

Education for Sustainable Development Annual Report 2019-20

Part 1 Introduction

This report contains highlights from UWE's education for sustainable development (ESD) work from the academic year 2019-20. It is the final such report to be produced in relation to Strategy 2020 and UWE's Sustainability Plan 2013-20 commitments.

UWE Bristol has worked for many years on building a sustainability culture which permeates its curriculum, research and the knowledge base and behaviour of staff and students, evidenced by the ability of staff and students to articulate links between sustainable development and their discipline (Sustainability Plan 2020). This is a long term, cross institutional commitment to sustainability with leadership from the Vice Chancellor, the Chair of the Board of Governors and the President of the Students' Union. The university's aims, direction and rate of travel are set out in the Sustainability Plan which takes its authority from Strategy 2020. The UWE Knowledge Exchange for Sustainability Education (KESE) group is charged with progressing the educational for sustainable development element of this agenda which is central to the achievement of the university's ambitions.

The knowledge, skills and attributes developed in higher education will prepare graduates to thrive in the increasingly unpredictable world which they will encounter in their professional and private lives. UWE is committed to ensuring that all students will have the opportunity to consider sustainability in the context of their discipline of study, particularly in relation to contributions of and implications for professional practice.

UWE is acknowledged nationally and internationally for its engagement with the sustainability agenda and has received the following external recognition:

- certified to the NUS Responsible Futures accreditation achieving the highest score yet awarded,
- ISO 14001 Environmental Management System certification, covering both operations and educational activity,
- UK and Ireland Green Gown awards for Student Engagement, Learning and Skills, Continuous Improvement-Institutional Change and Leadership.
- International Green Gowns for Student Engagement and Continuous Improvement.

Student expectations remain high with the Green Team in The SU at UWE identifying a key role for the society as "holding the university to account for its sustainability claims and actions". The SU at UWE has been the highest ranking students' union in the UK for five years running in the NUS Green Impact accreditation scheme. This achievement represents the significant expectation which UWE students have for sustainability commitment and action and their willingness to take concerted and consistent action to pursue best practice sustainability. They expect the same of UWE, setting and then meeting meaningful sustainability goals.

UWE achieved its target of ensuring that all UG and PGT programmes engage with ESD as relevant to the context of their discipline back in 2015. Since then we have been working on a more ambitious target to mapping every programme against the UN Sustainable Development Goals. This involves considering not only content of our programmes, but also design, delivery, engagement with external partners, even the very ethos and purpose of the programmes. Phase 1 of this mapping initiative was completed in 2020.



Part 2. Meeting the Key Actions set out in the 2018/19 Action Plan

The 2018/19 ESD report set out 12 Key Actions for Academic Year 2019/20. A summary of activity relating to each action is presented in Table 1. Overall good progress has been made with implementing each action.

| Action | Implementation |
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| 1. Active engagement with the development of the new institutional Sustainability Plan/Strategy to ensure that educational activity is core to UWE's sustainability commitments and actions, particularly noting commitments made in Strategy 2030 for pursuing sustainability by design, a sustainable university, sustainable communities, sustainable ways of doing things, and creating solutions to global challenges. | <p>This has been achieved through the engagement of the Assistant Vice Chancellor – Environment and Sustainability and the Associate Professor in ESD in discussions relating to Strategy 2030 and the development of the Climate Action and Sustainability Strategy, most notably as part of a strategy development group and Sustainability Board.</p> <p>Further, the KESE group dedicated a meeting to creating a joint response to the Chief of Staff as part of the consultation phase of the development of Strategy 2030.</p> |
| 2. Ongoing action against Responsible Futures criteria, including planning towards reaccreditation in 2020-21 and conducting surveys of the knowledge and attitudes of staff and students. | <p>A Responsible Futures working group has met throughout 2019/20 to ensure that appropriate activity was taking place throughout the academic year and that the journey to our reaccreditation audit in 2021 is mapped and all relevant parties aware of their responsibilities relating to running, evidencing, monitoring and reporting of activity in preparation for our audit.</p> |
| 3. Active working relationship with UWE's Academic Practice Directorate (APD) in revision/reframing and implementation of the Enhancement Framework Design Principles, UWE's Quality Enhancement processes and the Postgraduate Certificate in Academic Professional Practice. | <p>The Associate Professor in ESD has continued to work with the APD in relation to guidance for staff on the Enhancement Framework. Most significantly, during 2019/20 the Associate Professor in ESD was a tutor on the PG Certificate in Academic Practice and was able to provide a core session on UWE's ESD and SDG work to more than 100 members of academic staff.</p> |
| 4. Continued development of the working relationship with the Students' Union, specifically ensuring ESD engagement with new officers, building relationship with the members of the SU Sustainability Committee (particularly the ESD officer) and supporting implementation of Green Impact recommendations. | <p>There was good partnership working again between UWE and The SU at UWE in relation to ESD and broader sustainability work. New presidents and officers were provided with comprehensive training in the summer of 2019. ESD training was included in the annual SU Rep training and lead departmental student sustainability reps were invited to a bespoke KESE meeting to work with their staff departmental KESE rep. Some good work was undertaken by a few lead sustainability reps in 2019/20 (detailed elsewhere in this report).</p> |
| 5. Partnership with the NUS and The Students' Union at UWE to conduct a five year review of the Responsible | <p>UWE and The SU at UWE worked together with SOS-UK (formally NUS Sustainability) to undertake a five</p> |

