



Julie's Bicycle

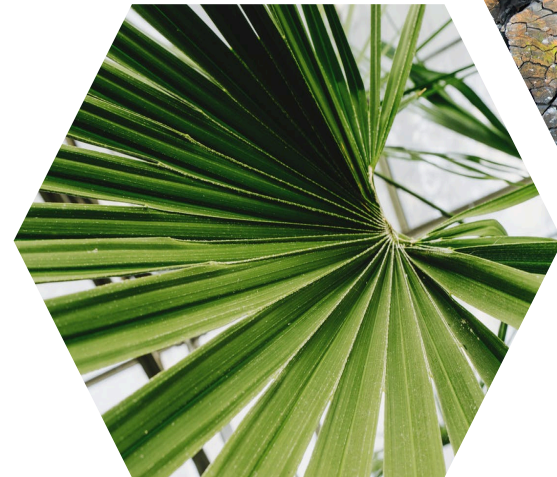
CREATIVE • CLIMATE • ACTION

Without Walls 12 March 2020

Chiara Badiali

www.juliesbicycle.com

@juliesbicycle



Julie's Bicycle is a charity that supports the creative community to act on the climate and ecological crisis - as a community uniquely placed to transform the conversation around climate change and translate it into action.



Cedar Lake performing Necessity Again
(Photo by Jane Hobson)

ABOUT JULIE'S BICYCLE

our strengths



EMBEDDING

Collaborate with organisations to develop their environmental ambitions



CONVENING

Uniquely positioned at the intersection of the cultural and environmental sectors



LEADERSHIP

Build the skills and competencies of creative professionals



TOOLS

2,000+ organisations use our tools annually to benchmark impacts and improvements



ADVOCATE

Advocate for the role for the power of arts and culture to catalyse the climate movement

WHERE WE HAVE FOCUSED OUR EFFORTS

ORGANISATIONAL
SUPPORT
(Creative Green
consultancy and
change projects)

POLICY
INTERVENTIONS
(Local, regional &
national policy
makers and strategy
bodies)

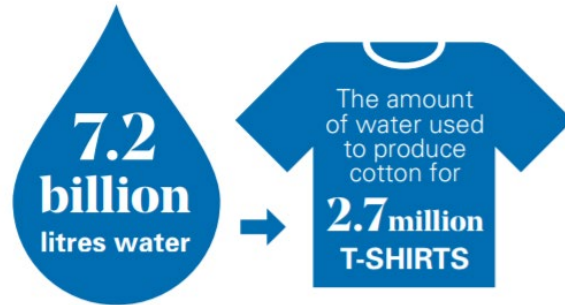
INDIVIDUAL
SUPPORT
(Creative Climate
Leadership)

SECTOR
DEVELOPMENT
(ACE Programme,
digital tools)

INNOVATION &
DISRUPTIVE
MODELS
(Clean energy
procurement,
economic models,
etc.)



Environmental Programme



21 million km
business travel

154,400
tonnes
waste

5.9 million
km touring

Total carbon footprint 2018/19 by source of impact



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Developing understanding and skills

- **80%** say environmental reporting helps better understand impacts
- **28%** offer staff opportunities for environmental training and professional development
- **24%** facilitating environmentally-themed activities and campaigns for local communities

Taking action

- **54%** have installed energy efficient lighting and controls
- **64%** taking steps to eliminate single-use plastics
- **29%** committed to sustainable food sourcing
- **70%** actively promote virtual communications technology as an alternative to travelling

Increasing collaboration

- **35%** collaborate with their peers on finding and sharing environmental solutions
- **25%** collaborate with neighbourhood or city decision makers on finding and sharing solutions to environmental issues

Signs of a new creative ecology

- **38%** have director or board level representatives with a specific environmental remit
- **47%** trialling sustainable production or exhibition methods
- **29%** with an ethical sponsorship or partnerships policy

Creative opportunities

- **49%** have produced, programmed or curated work exploring environmental themes
- **50%** have developed new creative or artistic opportunities as a result of environmental initiatives



COMMITMENT
UNDERSTANDING
IMPROVEMENT



Royal Albert Hall

Focusrite®



CURZON



National
Theatre



NEW/ADVENTURES
RE;BOURNE

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Take part in [#SeasonforChange2020](#), a UK-wide programme showcasing cultural leadership on climate action launching later this year:

seasonforchange.org.uk/takepart2020

Led by [@artsadm](#) & [@JuliesBicycle](#) with support from [@ace_national](#)

The logo consists of a large orange rounded rectangle. Inside, the words "SEASON FOR" are in a smaller white sans-serif font, and "CHANGE" is in a larger white sans-serif font. A white horizontal bar is positioned at the bottom right of the orange rectangle.

SEASON FOR
CHANGE

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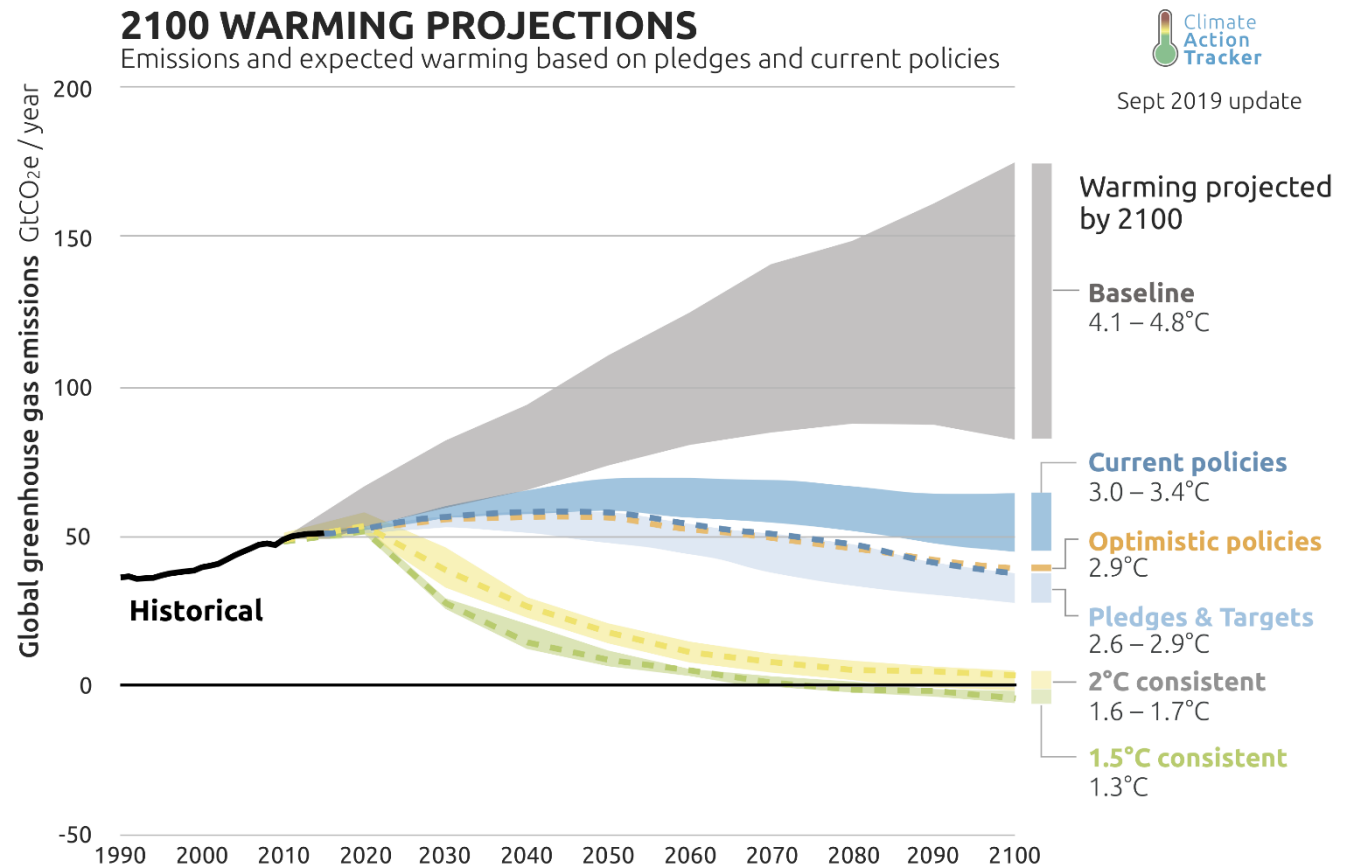
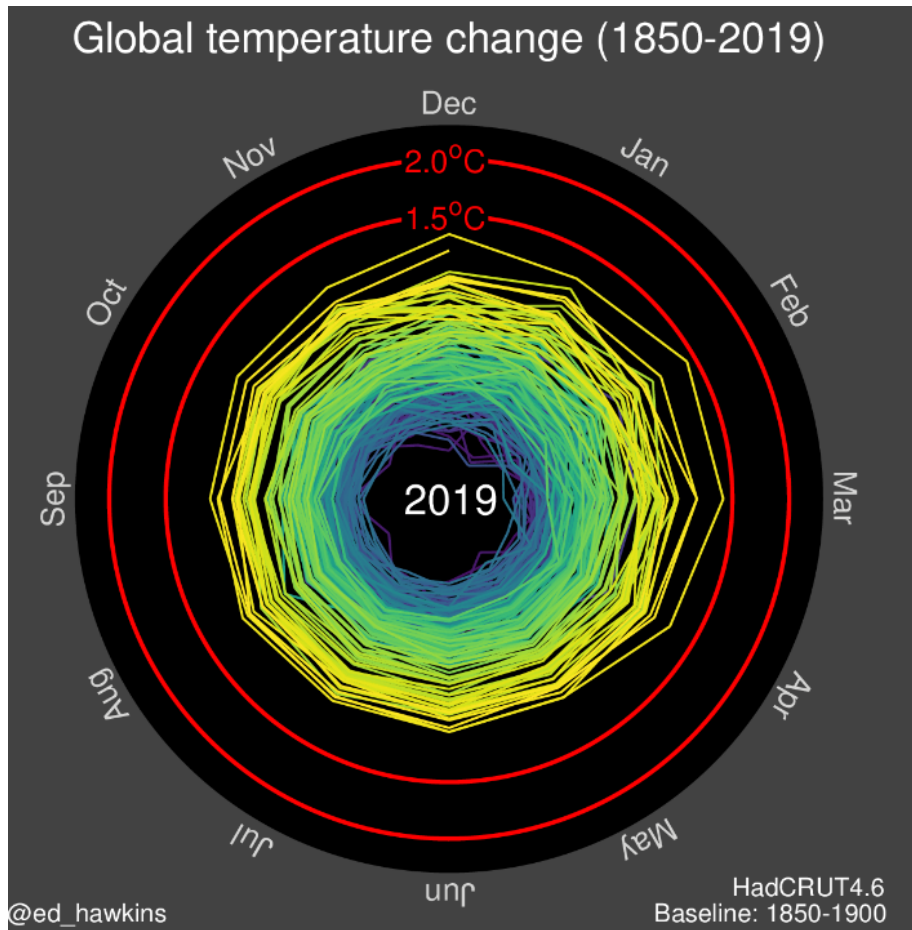
Global heating has already reached 1°C above pre-industrial levels (1850).
50% of all emissions released in last 30 years. Emissions have doubled since 1980.

We are already seeing and feeling the consequences of a 1°C increase.

