Examples to support pre-award environmental risk assessment

Examples are presented under the question headings from the optional pre-award sustainability assessment to illustrate the kinds of actions that might fall under each heading. These will not be applicable to all projects, but it is hoped that they will provide a useful starting point.

1. Leadership and system change

This section is designed to capture information about agreements made between team members to enhance sustainable research practice and reduce environmental impacts from the research, including any key sustainability innovations.

Illustrative examples that would fall under this section include:

- **Integrating reflections on sustainability into project evaluation exercises.** Designating time and resources to recording reflections on the environmental impacts of project activities at the end of a project, or at periodic intervals within the project lifecycle would generate information on lessons learned that could be fed into the design of future projects and inform iterative improvements.

- **Upskilling the team on more environmentally friendly ways of working.** Allocating time within a project budget/project delivery plan to upskill the project team of team on the use of relevant research practices, document formats, dissemination methods, and/or facilitation tools with a particular focus on gaining competence and confidence with options that are as carbon/resource efficient as possible, while still achieving desired outcomes. This might range from how to build a low carbon (but still effective) project website, to how to run engaging, interactive online events thus avoiding environmental impacts associated with attendees travelling to an event venue.

- **Adapting the team's video conferencing habits to minimise data intensity.** Implementing a policy within your project team of not having all attendees' cameras on in certain types of meetings would reduce the data intensity of your video calls since audio calls require less data, and therefore reduce the associated environmental impact. This might be more viable in some kinds of meetings than others e.g. for any meetings where one person is presenting for the duration of the meeting, often presenters can't see attendees very well when they are sharing screen anyway and cameras could be turned back on when ready for discussion.

- **Encouraging less data intensive ways of file sharing**. If team members can avoid sending documents as attachments to emails unless absolutely necessary, providing access via link to a shared platform instead, this could reduce the number of copies of

any given file and therefore the amount of data required to store it. This is likely easier to apply within a project team in the first instance, but could also be applied to communications with collaborators, subject to identifying a shared, university approved, file storage space. The impact of this change can be quite significant, when you take into account the number of files even a single project might produce, and the number of iterations it might go through.

2. Sustainable infrastructure

This section is for recording any actions planned to minimise the environmental impacts associated with use of lab or computer infrastructure (e.g. sharing space/equipment, making efficient use of space or computing).

Examples that would fall under this section include:

- **Arranging to utilise existing equipment, rather than purchasing new.** There may be opportunities for this within your department or across departments. If there are no opportunities within UoY, you could also consider using equipment at a collaborator's institution. Often a significant proportion of the environmental impact associated with equipment comes from the manufacturing phase, so better utilising equipment could result in lowering the impact per use. In some situations, it may also be appropriate, and more environmentally friendly, to rent equipment.

- **Optimising the power schedules of lighting or other equipment,** if it does not need to be in constant operation. This would be especially effective if informed by a period of monitoring, which could help identify priority areas for action e.g. especially power hungry devices. Where constant power is required, other energy management strategies might be viable.

- **Factoring the sustainable operation of equipment into project design**. This could be where a project, or experiment, requires use of especially energy or resource intensive equipment or building infrastructure. For example, if conducting repeated experiments with equipment that use significant energy to power on are required, it might be possible to organise these in one sustained block, or to ascertain when other projects might be using the same equipment to achieve similar efficiency. It might also be possible to schedule energy intensive computer tasks or simulations at periods outside of peak demand.

3. Sustainable procurement and resource use

This section should be used to document any steps taken towards minimising the material requirements of your project, or reducing the environmental impacts associated with material procurement related to it.

Examples that would fall under this section include:

- **Using full life cycle costs to guide bid/budget development.** As a project team you could have a policy of actively investigating the full life cycle costs of equipment or other

materials in bid/budget development, and endeavour to justify the purchase of more sustainable options even where this might result in higher upfront financial cost. This would include thinking about how the equipment can be re-used and whether it, or its constituent parts are easily recyclable at the end of their life. Investment in preventative maintenance, to prolong the life of the equipment, and require minimal replacement parts could also be recorded here.

- **Optimising delivery schedules.** Investigating the potential to consolidate deliveries of equipment with other project teams or even departments, to minimise the number of deliveries (and therefore associated environmental impact) made to the university by any given supplier.

- **Minimising the environmental impacts from packaging associated with deliveries.** This might range from favouring suppliers that are committed to using minimal packaging, able to collect and reuse their packaging and/or use recyclable packaging only. Where an existing supplier has been identified, it may still be possible to negotiate reduced packaging. There might also be more that can be done by the project team to ensure that the constituent parts of any packaging are correctly separated and recycled.

4. Emissions from travel

This section is for recording any steps taken to minimise travel-related impacts (e.g. virtual participation, land-based public transport, leveraging local expertise).

Examples that would fall under this section include:

- **Reducing travel by opting for online events or remote attendance.** Organising online meetings or workshops for your project in place of in person meetings and/or electing to attend remotely when invited to conferences or other events, where possible and appropriate. You could agree on a set of criteria to navigate these decisions within your team taking into account, for example, how many other trips any individual member of the team has already been on in a year, whether you expect there to be useful in person networking opportunities or other significant benefits from in person attendance that could not be achieved online. Where fully online meetings are not possible, hybrid delivery could still help minimise environmental impacts associated with travel.

- **Reducing travel by leveraging the skills of project partners.** It may be possible to leverage the skills of project partners, such that data collection or other elements of project delivery e.g. workshops or training sessions, are delivered by more local partners. This would be especially impactful for international or geographically dispersed projects, where multiple members of the project team would have needed to make long journeys or use carbon intense forms of transport to facilitate meetings or training sessions in person. Partner organisations could also be upskilled and supported to deliver these, with co-benefits extending beyond reduced environmental impact e.g.

enhanced efficiency, accountability, flexibility, cost savings and the potential for greater innovation.

- **Reducing travel by combining purposes.** There may be opportunities to reduce the total amount of travel required for a project by combining purposes, which would be especially effective in reducing environmental impacts where multiple carbon intense journeys would otherwise have been required e.g. flights. This could include organising to meet key local partners at a host institution during a period of planned fieldwork, or even arranging to meet partners at an intermediate location on the way to/back from a primary destination.

- **Prioritising lower carbon forms of transport for journeys**, e.g. using public transport instead of driving and travelling by train instead of flying where possible. Where public transport is not a viable option and multiple members of the team are required to attend in person events, car sharing could also be planned to help minimise the environmental impacts associated with travelling.

5. Reporting and communication

In this section, you can record information on any planned monitoring of environmental impacts associated with project activities or linked communications activities, including communicating the steps taken to reduce the environmental impacts of work.

Examples that would fall under this section include:

- **Elective reporting on project environmental impacts.** As a project team, you could elect to include sustainability metrics in project reporting over and above that required by the project funder e.g. if your project has a website, you might choose to feature information about steps taken to minimise the impacts of research on a dedicated page or in a blog post.

- **Actively engaging in knowledge sharing on sustainable research practice.** This might include organising events (including within the project team or department) to share learnings around ways of minimising the environmental impacts of work.

- **Record keeping for post project reflection.** This could be applied to the key impact area(s) associated with the individual project. For example you could choose to keep records of all travel completed by the project team, along with information about associated environmental impacts, alternatives considered, and notes from the team members involved about the purpose of the travel and expected benefits to enable post project reflection e.g. via TR2AIL