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| Futures accreditation scheme, as part of our role as Responsible Futures Host Partnership status in 2019-20. | year review of the Responsible Futures initiative. This is detailed below. |
| 6. Implementation of ESD recommendations arising from ISO 14001 2015 (re)certification in July 2019. | There were no ESD recommendations included in the auditor's report following our ISO14001 audit in July 2019. |
| 7. Completion of mapping of academic programmes against the Sustainable Development Goals and ongoing mapping of other areas of university activity. | There was significant activity in relation to SDG mapping of programmes in 2019/20 leading to a publication of Phase 1 of this work, to be published later in 2020. |
| 8. Provision of staff development and activities for students to raise awareness of the SDGs including hosting of events themed around the SDGs. | ESD and SDG awareness raising events were held as part of Green Week in October 2019. Further, staff were encouraged to take part in the Global Goals Teach in in February 2020. In total, 36 UWE academics pledged to include the SDGs into their teaching activities during the Teach-in, reaching nearly 2,300 students and placing UWE 3 rd in the UK for number of teaching staff pledged and 5 th for the number of students reached. |
| 9. Working with Academic Student Societies to explore the potential for collaboration and running of extra curricular events/activities focused on sustainable professional practice. | This was progressed by the staff and student reps for Nursing and Midwifery who had planned to run an Earth Conference in early summer 2020. COVID-19 has delayed this event, now planned for summer of 2021. |
| 10. Engage with EAUC, professional bodies, OfS/Advance HE and other agencies to raise national profile and promote renewed policy commitments to ESD in HE. | Assistant Vice Chancellor – Environment and Sustainability Jim Longhurst is very actively engage in national level HE discussions on ESD and climate action. He..... Climate Commission, EAUC and is co-chairing the expert advisory group who are currently developing a revised ESD Guidance for the UK HE Sector. This group, facilitated by Advance HE and the QAA, also includes UWE's Associate Professor in ESD Georgina Gough. |
| 11. Continued engagement with Bristol Green Capital Partnership, the Bristol SDG Alliance, PRME UK and Ireland Chapter and other local and regional organisations and partners as relevant to progressing opportunities for students to develop knowledge and skills for sustainable | Several member of staff engage regularly with the Bristol Green Capital Partnership, including as attendees of the monthly Green Mingle. UWE also has strong representation in the Bristol SDG Alliance and the Associate Professor in ESD Georgina Gough is part of an advisory group leading enhancement of governance arrangements for the Alliance. |

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| development and sustainable professional practice. This includes an ongoing commitment to Sustainability Literacy Test (SuLiTest) Steering Group and promotion, where appropriate, of use of the Test. | UWE has been actively involved in the activities of the UK and Ireland Chapter of PRME this year, particularly through joint UWE leads Svetlana Cicmil and Georgina Gough, and has been asked to help to establish a South West and South Wales local PRME network. A virtual meeting of interested institutions was held during 2019/20 with further development planned for 2020/21. One run of the SuLiTest was conducted during 2019/20. |
| 12. Working with Heads of Department, Faculty Executive Teams, Programme Leaders, UWE professional services and other internal colleagues to ensure continued enhancement of our ESD activity. | This action was progressed via the annual series of meetings between the Assistant Vice Chancellor – Environment and Sustainability, the Associate Professor in ESD, the Head of Environment and Sustainability, other members of the Sustainability Team and Heads of Department and, in separate meetings, members of Faculty Executive teams. These meetings form part of the activity audited under our ISO 14001 certified environmental management system. |

Part 3. Selected further institutional highlights

Knowledge Exchange for Sustainability Education (KESE)

The Knowledge Exchange for Sustainability Education (KESE) group continues to be an important vehicle for leadership of ESD across UWE. In 2019/20 activity focused on SDG mapping, encouraging and supporting relevant departmental activity and staff engagement. The group met regularly and their second annual away day was held virtually in June 2020. KESE also held an all staff open meeting in February 2020 designed to highlight a variety of disciplinary responses to UWE's ESD commitments and SDG engagement.



KESE Departmental Reps fulfil an important role in translating central university commitments to local level action and reporting back on departmental ESD matters. These reps have helped to build capacity and interest within departments and there is now significant activity within many departments. A personal approach to engaging colleagues by the reps has been effective in ensuring development of the number of colleagues with good understanding of the SDGs and the potential for them to inform teaching and learning activity.

KESE was awarded The Students' Union Award for Partnership as part of the Student Experience Awards in July 2020.

Annual ESD meetings with Heads of Department and Faculty Executive Teams

The annual round of meetings with Heads of Department was undertaken in autumn/winter 2019/20 and a number of opportunities for progressing staff engagement emerged from these. The third round of meetings between the AVC Environment and Sustainability, Associate Professor in ESD, members of the Sustainability Team and the full set of Deputy Deans and Associate Deans from each faculty were



also held this Academic Year. These discussions centred on ways by which responsibility for sustainability can be more effectively devolved across the institution, as well as on the identification and planning for resolution of, issues at Faculty level. Opportunities for more effective collaborative working towards sustainability objectives were identified in all meetings. One outcome of the meeting with the Faculty of Environment and Technology was a plan for an all Faculty staff forum to consider ways by which sustainability strengths can be enhanced across the faculty. The Faculty of Health and Applied Sciences also committed to enhancing Faculty level action through the creation of a new Faculty sustainability forum.

Presentations and national engagement in ESD

In January 2020, an expert group representing Advance HE, QAA and HEIs met at UWE to formally begin creation of a revised ESD Guidance documents for the UK HE sector. This group is co-chaired by UWE Assistant Vice Chancellor – Environment and Sustainability, Professor Jim Longhurst and includes Associate Professor Georgina Gough as a member. The group continue to work on the guidance document which will go out for consultation later in 2020.

During 2019/20, UWE's ESD work was also showcased at the Advance HE STEM Conference in Manchester in January 2020, at the Sustainability in Higher Education Conference coordinated by Canterbury Christ Church University in May, at UWE's Festival of Learning in June 2020 and will be included in the postponed annual EAUC Conference to be held in November 2020.

Student work on sustainability issues has been shared with community groups, businesses, councils and other stakeholders in multiple ways. Some examples can be found in the departmental updates below but also include submissions to the PRME UK and Ireland Chapter annual student coursework competition and team work produced to support homelessness charities in Bristol as part of UWE's Grand Challenge.