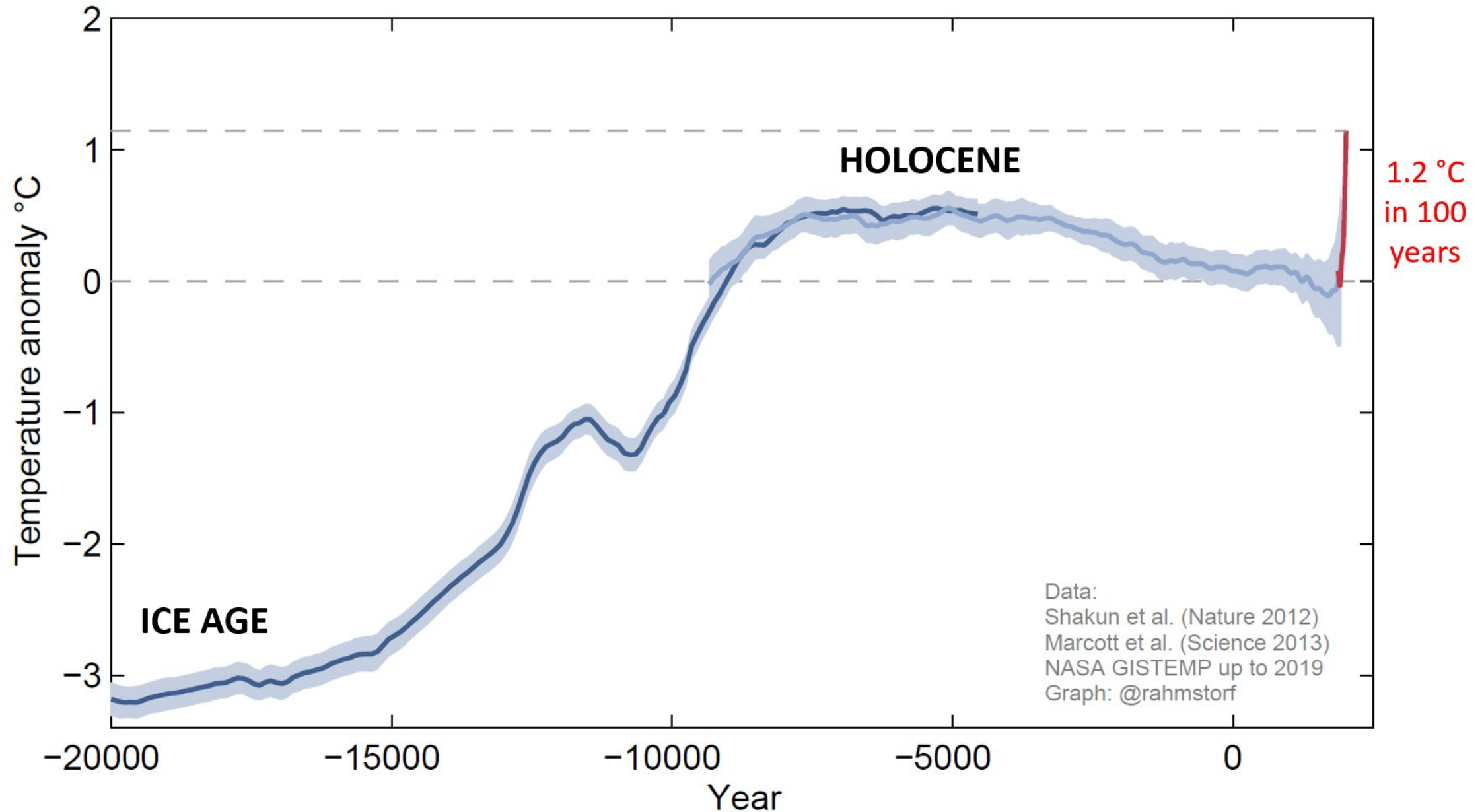
We have until 2050 (at the latest) to reach net zero globally but we are currently on a pathway to about 3°C .

Net zero is only possible if we start reducing now, and reduce by half by 2030.

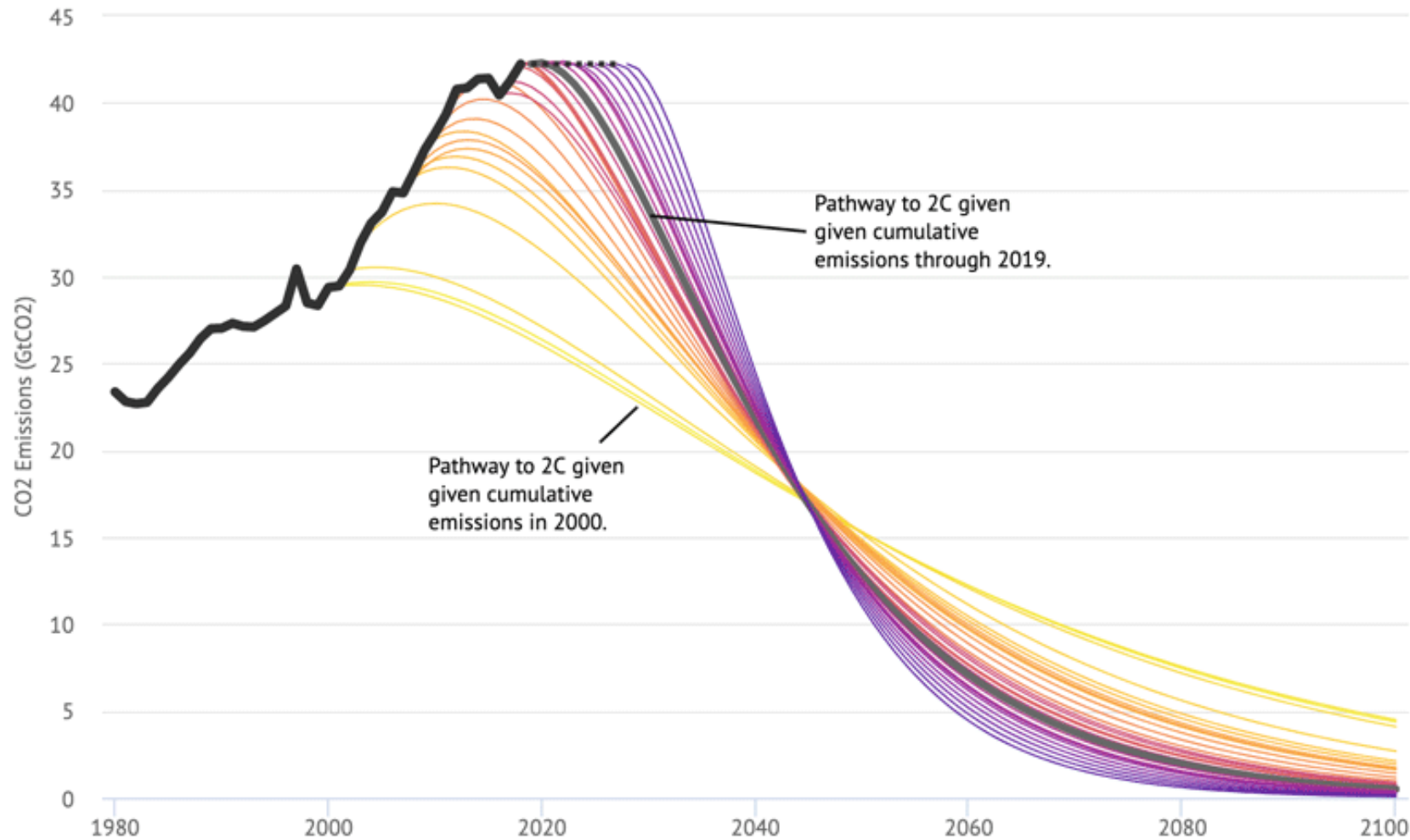
The next 10 years are crucial.



GLOBAL TEMPERATURE SINCE THE LAST ICE AGE



The later emissions peak the harder it is to limit warming below 2C



Graph: Carbon Brief



Because CO₂ accumulates in the atmosphere over time, the final amount of CO₂ in the atmosphere will depend on *when* net zero is achieved.

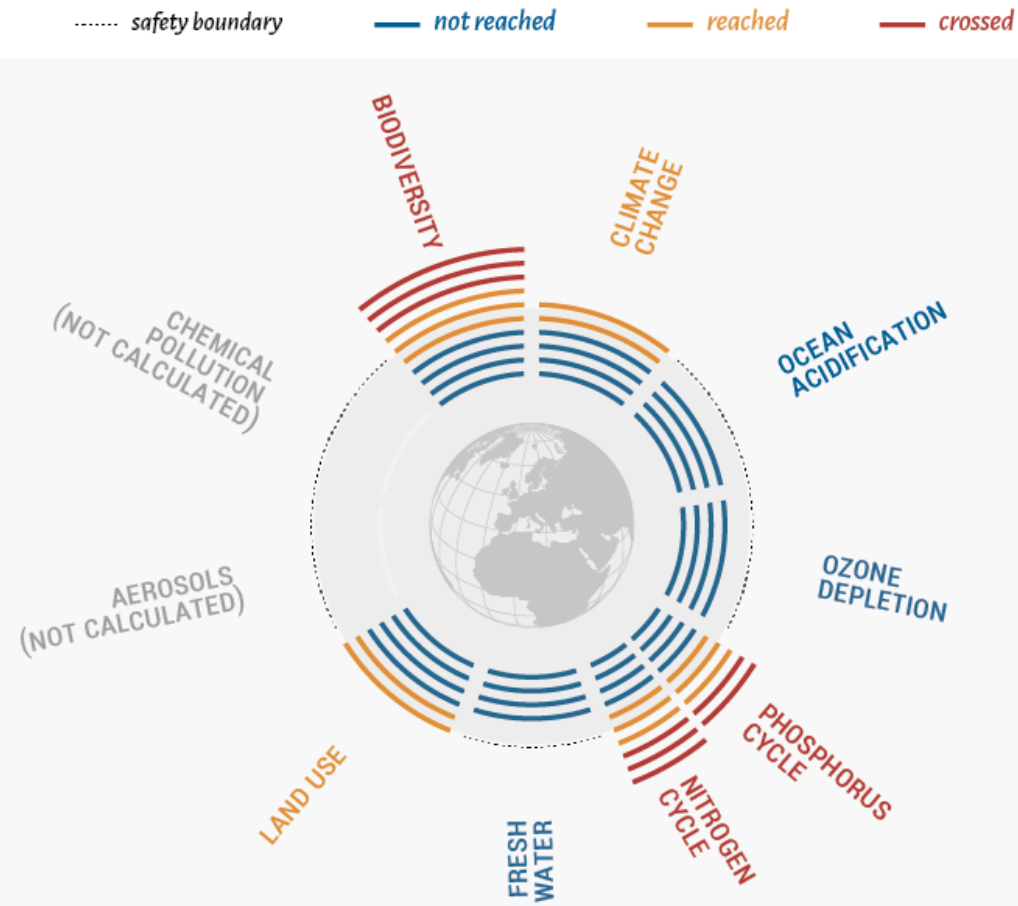
Every year that passes without substantial and lasting reduction of emissions increases the challenge of staying within the agreed carbon budget and the risk of setting off irreversible tipping points.

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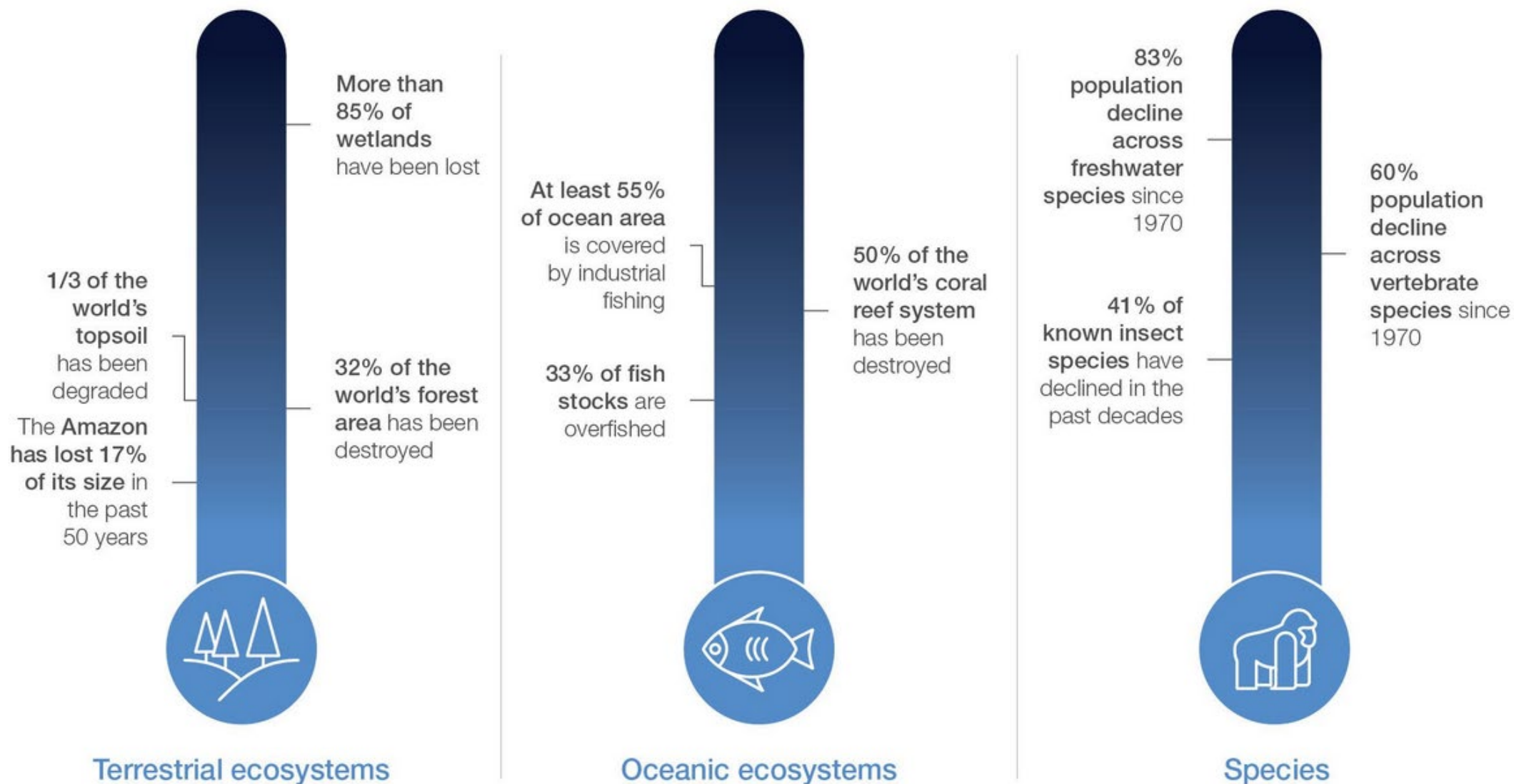
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Planetary boundaries

