

Climate Conscious Study Abroad

An Operational Guide

EUASA
European Association of Study Abroad



Using this guide

Study abroad is a significant contributor to the climate crisis owing primarily to the reliance upon air travel.

Yet we also recognize the educational, cultural, and personal impacts that study abroad has upon students, and don't wish for that to end.

With this in mind, there are changes to be made to make our sector more climate conscious and environmentally sustainable. This is a digestible 'How To' guide to get us on the right path.

The guide is primarily intended for European programs, but there is a huge amount of advice and helpful information for those operating in other regions too.

Climate action for study abroad is a 4 step process.

Ideally, your organization would start at CALCULATE and move on from there. If you jump straight to RECOMMENDATIONS FOR RIGHT NOW, you'll still be playing a part in a tide of change towards a climate-friendlier version of study abroad.

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CALCULATE



1. CALCULATE THE CARBON FOOTPRINT OF YOUR PROGRAMS Page 3

How much carbon is really being put into the atmosphere by your programs' activities?

Measure your current emissions with this guide's accompanying spreadsheet tool.

Benchmark your programs' footprint and aim for reductions from there.

REDUCE, COMPENSATE, EDUCATE



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Make carbon emission reductions where possible.

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Promote active offsetting and onsetting activities on your programs.

4. EDUCATE Page 16

Putting the 'education' into climate-conscious education abroad.

RECOMMENDATIONS FOR RIGHT NOW



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Go straight to this section if you want a summary of measures you can explore that will help to make a difference

GLOSSARY AND ACKNOWLEDGEMENTS

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*Note: any term with an * after it is defined in the Glossary.*

1. CALCULATE

Measure your programs' greenhouse gas emissions in order to benchmark your progress.



- Making any meaningful change starts with measuring the level of emissions your programs are currently producing. Plan program reductions from this initial calculation.
- Use a carbon calculator* to estimate what a change in behavior or service provider will have on your emissions.
- Measuring the potential or actual changes in carbon output can help satisfy your institutional KPIs.
- Or, build a case for changes you'd like to make but need internal support.

A NOTE ON CARBON CALCULATORS

There is no single existing carbon calculator that will take into account the myriad of emission sources related to study abroad programs.

However, this guide provides an accompanying spreadsheet tool that captures and provides calculations for the main sources of carbon emissions related to study abroad.

WHICH CALCULATOR SHOULD YOU USE?

There are a huge number of online tools that estimate the carbon output associated with various activities. Finding one which is truly accurate is not easy. We strongly recommend Atmosfair and Travel & Climate's calculators, and these form the backbone of our spreadsheet tool.

Atmosfair is excellent for flight emissions globally because it incorporates variables such as average passenger loading, aircraft type, class of service, and average time spent circling the airport or avoiding weather. It also incorporates a robust calculation to account for the additional impacts of high altitude fuel combustion.



[Click for Atmosfair calculator](#)

For ground transportation, Travel & Climate's calculator is both scientifically robust and intuitive, especially within Europe.



[Click for Travel & Climate's calculator](#)

CURIOUS TO KNOW WHAT YOUR CARBON OUTPUT IS COMPARABLE TO IN THE REAL WORLD?

Try using the US Environmental Protection Agency's [Greenhouse Gas Equivalencies Calculator](#).

All equivalencies you will see in this document have been calculated using it.

COLLATING ALL YOUR EMISSIONS DATA

Introducing the Climate Conscious Study Abroad Spreadsheet Tool

This spreadsheet tool, designed to accompany this guide, was developed to compile the carbon emissions results obtained from various sources that are explained in the tool.

It's not a calculator...but it points you in the right direction for making those calculations and embeds them all in one place to allow an overall calculation estimating your program's carbon footprint.

Presented as a series of worksheets for each of the main components of a study abroad program, it also provides a summary calculation and graph.

