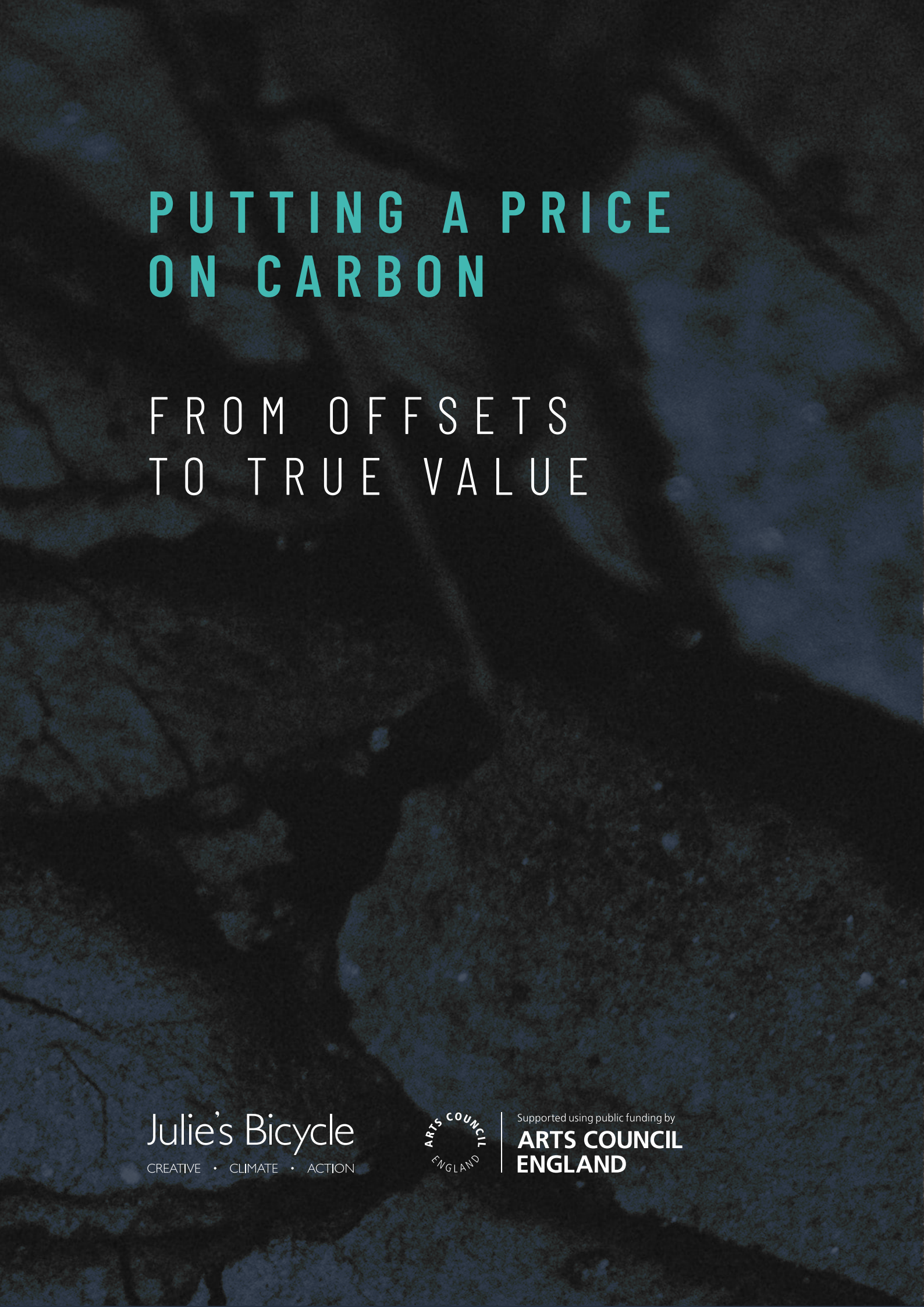
# PUTTING A PRICE ON CARBON

## FROM OFFSETS TO TRUE VALUE



Julie's Bicycle

CREATIVE · CLIMATE · ACTION

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# FOREWORD

"If all the world is a commodity, how poor we grow.
When all the world is a gift in motion, how wealthy we become".

**ROBIN WALL KIMMERER - BRAIDING SWEETGRASS: INDIGENOUS WISDOM, SCIENTIFIC KNOWLEDGE AND THE TEACHINGS OF PLANTS**

Over the last few thousand years humans have developed tools for the exchange of food, land and labour. Cocoa beans, cowrie shells and tulip bulbs - all at some stage used as currency - have prefigured our dominant method of measuring value: money. As we in the cultural sector know only too well, financial value only tells part of the story; it fails to express the intangible value the arts bring beyond its ticket sales, such as connection, community, love, identity and wellbeing.

Human lives and livelihoods depend on functioning ecosystems: predictable weather, fertile soil, clean water and air, and stable coastlines. Yet our financial system is wholly inadequate in recognising the true value of nature. The woodlands, forests and peat bogs that provide carbon sinks; the coral reefs that prevent storm surges; and the pollinating insects that prop up our food system, quite simply, make the planet habitable.

Our failure to recognise and account for nature is driving mass extinctions, rapid global heating and devastating communities around the globe. How we steward our relationship with our environment is at its heart a question of social justice. We must ask the questions: who gets to pollute, who benefits, and who pays the costs?

Of course, any comprehensive attempt to create a balance sheet of nature is likely doomed to failure. But while money remains a proxy for value, there is a compelling argument to financially account for environmental risk and damage so as to discourage harmful activities and steer investment toward socially just, regenerative action.

Carbon offsetting, alongside carbon trading, are attempts to 'marketise' greenhouse gas emissions. As this briefing paper outlines, carbon offsets are, essentially, a voluntary and retrospective payment for the right to pollute. This has some merit, but there are other measures needed, e.g.: the 'polluter pays' principle, progressive carbon taxation, global governance (e.g. recognition of 'ecocide' as an international crime); and climate finance to support the transition to a cleaner world that is fair and just. Most critically, offsetting actions should never be a substitute for actions to reduce emissions at source.

"In nature's economy the currency is not money, it is life."

**VANDANA SHIVA**

This briefing paper looks at carbon offsets, what they are, and some alternative models. It is one part of a richer set of choices we need to make to address our short-term economic system making fast money on the basis of profoundly inadequate valuations that are at the heart of the climate, nature and social catastrophe.

Choose well.