Responsible Futures host partnership status 2019-20

During 2019/20, UWE and The SU at UWE held Responsible Futures Host Partnership status. As part of our responsibilities as host partners, we held a Responsible Futures Support Day in November 2019 for other HEIs and their students' union. We also worked in partnership with the NUS and The Students' Union at UWE to conduct a five year review of the Responsible Futures accreditation scheme. This work was presented at an HE sector conference in May 2020, is the subject of a paper being submitted to the International Journal of Sustainable in Higher Education and will be the focus of a workshop at the EAUC Annual Conference in November 2020.



Part 4 Departmental Highlights (by Faculty)

The following pages detail selected highlights from the significant volume of ESD activity undertaken over the academic year 2019/20. These examples have been gathered by the departmental KESE reps as identified.

Faculty of Business and Law

Accounting and Finance

KESE Rep: Nicola Horner

SDG mapping for the BA(Hons) Accounting & Finance programme was completed with work beginning on mapping three new undergraduate (UG) accounting programmes and reviewing of modules specification documents to enable creation of programmatic SDG 'heat maps'. The process of mapping postgraduate programmes in the department has also begin shortly with KESE reps working with programme leaders initially, followed by module leader engagement. Interviews with accounting staff have been planned to coincide with a deeper mapping of the curriculum. 80% of Accounting and Finance staff have agreed to be interviewed for this mapping.

A new third year module "Accounting for Sustainability" (optional for students on BA Accounting and Finance) was postponed to 21/22



Fig. 1 An example of links between SDGs and accounting and finance topics. (Horner,2020)

Economics

KESE Rep: Peter Bradley

Mapping of the integration of the SDGs into economics programmes, clearly demonstrates that all goals are picked up in each programme in two or more years and quite often across all three years and in some cases by quite a range of different modules. This is clear progress from the handful of modules which were identified as having sustainability relevance in an earlier 2015 assessment. Although, more recent mapping has been conducted using a wider range of issues (derived from the SDGs) and with greater engagement of staff, perhaps explaining some of the additional content. Some optional modules are still to be fully mapped. This work is included in an article detailing a broader piece of work on sustainable development in the economics curriculum across the UK:

Bradley, P. (2019). Integrating sustainable development into economics curriculum: A case study analysis and sector wide survey of barriers. Journal of Cleaner Production, 209, 333-352.

Work has been done to provide economics students with the opportunity to engage with live briefs linked to sustainability in conjunction with relevant organisations, for example on responsible investment.

Sustainability Research Cluster: This Cluster sits within the Bristol Centre for Economics and Finance and brings together 24 UWE staff from within Economics and Accounting but also from other UWE departments. The Cluster arrange seminars, and in 2019-20 these included a presentation by Peter Bradley, Eleni Papathanasopoulou, Ian Smith, Sahand Panah, and Daniela Gabor titled "Our experience of integrating sustainable development into Economics Curriculum and the role of pluralism in achieving". This session included discussion of how to continue move further in integrating sustainability across the department.

Business and Management

KESE Rep: Janet Carruthers

Work continued to gather data on how sustainable practice is embedded within modules and programmes in each of the Business and Management clusters. Meetings planned for the spring were disrupted due to COVID-19 lockdown but will resume in academic year 2020/21. Work has also begun on the development of a metric to use to gauge impact of ESD in relation to raising students' interest and aspirations, using, for example, the number of dissertation topics being selected by students which relate to sustainability or the roles and organisations graduates go on to work for.

All students on the first year Enterprise and Entrepreneurship module were tasked with responding to the challenge of homelessness for an assessed project. 733 students submitted portfolios with a focus on the UWE Bristol Grand Challenge and a further 100 students are still working on their responses. Module leader Pam Seanor reported that students enjoyed the opportunity to work on a live project on an issues so relevant to Bristol. This project was also run at UWE's partner institution, Villa College, having begun there in May 2020. Partners from Villa College said that the theme of homelessness worked across cultures and their students have really engaged with the topic and the project work this year.

FBL are developing a short course in Sustainable Business and external speakers have delivered sustainability sessions for students on UG and PG programmes.



Law

KESE Rep: Jona Razzaque

A number of modules within UG and PG Law programmes explicitly address the SDGs, such as

- Environmental Law (Level 2 UG)
- Globalisation Trade and Natural Resources Law (Level 3 UG)
- International Environmental Law (PG)
- Natural Resources Law (PG)
- European Environmental Law (PG)
- Globalisation and the Law (PG)

A valuable opportunity for students to engage with the SDGs is provided by the Environmental Law and Sustainability Research Group. UG and PG students are members of the group and undertake original research on sustainability topics which is presented to other students, UWE staff and external guests at events including an annual Environmental Law Research Colloquium organised by Professor Jona Razzaque.



Fig. 2 Students participating in the annual environmental law symposium.

Recent dissertation topics completed by PG students include:

- Sustainability of gasohol and ethanol exploitation in Thailand (Nutwara Pongsupakul)
- Sustainability of renewable energy sources in ECOWAS and EU renewable energy laws. (Udeme Eduok)
- Legal challenges of solar as a renewable energy source in Nigeria. (Maryam Suleiman)
- Sustainability of coal power plant in Bangladesh and SDGs (Kamrun Nahar)
- A socio-legal analysis of effective cetacean protection. (Felicity Wertman)
- Right to water of Indigenous people in Cameroon. (Marion Nkengasong)
- Assessing the adequacy of REDD+ in Indonesia. (Paivi Mustakoski)
- REDD+ as a climate change mitigation tool in Indonesia and Brazil. (Hope Kurzawa)
- One Planet Development Policy in Wales and SDG 11 (Rachel Kelway-Lewis)

Recent research by UG students include investigations into:

- energy regulation and climate litigation in the United States;
- mining and indigenous people in Australia;
- land security and corruption and oil and gas regulation in Africa;
- biodiversity protection, water conservation and renewable energy in Europe; and,
- deep seabed mining and marine conservation and plastic pollution.