[Click for the Climate Conscious Study Abroad Spreadsheet Tool](#)
[\(Best downloaded and opened in Excel. Don't forget to save it once it's opened!\)](#)



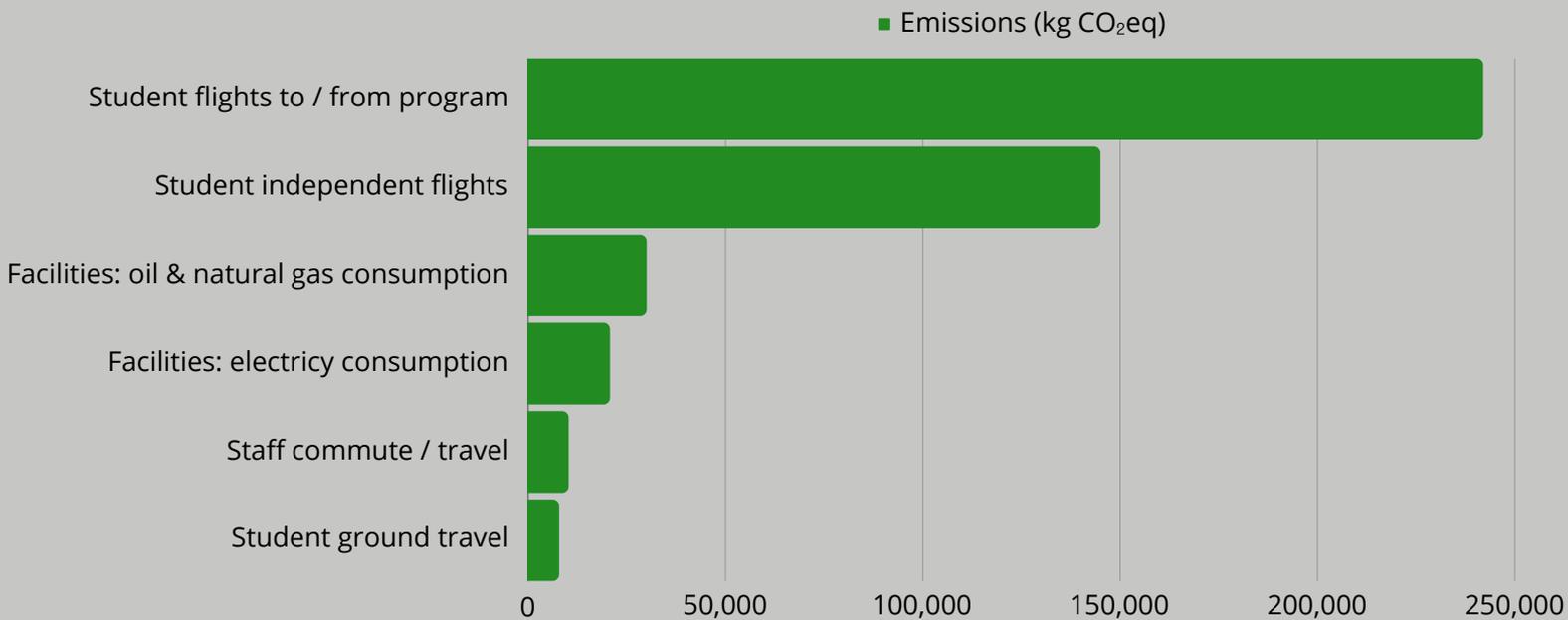
What are thought to be the main emissions sources for a study abroad program?

- Students' flights to / from the study abroad site;
- Independent student flights and transportation taken while on the program;
- Electric energy emissions from any academic, residence, and office locations;
- Natural gas or oil energy emissions from Academic, Residence, and Office locations;
- Staff and student commuting and business-related air and ground travel;
- Emissions related to program activities, including transportation.

A worked example: Champlain College, VT (Dublin centre)

This chart shows a summary of all Champlain College's emissions for running its Dublin programs for 100 students per year.

All data was gathered using Atmosfair, Travel & Climate and the spreadsheet tool on the previous page. The total amount of emissions generated from this one program alone is 456,243 kg CO₂eq - the same as 6 tanker trucks' worth of gasoline



One source of emissions that dominates....