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# CARBON OFFSETS
# SUMMARY AND TOP TIPS

**Nothing less than transformation is needed to meet the challenge of the climate crisis. The arts and culture's contribution combines the imperatives to reduce emissions and restore nature with the ingenuity and creativity that connects heart, head and soul. The task in hand - limiting global warming to below 1.5 °C before 2050 - requires greater reductions by high income economies which means that our ambition should be greater - preferably net zero by 2030.**

**What does 'net zero' really mean?**

A net zero commitment is not the same as zero carbon, or zero emissions, which means that no greenhouse gas emissions are emitted. A net zero commitment, instead, requires that all remaining greenhouse gas emissions are 'balanced' – removed - with an equivalent amount via offsets that remove or capture carbon from the atmosphere, such as peatland preservation, or carbon capture technologies. For a net zero commitment to be meaningful it cannot rely on offsetting as a main strategy. There is a finite capacity for carbon removal and we need absolute reductions.

**What is carbon offsetting?**

Offsetting means 'balancing', 'compensating', or 'neutralising' the carbon emissions from a given activity by paying into a scheme or project that will reduce emissions somewhere else. Offsetting investments are typically made in environmental, climate and nature restoration projects such as tree planting, or renewable energy development schemes. Offsets are usually sold as units with a price per tonne of carbon dioxide (CO2). But not all offsets sequester, or capture, carbon from the atmosphere - some are just emissions that have been, or will be, avoided elsewhere.

# HOW MUCH DOES A TONNE OF CARBON COST?

Carbon pricing ranges from a few dollars per tonne to over 200.

| | |
|---|---|
| ClimateCare (offset provider) | ca EUR 7.50 / tCO2e |
| Fairtrade minimum price for carbon credits | EUR 9.20 – EUR14/ tCO2e depending on whether it is an energy efficiency, renewable energy, or forest management project |
| World Land Trust | £15 / tCO2 mainly through forest protection projects under REDD+ (Reducing Emissions from Deforestation and forest Degradation) |
| Woodland Trust UK | Donation of £25 accounts for approximately 1 tCO2 |
| EU Emissions Trading System | ca EUR 25/ tCO2 in 2019 with Carbon Tracker suggesting it needs to rise to EUR 45-55 to meet EU climate ambitions |
| Grantham Institute | Suggest the UK government should impose an average carbon price of £40 / tCO2 in 2020, rising to £125 tCO2 or more in 2050, on emitters in the private sector, and use even higher costs per tonne to inform policy in order to meet the UK's current net zero commitments. |
| 'Social cost of carbon' | One survey of experts across science and economics suggests a 'social cost of carbon' of around $200 (EUR 164) per tCO2 16 - another suggests $417 (EUR 344) / tCO2 |

**Why the disparity?**

**Pricing ranges on what is included in the cost (cost of project as compared to a cost set to incentivise investment as compared to real cost of climate damage).**

If companies, individuals and governments are committing to meet their climate targets using offsets, this creates a perverse incentive for those offsets to become as cheap as possible instead of sparking real, meaningful transformation. There is a real danger that offsetting prompts a race to the bottom, not to net zero.

**How we price our damage**, and where and how we compensate, also raises questions about the nature of our work, its environmental and social costs and its benefits. The principle of **climate justice** – that those least responsible for climate change are most affected by its impacts - should be considered.

**Why offsetting alone is not the answer**
Offsetting is not a magic solution; many schemes fall short of their promised climate benefits and ethical credentials. Addressing emissions through offsetting often means that damaging business-as-usual behaviours continue.

**Carbon offsetting should always be the last step in your climate strategy: only turn to offsetting once you have exhausted all other options for cutting your carbon footprint.**

# FOUR APPROACHES FOR 'PRICING IN' CARBON:

These are the four main strategies that can be considered. The pros and cons of each approach is analysed within this report.

**Buy certified carbon credits/offsets** on the voluntary carbon market through an offsetting platform, which may be necessary to meet net zero commitments. If you do choose to buy offsets, look for Gold Standard certified projects, which are quantifiable and fairly well regulated. Remember, though, that the offsetting market remains beset by ethical and practical challenges that threaten to undermine urgent climate action.

**Do-It-Yourself: set your own price per Tonne of CO2** and donate to a project or charity driving environmental change and climate justice through campaigns, conservation, education, research, legal reform, and more. This approach means you can support causes which are harder to quantify in terms of carbon emissions, but that are equally important in driving positive change and can resonate with your audiences, staff, and partners.

**'Inset' internally by setting an internal price per Tonne of CO2** and creating a ring-fenced budget for reducing your own emissions e.g. a fund for on-site renewable energy or energy efficiency, or to invest in reducing the emissions of your supply chain. This has the benefit of creating a resource for environmental action and driving emissions reductions at home, although the required investment for quantifiable reductions may be comparatively high.

**Invest directly into projects with an environmental and financial return** such as buying community energy shares. This has the benefit of supporting a green economy, but doesn't count towards net zero commitments in the same way as an offset carbon credit.

## DO

**MEASURE:** Calculate your carbon footprint using the Julie's Bicycle free online CG Tools to measure the carbon impact of your activities and buildings (ig-tools.com/login).

**APPLY:** The climate hierarchy (see below) and plan to avoid and directly reduce emissions first.

**PLAN:** Develop a climate strategy and action plan that sets out emissions reductions targets. Focus on avoiding and reducing emissions first. If you choose to offset, be clear on your aims and the impact you want to make and research your approach carefully.

**CHOOSE WISELY:** Decide where to put your contribution and price it adequately – it doesn't have to be an 'official' offset.

**VERIFY:** Find a Gold Standard certified (or similar) carbon offset provider to ensure the investment is credible and verified.

**ENGAGE:** Use offsetting as a way to engage your organisation and audience in your wider environmental programme, the offsetting approach you're taking and why.

## DON'T

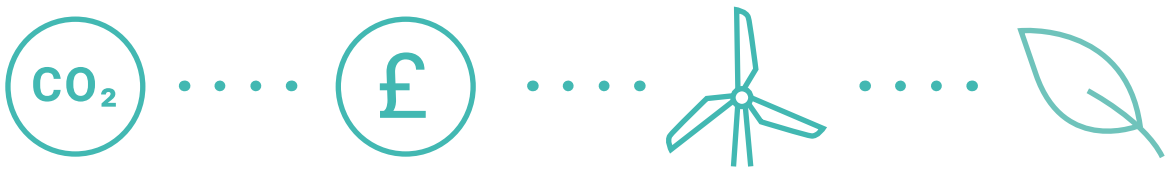
**UNDER VALUE** carbon. There is no set price for one tonne of carbon and many offsetting providers set their prices too low to reflect the true social and environmental costs.

**SUBSTITUTE:** Don't use offsetting as a substitute for taking actions to reduce emissions at source.

**MISCOMMUNICATE:** If you are using offsetting as a way to claim 'net zero' or 'carbon neutral' then communicate clearly what emissions reductions have been achieved directly against those offset. Frame your climate strategy as a journey- we all have work to do.