Notable activity undertaken within the department and by departmental staff this year includes:

- Evadne Grant provided training in UNITAR Training Workshop on Human Rights, Climate Change and Environment in San Jose, Costa Rica in October 2019
- Professor Jona Razzaque co-authored output 'Pervasive human-driven decline of life on Earth points to the need for transformative change' *Science*, 13 Dec 2019: Vol. 366, Issue 6471, eaax3100. This is one of the top-ranking journals with impact factor 41. Professor Razzaque was also Lead Author of IPBES Global Assessment on Biodiversity and Ecosystem Services published the Summary for Policymakers. Report available from https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf
- Onita Das organised a guest lecture by Dr Tom Appleby from FET, UWE on "Uncommon Marine Environmental Law" to LLB, LLM and PhD students.
- Christian Dadomo organised a guest lecture on environmental crime as a joint workshop with Global Security Group in March 2020.
- Elena Blanco organised an Inter-University Environmental Law Students Conference (including students from UWE Bristol, Swansea University, the University of Bristol and the University of Cardiff) held in March 2020. She also have a presentation in May at the University of Cardiff on 'Transnational Corporations: Cartographies of Power and Destitution'.

Faculty of Arts, Creative Industries and Education

Education and Childhood

KESE Rep: Verity Jones

Mapping of programmes against the SDGs continued this year with the secondary PGCE teams for Art and Design, Science, Modern Foreign Languages, Maths, History and Geography completing their first maps. BA in Education mapping process was supported by the departmental student sustainability rep and was undertaken in conjunction with the Early Years Education teams in order for commonalities, gaps and a shared way forward to be identified. In June 2020 a session was held for Education doctoral students about policy, professional identity and sustainability, reflecting on UWE's SDG mapping activity. There is a much higher level of awareness of sustainability amongst staff and a focus on all programmes, in terms of their engagement with the SDGs, has developed. KESE Rep Verity Jones is also working on mapping dissertation topic choices of students.

UWE is a **Bristol Learning City** partner and as part of one associated project, Verity Jones spent an inspiring day with young people from nine Bristol schools, all focussing on how to tackle the climate crises in their own personal context. Students had the expertise of Sustrans, Soil Association, Avon Wildlife Trust, GENeco and other organisations to support them with producing an action plan. UWE Education and Childhood also support **Bristol Achieve** and the **Bristol Education Partnership** which support local disadvantaged pupils.

Verity Jones now sits on the Advisory Board of the Bristol-based **Global Goals Centre** project. This is helping to ensure that UWE supports the ambitions of the project to develop a public-facing interpretive centre on the SDGs. Potential contributions include developing a BoxED box that could jointly promote what UWE does in relation to the SDGs or utilising UWE's research to inform development of the interactive dioramas which are to be created for the Centre.

Examples of sustainability-related research undertaken by staff within the department this year are:

- Fast fashion and successful pedagogies
- Edible insects in schools
- Integrated BAME curriculum
- Bystander interventions against sexual abuse on campus



Fig. 3 Examples of learning resources associated with work on an integrated BAME curriculum.

Project Zulu continues to be an important outreach project within the department. £30,000 has been raised so far, supporting the development, installation and maintenance of IT centres, solar panels, classrooms, infrastructure and equipment in schools in South Africa. It also supports up to 20 students to visit the UK each year.

Arts and Cultural Industries

KESE Rep: Grant Howie

This year has seen significant activity in ACI in relation to curriculum mapping. Programme and Module Leaders were contacted by KESE rep Grant Howie to initiate mapping and resources and support made available by Grant to support programmatic mapping. This has resulted in a number of new maps being created this year including ones for English Language and Linguistics, English Literature (and English Literature with Writing) and Foundation First Year for Arts and Cultural Industries and Media Studies. Most recently, the Creative and Professional Writing team returned their comprehensive assessment of links between their programme and the SDGs. Staff response to the task has been generally positive with senior members of staff noting that a sustainability focus is very important for curriculum nowadays and an increasingly strong element of student expectations.

This year's departmental student sustainability rep was also very active this year, developing discipline specific reading lists for her fellow students on sustainability. She also supported SDG mapping of her own programme of study.

Art and Design and Film and Journalism

KESE rep: Adrienne Noonan

There was good engagement by technical colleagues supporting art and design disciplines this year. Colleagues including Zarya Moskovits, Luisa Holder, Gabrielle Carter, Sandra Wilson and Phil O'Shaughnessy formed a City Campus sub-group of KESE to discuss locally-relevant ESD opportunities. In particular, work was done consider issues of waste and materials in practical workshops and in relation to student work. A calico audit was undertaken to establish a baseline of use and students were encouraged to think carefully about how much calico they use and where their calico is sourced from. Kieran Brown, Technical Manager physical making environment, has asked fashion teams to look at everything they use to consider what they use, how they use it, how they dispose of it and where improvements can be made.

Fashion colleagues collaborated across the faculty to run a series of Practice Innovation Place (PIP) events based around sustainability and fashion. The events were open to UWE staff, students, invited guests from the local area and partnered Universities. The series of workshops titled 'Mend' enabled participants to engage in mindfulness-based mending activities.

Colleagues from both Art and Design and Film and Journalism who undertook the PG Certificate in Academic Professional Practice this year picked up SDG mapping of programmes they were involved with as an opportunity to enhance their teaching and learning activities. Level 3 students from the BA Graphic Design produced an exhibition on Bristol's housing crisis title Bricks + Mortar held IN December 2019. Fine art held their own sustainability meeting in February 2020 to discuss issues such as whether microplastics are released when acrylic paints are washed in sinks.

UWE is working with Albert sustainable production training. Albert is the authority on environmental sustainability for film + TV. Albert is funded by the industry, allowing us to make our tools, training and resources totally free to use. Albert is embedded into the undergraduate Film programme (300+ students) and post graduate programmes, including MA Wildlife and the new suite of Screen Business programmes debuting in January 2021.

