SPORT ENGLAND

Carbon footprinting in grassroots sport – a beginner's guide

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usefulprojects

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sportengland.org

Contents

Overview: Why might you want to calculate your carbon footprint?

We know that carbon footprinting can sometimes feel inaccessible for grassroots sports and physical activity organisations, especially while juggling so many priorities and limited resources.

But we believe that carbon footprinting can be simple, without the need for lots of capacity, expertise or consultants.

This beginner's guide is split into three sections: Overview, Methodology and Key takeaways. It:

- Sets out why a carbon footprint is important
- Explains what a carbon footprint is
- Highlights where emissions come from for most sport and physical activity organisations
- Provides an introduction to the three different 'scopes' of emissions
- Sets out a four-step process for measuring your carbon footprint and the equation used to calculate your carbon emissions
- Highlights actions you can take regardless of the complexity of your carbon footprint to start decarbonising your operations.

We have also produced two case studies of organisations who have simply understood their carbon footprint, shared their approach to support others and used the insights to inform positive actions.

Why is a carbon footprint important?

We are on the edge of climate breakdown. Until we reach net zero carbon emissions, global temperatures will continue to rise, affecting fundamental parts of Earth's systems dramatically and irreversibly.

The UK has set a net zero carbon target for 2050. This will require a concerted effort and action from all to deliver. Like all other sectors in the UK, it is important for sport and physical activity to understand our own carbon footprint and set about decarbonising our impact where possible.

Although the carbon emissions associated with each grassroots sports club are small, the cumulative impact of each organisation's decarbonisation would be transformative.

We can all take responsibility for our own emissions and positively influence our members to reduce their environmental impact for the good of generations to come.

If we don't understand our starting point (our baseline carbon footprint), it is difficult to measure and communicate progress.

Where do emissions come from?

Energy use
The electricity and gas used in buildings you own or rent.

Travel
Including travel in company-owned vehicles, commuting to work and travelling to events and conferences.

Purchasing
Buying goods and services such as kit, equipment, food or insurance.

If you don't have the ability to calculate your carbon footprint just yet, you can start thinking about ways you can reduce emissions from these key areas.

Key takeaways →

Overview: What is a carbon footprint?

A carbon footprint measures the total greenhouse gas emissions (GHG) caused directly and indirectly by an organisation.

It helps an organisation to understand its key emission sources and the opportunities to make reductions.

It is important to remember that it is just an estimate and based on several assumptions. It can also be difficult to get accurate data! This is okay – all organisations face the same challenge

How do we use it?

In the first year of carbon footprinting, an organisation will collect data on all its emissions sources and produce an initial benchmark.

The information collected in a carbon footprint can then be used to start a conversation with volunteers, staff and stakeholders, and you can collect proposed actions into a Carbon Reduction Plan.

The conversations are useful as many of the potential positive changes are not ones you can enforce on others.