...are emissions related to air travel.. It is inescapable that in our international education sector there is a large amount of travel, primarily students traveling to and from their program site, but also student travel while on the program and staff and faculty air travel.

A recent survey of 229 US students studying abroad for a semester in Europe also showed the average student takes an additional 4.3 round trip flights for overnight independent travel.

Flight emissions from these 4+ short haul return flights is almost the same as a transatlantic return flight.

Added to this, an average of 2.4 friends or family members visit students while abroad, mostly via air travel.

Study Abroad and flights: squaring the circle

Measuring your program's carbon emissions will be instructive, but it's highly likely 'flights' will be top of the list.

If we accept that air travel to and from the study abroad location is required and an integral part of a well-rounded international education, we also need to accept the environmental impact of such travel.

That doesn't mean that we can't streamline it, put it under the microscope, and determine if it is all necessary.

We should challenge ourselves to consider the trade-off between educational impact and travel.

Does a 10-day trip to Indonesia really have an educational impact that allows us to assume the high carbon cost of the flights are 'worth it', or do longer term programs make more sense in this 'carbon-education trade-off'?



1.1m

The U.S., study abroad sector emits 1.1 million metric tonnes of CO₂eq just on student air travel to and from the study abroad site PER YEAR (Robinson *et al.*, 2023)

This doesn't include independent travel students take while on the program or impact of friends and family visiting.

The figure of 1.1 million metric tonnes is a lower end estimate.

18.1m

It would take 18.1 MILLION trees over 10 years to absorb those annual emissions

90

18.1 million trees would cover 90 Manhattan Islands.



2. REDUCE

Reducing carbon emissions within your programs is the number one thing you can do to combat climate change.

There are measures that can be taken in the short term to make a big difference.



- This means looking to reduce your program's emissions from their current levels;
- Reducing is otherwise known as 'insetting'.
- Reducing operational emissions, otherwise known as 'Insetting should be the sector's number 1 priority;
- All emissions that students produce directly (e.g. flights) and indirectly (e.g. heating) should be counted as part of your organization's operations;
- The massive amount of emissions that students' flights generate means insetting alone won't bring your program's emissions to net zero;
- Every carbon reduction matters, and this section outlines some common insetting actions available.

DIS provides funding to students who commit to mindful travel decisions through its Slow Travel initiative.

Here, two DIS students show their commitment to more climate friendly travel through traveling to beautiful Kiruna, north of the Arctic Circle by train.

Reducing your students' emissions

Part 1 of this guide showed that student flights are the overwhelming source of program emissions. It should come as no surprise that the suggestions below all relate to student travel.

Before arrival. What to promote in your pre-departure orientation & pre-departure communications



Direct flights

This minimizes the number of take-offs and landings, where fuel consumption is the highest. Carbon savings can be calculated using [Atmosfair](#)



Lower carbon airlines

[Atmosfair](#) returns flight emissions comparisons for several airlines that fly more efficient aircraft and engine types on certain routes



Economy class travel

OnCarbon estimates that the footprint of a first-class passenger on British Airways long-haul flight is 5.5 times that of economy, while business is 3.5 times the economy option

After arrival. Encouraging low carbon behavior during the program



Build smart travel choices into your orientation

Encourage train or bus, or combining trips into longer periods. [Chronotrains](#) is useful for showing students how far they can travel by train in Europe a selected number of hours.



Independent travel

Push students to explore their host country before flying abroad - there's depth in local experiences as opposed to marking off a bucket list.



Incentivize low carbon travel

Programs with financial means can subsidize travel for students opting for low carbon transport, or run a contest for the highest carbon savings.

You, your staff and organization

Encouraging a carbon-light working environment is positive for staff morale and serves as an example to your students.



Staff Travel

Most European study abroad destinations are in cities with good public transport.

Promote a culture of using it and when you can, incentivize public transport use by subsidized travel cards.