In July 2020, select Film staff and students participated in pilot training for sustainable film and television production, including Introduction to the Albert Calculator and Training the Trainer days.



Charlotte Crofts (PL Film), Vicki Harris (sustainability engagement co-ordinator) and BAFTA's Michelle Whitehead worked together on this important development. Key staff have become accredited trainers and Albert will be embedded in the film curricula. Drama colleagues have already been doing work on low and no-spend production.

Sustainable Production Training provides the knowledge and skills to create productions in a more sustainable way:

- environmental basics
- industry's impact
- production case studies
- carbon calculation and certification

Matthew Partington (MA Curating) looks at sustainability in museums and collections and divestment of collections with students.

Faculty of Environment and Technology

Engineering Design and Mathematics

KESE Rep: Laura Fogg-Rogers

EDM is committed to embedding sustainability and the SDGs within teaching and aspirations for the Department. A team meeting was held in November 2019 to discuss a route forward for existing and new modules, and consolidated with a wider Away Day workshop in January 2020.

A key development for the department is that all new Integrated Learning Framework modules for Year 1 Engineering Students address the SDGs and net zero 2030 targets. These are explicitly covered within lectures and are included in summative assessments.

SDG Mapping was given a boost in EDM this year, supported by a session at the departmental Away Day and significant work undertaken by Venkat Bakthavatchalam and Nadia Algosaibi. Module leaders were asked to indicate whether UN SDGs are embedded in modules across all clusters of the department (Aerospace, Mechanical and Automotive, Electrical, Electronic and Robotics, Maths and Statistics, PGDip Engineering Competency and Other). SDGs were considered to be embedded if they were covered during lectures or tutorials, or within coursework. 60 modules were surveyed in total, leading to the creation of maps for all of the aforementioned disciplinary clusters.

The student Project Weeks which run across all years are held in partnership with Engineers without Borders or the UWE Grand Challenge. The 2019 Project Week brought together over 300 Year 1 and Year 2 students to address the challenge of homelessness in Bristol.

The department have ensured that sustainability and net zero 2030 targets are explicitly referred to in the Communications Plan for the new Centre for Digital Engineering Technology and Innovation (DETI). DETI brings together UWE's undergraduate, postgraduate and industry Continuing Professional Development students through the Digital Academy. These connections enable reach right across the engineering industry in the West of England.

Geography and Environmental Management

KESE Rep: Georgina Gough

Sustainability is core to the purpose of all GEM disciplines and the SDGs are explicitly included in all programmes of study. SDG mapping continued in GEM this year with the new mapping activity for BSc Geography and BSc Geology. Examples of assessment explicitly linked to the SDGs from with GEM disciplines include:

- Preparation of a critical assessment of the alignment between the ambitions of the city of Bristol, as articulated in the Bristol One City Plan, with the Sustainable Development Goals (MSc Sustainable Development in Practice)
- Preparation of a proposal for a new tourism initiative which addresses SDG needs of a developing country (BA Geography)

Planning modules have sustainability embedded in them via learning outcomes, ensuring that students are assessed on their ability to, for example:

- Define the form and nature of green infrastructure and critically evaluate the processes by which green infrastructure is promoted through policy, plans and strategies;
- Critically examine the multi-functional benefits that green infrastructure can give rise to; and,
- Analyse the political and ethical nature of planning.

Head of Department, Elena Marco, outlined her expectations for staff within the department to put greater emphasis on sustainability and climate change in particular during 2019-20. Specifically, in an all staff email in the summer of 2019, she asked staff to 'steer (their) thinking and mind set towards having a stronger sustainable content in all the modules we teach so we are able to lead the way as a department of Architecture and the Built Environment approaches climate change action. ... ABE management team is asking you to think carefully how you embed a clear and strong grounding and awareness about climate change and the fact that the government has declared an emergency'. Staff were asked to design 'briefs for studio and coursework where students can demonstrate a strong steer towards radical action to stop climate change' and to 'consider how this can be done socially, environmentally and economically'.

Research was carried out by Sonja Oliveira and colleagues into staff and students' perceptions of sustainability teaching and learning across UWE's architecture programmes. This work supported ongoing discussions relating to SDG mapping which were progressed this year by a graduate of the department and James Burch. Most recently, the MSc Real Estate Management and MSc Real Estate Finance and Investment programmes were mapped by programme leader Grazyna Wiek-Roy.

During lockdown, Patrick O'Flynn ran a massive open online course (MOOC) on zero carbon buildings for professional in built environment disciplines. The course had two runs during the spring of 2020 attracting over 1000 applicants from the UK and internationally.

Hector Archila Santos sought to enhance the presence of sustainability in his Construction Technology modules and during 2019-20 undertook enquiry-based research into student expectations. He used the modules evaluation survey to explore students' interest in learning, studying and being assessed on how construction can help tackle current issues such as climate change during their lectures. Over 70% of students in two construction management modules were happy for sustainability to be part of their module experience (rising to around 90% when those who neither agreed nor disagreed were included). A small number of text responses indicated that students had thoughts on where sustainability might best fit in their wider programme experience and which elements of sustainability they would like to learn more about. Perceived relevance or irrelevance was also noted in student comments.

In 2021, the Radical Architecture Practice for Sustainability group will meet in Bristol. UWE is one of 12 architecture schools involved in this group. 12 UWE staff are involved in organisation of this first key event, as are UWE students.

SDG Mapping in CSCT has progressed with completion of a map for BSc (Hons) Cyber Security & Digital Forensics. The map was generated by coding and analysing the latest programme and module specification documents. The resulting map has been approved by the programme leader and core teaching team and will be used to inform current programme redesign in order to enhance coverage of sustainability.

Explicit engagement with the SDGs occurs in modules such as :

- UFCFA5-15-3 Information, Networks and Society
- UFCFVJ-15-3 Professional Development
- UFCFNJ-15-M Strategy and Governance in IT

SDG logos (see Fig. below) are used to ensure that students are aware of the direct links between session content and SDG issues but also to encourage them to be thinking about broader linkages between, for example, computer science and the wider world.