**PRESUME:** That carbon offsets will undo or balance out your emissions tonne-for-tonne; all things considered, there's a good chance that this is an unrealistic expectation.

**RUSH:** Some websites offer a carbon offset option at point of purchase, but rather than a quick click, consider a coherent approach that captures all your impacts.



# QUICK OVERVIEW
# CONTENTS



**Other resources you may find useful:**

Julie's Bicycle: Environmental Policy and Action Plan Guidelines
Julie's Bicycle CG Tools: free carbon calculators for the creative community
Julie's Bicycle Creative Green webinar: the road to zero carbon
Other free Julie's Bicycle guides and resources

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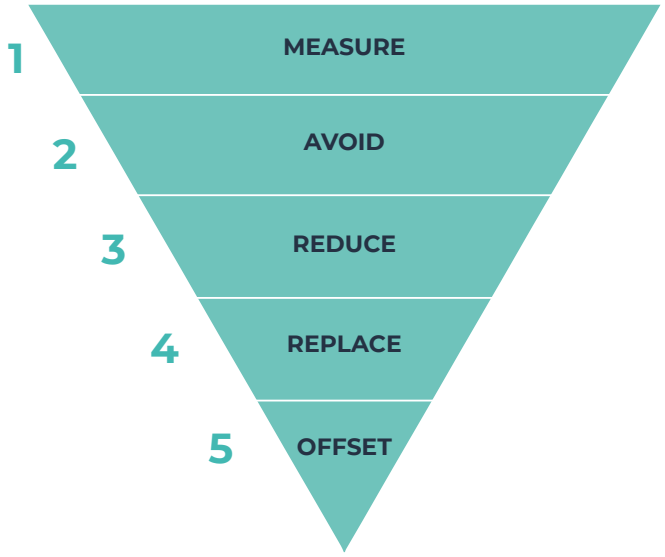
# PART 1

# HOW TO THINK ABOUT PRICING YOUR EMISSIONS

Considering offsets, investments, and donations; what a tonne of carbon should cost; and how to make sure you're not just buying your way out of taking action.

# CLIMATE STRATEGY HIERARCHY




**Offsetting or other ways of 'pricing in' carbon emissions should always be seen as a last step in your climate strategy.**

"If every corporate is relying on tree planting as a means of offsetting their emissions then we are not going to make as much progress as we think."

**CHRIS STARK, CHIEF EXECUTIVE OF THE UK COMMITTEE ON CLIMATE CHANGE, IN AN INTERVIEW WITH THE FINANCIAL TIMES IN MARCH 2020**

1 **Measure** to understand and report your impacts and track how you're doing year by year

2 **Avoid** emissions by doing things differently, including changing business models, avoiding unnecessary travel, etc.

3 **Reduce** emissions by increasing efficiency e.g. energy efficiency, fuel efficiency

4 **Replace** high-carbon energy sources with low-carbon energy sources, for example shifting to renewable energy

5 **Offset** and/or put a price on your emissions that can't be eliminated through one of the above, only as a last resort and if you're confident you're also managing and reducing your carbon footprint in other ways. Do this either through 'official' offsets, or through a DIY approach by making a donation or investment into a cause or project driving climate action or addressing climate justice.

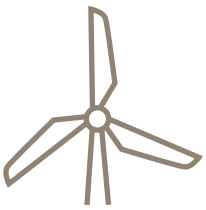
# EXAMPLES OF TYPES OF PROJECTS YOU CAN SUPPORT THROUGH BUYING OFFSETS, INVESTMENTS, OR DONATIONS

**absorb carbon directly from the atmosphere**

e.g. tree planting, peatland restoration

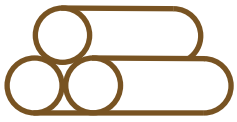
**capture carbon at source**

e.g. methane collected from landfill



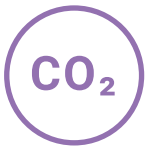
**reduce long term production of carbon emissions through funding alternative infrastructure**

e.g. new renewable energy projects, energy efficiency



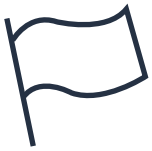
**promote and support projects that also have sustainable development outcomes**

**e.g. reducing emissions from carbon intensive cook-stoves in the Global South through replacing them with more efficient stoves, which also improve health and save women from extra work or cost to get wood**




**buy and retire carbon credits**

**e.g. from the EU Emissions Trading System**



**other ways to fight climate change and support climate justice**

**e.g. political campaigns, legal campaigns, supporting environmental and climate justice, education**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# Stories from the creative climate community

## Ninja Tune

Record label **Ninja Tune** allocate a minimum 2.5% of their profit for offset projects with chosen partners including **Trees for Cities** and **Grow Trees**. They have also given ad hoc grants and donations to projects including **Music Declares Emergency** and **TransitionLab** – a new initiative helping to build bridges between **u**niversities and local government, industry and conservation NGOs. Internally, the label has invested in 18 solar PV panels on their office roof (with 6 more to come), as well as travel grants to staff including £100 for each personal flight they and their partners don't take, in order to subsidise alternative train travel.

OFFSET INVESTMENT DONATION

## EarthPercent

**EarthPercent** is a fundraising initiative launching in 2020 with the aim of providing a simple solution for the music industry to donate a percentage of revenue in support of climate action, as a high impact, low friction way to balance the energy used by the industry. Using existing mechanisms for allocating revenue developed and used within the music industry (including by artists, labels, collection societies, etc.), EarthPercent will help to fund the most impactful organisations working on carbon absorption, legal campaigns, developing tools for sustainability, and climate justice, as well as support projects that help the industry itself become greener. Beneficiaries will be selected by an advisory group of external environmental experts and industry representatives.

DONATION

## Ice Watch London

**Ice Watch London** was a public art work by **Olafur Eliasson** and **Minik Rosing**, presented in December 2018 outside the Tate Modern and Bloomberg London HQ simultaneously to mark the UN Climate Summit (COP24) in Katowice, Poland and celebrate the third anniversary of the Paris Agreement. The Ice Watch team worked with Julie's Bicycle to calculate the carbon footprint resulting from the exhibition of Ice Watch London: 55 tonnes CO2e total, or 1.8 tonnes CO2e per block of ice transported from Greenland to the UK. To compensate for the carbon impact of Ice Watch London, Studio Olafur Eliasson made a donation to the Woodland Trust, the UK's largest woodland conservation charity. The donation made was in excess of the sum estimated for a traditional carbon offset.[1]

DONATION

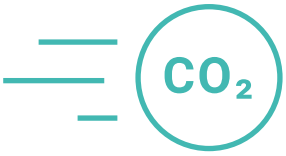
[1] Ice Watch Carbon Footprint, prepared by Julie's Bicycle for Studio Olafur Eliasson (2019) http://olafureliasson.net.s3.amazonaws.com/subpages/icewatchlondon/press/Ice_Watch_London_Carbon_Footprint.pdf

# DEVELOPING YOUR STRATEGY

## Step 1

**Measure your emissions.**

You can use the Julie's Bicycle free online CG Tools for venues, offices, festivals, and touring to measure your carbon footprint from different activities including air travel and energy use.