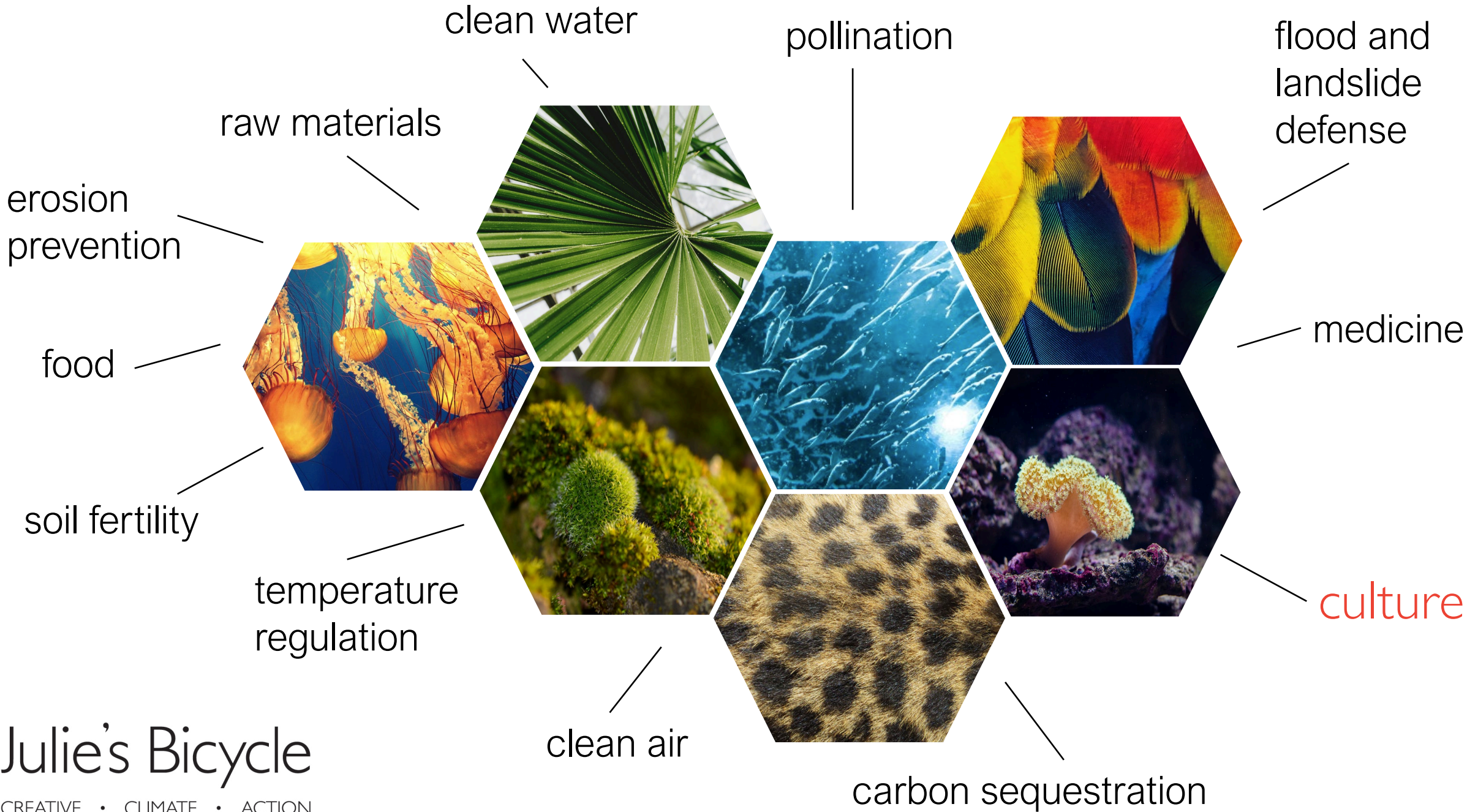
By 2015, we reached or crossed the boundary between safe operating levels and dangerous conditions in five planetary trends.



Human activity is eroding the world's ecological foundations



Source: IPBES, 2019, "Global assessment report on biodiversity and ecosystem services"; Maria-Helena Semedo of the Food and Agriculture Organization (FAO) at World Soil Day 2014; The Economist, 2019, "On the brink – The Amazon is approaching an irreversible tipping point"; WWF, 2018, "Living planet report – 2018: Aiming higher"; F. Sánchez-Bayo and K.A.G. Wyckhuys, 2019, "Worldwide decline of the entomofauna: A review of its drivers", Biological Conservation.



IPBES GLOBAL ASSESSMENT: DRIVERS OF BIODIVERSITY LOSS:

- (1) changes in land and sea use
- (2) direct exploitation of organisms
- (3) climate change
- (4) pollution
- (5) invasive alien species

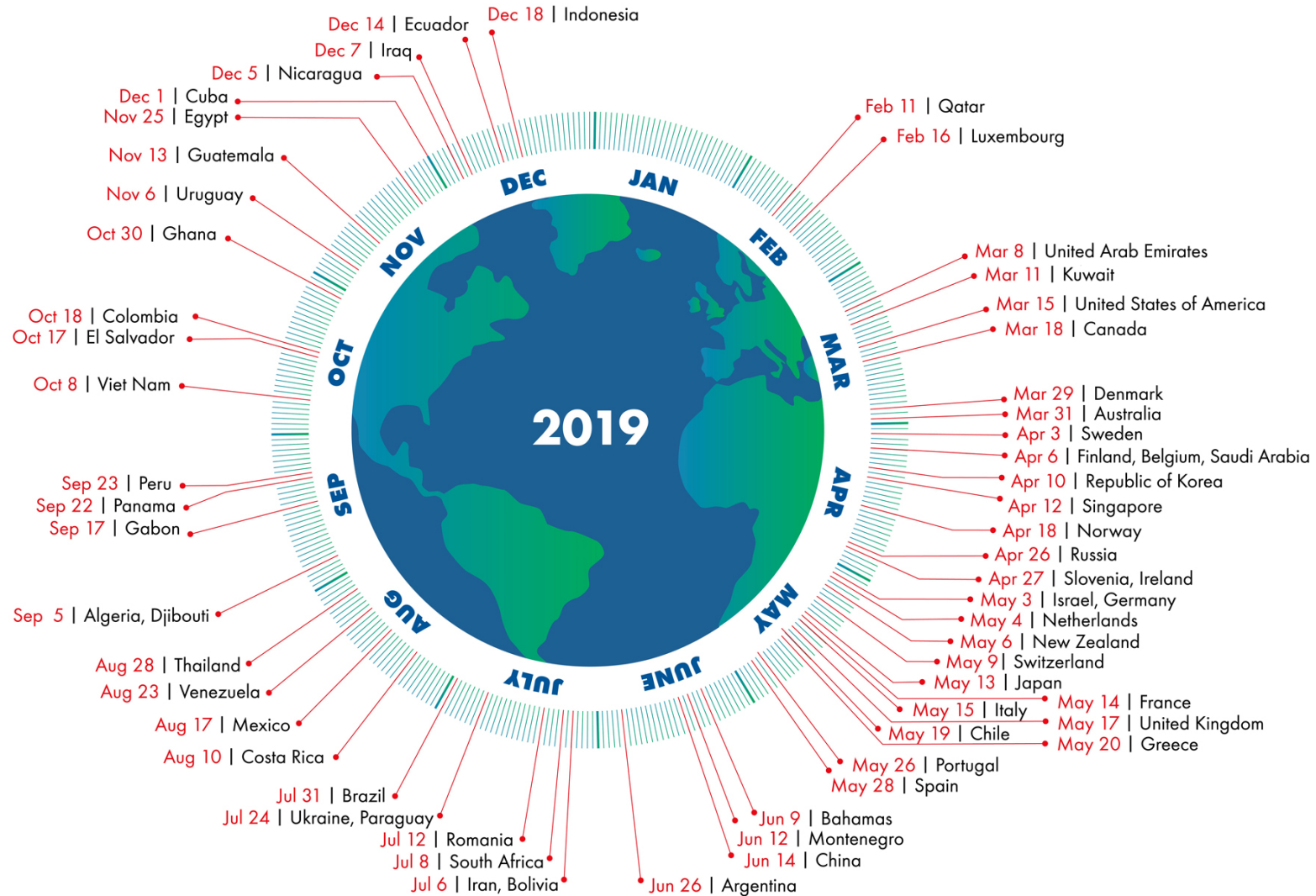
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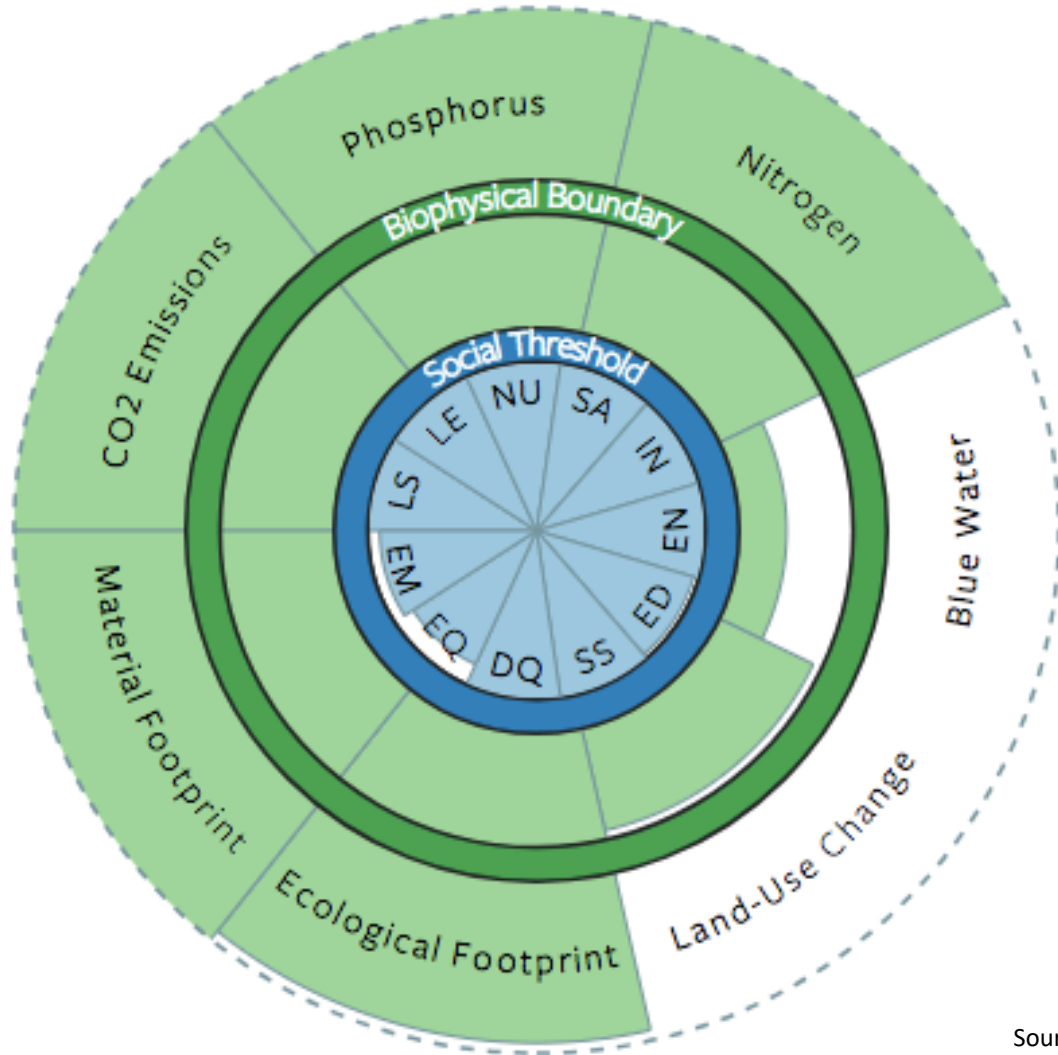