Change to a renewable electricity supplier

Most European countries have energy suppliers that generate their electricity from renewables, such as wind or solar power.

Yes, renewable sources are often mixed with electricity generated from fossil fuels in a country's national grid, but making the switch to support renewable supply is still environmentally beneficial.

Changing to a renewable supplier for your facilities should be relatively straight forward.



Your facilities

Where you have a choice, look out for accommodation and office spaces which run with evidenced low-carbon ratings.

Turn down thermostats, install LED lighting, turn off computers, lights and other equipment when not in use.

Hybrid work where possible can also cut down on travel carbon emissions for staff



Where are you buying from?

Look at what you are buying and from whom. Everything we purchase has emitted carbon in its manufacture.

There are quick wins to reduce the carbon output from your operations.

More reduction ideas overleaf



Top Choices to Reduce Carbon Emissions

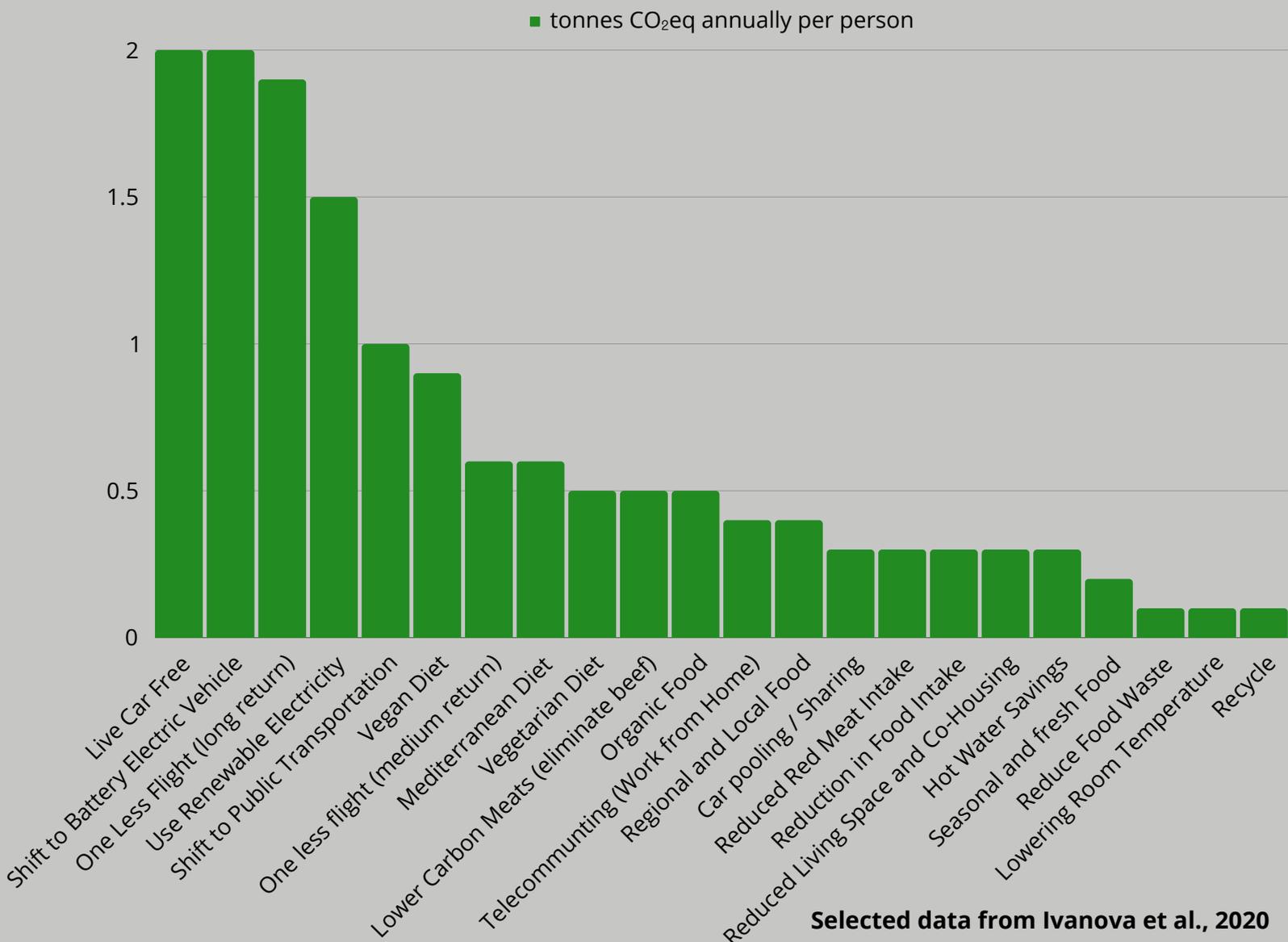
Looking for more ideas that will allow you to reduce your carbon output? This chart will provide some inspiration. Note that four of the top five personal actions are transport related.