## Step 2

**Use the climate strategy hierarchy.**

Create an environmental strategy and action plan with targets for reducing your greenhouse gas emissions.

## Step 3

**Decide on an approach for 'pricing in' remaining emissions.**

## What are your aims for putting a cost on your carbon? (beyond making a reparative payment to account for environmental damage)

**Create internal budget for environmental action**

Develop internal environmental programme

"In-setting": set internal price per tCO2e and create ring fenced budget

### What is your focus?

Staff engagement and behaviour change e.g. workshops and training on environmental action

A reduction in carbon emissions elsewhere in the business (e.g. a switch to LED bulbs)

**Engage staff and build enthusiasm internally**

Support projects with direct resonance with staff and audiences

DIY donations or investments: set internal price per tCO2e and donate to an environmental cause with relevance to your staff/ partners/ audiences, support climate justice, or to invest in an environmental project such as a community energy fund

### Where do you want to make an impact?

Local / international

Emissions reductions (e.g. renewable energy) / other environmental issues (e.g. biodiversity) / broader transformational change (e.g. climate justice, campaigns, education)

**Engage and demonstrate action to external audiences and partners**

Make a 'net zero' or 'carbon neutral' claim

Buy carbon credits / offsets on the voluntary carbon market

### Where do you want to make an impact?

Emissions reductions / energy only

Nature / biodiversity co-benefits

Social / educational co-benefits

Health / well-being co-benefits

### Will you decide on the chosen project centrally or will you open up a vote to staff, audiences, or other partners?

### How will you report on the impact and outcomes of your chosen approach?

e.g. carbon emissions accounted for, £ invested or donated, people trained, project supported

**Your strategy for pricing environmental damage**

You may want to consider a combination of approaches

# Pros & Cons

| | PROS | CONS |
|---|---|---|
| **Offsets purchased on carbon market** | Quantified and quantifiable, governed by standards (if purchasing certified offsets)<br><br>May be a condition of achieving certain claims of net zero emissions or carbon neutrality. | Inherent weaknesses in whole system, especially if cheap offsets undermine climate action closer to home<br><br>Claims of 'carbon neutral' that are met through offsets alone can obscure real climate action and are less meaningful than action to reduce emissions<br><br>Most companies offering offsets on the voluntary market are for-profit companies, not charities / community-led non-profits. |
| **DIY approach through donations or investment** | Can choose a cause or project close to home or that resonates with the values and interests of audiences, staff, partners<br><br>Can set own carbon price to help drive change<br><br>Can support causes that look at climate change action through a broader lens, including cultural shifts, political campaigning, education, legal action, and climate justice. | Difficult to quantify impact in terms of exact emissions reductions, especially for causes like campaigns and climate justice.<br><br>Can't count towards 'net zero' or 'carbon neutral' commitments. |
| **'Inset' and create internal budget for environmental action** | Can help create resources for environmental action within cash-strapped organisations<br><br>Quantifiable emissions reductions that you can directly measure yourself (i.e. not dependant on an intermediary accounting) if budget is used towards investments such as energy efficiency. | Cost of reducing emissions at home through e.g. investing in LED lighting can be higher than achieving the same greenhouse gas emissions reductions elsewhere. |

## Top Tips

- Consider a combination of approaches, depending on budget and ambition. For example, with offsets so cheap on the voluntary carbon market, you may want to offset all unavoidable emissions as well as matching a donation to an environmental justice cause, or internal investment into emissions reductions.
- Consider ways to incentivise emissions reductions as part of the way you price emissions, for example, for every $tCO_2e$ reduced year by year, a donation is made to a project chosen by staff, or some money is put into an internal training or development fund.
- Engage your stakeholders: consider giving colleagues, customers and audiences a say in which project you choose to support. For example, shortlist three projects which satisfy your criteria and let people vote for the one they would like you to invest in. This is a great way of opening dialogue and showcasing your wider environmental commitments and initiatives.
- You can also split any offset, investment, or donation across multiple causes – for example, choosing a renewable energy project, a habitat conservation project, and an environmental justice campaign.

# Stories from the creative climate community

## Ecolibrium

**Ecolibrium** (formerly known as Energy Revolution) works with the live events and music industry to tackle the environmental impacts of travel. As of May 2020, they have worked with festivals and events, as well as artists, agents, suppliers and music companies; helping them balance the emissions from over 13 million travel miles with investments in renewable energy through their Energy Revolution programme, and by supporting tree planting and the protection and regeneration of threatened forests through their Trees+ programme.

Donations to balance event audiences' travel carbon can be collected at point of sale, while some events, including Boomtown, Download and Reading Festivals have added £1 to every car parking pass sold to collect funds. Projects that have benefited from the Energy Revolution programme include Solar for Schools, a project supporting primary schools close to the festivals to install solar panels that will provide them with clean renewable energy.[2]

INVESTMENT

## FEAT

**FEAT.** (Future Energy Artists) is an Australian project working with Future Super, an Australian fossil-fuel-free superannuation fund, to support touring artists to invest in solar power projects in Australia as a way to account for the carbon emissions of their touring. Participating artists include Midnight Oil, Cloud Control, and Vance Joy.[3]

INVESTMENT

## Boomtown

In 2019, **Boomtown** planted 71,725 trees. Festival goers can donate at point of ticket sale with funds donated to **Treesisters**, an organisation that aims to "rapidly accelerate tropical reforestation by inspiring and channelling women's Nature-based feminine leadership into local and global action."[4]

DONATION

## Massive Attack

In 2019, **Massive Attack** decided that instead of continuing to tour as they 'normally' would and offsetting through offset projects, they would work with the Tyndall Centre for Climate Change Research to analyse the carbon footprint of their previous tours, and identify key actions to reduce their touring emissions going forward.[5]

PROJECT

## Orchestra for the Earth

For every ticket sold, **Orchestra for the Earth** work with the Eden Reforestation Project to plant one tree.[6] Through their concerts, Orchestra for the Earth have also raised funds to open a new nature reserve in Austria: the Gustav Mahler Field of Flowers.[7]

