

Title of Activity or Example: Lower Carbon Weeklong Fieldtrips

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Theme: Sustainability

Description

This vignette considers longer fieldtrips both as practical examples of how to reduce carbon and as opportunities for students to extend their carbon knowledge. This case study relates to a lower carbon trial in 2023 of a human geography fieldtrip from Swansea to Berlin.



Figure 1 – Fieldtrip coach parked amidst hundreds of bikes for hire in Maastricht, Netherlands (c) Aled Singleton, 2023

Usage suggestions

The fieldtrip is designed for Year Two students who have already been introduced to the Climate Emergency and Sustainable Development Goals (United Nations 2015). Carbon Literacy considers how collaborative learning can start at a local level and – in this case of a fieldtrip – to another location.

Learning objectives

This lower carbon fieldtrip is designed to incorporate and extend the learning objectives of a typical Human Geography fieldtrip. Of note, SDGs below refer to specific Sustainable Development Goals:

- To investigate climate related geographical research problems using fieldwork techniques to relate findings from the fieldtrip to themes, topics and issues seen elsewhere across the Geography course.
- By passing through and stopping in other countries to analyse the relative importance of human and physical factors which impact on carbon reduction e.g. some landscapes may have more visible forms of renewable energy sources (SDG11 Communities).
- By considering the character of given place how convenient or difficult it is to take coaches, trains and ferries rather than aeroplanes (SDG12 Tourism).
- Recognise how reducing carbon consumption has cultural, economic, social, and political dimensions e.g. lower emissions zones in different cities and countries, food consumption (SDG12 Consumption).

Step-by-step

The Geography Subject Benchmark Statement (QAA 2022) demands that a carbon audit is carried out for all fieldtrips. The choice of destination and mode of travel should balance environmental costs with learning. The following practicalities and considerations to help plan a lower carbon field trip.

The UK Government conversion factors helps calculate in advance the CO₂e per person a fieldtrip. The bus from Swansea to Berlin emitted 81.874kg per person: 80kg for the coach and 1.874kg for the ferry. Effectively we used 73% less CO₂e compared to travelling to Berlin by coach to a London airport and then flying.

Student and staff welfare is a key concern when deciding on potential locations and travel: how long is spent on one form of transport, what access is there to toilets and refreshments, and how to schedule overnight stays?

A destination like Berlin is approximately 1,500km by road from Swansea University. On Day One we left Swansea at 3.30am, slept on the coach, caught the Dover to Calais ferry at 11am, and arrived in Maastricht just after 6pm. We arrived in Berlin mid-afternoon on Day Two. On the return journey students arrived back in Swansea at 10pm via an overnight stay in Antwerp. Due to the distance travelled each day we required two bus drivers.

We prepared an online feedback survey which students answered anonymously on the final day. Though they enjoyed visiting much of Europe, many found four days of

travel to be tiring and long (Singleton and Stephens 2023). The coach was a good place for students to interview each other and audio-record their reflections.

We spent four days travelling and five nights in Berlin. The cost of the coach compared favourably to flying, however the vehicle and two drivers are potentially a dead cost if not also used when at the destination. To some degree there is an argument for a weeklong fieldtrip visiting several cities if hiring a coach for a week.

Some UK universities have organised European fieldtrips by rail or by ferry. Of note, Interrail tickets can be very flexible. For example, a flexible four-day ticket could take a group to southern Italy and back with an overnight stop in France or northern Italy. Eurostar tickets between London and Paris can cost €30 each (2023 prices) for those with an Interrail ticket. More info here www.seat61.com.

References and resources

Carbon literacy Project <https://carbonliteracy.com/>

GOV.UK (2013). Government emission conversion factors for greenhouse gas company reporting. Available at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>.

QAA. (2022). Subject Benchmark Statement Geography Available at: <https://www.qaa.ac.uk/docs/qaa/sbs/sbs-geography-22.pdf>

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United Nations (2015). *The 17 Goals | Sustainable Development*. Available at: <https://sdgs.un.org/goals/>.