Consider that 1 ton of CO₂ needs 0.48 hectares of forest growth to be absorbed in one year.

The figures in the chart below are for one person.

Around 350, 000 American students study abroad each year, so it's a cumulative impact, not just your program.

Carbon savings through selected person actions



Selected data from Ivanova et al., 2020

3. COMPENSATE

Your organization funds internal or external activities that will, in time, neutralize the carbon your programs have produced.



Passive Offsetting*

- You fund another organization to provide the carbon capture service for you, often in a different country or even continent.

Active Offsetting*

- Whoever is responsible for the emissions, in our case students and staff, are involved in the offsetting activity. This also keeps it local.

Offsetting: a health warning!

All offsetting can provide valuable investment and any measure that takes carbon from the atmosphere is positive.

However, consider that the carbon is still being put into the atmosphere in the first place.

Carbon offsets should therefore NOT be used as a substitute for aiming to make real emissions reductions.



Given the choice, passive or active?

Active, every time. Paying someone else to take actions that will compensate you and your students emissions is a choice you should make with great reluctance.

You lose control with passive offsetting over what's happening with your funds. Students, whose flights we are most likely to be offsetting, lose any engagement with the consequences of their choice to study abroad.

By having students and staff play a part in a local offsetting process, they are playing a tangible role as a stakeholder.

Passive Offsetting (Supporting Carbon Offsetting Projects)

Many offsetting companies or charities allow you to pay money to support a project that offsets the carbon emitted from an action such as taking a flight.

These projects commonly include forest planting or preservation, the provision of fuel-efficient cook stoves, solar and wind or biomass energy projects.

Passive offsetting should be a last resort, as it is not educationally impactful and may quickly be forgotten.

Active Offsetting (Embedding Carbon Offsetting into a Program)

The most educationally impactful form of offsetting involves the person responsible for the emission taking part in an emission reducing activity.

These are often local projects that can benefit the community hosting your program, and repeat visits allow students and the program to become more embedded locally

Below, we focus on the two most common forms of active offsetting.

Active Offsetting example 1: Wetland Restoration

Wetlands store more carbon than any other soil type on Earth. In many places they have been degraded or drained and turned into agricultural land, forests, or had their peat removed for an energy source.

Restoring wetlands to their original function can raise biodiversity, promote species recovery, maintain clean waterways, act in flood prevention and resume the long-term storage of carbon.

Some wetland restoration projects in Europe have opportunities for students to get involved by creating drainage blockades in the ditches and transplanting wetland species.

A messy business, but in terms of carbon restoration the biggest bang for your buck.



Restored wetlands:

Finding a local partner to integrate a project into your study abroad program has many payoffs: for the planet, for rooting students in a local project, and potentially the economy through local tourism.

Active Offsetting example 2: Tree Planting

Tree planting is a common form of offsetting, and can be conducted in much of Europe. While the carbon capture often takes 10 or more years to reach a significant amount, there are long-term benefits to planting trees if done correctly.

These benefits are not only in regards to natural carbon capture. Many tree planting organizations use native species as a means to rewild the local area and restore ancient ecosystems.