DONATION PROJECT

## Burberry

Luxury fashion retailer Burberry has created the '**Burberry Regeneration Fund**': a carbon insetting approach to reducing the environmental impacts of their supply chain. Their first project will be working with the Certified B Corporation PUR project to introduce regenerative agricultural approaches with some of Burberry's wool producers in Australia, focusing on improving soil carbon capture, watershed and soil health, reducing dryland salinity, and promoting biodiversity.[8]

INSETTING

## One Tree Planted

The 1975 pledged to plant a tree for every ticket sold to their 2020 UK and Ireland arena tour through the charity **One Tree Planted.**[9]

DONATION

## Jack Johnson

Musician **Jack Johnson** has a comprehensive approach to managing the environmental impact of his touring, which includes initiatives on eliminating single use plastics from venues, using ground and sea freight rather than air freight, supporting local food initiatives, and engaging his audiences to take action (including linking with local environmental NGOs, travelling by more sustainable means, and making environmental commitments). Alongside this, remaining carbon emissions are offset: for his 2017/18 world tour, nearly 2,400 Tonnes of CO2 were offset directly by the Jack Johnson tour, while 8,643 fans offset a further 3,900 Tonnes of CO2 by purchasing an 'offset sticker' at the shows, and 12,493 fans donated directly through a Ticketmaster Opt-In to offset a further 1,100 Tonnes of CO2.[10]

OFFSET

## Dietl International

Fine arts logistics company **Dietl International** transported 167 Tonnes of artwork via air freight to the Art Basel Exhibition in Miami in 2019. The company offset the entire 644 Tonnes CO2 carbon footprint of the incoming air freight by purchasing carbon offsets in support of the Jari Amapa REDD project in Brazil, which aims to protect an area of forest in the Valley of Jari. Dietl International sponsored the carbon offset of the incoming air freight, and challenged its clients and other galleries to make their own financial contributions to account for the return shipping.[11]

OFFSET

## Kering

Luxury fashion brand **Kering** have built a detailed approach to measuring and managing their environmental impact. Their approach covers Scopes 1 and 2 of the Greenhouse Gas Protocol, and also uses a bespoke system they have developed for Environmental Profit & Loss accounting to analyse emissions all the way to the raw material end of the supply chain. The company has set a science-based target approved by the SBT initiative to reduce its GHG emissions from its own operations and supply chain by 50% by 2025 (from a 2015 baseline). In 2019, Kering additionally committed to also offsetting all remaining annual emissions in Scope 3 of the GHG Protocol. For 2018, this will be approximately 2.4 million Tonnes CO2e, which will be offset through REDD+ projects conserving forests and biodiversity.[12]

OFFSET

[2] Energy Revolution members smash carbon balancing targets (2020) https://www.energy-revolution.org.uk/energy-revolution-members-smash-travel-carbon-balancing-targets-in-2019/

[3] FEAT. https://www.feat.ltd/

[4] Boomtown Fair: help us plant 1 million trees with Treesisters https://www.boomtownfair.co.uk/news/2020-02-13-help-us-plant-1-million-trees-with-treesisters/

[5] We've toured the world for years. To help save the planet we'll have to change (2019) https://www.theguardian.com/commentisfree/2019/nov/28/tour-world-massive-attack-band-climate

[6] Orchestra for the Earth Tickets for Trees https://www.orchestrafortheearth.co.uk/trees

[7] Orchestra for the Earth Guest Blog for Julie's Bicycle https://juliesbicycle.com/news/orchestra-for-the-earth-mahler-and-the-climate-movement/

[8] Burberry Introduces Carbon Insetting (2020) https://www.burberryplc.com/en/news/news/corporate/2020/burberry-introduces-carbon-insetting-and-autumn-winter-2020-runw.html

[9] The 1975 to plant a tree for every ticket sold (IQ Magazine, 2019) https://www.iq-mag.net/2019/09/the-1975-plant-tree-every-ticket-sold/#.XpXXCchKiUk

[10] 2017-18 All At Once Impact Results Jack Johnson World Tour https://jackjohnsonmusic.com/greening/2017

[11] Dietl International Offsets 644 Tonnes Of CO2 After Moving 167 Tonnes Of Air Freight For The Art Basel Exhibition In Miami https://sustainabletravel.org/dietl-offsets-art-basel/

[12] Kering commits to full carbon neutrality across the group (2019) https://www.kering.com/en/news/kering-commits-to-full-carbon-neutrality-across-the-group

# HOW MUCH DOES A TONNE OF $CO_2$ COST?

## … AND HOW SHOULD YOU PRICE A TONNE OF EMISSIONS INTERNALLY?

### Ways of putting a cost on a tonne of $CO_2$

**1**

**The overall cost of a project to remove or avoid emissions divided by the number of Tonnes of Carbon 'saved' by the project. Approach generally used on the voluntary carbon market.**

**Varies by type of project, location, size, whether the project is focusing only on carbon reductions or also social impact, administration costs.**

**Critics say this tends to be far too cheap to drive behaviour change**.

#### Examples

Fairtrade minimum price for carbon credits:[13] ca £8 - £13/ $tCO_2e$ depending on whether it is an energy efficiency, renewable energy, or forest management project.

World Land Trust: £15 / $tCO_2$ , mainly through forest protection projects under REDD+ (Reducing Emissions from Deforestation and forest Degradation)

ClimateCare (offset provider): ca £7.50 / $tCO_2e$

Woodland Trust:[14] donation of £25 accounts for approximately 1 $tCO_2$

[13] Fairtrade Minimum Price and Premium Information at March 2020 https://www.fairtrade.net/standard/minimum-price-info

[14] How to calculate and reduce your carbon footprint (Woodland Trust, 2020) https://www.woodlandtrust.org.uk/blog/2020/01/carbon-donation/

## 2

**A market-based value in a compliance system like the EU Emissions Trading System, where the value of a carbon credit is tied to supply and demand.**

**If there are too many credits in the system, their cost is too low to drive change.**

### Examples

EU Emissions Trading System: ca €25/ $tCO_2$ in 2019, with Carbon Tracker suggesting it needs to rise to €45-55 to meet EU climate ambitions. [15]

Has been much lower in the past – dropping to below €5 / $tCO_2$ due to an excess of carbon credits in the system.