The slide is titled "Information and knowledge" in a large, orange, sans-serif font. To the right of the title are three SDG logos: SDG 9 (Industry, Innovation and Infrastructure) in orange, SDG 17 (Partnerships for the Goals) in blue, and SDG 4 (Quality Education) in red. Below the title, there are two columns of bullet points. The left column lists: "Problems of knowledge and information", "'Tower of Babel' problem, and 'Cathedral and Bazaar' argument", "'Death of the expert', dissolution of professions", "'long-tail' of information and knowledge", and "Information work more challenging". The right column is headed "Why does it matter?" and lists: "Importance of digital media for storage of information and knowledge", "Importance of digital networks for access to information and knowledge", and "Importance of different ways of knowing".

Fig. 4 An example of use of SDG logos in teaching materials.

Although not flagged as SDG relevant this year, sustainability featured in other modules too, such as:

- UFCFN6-30-2 Information Practitioner 2: A student team worked with IT Services on Carbon Footprint
- UFCFP6-30-3 IP3: CAKE (Community Action and Knowledge Exchange) module where multiple student teams (8 in 2019-20) worked with community organisations on IT support.
- UFCFR5-15-3 Advanced Topics in Web Development 2 where students analysed and presented 15 years of Bristol Air Quality data from the Bristol City Council Open Data portal

IT students also considered sustainability content in Strategy and Governance in IT and Cloud Computing contexts, whilst MSc Creative Technology students engaged with the UWE Grand Challenge issue of homelessness which culminated in an event at Frenchay campus (see poster below).

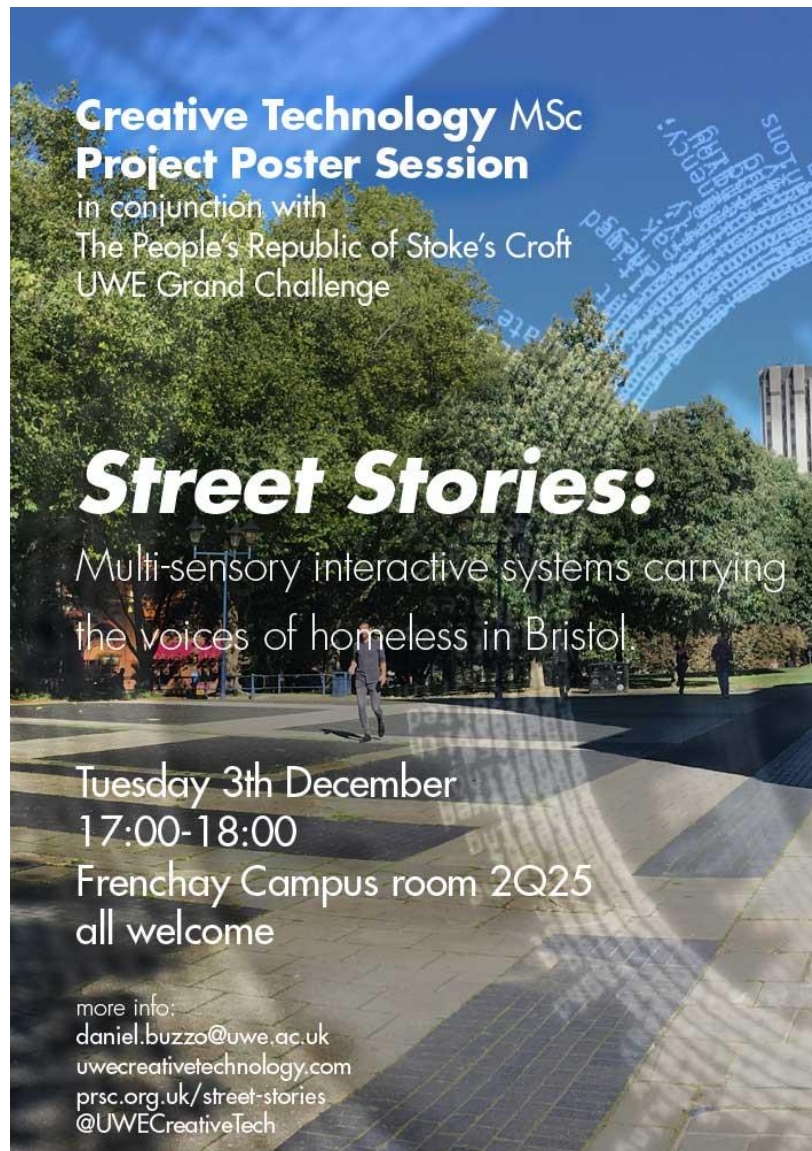


Fig. 5 Poster promoting students exhibition of posters on the theme of homelessness

Faculty of Health and Applied Science

Nursing and Midwifery

KESE Rep: Gerry Lucas

KESE Rep Gerry Lucas led a departmental plastics audit this year as part of UWE's commitment to reducing the use of single-use plastic across the institution. The audit provided a baseline of plastic use including, for example, the fact that 14,000 plastic aprons were used in skills training in the department in 2018-19. The audit process included development of a plastics action plan which includes consideration of ways by which waste recycling in skills labs can be improved and replacement of plastic products with more biodegradable ones, so that skills lab adopt a more eco approach to resource management. Paul Roberts (Head of Environment and Sustainability) has provided support in development and planned implementation of the action plan. Lucy Watkins (Associate Head of Department for Clinical Skills and Simulation) has also been supporting this work.

There have been some ongoing discussions between UWE and Universities Hospital Bristol Trust (UHBT), specifically the waste manager at the Bristol Royal Infirmary (BRI) relating to the transfer of out-of-date equipment from BRI to UWE for use in skills training for students. There are plans to progress the matching of inventory and agreement of transport arrangements and careful consideration is being made as to what can safely and feasibly be recycled. Discussions have also begun to put a similar arrangement in place with North Bristol NHS Trust (NBT).

