Sustainable Futures MSc Programmes

SDG focus

☒ Goal 1 - No poverty
☒ Goal 11 - Sustainable cities and communities
☒ Goal 13 - Climate action

What did you do?

To further enhance the sustainability related education offer at Durham University and in the Department of Geography, we have developed three new sustainability orientated MSc programmes for launch in 26/27. The MSc are all organised around the challenge of how to foster 'sustainable futures'.

MSc Climate Change, Society and Sustainable Futures

The programme enables students to understand the challenges that climate change poses to the world, and explore, evaluate and propose solutions that aim to create sustainable futures.

MSc Climate Change, Environmental Processes and Sustainable Futures

This natural sciences orientated programme explores how we can create sustainable futures in the context of climate-induced changes to environmental processes.

MSc Cities and Sustainable Futures

Engages with the challenges facing cities around the world, and enables students to learn about different solutions that aim to create sustainable urban futures.

The suite of MScs combines a focus on emergent solutions and experiments at different scales, with an emphasis on the development of specific sustainability related skills through partnership working and solution orientated education. Two are directly related to climate change (and therefore Goal 13 – climate action), with climate change serving as the pressing context that makes sustainability related questions vital. The Cities and Sustainable Futures MSc programme directly relates to Goal 11 – Sustainable cities and communities.

What were the benefits and outcomes?

The overall outcome is a set of MSc programme that use the SCGs as a starting point for developing the knowledge and skills future generations of students need to contribute to creating sustainable futures at local, national and international scales.

1. The benefit to prospective students is that they acquire knowledge of a range of sustainability related challenges and problems in the context of climate change and other crises, develop the skills to address those challenges (from technical skills of data science to skills of policy analysis, depending on programme), and enhance their capacity to evaluate sustainability related initiatives and propose solutions under conditions of uncertainty.
2. The benefits to the Department and University is that sustainability related education, which was already central to the University's education offer, is further enhanced and centred through a unique set of programmes organised around inquiry-based learning and the acquisition of sustainability related skills and knowledges. The benefit of this should be cohorts of students who graduate equipped to help meet the SDGs.

What barriers or challenges did you encounter in embedding sustainability into your learning and teaching practice and how did you overcome them?

1. The first challenge was to identify an overarching theme that would give the MScs coherence, and allow for different SDGs to be translated into a clear mission and purpose that students could identify and understand their learning in relation to. We explored different options, with a challenge being to identify a meaningful overall theme that was neither too general nor too specific, before agreeing upon 'Sustainable futures' as the overarching goal that cuts across the different SDGs. Consequently, the programmes are all anchored in a compulsory 30 credit module – *Sustainable Futures* – that sets out different ways of thinking about what sustainable futures might be, and encourages students to work with the SDGs to identify how sustainable futures might be created.
2. A second challenge was to consider the range of interdisciplinary knowledges necessary for sustainability related education, particularly when framed in the context of climate change. We were also keen to ensure that the programmes move between, and explores the differences across, different types of sustainability knowledge and expertise – so from transnational international organisations such as the IPCC to indigenous communities. The challenge here is how to bring very different knowledges and sources of knowledge into genuine dialogue in a way that enables them to inform one another and contribute to the overall 'sustainable

futures' project of the programmes. We've tried to address this challenge by organising the Sustainable Futures module around dialogues across different kinds of knowledge in relation to select SDGs, as well as rooting the module in a summary of existing climate science.

3. The third challenge was thinking carefully about the types of learning necessary for sustainability related education, with a particular challenge being the balance of different kinds of learning across the programmes. The programmes centre research-led substantive knowledge in the form of modules that draw on staff sustainability related research interests, for examples in modules on Cities and Climate Change and in Anticipating Future Environments. But we were also keen to embed inquiry led learning and partner-based working, to shift emphasis on the programmes from diagnosing problems to exploring, evaluating, and proposing solutions – key skills that we consider necessary in sustainability related education. To this end, we experimented with different models for inquiry-based learning. We settled on a 30-credit module on two of the MSc – *Sustainable Transitions and Transformations* – which involves students working with partners at local, national and international scales to identify problems, research those problems, and provide recommendations and solutions. In the physical science orientated MSc, we incorporated partner related working through a fieldtrip in a module on *Climate and Environmental Change Past and Present*. We also included the option of a 60 credit *Vocational Dissertation* across all programmes, where students will work with a sustainability related partner to co-design a research project that will result in a partner-orientated report as one of the pieces of assessment.

What are your conclusions and recommendations for others?

Developing the new sustainable futures MScs has involved us carefully considering the subject specific and general knowledge and skills that prospective students need for future careers that might contribute to meeting the SDGs. It has also centred the challenge of how to incorporate a range of interdisciplinary knowledge and skills into a set of programmes, recognising the necessity of interdisciplinary working for addressing the SCGs. This leads to two recommendations in relation to embedding sustainability in education programmes. First, to identify how the SDGs can be combined into an overarching theme and approach that underpins and drives the learning outcomes of the programme. Organising the MSc around the idea of sustainable futures allowed us to identify a single theme that works across and combines different SDGs. Second, to think carefully about the different kinds of learning that sustainability related education demands. The programmes are designed to ensure that students acquire a foundation in different kinds of knowledge, but also involve problem orientated and partner-based learning that is designed to be prospective – learn about and explore local, national and global solutions and experimentations that are working to deliver on the SDGs.