## 3

**A calculation of the full economic, social, and/or environmental damage caused by climate change – the 'real' cost of emitting a tonne of carbon. Can be used to inform policymaking, although many experts feel the values used by governments are not high enough.**

**Involves ethical questions, e.g. 'what value do we put on the well-being of future generations?', and scientific and economic modelling on the likelihood and scale of damages.**

### Examples

One survey of experts across science and economics suggests a 'social cost of carbon' of around $200 (£160) per $tCO_2$ [16] , with another suggesting $417 (£335) / $tCO_2$.[17]

Greater London Authority: recommends using a price of £60 / $tCO_2$ rising to £95/ $tCO_2$ in the new London Plan to set up carbon offset funds linked to new developments.[18]

Grantham Institute: suggest the government should impose an average carbon price of £40 / $tCO_2$ in 2020, rising to £125 $tCO_2$ or more in 2050, on emitters in the private sector, and use even higher costs per tonne to inform policy in order to meet the UK's current net-zero commitments. [19]

[15] EU carbon prices could double by 2021 and quadruple by 2030 (Carbon Tracker, 2018) https://carbontracker.org/eu-carbon-prices-could-double-by-2021-and-quadruple-by-2030/

[16] Pyndick, R, The Social Cost of Carbon Revisited (National Bureau of Economic Research, 2016) https://www.nber.org/papers/w22807

[17] Ricke, K., Drouet, L., Caldeira, K. & Tavoni, M. (2018), Country-Level Social Cost of Carbon, Nature Climate Change. https://country-level-scc.github.io

[18] Carbon Offset Funds Greater London Authority guidance for London's Local Planning Authorities on establishing carbon offset funds (Greater London Authority, 2018) https://www.london.gov.uk/sites/default/files/carbon_offsett_funds_guidance_2018.pdf

[19] Policy brief: How to price carbon to reach net-zero emissions in the UK (Grantham Research Institute on Climate and the Environment, 2019) http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2019/05/GRI-POLICY-BRIEF_How-to-price-carbon-to-reach-net-zero-emissions-in-the-UK.pdf

# TRANSLATING THE COST PER TONNE OF CARBON INTO THE CREATIVE COMMUNITY

You can use the free Julie's Bicycle **CG Tools** to calculate the carbon footprint of your office, venue, museum, tour, or event (including e.g. energy use and business travel). Once you have an estimate, try out a few different £ / tonne $CO_2e$ values: what could you do with that kind of budget in terms of internal investment – and what external projects could you support? What feels most meaningful to your organisation? What feels like it reflects the true cost of emissions – and what will make the most meaningful difference? Use the questions under 'Developing Your Strategy' to come up with an approach.

| | AT £8 / TONNE CO2E | AT £25 / TONNE CO2E | AT £100 / TONNE CO2E |
|---|---|---|---|
| **Short haul return flight within Europe (Economy)** | **£4** | **£12** | **£47** |
| **Short haul return flight within Europe (Business)** | **£6** | **£18** | **£70** |
| **Long haul return flight e.g. USA (Economy)** | **£13** | **£42** | **£167** |
| **Long haul return flight e.g. USA (First Class)** | **£54** | **£167** | **£669** |
| **2000 mile tour in a double-decker tour bus** | **£24** | **£74** | **£295** |
| **UK performing arts venue annual energy use** | **£1,770** | **£5,531** | **£22,123** |
| **Carbon footprint reported by 747 organisations for 2018/19 Arts Council England environmental reporting programme** | **£916,376** | **£2,863,675** | **£11,454,700** |

All figures indicative only and rounded to the nearest £1. Tour figure only includes bus travel, excludes e.g. accommodation and impact of gigs themselves, impact of any additional vehicles

# THINK ABOUT WHAT IS MEANINGFUL

"We're carbon neutral because we've bought carbon offsets equal to our emissions." **No action, offsets only.**

**vs.**

"We have reduced our emissions by **x**% since YEAR. / We have a target to reduce our emissions by **x**% by YEAR.

We've also helped to finance climate action by buying offsets worth **x** tonnes of CO2 to account for our remaining carbon footprint. We chose to support a renewable energy / forest conservation / energy efficiency offset project because……" **Action and commitment alongside offsets and why**.

**or**

"We have reduced our emissions by **x**% since YEAR. / We have a target to reduce our emissions by **x**% by YEAR.

We've also financed climate action by making a donation to **x** to support wider climate action because we believe in climate justice / shifting to renewable energy / making a difference in our community / that we need large-scale political change (etc.) – we worked out how much to donate based on our carbon footprint, to help keep us accountable." **Action and commitment alongside a commitment to supporting wider climate action.**

# PART 2

# OFFSETTING ON THE CARBON MARKET

If you've decided that this is the way you want to go, some advice on understanding offset credits.

# OFFSETTING ON THE CARBON MARKET: THE GOOD, THE BAD, AND THE UGLY

## WHAT WOULD A 'GOOD' OFFSET LOOK LIKE?

For an overview of the pros and cons of commonly available offset credit project types on the market, see Annex I. Offsets on the carbon market are expected to demonstrate how they meet the following in order to be considered effective:

- **Transparency, monitoring and evaluation**. Projects should be transparent about how their baseline and the amount of carbon that is avoided or absorbed by the project is quantified and monitored, and this should be verifiable by a third party. This is to ensure that paid offsets can be accurately matched to avoided/absorbed emissions i.e. that they are 'real' and measurable, and there is accountability in the system.
- **Additionality.** Projects need to show that they generate emissions reductions over and above what would have happened anyway (without the investment raised by the sale of carbon credits). For example, this would exclude energy efficiency investments that make sense on the basis of the returns on energy savings alone; or investments that have to be made as a result of environmental legislation.
- **Permanence.** Projects should be able to demonstrate that they will last for the lifetime on which the offset is calculated i.e. if the project is afforestation, there needs to be a mechanism that makes sure the forest won't be cut down (or burned in a forest fire!) before it has absorbed the amount of carbon promised by the offset.
- **Avoid leakage.** Projects that have a mechanism in place to avoid 'leakage' of the supposedly avoided emissions to the surrounding area – for example, if a project protects forest in one area, ensuring that deforestation doesn't just shift to neighbouring areas instead.
- **Registered.** Carbon credits should be registered as part of a carbon market, with mechanisms in place to ensure they are only 'sold' once and that there is no double-counting in the system.
- **Other benefits.** Projects that can show that they create other social or environmental benefits and support progress towards other Sustainable Development Goals e.g. biodiversity, clean air, social cohesion, community economic benefits, education.

# OFFSET ACCREDITATION AND STANDARDS

There are various different standards on the carbon market, each with their own specific criteria for assessing these factors. Critics of offsetting note that in practice it is almost impossible for projects to guarantee some of these to a high level of certainty, even with standards in place.

There are a huge array of certifications and standards on the carbon market, but the main one to look out for is the **Gold Standard**, originally established by WWF and other NGOs, which evaluates social alongside climate impacts. Note that even Gold Standard certified offsets are subject to some of the shortcomings explored in the next section.