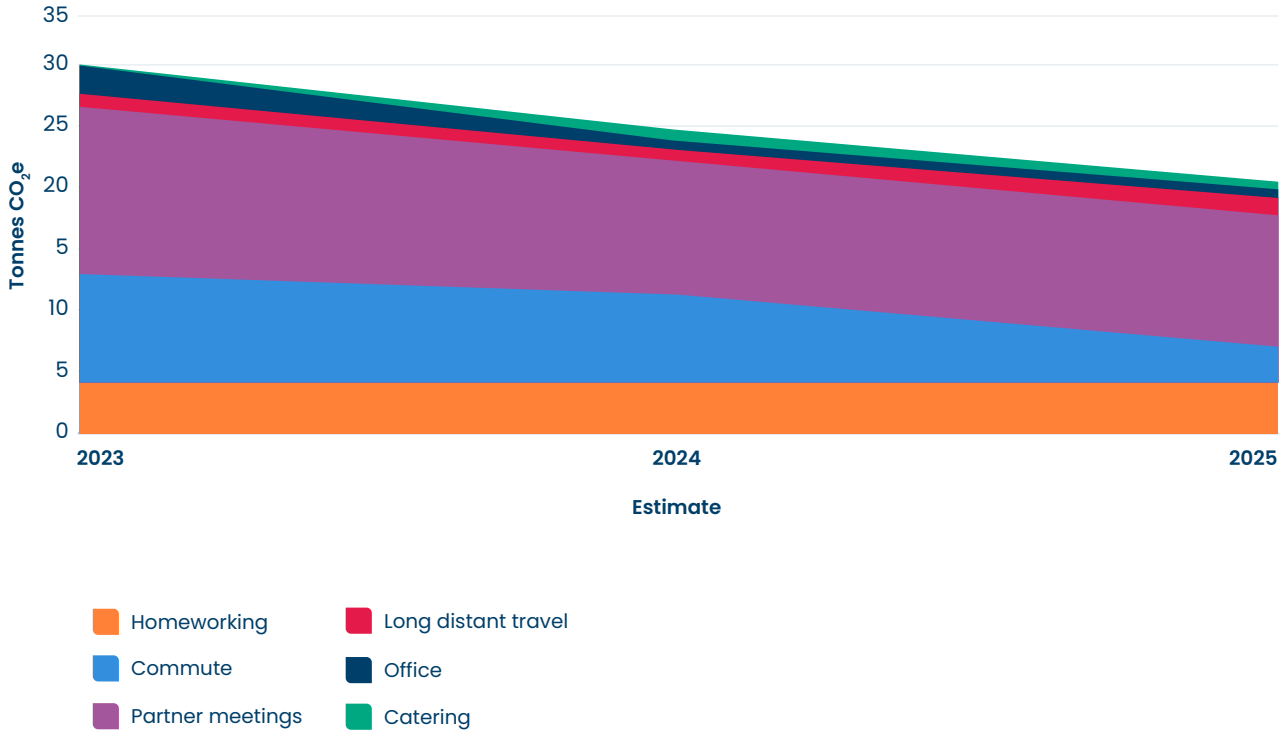
Updating your footprint each year is a great way to understand the difference your actions are making, see if your footprint is going down (or up), and make adjustments to your plan.

An example: Active Devon's carbon footprint

Active Devon have calculated their own carbon footprint, starting off with the areas they have data for and labelling the sources of emissions in a way that is relevant to them.

2023 Estimate

2023-25 Trajectory



More information →

Overview: What are likely to be your key emissions areas?

Start by answering the following questions to get a rough idea of what might make up your organisation's carbon footprint. This will give you a starting point to understand where your carbon hotspots are and take action.

Energy use

- How much electricity and gas do you use each year in your clubhouse, training facilities or offices? Look at your energy bills or ask your landlord.
- Do you own diesel generators?
- Do you own company vehicles? Are they petrol/diesel or electric?

Travel

- How do staff travel to/from work – what distance and by what method (car, train, bike, walk?). If they walk or cycle, your organisation's travel footprint will be much lower than if they are driving long distances by car.
- Do you do much business travel within the UK or internationally, for example to conferences and events? Flights produce lots of carbon emissions!

Purchasing

- What do you spend the most money on?
  - Products tend to have much higher emissions than services because they are manufactured and transported. Products might include things like grounds maintenance machinery, hired generators for events, IT equipment, sport kit, catering and event supplies.
  - Services like buying insurance or legal services typically have lower emissions.
- If you own your building, are you spending money on facilities upgrades or refurbishment projects? Construction products and construction projects have big carbon emissions associated with them.
- What do you buy that gets wasted? If you cut down on unnecessary purchasing, it can save you money and carbon emissions!

How big is my footprint?

You can compare against the footprint of other activities to put it into perspective. For example:

3.5 tonnes return flight London to Hong Kong in economy

13 tonnes annual footprint of average person in the UK

40 tonnes annual footprint of a small company.

Like all footprints, this provides you with a rough estimate which can be refined by using better data, or more accurate conversion factors.

Useful resources:

Accelerate your carbon footprint and carbon reduction efforts by accessing helpful online resources such as:

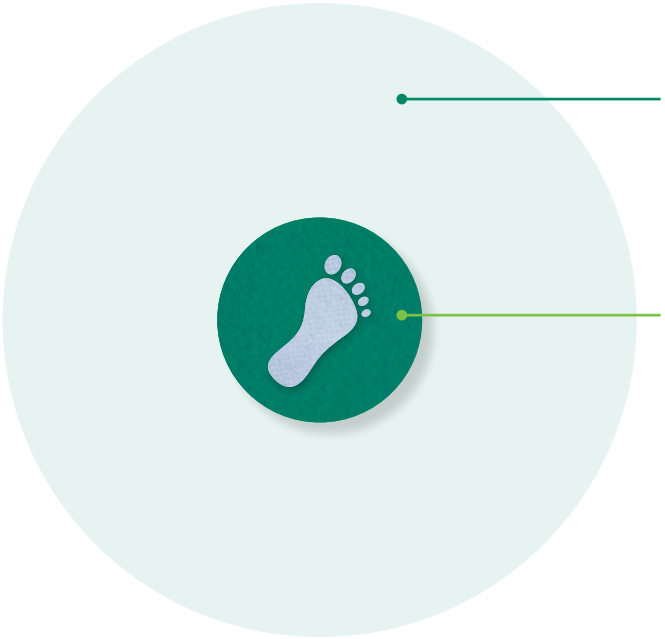
- SME Climate Hub – Free-to-use calculators
- How Bad are Bananas by Mike Berners-Lee
- MotherTree's Carbon Emissions Bank League Table – updated June 2023
- GHG Protocol – A Corporate Accounting and Reporting Standard
- GHG UK Government conversion factors