Country Overshoot Days 2019

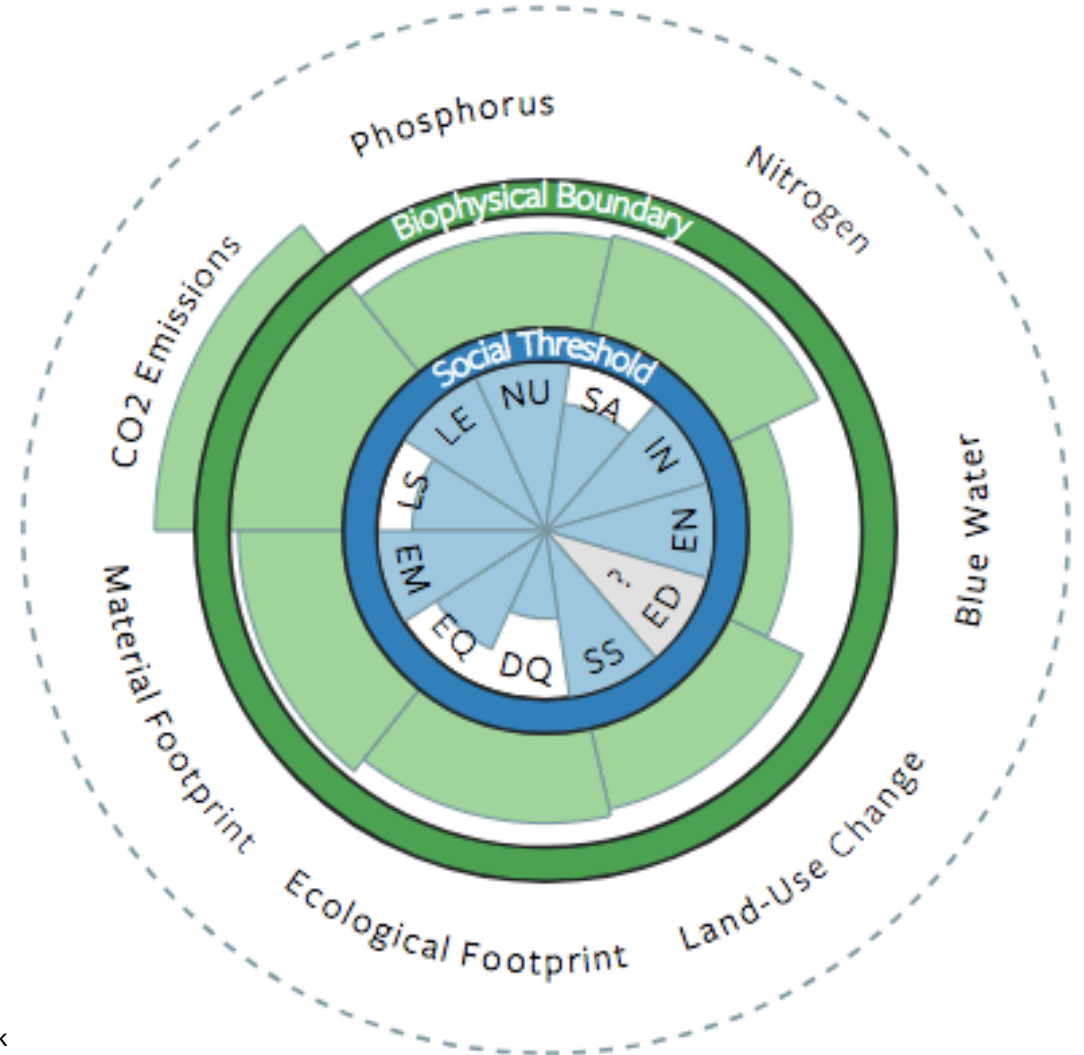
When would Earth Overshoot Day land if the world's population lived like...



United Kingdom



Vietnam



NO COINCIDENCE

Environmental racism has left black Americans three times more likely to die from pollution

By Bartees Cox • March 13, 2018

Climate change already bringing disease, air pollution and heatwaves

Heatwaves, pollution and disease are the main health issues linked to global warming but action to halt emissions would deliver huge benefits

Devastating climate change could lead to 1m migrants a year entering EU by 2100

Researchers plotted temperature rises against the number of asylum applications and are predicting that as the southern hemisphere heats up the number of people migrating to the EU each year will triple

Climate change: the poor will suffer most

UN report says that unless governments act now to reduce emissions, no one will be safe from effects of climate change

Climate change exacerbates gender inequality, putting women's health at risk

Climate change takes a higher toll on women than on men. Women's health and well-being, including their sexual and reproductive health and rights are all at stake.

POLITICS

Trump's EPA Concludes Environmental Racism Is Real

A new report from the Environmental Protection Agency finds that people of color are much more likely to live near polluters and breathe polluted air—even as the agency seeks to roll back regulations on pollution.

VANN R. NEWKIRK II FEB 28, 2018

Climate change 'impacts women more than men'

By Mary Halton
BBC News, science reporter

We're All In The Same Boat Together? Reflections On Hurricanes, Undocumented Residents, And LGBTQ People

09/06/2017 09:24 am ET | Updated Sep 06, 2017

APR 16, 2017

The Disabled Are Probably the Most Vulnerable to Climate Change Effects

Climate change already causing increases in stress, depression and negative mental health, study shows

Women and people on low incomes are more likely to report mental health problems due to weather

CLIMATE CHANGE IS A
POVERTY PROBLEM.

CLIMATE CHANGE IS A
HUNGER PROBLEM.

CLIMATE CHANGE IS A
HEALTH PROBLEM.

CLIMATE CHANGE IS AN
EDUCATION PROBLEM.

CLIMATE CHANGE IS AN
EMPOWERMENT PROBLEM.

CLIMATE CHANGE IS A
WATER PROBLEM.

CLIMATE CHANGE IS AN
ENERGY PROBLEM.

CLIMATE CHANGE IS AN
ECONOMIC PROBLEM.

CLIMATE CHANGE IS AN
INNOVATION PROBLEM.

CLIMATE CHANGE IS AN
EQUALITY PROBLEM.

CLIMATE CHANGE IS A
COMMUNITY PROBLEM.

CLIMATE CHANGE IS A
RESOURCE PROBLEM.

CLIMATE CHANGE IS A
COMMITMENT PROBLEM.

CLIMATE CHANGE IS A
SOCIAL JUSTICE PROBLEM.

CLIMATE CHANGE IS AN
OCEANS PROBLEM.

CLIMATE CHANGE IS AN
ECOSYSTEM PROBLEM.



'Transformative change' from the global to the local:

“By transformative change, we mean a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values.”

- Sir Robert Watson, Chair, UN IPBES

minimising negative impact >> a creative community regenerating

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identity

history

heritage

stewardship

perspective

values





Where do GHG emissions come from?

Greenhouse Gases

Carbon Dioxide (CO₂): The biggest proportion of greenhouse gas in the atmosphere – burning of fossil fuels, deforestation, cement manufacture. Long-lived.

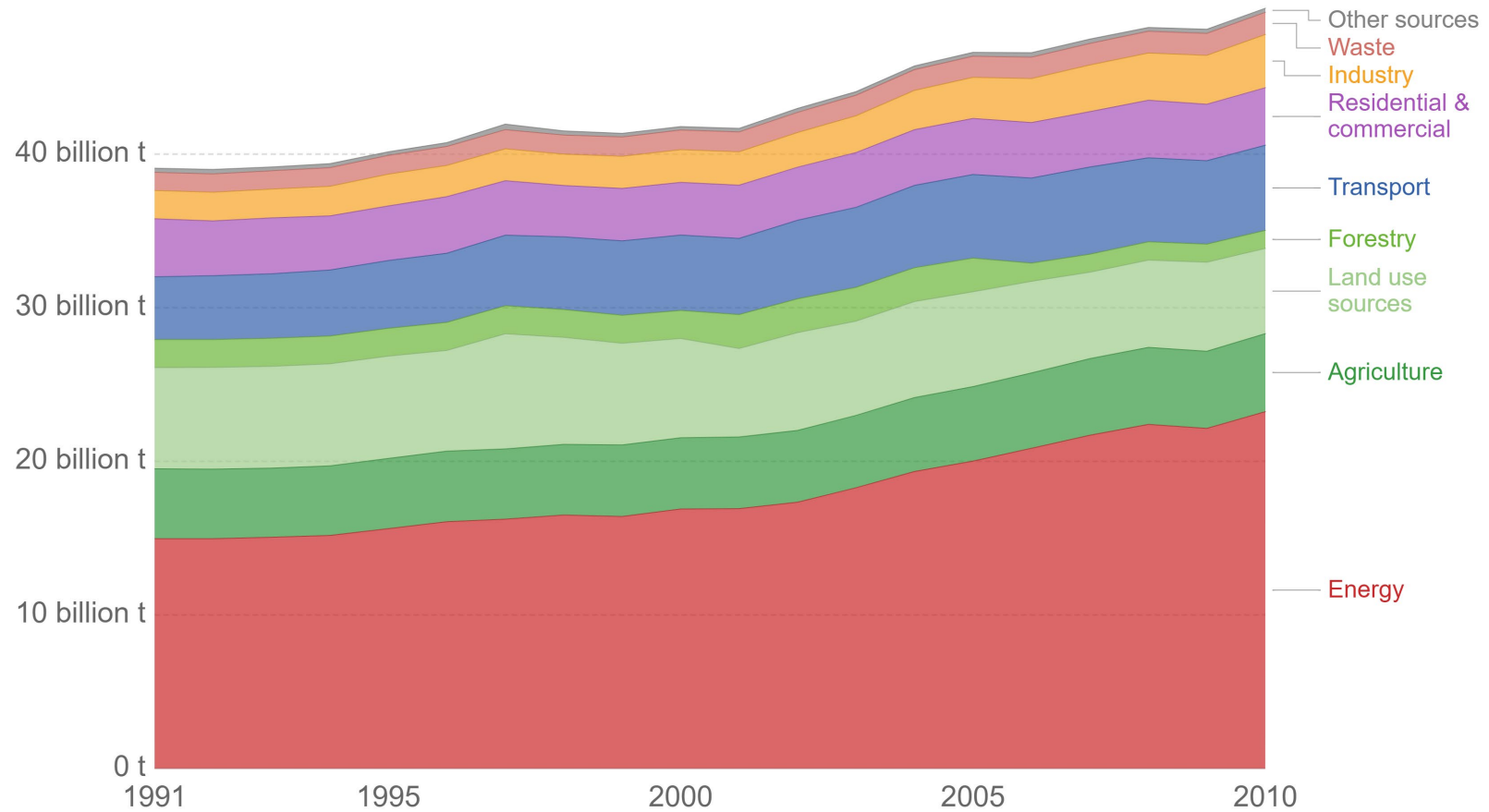
Methane (CH₄): Production and transportation of coal, natural gas and oil (fossil fuels), livestock and meat industry and landfill

Nitrous Oxide (N₂O): Up to 300 times more impactful than CO₂. Agricultural and industrial activities, by-product of synthetic fertilisers, burning fossil fuels

F-gases: Global warming effect up to 23,000 times more impactful than CO₂. Fridges, aerosols, solvents, aircon, cosmetic and pharma industries, magnesium and aluminium production

Greenhouse gas emissions by sector

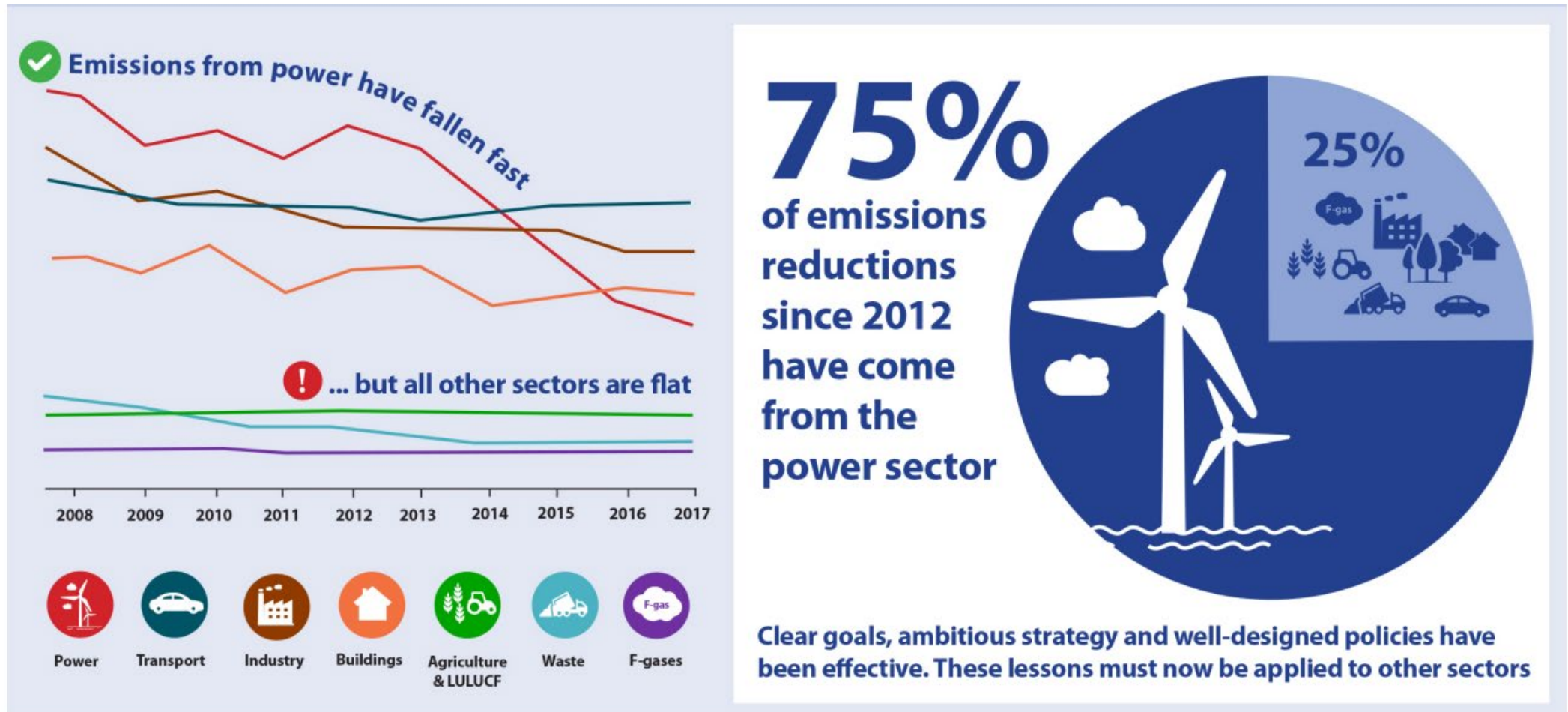
Breakdown of total greenhouse gas emissions by sector, measured in tonnes of carbon-dioxide equivalents (CO₂e). Carbon dioxide equivalents measures the total greenhouse gas potential of the full combination of gases, weighted by their relative warming impacts.