Other terms you might come across are Certified Emissions Reductions (CERs), which are offsets that have been certified by the UN as part of the Kyoto Protocol Clean Development Mechanism (CDM) for the compliance carbon market. This is as opposed to Voluntary Emissions Reductions (VERs) on the voluntary carbon market. Note that if you are a voluntary offsetter, you can still buy CERs – but independent studies have shown that UN CDM accreditation is not a guarantee of impact.

Lastly, there are UN REDD+ projects – this stands for 'Reducing Emissions from Deforestation and forest Degradation', and is a UN mechanism through which developing countries receive results-based incentive payments for reducing/removing carbon emissions from the forest sector by conserving and sustainably managing forests.

# THE BAD: CHALLENGES WITH OFFSETTING – AND THE UGLY: WHEN OFFSETTING GOES WRONG

**Undermining climate action**

The use of offsets can undermine climate action as people, businesses, and governments feel justified in continuing high-carbon activities. Reliance on quick and easy offsets that don't reflect the true cost of emissions can delay urgently needed climate action. This is exacerbated when offset credits which have been used to help meet emissions reductions commitments are found to have led to less emissions reductions than promised. For example, one study evaluating the Kyoto Protocol found that three quarters of offset projects used by governments to meet their targets would have probably happened anyway, meaning that their use may have enabled greenhouse gas emissions to be around 600 million Tonnes of CO2 higher than if countries had instead reduced their emissions domestically.20 Another study prepared for the European Commission found that, of the projects it looked at under the Clean Development Mechanism (another part of the Kyoto Protocol), only **2%** had a high likelihood of ensuring emissions reductions are additional and not over-estimated.[21]

**Scale**

The later we reach net zero emissions, the more we will depend on 'negative emissions technologies' i.e. removing carbon from the atmosphere to meet the Paris Agreement targets of limiting global warming to less than 2°C, aiming for 1.5°C. We can't rely on offsets to offset our unsustainable emissions while they continue growing year after year AND draw down (through projects like reforestation) any 'overshoot' of our carbon budget: there isn't the land (for tree planting or peat restoration) or technology (for removing CO2 from the atmosphere) at anything like the scale that would be needed.

**Time Lag**

When we release greenhouse gases through our activities, they immediately add to the existing excess of greenhouse gases trapping heat in the atmosphere and destabilising our climate. Offsetting projects can take decades to absorb the same amount of carbon. Meanwhile, the gases already emitted continue to add to climate change, while well-intended offset projects struggle to catch up. Because we need to reduce carbon emissions radically in the coming years, we don't have this time. Time lag can come from: the type of offset project (e.g. trees take decades to absorb carbon as they grow) or the way it is financed (e.g. if offset 'credits' are sold before a project is underway, to help finance it, it may not be put into action for years as the necessary funds are collected).

**Failure to deliver promised emissions reductions**

For most projects, offset credits are calculated on the basis of expected emissions avoided or captured during the lifetime of the project. Each credit is then assigned a cost based on the total cost of the project, and they are sold to raise the money needed to make the project happen. Because these calculations are based on modelling, evidence collected during or after project implementation often shows that the actual carbon reductions are far below what they were expected to be. Flawed modelling can arise because models fail to take into account real-life conditions – for example, 'clean' cookstove projects where the take-up has been much less than projected, or where the cookstoves don't remain in use because they weren't designed with end users' needs in mind.

**Human rights conflicts and ethics**

Offset projects, especially forest protection and reforestation, have led to or exacerbated land rights conflicts with documented human rights abuses against indigenous and local communities, ranging from people being denied access to or evicted from land they depend on for their livelihoods to physical violence and murder – sometimes called 'carbon violence'.[22] Also cause for ethical question, are projects in developing countries (e.g. clean cookstoves) that demand people change their way of living – effectively, to enable us not to change our high-emitting lifestyles elsewhere.

**Corruption**

Some offset projects have been found to intentionally game the system, for example by selling credits for projects that don't exist, or by using artificially high baselines against which reductions are calculated, inflating the number of credits that can be sold.

**Additionality in a net zero world**

With countries pledging to limit global warming as part of the legally binding Paris Agreement, the threshold of 'additionality' – already hugely challenging – will arguably become impossible to meet in the compliance carbon market. If two countries are both legally committed to bring their emissions to zero, how can one pay another to cut its emissions and count those cuts towards its own targets?

[20] Kollmuss, A., L. Schneider and V. Zhezherin Has Joint Implementation reduced GHG emissions? Lessons learned for the design of carbon market mechanisms (Stockholm Environment Institute, 2015). https://www.sei.org/publications/has-joint-implementation-reduced-ghg-emissions-lessons-learned-for-the-design-of-carbon-market-mechanisms/

[21] Cames, M. et al How additional is the Clean Development Mechanism? Study prepared for DG Clima (2016) https://ec.europa.eu/clima/sites/clima/files/ets/docs/clean_dev_mechanism_en.pdf

[22] For some examples, see The Clean Development Mechanism: Local Impacts of a Global System (Carbon Market Watch, 2018) https://carbonmarketwatch.org/publications/the-clean-development-mechanism-local-impacts-of-a-global-system/ and Ervine, K. Trading Carbon: Offsets, Human Rights, and Environmental Regulation (Palgrave Macmillan, 2015) https://link.springer.com/chapter/10.1057/9781137412737_14

# WITH ALL THESE CHALLENGES, CAN WE MAKE PAYING FOR OUR EMISSIONS WORK AT ALL?

| | |
|---|---|
| **Unlocking investment** | Transitioning to a net zero emissions society is going to take a huge amount of investment from governments, businesses, and individuals across the world. Depending on how they are structured, offsets (or voluntary commitments to donate or invest) can help unlock some of this – although the voluntary offset market shouldn't be seen as an alternative to the obligations under the UNFCCC and Paris Agreement of developed countries to provide financial support to developing countries to help them take action on and adapt to climate change. |
| **'Pricing in' environmental damage** | If we set a sufficiently high cost per Tonne of $CO_2$ emitted by our activities and start including this in project budgets and costs, this can help 'price in' environmental costs not currently reflected in the market so that these can be weighed up alongside financial costs in planning and decision-making.<br><br>Setting an internal price for carbon can also be used to create an internal budget for climate and environmental projects. This can also help build financial resilience against any rising costs arising from future environmental legislation introduced to meet national emissions reductions targets (e.g. carbon taxes), as these will already be built into operational and project budgets. |

| | |
|---|---|
| **Links with communities and causes** | The process of engaging staff, partners, or other stakeholders with choosing projects to support through offset credits, donations, or investments can help build and strengthen links with communities and/or specific environmental causes. It's your business and your investment: where do you want to make a difference? |
| **Education** | The process of choosing projects or initiatives to support through offsets, donations, or other forms of investment can build environmental literacy and understanding of climate change drivers and impacts. |
| **Regulated way of achieving carbon neutrality or net zero emissions** | The voluntary carbon market is to some extent regulated through international standards, and there is also an international standard for 'carbon neutrality' called PAS 2060.[23] If you or your organisation have made a carbon neutral or net zero emissions commitment, then you will need to account for the emissions you cannot avoid or reduce, and many standards or certifications require that you do so via certified carbon credits bought on the voluntary carbon market (rather than other approaches such as donations or investments). |