Let's put things in perspective

While it is important and helpful to calculate your organisation/club's carbon footprint, your actions can have a far bigger influence on individuals (your workforce, volunteers, participants and spectators) in raising awareness and inspiring them to take action too.

The way participants and spectators travel and what kit they buy (how much and where from) are normally out of your control. But you do have an opportunity to positively influence positive choices through communications and advocacy.

So, even if you don't have the ability or time to calculate your carbon footprint just yet, you can still think about conversations you can have with your members and actions you can take that can reduce emissions. See our key takeaways for how to get started.



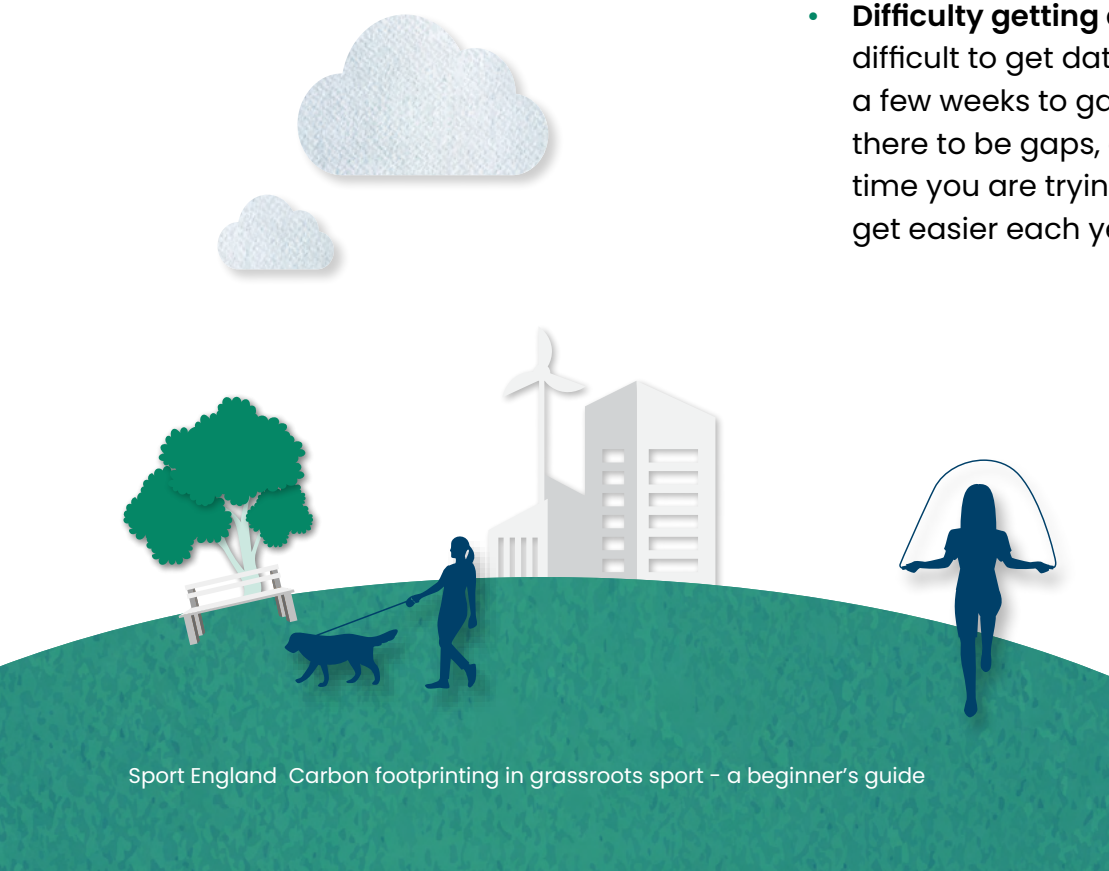
Influence
Your ability to advocate for your participants, spectators, workforce and volunteers

Control
Your club's carbon footprint

Methodology: Introducing the carbon footprint process

It is sometimes hard to know where to start.