Source: UN Food and Agricultural Organization (FAO)

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY

Excellent progress in reducing emissions from electricity generation masks failure in other sectors

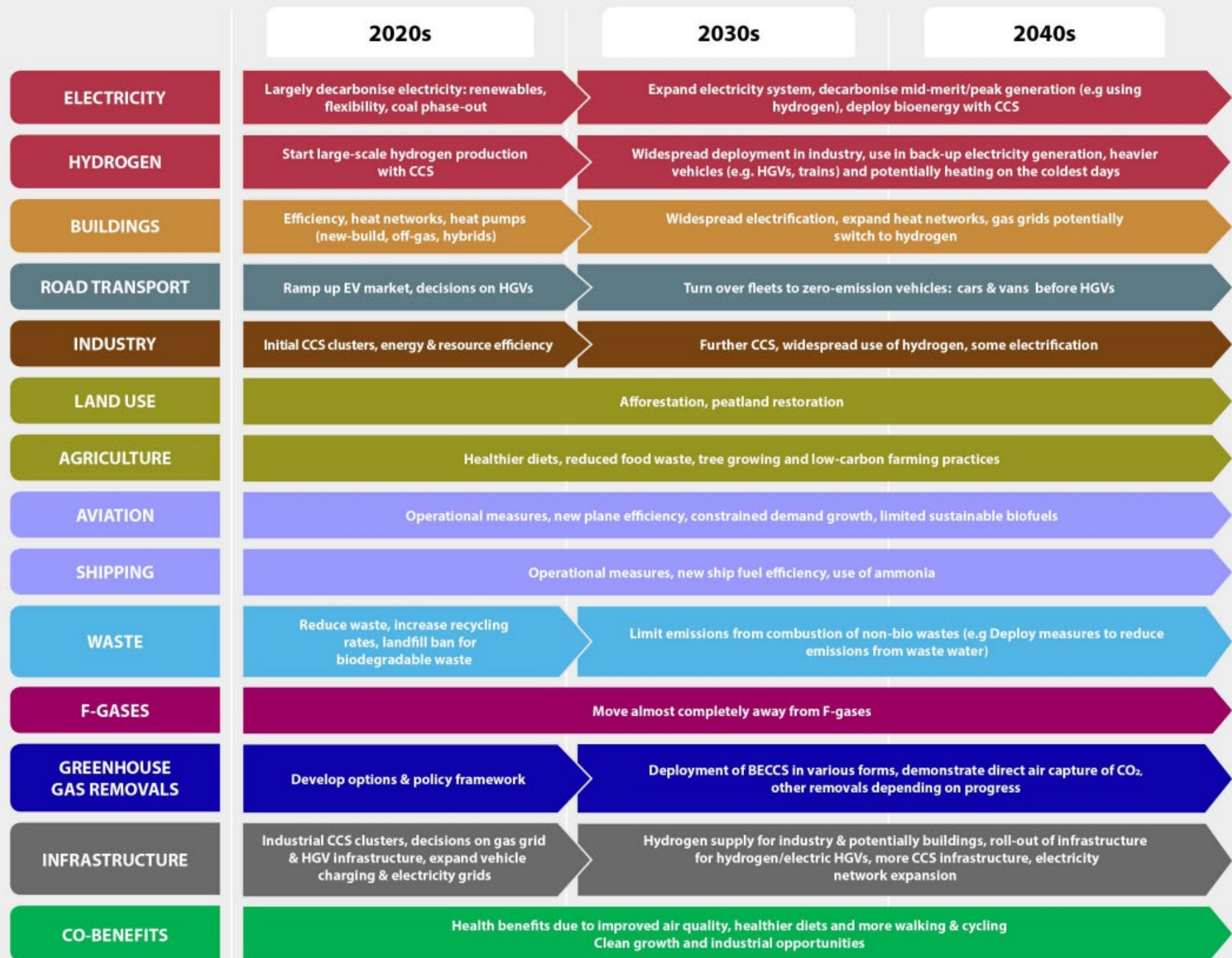


Source: Committee on Climate Change: UK progress (2018)

UK net zero by 2050 target:
But is it enough?

“Tougher targets do not themselves reduce emissions. New plans must be drawn up to deliver them.

Over half of the emissions cuts to reach net-zero emissions require people to do things differently.”



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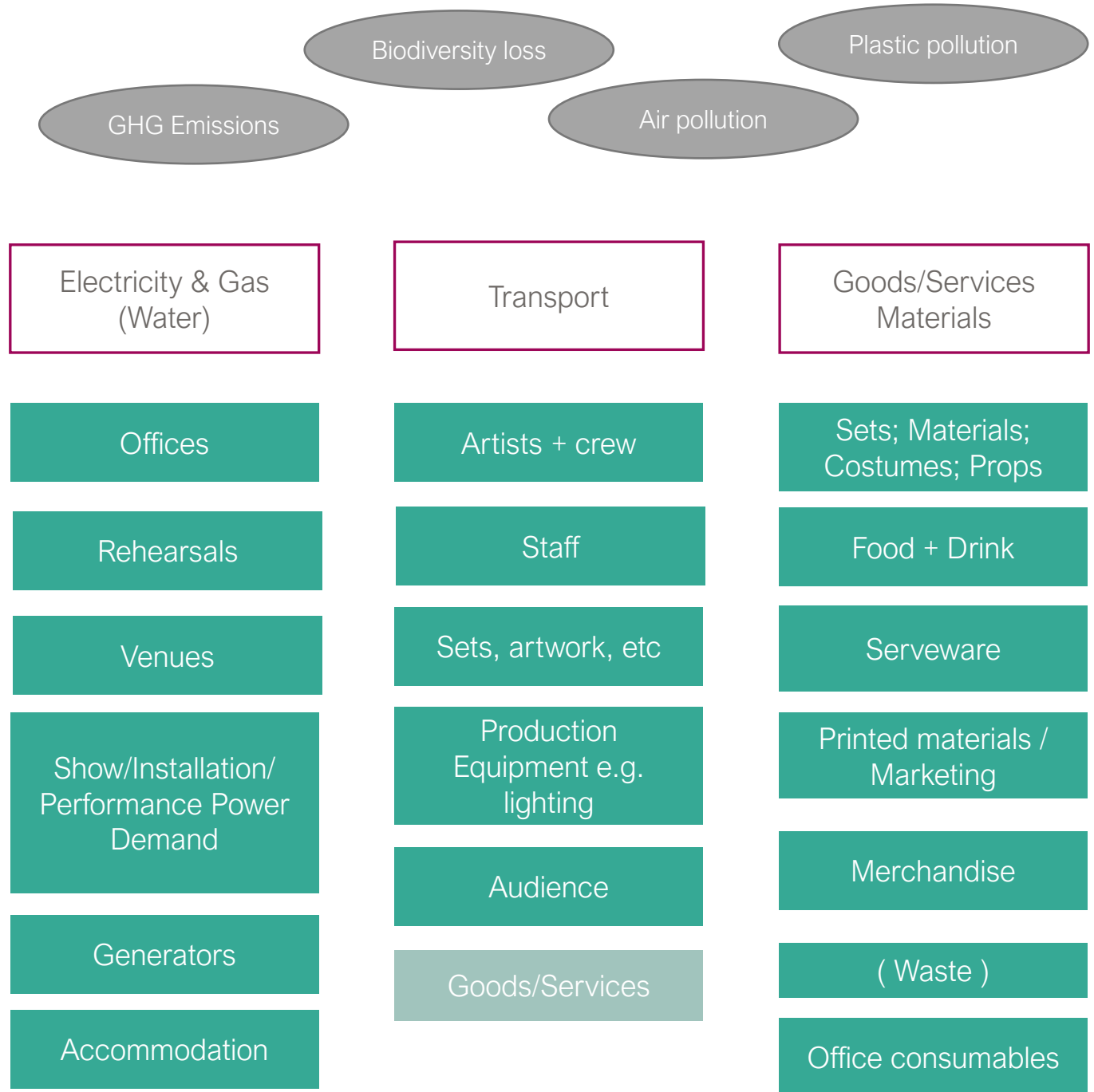
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Where are our main areas of direct impact? Which are most important? Which are highest?

Carbon footprint: measure of climate change impact of an activity. E.g. kWh electricity x CO₂e / kWh electricity generated = carbon footprint of electricity use

What data or information is already available?

What isn't captured here?



- What do you think the arts uniquely bring to the climate and ecological crisis?
- What are the strengths of outdoor arts in particular?

7

TRENDS



ART WORK

ACTIVISM

COLLABORATION

PATH-FINDING

ORGANISATIONAL LEADERSHIP

POLICY CHANGING

DESIGN & INNOVATION

Energy use

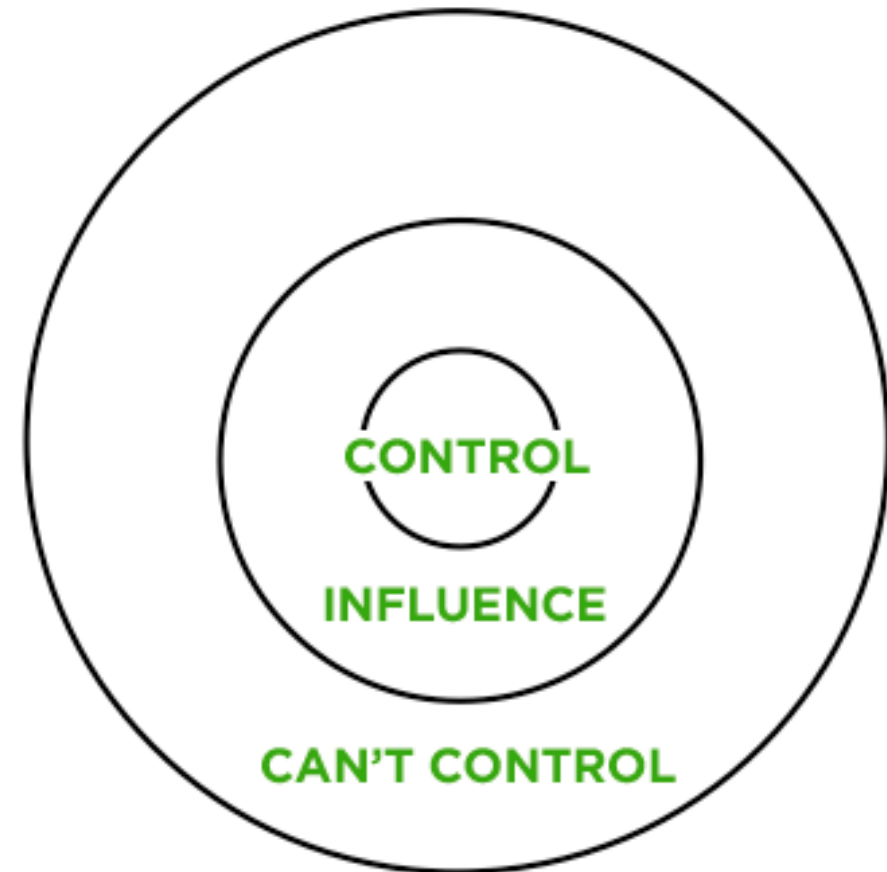
Food

Resources, materials (& waste)

Transport

Biodiversity & habitats

Finances / Divestment



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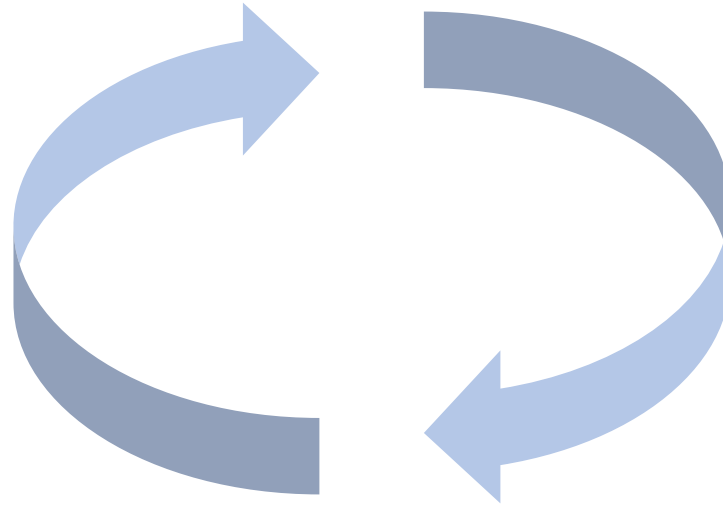
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COMMIT:

- Develop a policy and action plan
- Embed sustainability in decision-making processes
- Green champion(s)
- Create a designated budget?
- Influence: engagement for artists, partners, audiences, suppliers
- **What are your targets? What do you want to achieve and why?**

UNDERSTAND:

- Measure and monitor impacts
- Surveys
- Where you can make a difference



IMPROVE:

- Translate into action
- Achieve impact reduction
- Evaluate your performance against targets and plans

COMMUNICATE:

- Talk about what you're doing
- Make it visible and felt

THE MAJORITY OF ENVIRONMENTAL
IMPACT OF A PRODUCTION IS LOCKED IN
AT DESIGN AND PLANNING STAGE

Energy

Assess power requirements

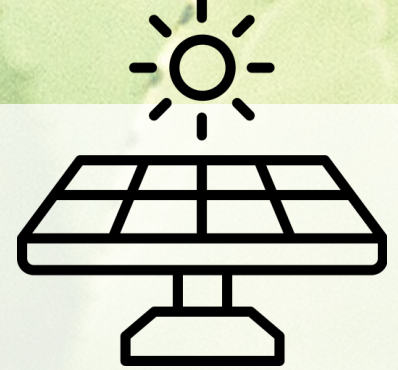
Focus on efficiencies: low energy tech, LEDs, etc.