There has been strong engagement between the lead departmental KESE Rep and lead sustainability student rep for the department this year. Student-led work has included creation of an infographic on the use of gloves and identification of energy wastage through computer labs and lights being left on at Frenchay campus. Follow up action has included amendments to auto-shutdown on PCs. A joint presentation on sustainability in Nursing and Midwifery was made by the staff and student sustainability reps and The SU at UWE to the department executive in June 2020.

Looking ahead to 2020/21, plans are coming together for a health-care based Earth Conference in early 2021. Academic colleagues, Estates and Facilities colleagues and colleagues from The Students' Union at UWE are working together to plan this multidisciplinary event. Gerry Lucas is the lead academic, working with Steve Evans (Allied Health Professions KESE Rep) with support from Vicki Harris (Sustainability Engagement Coordinator).

A new midwifery curriculum is under development and sustainability (including the SDGs specifically) is one of the reference points being used to create the new programme structure and content.

Finally, colleagues in the department and from other departments have been exploring ecoanxiety as something which is affecting both staff and students. Fred Ehresmann led a discussion with MSc Sustainable Development in Practice students on their experiences and more work on this is planned.

Programmes in Allied Health Professions (AHP) were amongst the first to be mapped in Phase 1 of the institutional SDG mapping initiative. Work has begun on refreshing these and KESE Rep Steven Evans as developed a bespoke approach to engaging colleagues in the process to avoid it feeling like an audit. Subsequently, a more organic process has developed that has matured as time has gone on. One outcome is that the SDG mapping has led to changes in the way students learn on programmes within the department.

Lockdown was challenging in that student placements were withdrawn and colleagues were engaged in discussions of how distance-based learning might be required to enable students to complete programmes more remotely. This has led to reflection on the fundamentals of some programmes which may lead to permanent changes. The COVID lockdown experience has instigated changes in thinking about the way placements are conducted which could lead to reductions in the mileage covered by staff and students linked to placements. The possibilities offered by tele-health now seem greater and more feasible than before COVID-induced changes to practice. It is likely to be a significant feature of the student placement experience in 2020-21.

5 programmes went through internal and external re-approval in 2019-20 and sustainable development statements were core to re-approval.

A new Apprenticeship in Occupational Therapy programme has good sustainability implications and begins in September 2020.

SDG mapping work continued with teams from Criminology and Politics and meetings were held with Programme Leaders (PLs) from Social Work, Music Therapy, SCHPN, Environmental Health, Public Health and Psychology. PLs were positive about the task, and it as a good opportunity to reflect upon, and improve, programme content. Curriculum development in sociology and criminology has stemmed directly from SDG mapping work. New Sociology content and modules are proving popular. There is now content in core level 1 module and level 2 and optional sustainability-explicit level 3 module is popular. The same approach is being adopted for the Criminology programme. There is anecdotal evidence that these changes are influencing students' choices beyond graduation with four students from the 2020 graduating year seeking to go on to study sustainability at PG level (up from none previously).

The department made a contribution to UWE's Green Week in October 2019 in the form of a seminar on Environmental Sociology and the Concept of Sustainability. This was open to all staff and students.

An event was held in March 2020 on sustainable transport, enabling students to link in with discussions of opportunities and challenges associated with Bristol's city-wide vision for a carbon neutral transport system.

Supported by grant income from the Community Fund, Sociology students taking the Level 3 module *Sustainable Futures: Liveable Cities, Liveable Lives* (UZSY6W-30-3) enjoyed a field trip to Sims Hill Community Farm. The field trip comprised of a presentation, question and answer session, a tour of the facilities, and practical volunteering. James Miller, Sims Hill Farm Manager, gave an engaging and inspirational account of the project



Figs. 6 and 7: Sociology students visiting Sims Hill Shared Harvest

Students had the opportunity to understand the innovative and increasingly important role played by social enterprise as a medium through which to bring productive and progressive change, and simultaneously generating sustainable and ethical employment opportunities going forward. Specifically, students learned of the challenges facing urban food supply and of the critical role played by urban farming in bringing more sustainable, localised food systems into the future of food planning, policy and practice. Students also enjoyed the opportunity to discuss how such innovative projects may be able to reach marginalised communities and engage those communities in innovative change. The Sims Hill field trip will be an available focus for students' project assessment in Semester 2.

All UG programmes in Applied Sciences have engaged with SDG mapping, with work on PG programmes beginning. Examples of teaching activity linked to the SDGs are the inclusion of Life Cycle Assessment within Level 2 and 3 modules and an explicit lecture on the SDGs to MSc students taking the Current Issues in Biomedical Research module. A Human Nutrition module was revised this year to include Sustainable Food Production. There are plans to include this topic in a new Physical Activity, Nutrition & Health module which starts in Semester 2 of academic year 2020/21.

The Department is beginning to assess and reduce use of plastic in labs. This aligns to UWE's commitment to reducing use of single use plastics. For example in lab activities in forensic science Sarah Bateman and colleagues have been exploring ways by which glove use could be reduced whilst still adhering to professional standards. Lynne Lawrence has also been involved in discussions on sustainability in UWE's lab environments and has been successful in recruiting a student from the MRes Applied Science to a research project on "Exploring Sustainability in the Laboratory Setting".