This section provides a four-step process to support you throughout your journey of measuring your carbon footprint, and some common challenges you may face.



Be aware of common challenges:

- **Lack of time or expertise** – it is likely not your day job to be undertaking a carbon footprint, and therefore your time is limited. Try to use publicly available free tools online to help you on your journey.
- **Difficulty getting data** – it can be difficult to get data. You should allow a few weeks to gather it, and expect there to be gaps, especially the first time you are trying to collect it. It will get easier each year!
- **Lack of ability to reduce emissions** – some scopes of carbon (i.e. energy use in a shared, rented building) sit outside your direct control as an occupant. When you lack control, you should move to advocacy and raising awareness within groups who can decarbonise.

The Carbon footprint process

1

Set your boundaries

What will be your base year? This will form the reference year for future carbon footprints to compare against.

Which offices, facilities, and operations fall within the control of the organisation?

What is excluded from the carbon footprint?

2

Identify relevant activities

Which activities within your boundary contribute to the carbon footprint?

(For example, energy use, business travel, buying things.)

3

Gather data

What is the most appropriate data available to represent the emissions associated with the activities identified?

Collect and check our data.

Acknowledge where there are gaps and you've had to make assumptions.

4

Review and take action

Undertake your carbon calculation.

You will see the total amount, and a breakdown of where the emissions come from.

What are the carbon hotspots?

How can data quality be improved?

What are the 'easy-win' areas for decarbonisation?

Methodology: What's included in a carbon footprint?

Let's get a bit more technical: an introduction to the three different 'scopes' of emissions.

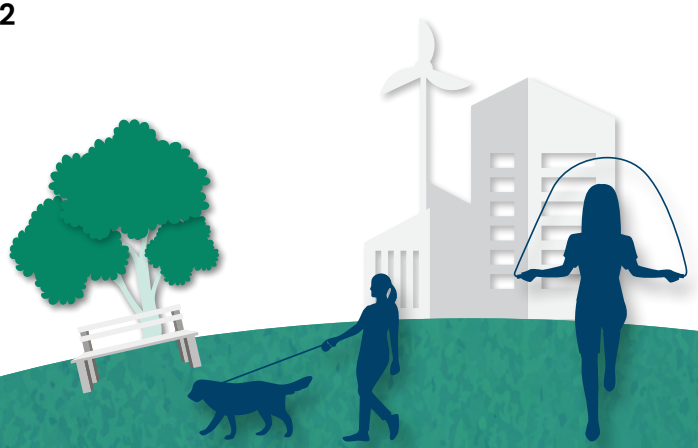
The Greenhouse Gas Protocol sets out guidance for calculating an organisation's carbon footprint. It defines three different 'scopes' of emissions that business have various control and influence over:

Scope 1 covers direct emissions from owned or controlled sources (e.g. emissions that are generated from combustion in owned boilers or company cars). They all produce carbon emissions on your site or from your vehicle.

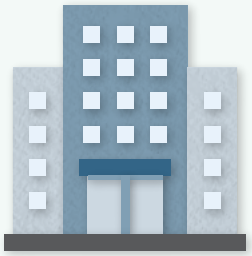
Scope 2 covers indirect emissions from the purchase of electricity. By using the electricity, an organisation is indirectly responsible for the release of these GHG emissions.

Scope 3 includes all other indirect emissions that occur in the upstream and downstream activities of an organisation. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. We can't control these directly, but we can still take steps to reduce emissions from the amount we use. Some examples of scope 3 activities are purchased goods and services (things you buy), and business travel (travel by your staff to events etc).

You should focus on your scope 1 and 2 emissions calculations as a first step. You can then tackle the more difficult scope 3 emissions.