Communicate clearly on energy requirements with events.

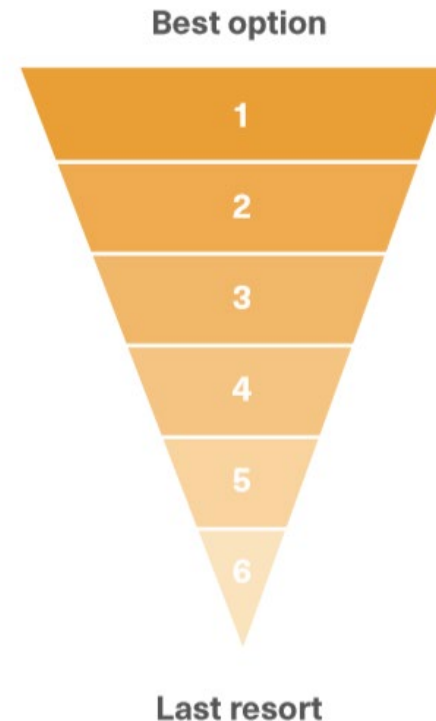
Events: measure and monitor!!!

Champion and implement energy efficiency

Switch from diesel to mains grid and prioritise renewable sources



THE POWER MANAGEMENT HEIRARCHY



Prevention - Do you actually need power in this location or for this application?

Efficiency - Use less power & use it in a more fuel efficient way

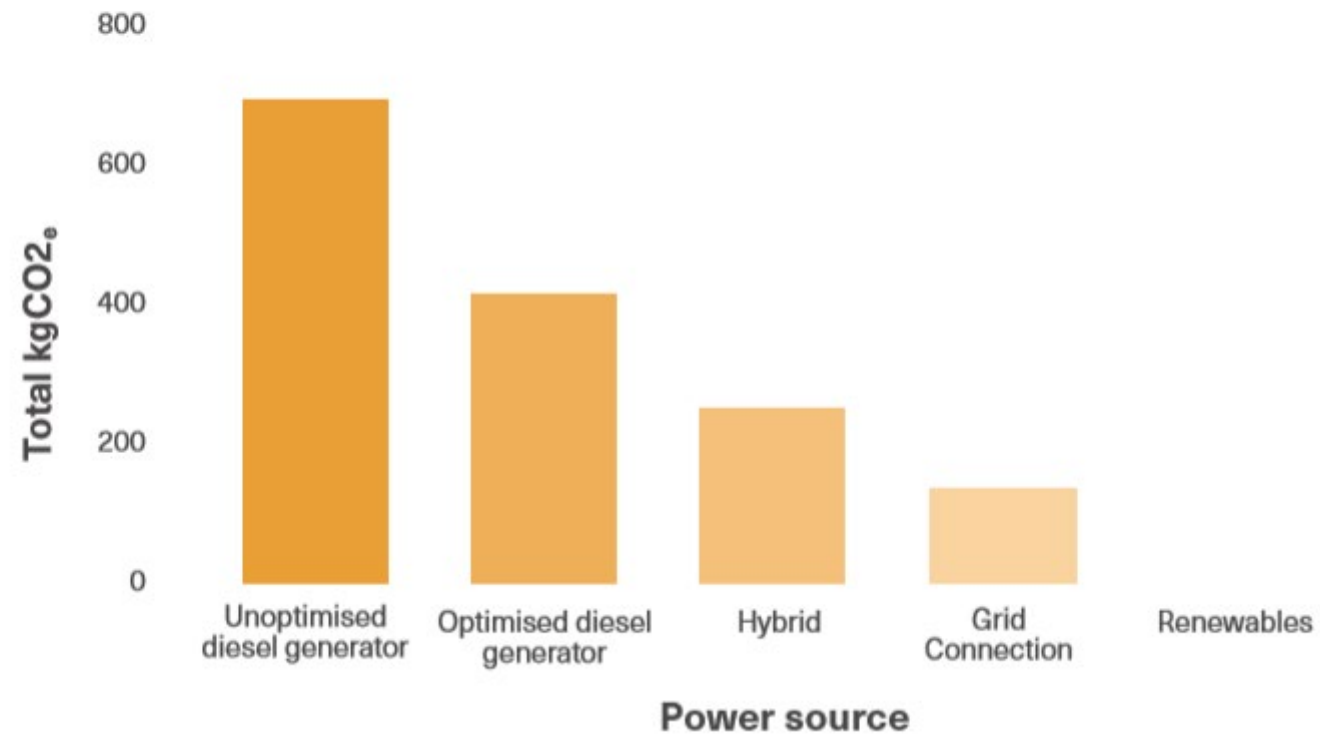
Sourcing - Can you use mains instead of generators? Can you use renewables?

Hybrids - Can the system be backed up or bolstered by battery technology?

Alternative fuels - Can you use HVO or other sustainable fuels?

Diesel-fueled generators - only where nothing else can be used

PREDICTED EMISSIONS SAVINGS USING THE POWER MANGEMENT HEIRARCHY

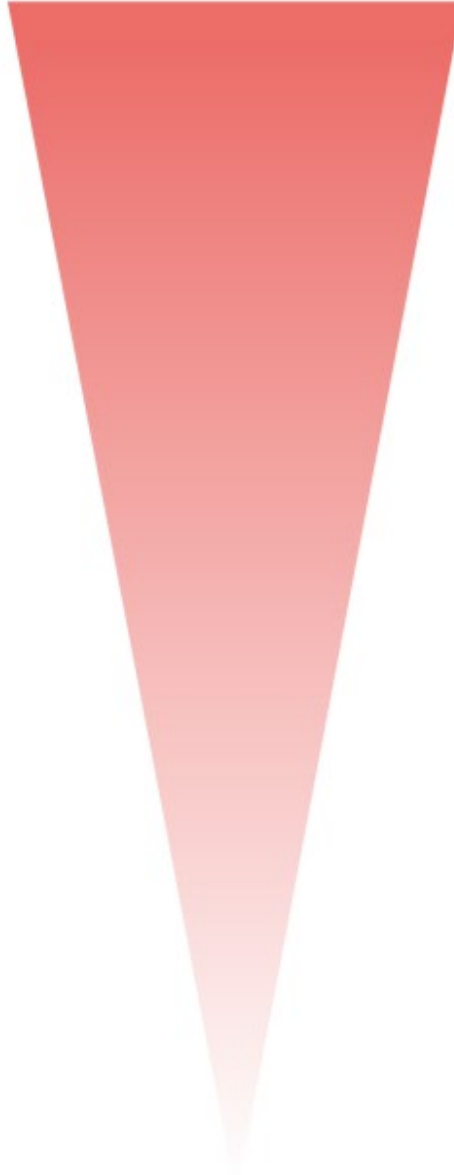


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Material Use and Waste

Consider at the start what will happen at the end.



MINIMISATION AND PREVENTION

- Use less materials in design and manufacture.
- Keep products for longer and re-use.
- Re-use or re-purpose materials instead of sourcing new.
- Use less hazardous materials / materials with lower environmental impacts.

(PREPARING FOR) REUSE

- Check, clean, repair, refurbish – whole items or spare parts.
- Design for disassembly and re-use.

RECYCLING

- Includes composting.
- Not everything that is labelled as 'recyclable' can automatically be recycled at the majority of facilities or if it is in waste streams that are too contaminated - for example if something consists of two or more materials glued together.

OTHER RECOVERY

- Including anaerobic digestion for organic materials, and incineration with energy recovery / 'Energy from Waste' i.e. where materials are burned and the energy generated is captured.

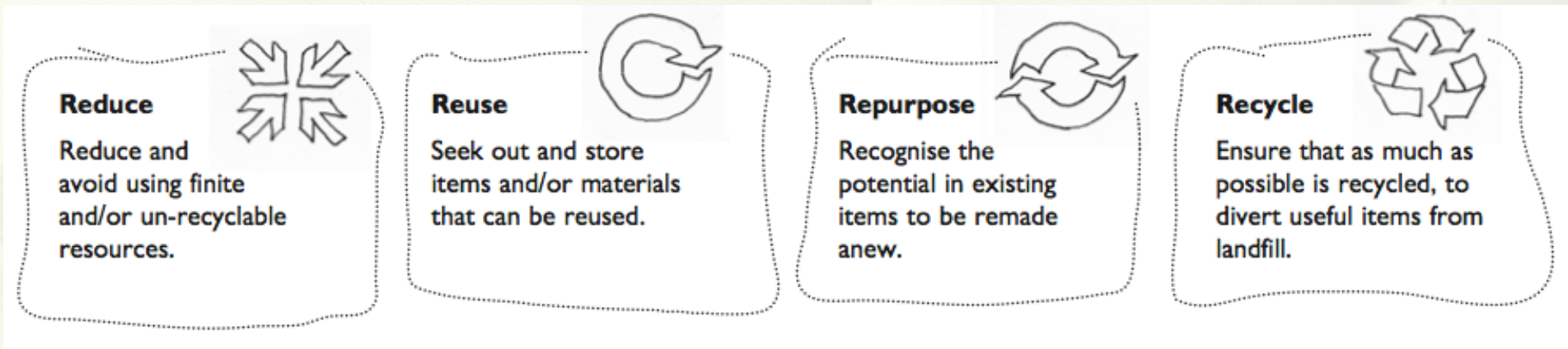
'DISPOSAL'

- Landfill and incineration without energy recovery.

Material Use and Waste



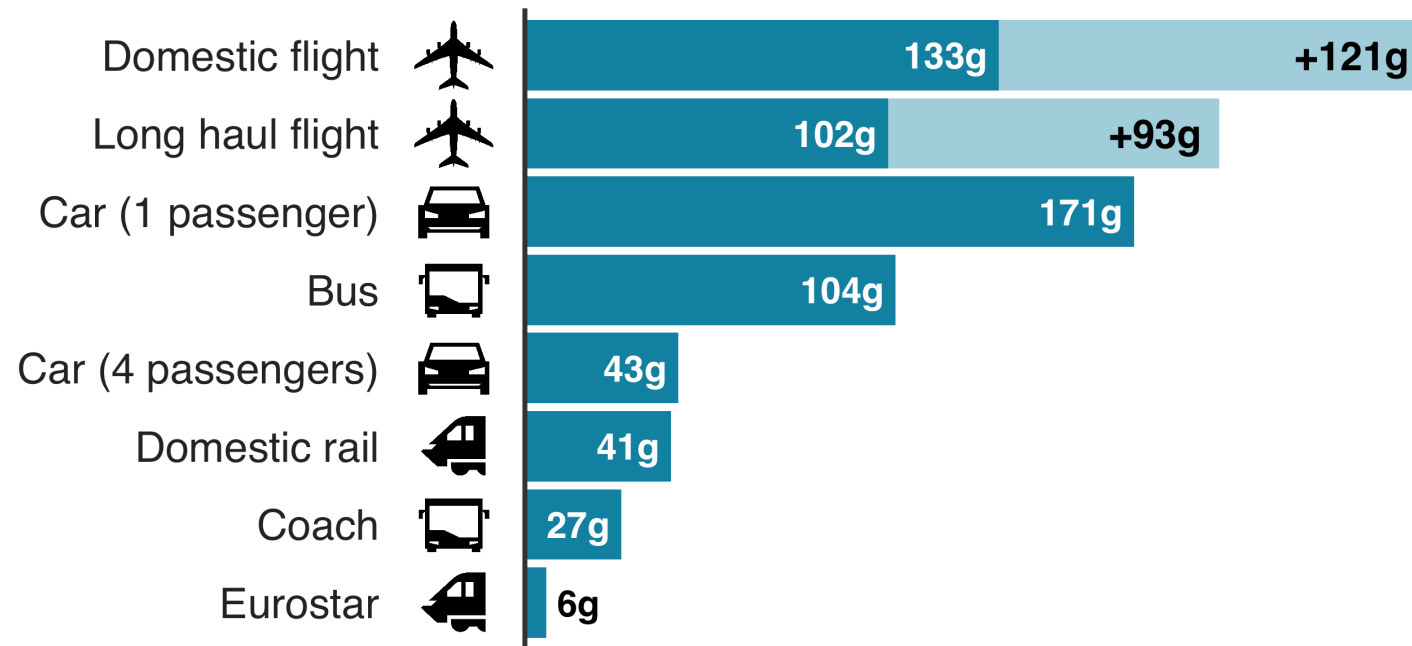
- Use less
- Use low-impact materials that are reused or repurposed, or contain reused or recycled content, or are certified from lower impact sources (in that order) e.g. FSC-certified
- Focus on most commonly used e.g: timber, steel, paper. Ask your suppliers questions!
- Introduce minimum sourcing standards (if you're commissioning, introduce them for commissioned artists). Also consider social standards and healthy materials
- Reduce, reuse, repurpose, recycle
- Have a plan for what happens after workshops or commissions. For larger commissions, encourage build for disassembly – screws, not glue!
- Use existing sharing networks e.g. set swap cycle, scrap stores, Freecycle, etc.



