by a wind turbine, nuclear & fossil fuel powered plants killed 2,118 birds *(The Conversation 2017)*

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The harsh reality for billions of animals

"I'm just your next pair of shoes…."

- Male "by-product" chicks macerated (ground up alive) at 1 day old
- Overcrowding in factory farms
- Long journeys before slaughter
- Painful mutilations with no anaesthetic
- Mothers and babies separated
- Animals kept in cages awaiting the next painful laboratory test

The global leather industry slaughters more than a billion animals every year. Most comes from China and India, where animals are marched for days with no food or water. Cattle who collapse from exhaustion have their tails broken or chilli peppers rubbed into their eyes in order to force them to keep moving.

Abuse, pain, suffering, fear and death. In HUGE numbers

e.g. 20 million chickens slaughtered for meat every week in the UK.

Over **70%** of chickens raised for meat globally are in intensive industrial farming systems

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Making planet & animal friendly lifestyle choices

"Going vegan is far better for the environment than cutting down on your flights or buying an electric car, as these only cut greenhouse gas emissions." (*Poore 2018*).

General:
Be happy with what you have

Buy less, use less, waste less, re-use more

Food:
Eat a plant based diet – better for the planet, animals and your health.

Don't waste food – an estimated third of food ends up in landfill

Low cost/easy lifestyle actions to take if you care about animals and the planet

Fuel:
Switch to a green, renewable energy supplier, reduce use by travelling less and turning down the thermostat

Fashion:
Avoid leather - highly toxic process and has a high animal suffering footprint.

Fur and wool involve animal cruelty too

Plastic:
Kills animals and coral reefs. Takes up to 1000 years to break down. Buy less, re-use

Forests:
Avoid deforestation – deforestation free palm oil, buy sustainable wood & paper, plant trees and encourage biodiversity

Remember – every change helps

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Driving policy change

The stark reality is that the planet, animals and people of the world need Governments to wake up and take some serious action.

NOW

Support Animal Rebellion and Extinction Rebellion (XR) – who are taking non-violent disruptive action to generate system change - and the youth strikers who are trying to create a wake up call. XR/Animal Rebellion are calling on the Government to 1. Tell the Truth, 2. Act Now to halt biodiversity loss and reduce greenhouse gas emissions to zero by 2025 and 3. Create a Citizens' Assembly.

Companies and organisations across the globe need to stop thinking about profit and start thinking about the planet and future generations.

1 voice is a whisper, 1 action can be ignored, many voices create a

SHOUT

What you can do :

- ✓ Join a local Animal Rebellion and XR (there are plenty of behind the scenes/non-arrestable roles if you prefer those)
- ✓ Support the youth strikers

It has been shown historically that if just **3 to 3.5%** of people take to the streets, change can be achieved.

- ✓ Lobby your MP www.parliament.uk/get-involved/contact-your-mp
- ✓ Add your voice to petitions – e.g. Avaaz, Change.org, 38 degrees, SumOfUs
- ✓ Use your consumer power and write to companies asking for sustainable, planet and animal friendly options
- ✓ Support charities/organisations lobbying for change

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What we do

As a new, not-for-profit organisation, run by volunteers, we aim to support people on their individual journey to a way of living that is **kinder to animals** and **better for the planet**

How we do it

Our key approaches are to :

- raise awareness
- supply information
- support and encourage action

We complement and support other organisations and add value to campaigns and actions

"The best way to predict the future is to create it!"
Denis Gabor

Separate information available on the health benefits of a vegan diet.

Why we do it

"Love and compassion are necessities, not luxuries. Without them, humanity cannot survive." Dalai Lama

Every action of kindness to animals, every step to slow damage to the planet COUNTS. Start today - don't delay

The planet and animals need you TODAY

Where to find us :

www.humanebeing.org.uk
jane.tredgett@humanebeing.org.uk
www.facebook.com/HumaneBeing2019

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Be a HumaneBeing

Please

ACT NOW

for the sake
of the planet

for the
animals

for your
children

The future is …
….. in our hands

If you like these booklets and could distribute some to help spread the word – please email Jane on jane.tredgett@humanebeing.org.uk Donations appreciated but not essential.

Booklets printed by **www.veganprint.co.uk** on sustainable paper using vegan friendly, vegetable based inks.

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www.HumaneBeing.ORG.UK