Scope 1

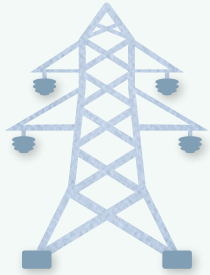


Direct emissions released directly by your organisation when you burn fuels in equipment or vehicles you own or control

For example:

- Gas heating
- Fuels burnt on-site for generators
- Fuel used in company vehicles
- Refrigerant losses from air conditioning

Scope 2

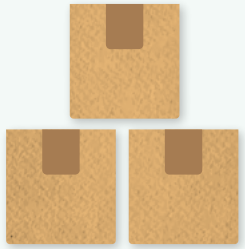


Indirect emissions from electricity

For example:

- Electricity purchased from electricity companies

Scope 3



Indirect emissions from everything else

For example:

- Purchased goods and services
- Business travel
- Employee commuting
- Waste disposal

The image above shows examples of typical types of emissions for each scope. This is not an exhaustive list.
For all types of emissions and detailed guidance, see the GHG Protocol website.

Methodology: Carbon footprint calculation

This section shows the equation that is used to calculate a carbon footprint, to help your understanding.

You will only have to use this equation if you build your own carbon calculator.

If you use an off-the-shelf carbon calculator – which is recommended (e.g. from the SME Climate Hub or the Active Devon tool) – all you need to do is enter your consumption data and it will do the hard work for you.

To aid your understanding, we have also provided a very simple worked example for calculating carbon emissions from electricity and gas use (based on UK Government Conversion Factors from 2025).

Carbon footprint calculation

Consumption data or spend-based data (unit)	×	Conversion factor (kg CO_2 / unit)	=	Carbon emissions ($kgCO_2$)	÷ 1000 =	Carbon emissions (tCO_2)
10,000 kWh electricity	×	0.17489 kgCO2 per kWh	=	1,749 $kgCO_2$	÷ 1000 =	1.75 tonnes CO_2
10,000 kWh natural gas	×	0.18259 kgCO2 per kWh	=	1,825 $kgCO_2$	÷ 1000 =	1.83 tonnes CO_2
					Total =	3.6 tonnes CO_2

Consumption data is the data we have available for the emissions-generating activities within our organisational boundaries, during the reporting year.

For example, electricity consumption data, litres of petrol used, or pounds spent on clothing.

Conversion factors are a multiplier providing the estimated number of emissions per emissions-generating activity. These are provided by the UK Government each year.

For example, emissions per kWh of electricity used, emissions per litre of petrol fuel used, or emissions to produce a tonne of clothing.

Carbon emissions are an estimated volume of carbon (or GHG) emissions released into the atmosphere as a result of the emissions-generating activity.

For example, emissions resulting from your annual electricity use or the use of X litres of petrol fuel.

When you multiply the amount you've used by the emissions factor, you get the carbon emissions associated with that emissions-generating activity.

When you add up the carbon emissions from each activity, you get your total estimated carbon footprint. We usually report carbon emissions in tonnes of carbon (tCO_2), so divide your kg figures by 1000.

Key takeaways: Act regardless of whether you choose to calculate your carbon footprint

The most important thing is to start taking action to try to reduce your emissions.

If you feel that undertaking a carbon footprint is out of reach for your organisation at this time, there are still some actions you can take to reduce your footprint. Some key ways in which you can start to better understand your footprint and make savings are set out here.

Engage with your people (employees, members)

- What do you see as the largest carbon reduction opportunities? What are the challenges we face?
- How can we reduce our consumption?
- What environmental sustainability actions would you like to see taken in the near future?
- Encourage training via helpful, free resources:
  - Climate drawdown resources
  - SME Climate Hub
  - Carbon Literacy Training
  - Climate Fresk
- Encourage a sustainability or carbon working group:
- Task them to calculate your basic carbon emissions.
- Task them with engaging your suppliers.

For more tips and advice on going green:

See Buddle →

Engage with your landlord

1. If LED light bulbs haven't already been installed, can they be?
2. Are there motion sensors that turn off lights when the space isn't being used?
3. If there is gas heating, ask them about plans to transition to electric heating.
4. For electricity, ask if they have considered adding solar panels? Do they have a renewable tariff?
5. Do they have submetering so they can tell you your electricity and gas emissions?

If you are picking a location or considering moving to a different building, prioritise things like low-carbon energy, electric heating, renewable electricity (generation or tariff), access to public transport and active transport facilities (showers, secure bike storage etc).

Think about what you buy

- List out the top five to 10 suppliers by spend, impact or importance.
- Do some research – have they set carbon reduction targets? Are they trying to reduce emissions associated with their products and services?
- Look at lower carbon alternatives. There might be lower carbon products or companies based more locally to you that you could switch to.
- Explore sustainable kit and equipment options. How can your kit last longer through sustainable purchasing, good care and repairs? Could you buy second-hand in some instances? Think about how you might avoid waste when equipment does need replacing.
- Think about your catering. How might you minimise waste? Could you source more products locally? Could you provide more plant-based options?