Emissions from different modes of transport

Emissions per passenger per km travelled

■ CO2 emissions ■ Secondary effects from high altitude, non-CO2 emissions



Note: Car refers to average diesel car

Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019

BBC



Travel & Transport

- Measure, monitor, and report!
- EVERYONE: work with audiences to incentivise better travel choices
- At design stage, understand the environmental implications of the decisions made. Are you making a show to take on a train, something that fits in a car, or something that is going to need more significant freight?
- Routing! How do we get better at this and challenge exclusion zones?
- If you're driving, choose the right size vehicle and do some fuel efficient driving training
- If you're hiring, ask your trucking company about:
 - Whether their drivers receive eco-driving training, speed limits, etc.
 - The efficiency of their engines
 - Their investment plans into fuel efficiency
 - Get fuel use figures AND mileage
- Who carries additional costs of e.g. train travel? Where and when are costs compared (e.g. lowest cost flights to highest cost rail fare). How do we structure this in contracts? Why are some promoters nervous about train travel? What about exclusion zones?

Travel & Transport



Where are we headed?

- From 2035, will only be able to buy electric or hydrogen cars or vans.
- Committee on Climate Change thinks (for cars) we will reach cost parity for electric as soon as 2025.
- HGV transport not likely to decarbonise until 2030s – 2040s
- BUT we will also need to reduce the number of miles driven on UK's roads overall. Do we tour less - and/or do we focus on reducing audience miles?
- What do we do about the miles we can't reduce?

Food & Drink



- Ensure your audiences have a choice of more environmentally friendly food options e.g. vegetarian / vegan options, or go fully meat- and fish-free
- Use catering providers which demonstrate sustainable practices e.g. using seasonal, organic, certified e.g. Soil Association, Fairtrade, RSPO. For events: put in place minimum standards.
- Limit the use of single use plastics and other packaging. Use reusables on the road. If you do need to use single-use items, match procurement to waste streams.
- Eliminate food waste

Biodiversity and wellbeing



- Bring plants into offices and buildings to support air filtration and physical and mental well-being
- Explore options for creating spaces for wildlife (and people) – planters, gardens, bat or swift boxes where appropriate, supporting people to create green spaces in their gardens and neighbourhoods and activities that take them into green space.
- If you're making site-specific work in natural environments, put in place policies to minimise the impact on local plants and wildlife.

Office

- Switch to a 100% renewable electricity provider for your office space. Encourage staff to switch, too.
- Incentivise commuting by public transport, cycling, or walking where possible.
- Look at finance and pension providers.



What does 'carbon neutral' mean?

Carbon neutral, climate neutral, net zero, zero emissions and decarbonisation: often used interchangeably.

The total of greenhouse gas emissions (CO₂e) produced is offset...
by natural carbon sinks?

'carbon credits'?

carbon capture and removal?

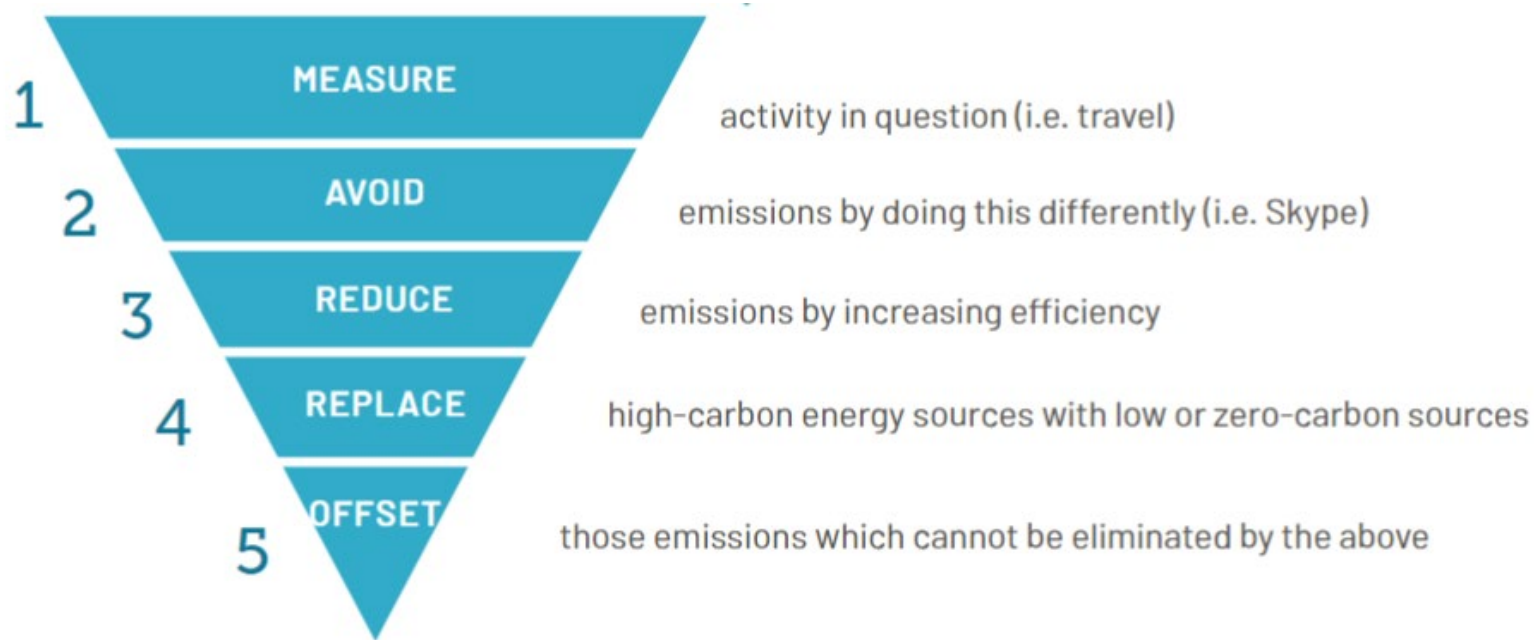
There are defined business frameworks on defining carbon neutral that we can use, but they are not enough on their own.

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CARBON OFFSETTING?

Carbon offsetting is an approach to compensate for emitting greenhouse gas emissions in one area of your organisation's activity by investing in climate positive projects in another, 'balancing' your carbon footprint.



WHAT KIND OF CARBON OFFSET?

For **official** 'carbon neutral' label or certification, purchased offsets have to meet certain specific standards.

Credible standards include the Voluntary Carbon Standard or the Gold Standard for the Global Goals

Projects should:

- Create local community and economic benefits
- Generate emission reductions in addition to usual business practice
- Be measurable, reportable, and verifiable (and verified) by a third party
- Permanent (e.g. if the project is reforestation, there needs to be a mechanism in place to make sure the forest won't be cut down a year after the investment)
- Avoid double-counting

TYPES OF PROJECT:

- Renewable energy
- Efficient Lighting
- Forestry
- Cooking stoves
- Water purification

OTHER APPROACHES TO PUTTING A BUDGET LINE IN FOR CARBON EMISSIONS / ENVIRONMENTAL DAMAGE:

Assign an internal value to every T CO₂e:

- Investment into environmental projects (with returns)
e.g. renewable energy, community energy share offers, etc.
- Donation to an environmental project or charity
e.g. chosen by staff, close to home or active in countries where your tours and projects are located, or chosen by an area you want to make an impact in
- Creation of internal budget for environmental projects and reductions
e.g. cover higher cost of train fares, additional travel days

Note: these will not meet standards to claim official carbon neutrality.

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SUSTAINING CREATIVITY

sustainable production guide

How to limit environmental impacts at every stage in the production process.

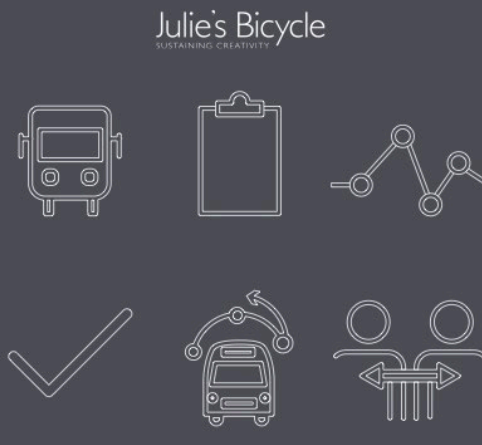
This guide is for artistic directors, producers, directors, production managers, lighting designers and technicians, set designers and builders, costume designers, and performing arts practitioners across the industry seeking to understand and reduce their environmental impacts.



Supported using public funding by
**ARTS COUNCIL
ENGLAND**



Creative Green Tools



Julie's Bicycle Practical Guide:

Audience Travel



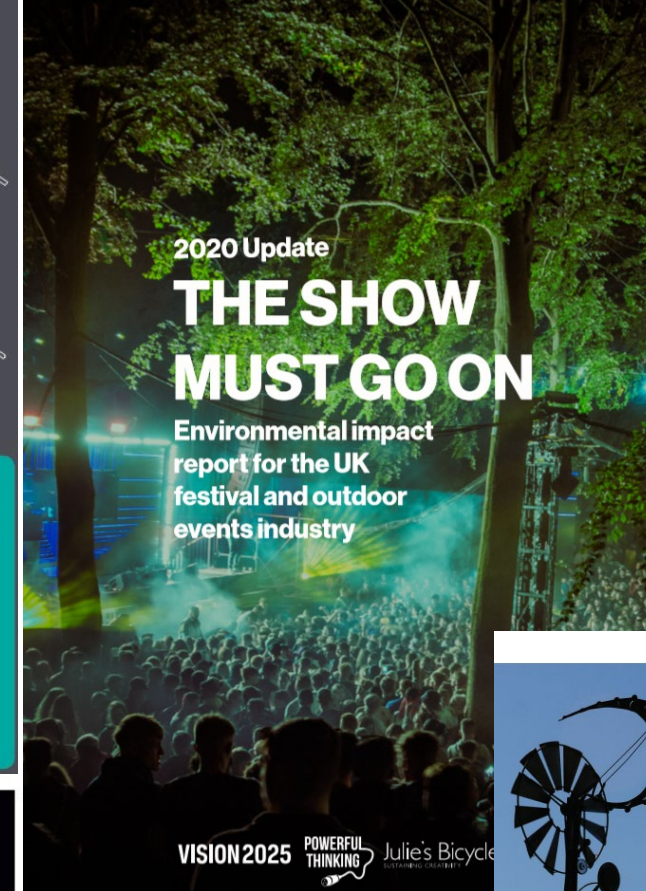
The arts and creative industries are ideally placed to lead on environmental sustainability; with creativity and inspiration they can champion a greener economy, energy efficiency, challenge our reliance on fossil fuels, make creative use of otherwise wasted materials and open new ways to greener travel and living.

Audience Travel Version 2015



Webinar: Speaking Green: How To Share Your Environmental Story

This webinar shares ways of communicating your environmental initiatives: explaining why you're 'going green', creatively speaking about your environmental impacts, and celebrating your achievements.



2020 Update

THE SHOW MUST GO ON

Environmental impact
report for the UK
festival and outdoor
events industry

VISION 2025  Julie's Bicycle 



THE POWERFUL
THINKING GUIDE 2017

Smart Energy for Festivals
and Events



ISAN

Developing
Outdoor
Arts

Environmental Sustainability Toolkit:
Making Outdoor Arts Sustainable

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SUSTAINING CREATIVITY

ART WORK

ACTIVISM

COLLABORATION

PATH-FINDING

ORGANISATIONAL LEADERSHIP

POLICY CHANGING

DESIGN & INNOVATION

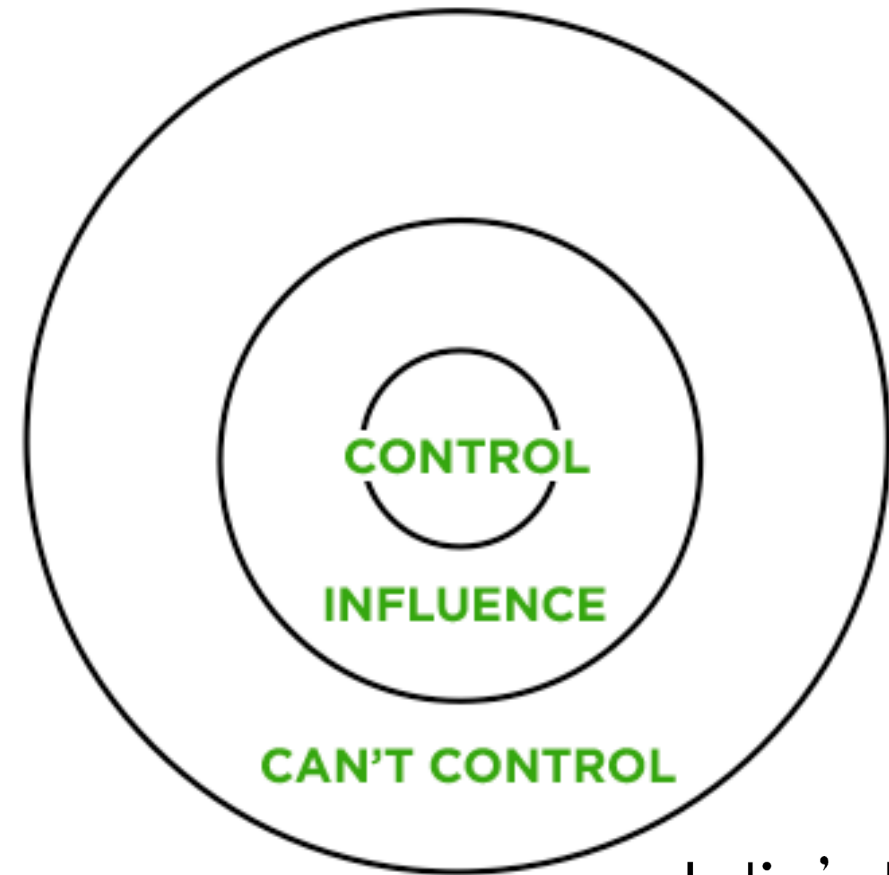
What is most important?