Since tree planting is the most common form of offsetting, we include below some tips to consider.

Your tree planting partner should be;

- Planting native species only in areas that are suitable habitats for survival.
- Planting a mixture of species which will result in a functioning forest ecosystem.
- A local organization that owns the land and can certify that the trees will be protected.
- Adding an educational program to the tree planting experience if possible.

You should;

- Overcompensate!! Saplings often die before maturity. The per-tree carbon capture is nowhere near an exact science and the capture takes years to become effective.
- Include an educational component to the activity, explaining why you are planting, the climate impact of travel actions, and also the ecology of forest regeneration and rewilding.
- Give students the option of voluntarily planting more trees after your formal day, perhaps to compensate for their independent travel. Make it an event in your program's calendar.



All students on Marist College's First Year Dublin Experience participate in mandatory tree planting in County Clare, Ireland.

The tree planting charity plants only native species, grows their own seedlings and gives ecological walking tours.

4. EDUCATE

Not all positive environmental action has a calculable carbon saving.

Making an active contribution to overall sustainability is also very worthwhile.

This might be through involvement with cleaning the city or waterway, enhancing biodiversity, or promoting locally grown food.



- Don't get hung up on purely counting carbon because you can take actions in other ways that are also environmentally beneficial.
- A study abroad semester is an ideal opportunity to help model more sustainable behaviors in your students.
- Encouraging active behavior as a 'good climate citizen' is sometimes categorized as 'carbon onsetting'*.
- Emphasizing that the average European has a carbon footprint of less than half that of the average American should alone give students pause to think.

Penn State's 'Stay Local' initiative incentivizes study abroad students to remain close to their host city on specific weekends.

By partnering with other U.S. sending universities and host institutions like Temple University Rome (left) students can see the collective impact of their personal travel decisions and better understand local climate action initiatives.

Any organization can join the list of participating institutions.

What can you do to encourage your students to become 'good environmental citizens'?

All the examples below actively promote meaningful cultural immersion and sustainable actions amongst our students.

As such, all are high impact practices which can be continued upon their return home.



Promoting homestays

Housing that students abroad occupy often has striking similarities to the comforts they are used to at home.

Homestays or home visits allow a student to experience a real European living situation, which tends to have a lower environmental impact than that of the average American household.



Guest speakers on environmental & sustainability topics

Amplify the classroom experience with guest speakers offering practical tips on living more sustainably.



Promoting locally-sourced produce

Program leaders can promote shopping locally for produce, perhaps at farmers markets or shops that specialize in locally-grown foods.

It helps the environment through decreased transport emissions, helps the local economy and often uses less plastic packaging.



Visit sustainable businesses in your area

The most impactful learning on our programs takes place outside the classroom.

A study abroad program is the perfect opportunity to model the benefits of environmental and socially sustainable business.



Community clean-ups

There is no direct carbon equivalent of helping to clean up a local community, beach, park or watercourse.

However, any of these sends an environmental message to both the students involved and the local community.



Grow your own food

Programs that can grow at least some food for student consumption is a tangible reminder to them of the benefits of local living.

The ultimate onset? - putting 'climate education' into education abroad

A student's abroad experience is an ideal time to inspire climate action and behavioral changes for years to come.

Focusing on reducing our carbon footprint and aiming for net zero are admirable and aspirational goals, but our role as international educators should not be overlooked.

We have the enviable opportunity to create a learning laboratory for a captive audience of students. Program orientation is the ideal time to start embedding climate action and sustainable messaging. Make sure to reinforce the action - targeted messages throughout the program.

Education inclusion #1: embedding carbon literacy in abroad programs

Mandate carbon literacy as part of your program.

Example, below: all students on a Big Pond Education study abroad program take Big Zero, a bite-sized, accredited Carbon Literacy micro-credential as part of their experience abroad.

The training is both classroom based and experiential. Initial sessions cover the climate crisis, and the students' relationship with it.

Later sessions cover positive actions taking place within student's spheres of influence, practical training on how to enact positive change and field work planting trees with local charities.