**In summary, if you expect a carbon offset to undo or balance out damage that you're causing to the climate tonne-for-tonne of emissions, there's a fair chance this is an unrealistic expectation.**

**Offsets or other ways of 'pricing in' environmental damage – through donations or investments - can, however, help provide much-needed investment for global climate action, if you put them in place alongside actions to reduce emissions.**

[23] PAS 2060 Carbon Neutrality, British Standards Institute https://www.bsigroup.com/en-GB/PAS-2060-Carbon-Neutrality/

# ABOUT JULIE'S BICYCLE

The creative community is uniquely placed to respond to the climate and nature crisis. Founded in 2007 by the UK music industry, Julie's Bicycle mobilises direct action across the arts and culture, harnessing the creative sector's power to communicate the reality of the climate crisis, advocate for science based solutions and take bold practical action. Julie's Bicycle's freely-available resources are the most comprehensive library of good environmental practice for culture anywhere in the world.

Guide authors: Chiara Badiali and Rebecca Hazlewood, Julie's Bicycle.
Annex I by Catherine Bottrill.

*Thanks to Diana Liverman (Regents Professor of Geography and Development at the University of Arizona and Julie's Bicycle board member); Nigel Adams (Full Time Hobby / Music Declares Emergency) and Peter Quicke (Ninja Tune / Music Declares Emergency) for their feedback.*

*All case studies based on publicly available information, with the exception of Ninja Tune – thanks to Peter Quicke for contributing.*

# ANNEX I

## EVALUATING DIFFERENT KINDS OF OFF-SET PROJECTS ON THE CARBON MARKET

| | PROS | CONS |
|---|---|---|
| **Renewable energy projects** | Emissions reductions easy to calculate and monitor because the emissions intensity of the fossil fuel based energy they are displacing is known<br><br>A shift away from fossil fuels is essential for addressing the climate crisis, so this is arguably the most effective way to 'offset' emissions (preference should be given to wind and solar)<br><br>Many renewable electricity projects have relatively high emissions reduction volumes so that transaction costs (and cost per credit) are proportionally lower. | **Additionality** can be questionable because the revenues from offsets usually make only a small difference to the rate of return of projects (due to their high investment costs, and usually much higher revenues from electricity sales)<br><br>Some large projects (like hydroelectric dams), especially those financed in the Global South, have a history of human rights **conflicts** e.g. the displacement of people<br><br>Some types of renewable energy e.g. biomass can have harmful environmental impacts if not carefully regulated. |
| **Efficient lighting projects** | Small scale community/ household projects in the Global South can have substantial sustainable development benefits. Increasing access to lighting can e.g. improve education<br><br>Relatively low upfront investment costs. | As with any distributed small technology, costs of monitoring can be high because large sample of end users must be visited<br><br>Quantity of emissions reductions per unit is small, so projects don't tend to generate large volumes of offsets, and the cost per credit can be higher<br><br>Ensuring people use the technology as intended can be a challenge. |

| | PROS | CONS |
|---|---|---|
| **Forestry** | Potential for biodiversity and ecosystem services benefits, e.g. habitat for plants and animals, flood protection, water filtration<br><br>Potential for community involvement and supporting employment. | **Permanence** is a challenge. Planting trees to sequester carbon from the atmosphere is only a good way to tackle climate change if the land remains a forest and the trees are not felled (or, if they are felled, that they are used in applications where the carbon remains sequestered for a long time – like construction, and not e.g. furniture)<br><br>**Leakage** is also a challenge. If the planting of trees displaces food production, this may lead to deforestation elsewhere<br><br>**Badly structured financial incentives** can lead to negative impacts, e.g. if existing forest is cleared to be replaced by newly planted trees in order to gain carbon revenues<br><br>Forest conservation projects can avoid this last risk, but are also vulnerable to:<br>**Permanence** - as soon as the project funding runs out, what is the guarantee that the forest won't be cut down anyway?<br>**Leakage** – deforestation may just be shifted elsewhere<br>**Baseline/additionality** – almost impossible to prove whether the land would have been deforested / what would have happened without the project<br><br>Any forestry project has a high risk of human rights conflict if local communities are displaced from the land<br><br>**Monitoring and measurement** of carbon emissions saved relies on assumptions about biomass, growth rates, etc, although most models will use conservative figures to account for this. |

| | PROS | CONS |
|---|---|---|
| **Cooking stoves** | Carbon reduction claims usually based on reduced pressure on wood fuel helping to reduce deforestation<br><br>Projects expected to have health co-benefits for some of the poorest households in the world, where wood and other biomass is used as fuel for cooking, resulting in severe health impacts from indoor air pollution. Improved cooking stoves have more efficient combustion, reducing air pollution<br><br>Reduced money spent on fuel (or less time spent collecting fuel can have other co-benefits, like freeing up resources for education. | Emissions reductions can be called into question because they rely on a number of assumptions, e.g. that people wouldn't switch to modern stoves anyway; and that wood fuel use is leading to deforestation<br><br>Monitoring is challenging and relies on surveying large samples of households often in rural areas of the Global South<br><br>Ensuring people actually use the stoves can also be challenging. |
| **Water purification projects** | Much like cooking stove projects, water purification projects (e.g. distribution of water filters) can have environmental, health and livelihood benefits if people switch from boiling water using wood fuel (the only form of water treatment available to many people). | Emissions reductions estimates are based on similar assumptions as cooking stove projects – i.e. that wood fuel use is unsustainable and driving deforestation – and rely on the assumption that people would boil their water as a baseline (which is often not the case)<br><br>Ensuring people actually use the water filters can be challenging<br><br>Monitoring is challenging and relies on surveying large samples of households often in rural areas of the Global South. |
| **Industrial gas projects (HFCs, $N_2O$)** | Clear additionality if HFC/$N_2O$ mitigation is not mandated by law in the project country<br><br>Cheap credits and large volumes, measurable. | These types of 'low hanging fruit' emission reduction opportunities should be captured by regulation (although in reality in many countries they aren't)<br><br>Large profits for commercial companies for not doing very much<br><br>Zero sustainable development co-benefits in many cases. |

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