What is most impactful?

What do you have most influence about?

How do you work past “it depends” and find the best answer?

Ask follow-up questions to identify greenwashing. E.g. ‘environmentally friendly’ – how so? ‘Biodegradable’ – under what conditions? ‘Recyclable’ – commonly recycled? ‘Better for the environment’ – better than what?



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Programming +
commissioning

Celebrate Beauty of
Nature / Meditate on
Loss



←
Science and data-driven
– “objective”?

→
Political Dimensions
of Climate Change

↓
Climate Crisis
Post-apocalyptic Visions

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QUICK BREAK

New Carnival Company

- Isle of Wight Mardi Gras co-funded by the local AONB and themed around understanding and appreciation of the biosphere.
- 2019 theme for Mardi Gras parade was 'Biosphere Island'.
- All 28 participating schools required to partner with a local environmental organisation to learn about and then creatively present work, actively supporting the island's application to be recognised as only the third English designated UNESCO Biosphere Reserve. This designation was approved in June 2019.
- *'All along the Riverbank'*, a collaboration with local environmental and heritage organisations, animated a two mile stretch of the Easter Yar River with temporary installations, from water voles to emperor dragonflies and giant red squirrels, created by school and community groups



'Towards a Greener Carnival'
conference in Bristol in March
2020 and commission to trial work
with three national carnival
projects including Hasting, Milton
Keynes and the Isle of Wight.

CASE STUDY: Metta Theatre



That's about **0.5Kg** per audience member, the equivalent of **2** cups of cappuccinos or **3** plastic carrier bags!



We worked with **Event Transport** to reduce lorry journeys, and used for personal travel trains whenever we could.

The set and props are designed to **reused** or **recycled**, we're aiming for nothing to go to landfill after the show finishes.

Our 2016 production of **Jungle Book** was directly responsible for **10.6 tonnes** of Carbon Dioxide emissions across the whole of the 9 venue, 61 performance tour.



That's about **0.5Kg** per audience member - the same as just **two large cappuccinos** or a **1 mile** drive by car!

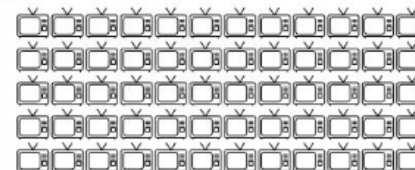


Most of these emissions were from the tour's transport - **33%** came from the lorry carrying the set, costumes and lighting equipment and **60%** from the cast and crew's train travel.



The show itself accounted for only **7%** of the total emissions (that's the construction of the set and the electricity used by the sound and lighting equipment during performances).

Each performance of **Jungle Book** used **24 kWh** of electricity - about the same as running **60** TVs for the two hours the show lasts.



Julie's Bicycle

CREATIVE • CLIMATE • ACTION

We recycle almost all of our office waste, sending almost nothing to landfill.

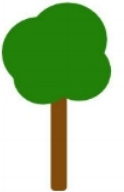


And for some of the things we can't recycle, we have our own compost bin outside the door.



The compost goes straight onto our own little veg-patch - so if you visit us here in the office you may very well be fed a delicious veggie meal straight from the garden!

We also have a couple of traditional variety apple trees, but they haven't given us any fruit yet...



Our electricity is **100% renewable**, supplied by Good Energy. We think we're in pretty good company alongside the National Trust and the Eden Project as customers.

We bank with the Co-operative Bank, the only high-street bank with a serious ethical policy.



Our website is hosted by LCN.com, who's modern data centres are **40% more energy efficient** than traditional centres. One thing they do is called **Ambicool Technology** - using the cold air outside to reduce the amount of power hungry air conditioning needed.

LEEDS MUSEUMS AND GALLERIES

Beavers to Weavers Exhibition: showcasing how animals use what they find around them



- Recycled paint; recycled and recyclable alternatives to foam board;
- Old bobbins and cotton reels as plinths; printing some labels with Leeds Industrial Museum's Albion printing press;
- Homemade paper from waste materials as a community activity, and using this for labels;
- Materials sourced from Scrap, a creative-reuse supplier for learning activities;
- Cushions from recycled coffee sacks and foam offcuts.

Julie's Bicycle

CREATIVE • CLIMATE • ACTION

The Living Stage (Tanja Beer)



We Love Green Festival, France

400kg of plastic recycled to create the festival's signature set design

The festival opened up its scenography workshop to a group of selected artists. During the two-week residency, the winning artists received funding for their projects, recycled materials and a creative workshop alongside a team of specialists, to bring the festival's eco-designed scenography to life. During last year's festival, the workshop resulted in six artistic pavilions created using reclaimed materials, as well as the festival's signature artwork made using 400kg of recycled plastic.

Material exchange hub

We set up an online recycling platform with CO-RECYCLAGE for sharing and **sourcing materials** for the festival and its set design, and **putting them back into the circular economy once the festival is over**. In 2019, we reclaimed: 2 palettes of compostable cutlery and plates, small household items (jugs, brushes, scrapers, bins), packaging (12 tubes of foam, bubble wrap, isolation, non-woven fabrics), screens, wooden partitions and set design material (1 disco ball, 1 record player, 20 solar-powered spot lights). **Do you organise events or run a venue?** Do you need to get rid of your old set design materials and decorations, signs or raw materials? Why not donate your **wood, fabrics, materials, office furniture, paint** and **material off-cuts** [HERE](#), to help us build the festival's set design.

ENERGY (14,000 kWh)^{1,2}

Generators (100% GoodFuels HVO Biodiesel) (8,260 kWh)²
Mains connection (100% wind energy) (3,740 kWh)²
Mains connection with batteries (100% wind energy) (2,000 kWh)²

WATER (20,000 LITER)^{3,4}

Bars (9,278 liter)³
Catering (4,770 liter)³
Waterpoints (3,624 liter)³
Other (1,178 liter)³
SEMILLA Sanitation Hub (1,150 liter)³
Toilets (0 liter)³

DRINKS (90,000 LITER)⁵

INFRASTRUCTURE & DECOR (786 TONNE)⁴

STEEL (553 TONNE)⁴

Shipping containers (428 tonne)⁴

Fences (45 tonne)⁴
Tents (40 tonne)⁴
Large romney (14 tonne)⁴
Decoration (9.24 tonne)⁴
Small romneys (8.74 tonne)⁴
Lockers (7.01 tonne)⁴
Standing tables (0.72 tonne)⁴
Bins (0.60 tonne)⁴

ALUMINIUM (109 TONNE)⁴

Tents (60.00 tonne)⁴
Stages (49 tonne)⁴

WOOD (50 TONNE)⁴

Decoration (46 tonne)⁴
Tables (3.36 tonne)⁴
Cable reel (0.52 tonne)⁴

ELECTRONICS (45 TONNE)⁴

Lights and lasers (25 tonne)⁴
Speakers (20 tonne)⁴

PLASTICS (DECORATION) (19 TONNE)⁴

PVC (TENTS) (10 TONNE)⁴

FOOD (9.73 TONNE)⁵



2018

EMISSIONS (70 TONNE)^{1,5}

Mains connection with batteries (100% wind) (45 tonne CO₂e)²
Mains connection (100% wind) (24 tonne CO₂e)²
Generators (100% GoodFuels HVO Biodiesel) (1 tonne CO₂e)²
Generators (100% GoodFuels HVO Biodiesel) (0.01 tonne NO_xe)²
Generators (100% GoodFuels HVO Biodiesel) (0 tonne PM₁₀e)²

WASTEWATER (20,000 LITER)³

URINE (90,000 LITER)⁵

MATERIAL REUSE (777 TONNE)³

Steel (548 tonne)³

Aluminium (108 tonne)³

Wood (49 tonne)³

Electronics (44 tonne)³

Plastics (decoration) (18 tonne)³

PVC (tents) (9.91 tonne)³

DECONSTRUCTION WASTE (8.82 TONNE)⁷

RESIDUAL WASTE (7.52 TONNE)⁷

DEMOLITION WASTE (1.30 TONNE)⁷

Wood (0.65 tonne)⁷
Plastic corrugated roofing sheets (0.26 tonne)⁷
Steel (0.13 tonne)⁷
Coarse waste (0.13 tonne)⁷
Cables (0.13 tonne)⁷

ORGANIC RESOURCES (0.03 TONNE)⁷

CONSUMPTION RESOURCES (2.25 TONNE)⁷

Glass (0.90 tonne)⁷
Cardboard boxes (0.60 tonne)⁷
PET (0.46 tonne)⁷
Aluminium (0.29 tonne)⁷

WATERNET
(20,000 LITER)

SEMILLA SANITATION
HUB (750 LITER) ²

REUSE
(837 TONNE)

ICOPower®
renewi PELLETS ^Δ
(7.52 TONNE)

DOWNCYCLED ^Δ
(1.30 TONNE)

ECOCREATION
COMPOSTER ¹
(0.03 TONNE)

RECYCLED
(2.25 TONNE)



Circular food court

- Innovative composting
- Closed loop food system
- Audience visits and workshops at urban farms

Set design + production

- Ace & Tate partnership to use faulty lenses to create artwork
- Pallet timber artwork – reclaimed and returned

Resource street

- Reusable cups and deposit scheme
- On-site recycling hub
- Innovative recycling – urine to drinking water and fertilizer, bottle caps to oil

<https://dgtl.nl/sustainability>



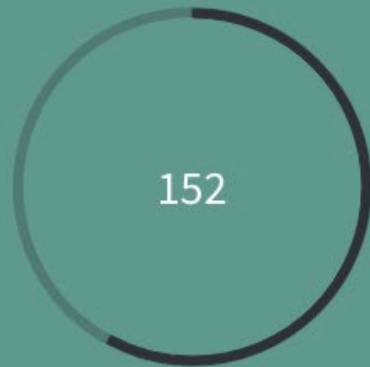
IN 2018, THE AVERAGE FESTIVAL GOER PRODUCED 7X MORE WASTE THAN A DGTI VISITOR. COMPARED TO 2017, DGTI VISITORS CUT THEIR WASTE IN HALF THIS YEAR.



The HandleBards



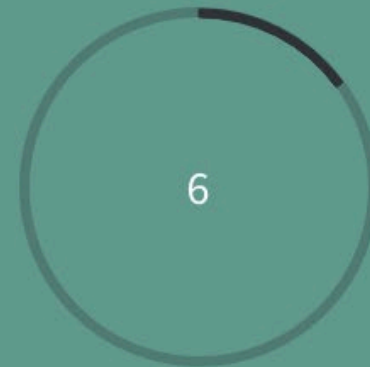
Miles Cycled



Characters Played



Countries Visited



Punctures

National Theatre



- Own branded re-usable cups has saved on average 250,000 single-use plastic cups in just six months. This success has meant NT have achieved 75% of their commercial waste recycling target two years ahead of schedule.
- Sustainable touring partnerships and green riders
- Detailed assessment of production workshop material use and sourcing

Manchester Day

- Parade structures and costumes made from reused and recycled materials, e.g. flowers made from cassette tapes, carrier bag flags; large puppets hired in.
- Many items stored and adapted for re-use each year, e.g. wheel bases for moving structures within the Parade
- 98% of previous parade floats/structures have been pushed, walked, wheeled or cycled
- Recycling of water bottle waste from participants at start and finish point of Parade and in the squares

What is something you've done in the past year that worked very well that you'd like to share with the room?

Julie's Bicycle

CREATIVE • CLIMATE • ACTION

GREEN RIDERS:

- Day-to-day actions vs. asking for systemic change
- Energy, waste, transport, food, communications
- What is useful to know?

Events

Productions

Who receives them?

DISCUSSION

What do we as a community want to see happen in the next year? In the next 5 years?

How can we work together best as a community?

Julie's Bicycle

CREATIVE • CLIMATE • ACTION

Turn to the person next to you.

What are two things you will do after leaving here today –
one short term, one longer term??