Big Zero is available to others in the sector to deliver to their own students.



Education inclusion #2: Carbon footprinting*, personal responsibility and comparative analysis

Having students calculate their own footprint can help them take responsibility for their own carbon-emitting behaviour.



FLIGHT 1 (ONE WAY)	DISTANCE (km)	CO ₂ EMISSIONS kg
BOSTON - DUBLIN	4,858	1,125
L.A - PARIS	9,148	2,286
SAN FRANCISCO - DUBLIN	8,243	4

Education inclusion #3: Embedding sustainability across the curriculum

Depending on the size of your institution, embedding sustainability across the curriculum can be a relatively large and costly undertaking.

It requires training, staffing, institutional buy-in and cross-departmental oversight.

However, the educational benefits are huge.

Example, Strasbourg, France (below left), home of EM Strasbourg Business School.

An entire course is integrated into the management curriculum "Eco-literacy and intercultural management" (below).



RECOMMENDATIONS FOR RIGHT NOW



Whether you're in a position to do a full carbon emission audit with this guide's spreadsheet tool or not, there are ideas within this document that will help reduce (inset), compensate (offset) or pass on associated environmental and educational benefits through onsetting.

This page summarizes some of the actions you can take now that will help you become part of changing the status quo.

Program enhancements

- Promote sustainability and climate action to students while on your programs. Embed it in courses and show local sustainable examples. Get students and programs to calculate their carbon footprints. Those of us hosting programs on the ground effectively have captive student audiences for several months. That's a lot of time to embed new ways of thinking.
- Lead by example. Use public transport, reduce our conference and travel to home campus, serve vegetarian and vegan meals at program events.
- Incentivize low-carbon travel through local promotions you can pass on or schemes develop internally.
- Promote active offsets, in which the students participate directly in the offsetting process. Yes, offsetting is rife with problems, but it's a start and helps with new ways of thinking. Choose your active offsetting program carefully, so that it has tangible benefits.
- Find consumption savings in your programs. This could be electricity, gas, travel, food, etc.

You and your students: encouraging behavioural changes

- Reduce faculty & staff air travel! Could we send fewer staff, or attend every other year?
- Encourage students to travel locally rather than jetting away each weekend. If they do want to travel further afield, promote more sustainable methods. Most Americans aren't used to efficient and quick train travel, such as that found in most of Europe.
- Suggest students fly to your program abroad as directly as possible. Connecting flights only serve to increase the carbon footprint of getting to the destination.

Organization - What your college can do

- Advocate for longer-term programs over shorter-term ones. The educational value increases for the same flight carbon emissions.
- Research the [CANIE Accord](#), a series of pledges for international education to move towards a lesser impact. Sign it if you can, but even if you don't there's some great strategies in there.
- Convert to renewable energy suppliers.
- Develop a climate action plan. It acts as a roadmap everyone can buy into. [Here is an example plan.](#)

GLOSSARY

Carbon Calculator

A computer program for estimating carbon footprints at a moment in time, period of time, or for particular events. There are many available free online, but you should find one that is accompanied by a robust guide outlining calculations & assumptions.

CO₂ VS CO₂eq

'Eq' stands for 'equivalent'. CO₂ is just one gas, whereas there are other greenhouse gases such as methane and nitrous oxide that have a climate impact. Calculating as CO₂eq accounts for these other gases.

Carbon Footprint

The estimated sum of all greenhouse gas emissions associated with the activities a person or in our case, a study abroad program.

Carbon Insetting

Changes made in the operating activities internal to our own organizations that results in the avoidance of carbon emissions. Termed 'Reduce' in this guide.

Carbon Offsetting

Your organization funds activities that will, in time, neutralize the carbon your programs have generated. Termed 'Compensate' in this guide.

Carbon Onsetting

Some carbon emitting activities are worthwhile in the short term if we can leverage long term benefits. Firing students up to make behavioral changes is one of them. Termed 'Educate' in this guide.

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