Think about how you travel

- Our travel choices can make a significant difference to our carbon footprint. Think about how you get to training, matches or events.
- Could you make the journey by public transport? Can you share the car journey with others, saving emissions and fuel costs? Can you walk or cycle part of the journey?
- How might you make it easier for others to make these choices? Can you provide bike lockers and storage space for kit to make it easier to walk or cycle? Can you provide details of public transport options and maps? Could you arrange a car-share rota?

Key takeaways: Top tips

Harness enthusiasm and the skills you have available

Environmental action doesn't require expensive consultants or specialist staff. Passionate team members with financial accounting or analytical skills can develop effective carbon footprinting capabilities through research and application.

Don't get lost in the detail

Rather than attempting comprehensive measurement immediately, organisations should prioritise scope 1 and 2 emissions (energy use), moving into scope 3 after you've got to grips with that.

Maintain engagement and create advocates

Providing feedback and education transforms data collection from extraction to empowerment, significantly improving participation and creating internal advocates for environmental action.

Don't let measurement or data quality prevent action

For small organisations, high-impact areas are likely your office energy, travel and procurement of goods and services. If you do not have time or resource to calculate your organisation's footprint, start by educating and advocating for your team to reduce their impact in these areas.

Simplify complex issues to make progress

Some environmental challenges can seem overwhelming, but breaking them into manageable, sport-specific categories makes action achievable and relevant.

Key takeaways: Case studies to inspire you to get started

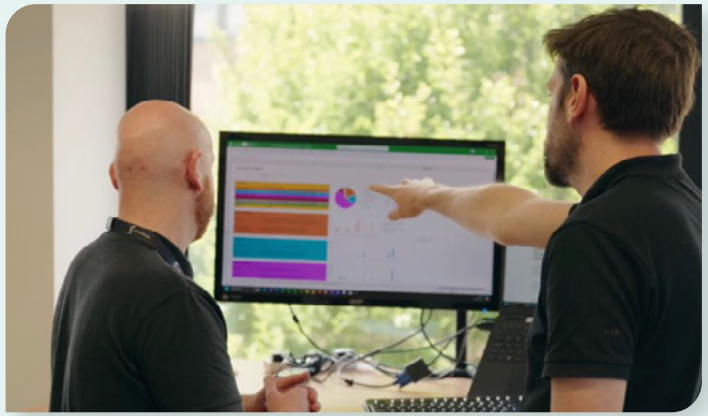
We have produced two case studies of organisations who have simply understood their carbon footprint, shared their approach to support others and used the insights to inform positive actions.

They bring carbon footprinting in grassroots sport to life – take a look!

Case study

Active Devon: Taking Control of Our Carbon Footprint

Active Devon developed their own carbon footprint tool to measure and manage their emissions across key areas like travel, energy and procurement. Their approach has been successfully shared with other Active Partnerships, demonstrating how small organisations can build internal expertise and take meaningful climate action without significant financial investment.



Access case study → **View video →**

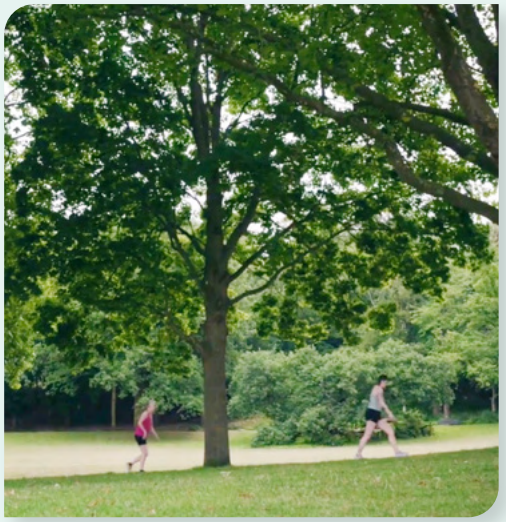
Case study

The Green Runners: Breaking Down a Runner's Carbon Footprint

The Green Runners is a grassroots community of environmentally conscious runners who developed a four-pillar framework (How We Travel, Kit Up, Fuel, and Speak Out) to help runners reduce their carbon footprint in accessible, sport-specific ways. By requiring an initial commitment from new members and fostering local meetups for knowledge-sharing, they demonstrate how sporting communities can drive meaningful climate action without overwhelming people with complex environmental concepts.

Access case study →

View video →



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