Staff in Applied Sciences have supported many SDG and ESD related projects and initiatives this year. For example:

- Sam Bonnett is an external examiner for Centre for Alternative Technology with Liverpool John Moores University and has liaised with them on the Zero Carbon Britain reports.
- Emma Weitkamp has been involved with the ENDOWS (Engaging diverse stakeholders and publics with outputs from the UK Drought and Water Scarcity programme) and DRY (Drought risk and you) projects. Within this project, a number of resources have been created which are being used for outreach activity, including films and policy briefs. See: [Aboutdrought.info](http://aboutdrought.info) and <http://dryproject.co.uk/>
- Ruth Larbey and other staff are involved with Science for Environment Policy which produces research news and briefs for policy makers. These cover most of the SDGs at various times and also include film as well as written content. https://ec.europa.eu/environment/integration/research/newsalert/index_en.htm
- Ros Rouse and John Hancock were on the development team for the UWE policy on the use of leather, feathers and fur, which was chaired by Assistant Vice Chancellor – Environment and Sustainability Jim Longhurst and conducted under with UWE's Animal Welfare and Ethics Sub-Committee. Ros has also been looking at the sustainable sourcing of lab chemicals.
- Shona Nelson has tried to capture the cost of students not turning up to a set of Level 1 practical classes on Infection and Disease as a contribution to the national [Global Goals Teach-in](#) in February 2020. The microbiology technical team collected up all the unused materials they had bought in and/or prepared and then did a rough calculation on their cost (agar, blood, plasticware). Some estimated costs in terms of CO₂, kWh of energy, and water expended in the production of the plastic petri dishes were added in, and this information was presented to students in lectures the following week. Although the calculations were rough, it helped to alert students to impacts of their behaviour in this one instances and 'seemed to cause a bit of a stir'. Impact on non-attendance has not been monitored though.

The impact of COVID-19 lockdown on the future direction of teaching, particularly on international field trips, has already been occupying staff in Applied Sciences department.

Part 5 Key ESD Actions for 2020/21

UWE's education for sustainable development work in 2020/21 will be informed primarily by Strategy 2030, the Climate Action and Sustainability Strategy, criteria within the Responsible Futures accreditation scheme, and UNESCO work on ESD.

Strategy 2030 states that UWE will:

- Strive to fulfil our role in the achievement of the United Nations' Sustainable Development Goals
- Offer all students the opportunity for engaging across the UWE Bristol community to solve current and future global challenges
- Work with our students to explicitly address climate change and environmental challenges through our teaching, learning and curriculum

Objectives guiding this ESD Action Plan:

- To align our ESD work to Strategy 2030 commitments
- To support all strategic objectives of the Climate Action and Sustainability Strategy: To practice, to promote understanding of and to influence sustainability
- To retain Responsible Futures accreditation
- To strive for continuous improvement in line with our ISO14001 certification
- To embed best practice into our education for sustainable development planning, taking guidance from UNESCO, Advance HE, the QAA and SOS-UK in particular

Operating Principles for our ESD actions and community:

- To frame all ESD work by the United Nations' Sustainable Development Goals;
- To work at a pace and level commensurate with the urgency of the climate and ecological emergency which UWE's recognises the work is facing;
- To utilise UWE's research community, activity and outputs relating to the SDGs, sustainability, climate change, environmental challenges and biodiversity to enhance teaching and learning across all disciplines;
- To work in partnership with key internal and external stakeholders to enhance our ESD work and to run training, events and initiatives, including:
 - Departmental staff KESE (Knowledge Exchange for Sustainability Education) reps;
 - Academic Practice Directorate and others with responsibility for Teaching and Learning leadership (particularly to ensure alignment between ESD and our Learning and Teaching Strategy, the Enhancement Framework Design Principles, UWE's Quality Enhancement processes and the PG Certificate in Academic Professional Practice);
 - Heads of Department, Faculty Executive Teams, Programme and Module Leaders and UWE professional services;
 - The Students' Union at UWE (including Academic Student Societies, lead departmental student sustainability reps, SU officers, the Sustainability Committee and the ESD officer);
 - Bristol Green Capital Partnership, the Bristol SDG Alliance, Bristol City and South Gloucestershire County Councils, PRME UK and Ireland Chapter and other local, regional and national organisations and partners as relevant to progressing opportunities for students to develop knowledge and skills for sustainable development and sustainable professional practice.
- To continue to raise the national profile of and capacity for ESD and to promote renewed policy commitments to ESD in HE through engagement with key national bodies and agencies including Advance HE, the QAA, EAUC, SOS-UK and professional bodies.

The following actions have been identified as priorities for the academic year 2020/2021

| Action | Success measure(s) |
|---|---|
| 1. Publish phase 1 (2015-2020) of the mapping of academic programmes against the Sustainable Development Goals and initiation of Phase 2, including the ongoing mapping of other areas of university activity. | Phase 1 publication completed and disseminated to staff and students. |
| 2. Undertake surveys of staff and students, including via promotion of national initiatives such as the SuLiTest and the SOS-UK Skills Survey. | Surveys undertaken and results communicated to staff and students |
| 3. Continue to take action against all Responsible Futures criteria, including accumulation of evidence of activity, monitoring of impact and dissemination of results of monitoring in preparation for our reaccreditation in 2020-21 | Responsible Futures reaccreditation achieved <u>and</u> evidence submitted against all criteria. |
| 4. Ensure strong ESD engagement across all UWE academic departments, with plans for continuous improvement. | Annual ESD reporting includes multiple examples of action from all departments. |
| 5. Prepare and submit our biannual Sharing Information and Practice Report (SIP) as part of our commitments to the Principles of Responsible Management Education (PRME). | Report submitted |
| 6. Support achievement of sustainability commitments made in Strategy 2030 by creating draft of guidance for academic staff on how their teaching and learning activities and curriculum (module and programme level) can be designed to support UWE's commitments to: <ul style="list-style-type: none"> • be carbon-neutral organisation with net zero emissions of greenhouse gases by 2030 • reduce water and energy use, cut waste generation including food waste, and support biodiversity • eliminate all but essential single-use plastic and meet the 2025 targets for recycling and reuse • achieve year-on-year improvement in travel sustainability for staff, students and visitors • work with our students to explicitly address climate change and environmental challenges | Guides created |
| 7. Begin to identify structural changes which may be necessary to deliver best practice education for sustainable development/the SDGs/UWE Strategy 2030 commitments | Draft document created which reflects on barriers to best practice ESD within UWE. |

Approval status

The UWE Sustainability Board approved this report and the ongoing work in October 2020.

