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PRME WORKING GROUP ON CLIMATE CHANGE AND ENVIRONMENT

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21.1 Introduction

Climate change is seen as one of the biggest threats facing the world. The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) highlighted in its publication, *Global Warming of 1.5 degrees: Headline statements from the summary for policymakers* (IPCC, 2019, p.2) that ‘Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence)’. These transitions are required in every aspect of life and every aspect of business organisation from managing the carbon emissions, divesting from fossil fuels, changing our consumption patterns and teaching and practising climate change mitigation and adaptation tools.

In this context, the **PRME Working Group on Climate Change and Environment** enables business schools and universities to achieve this transition by supporting them in their efforts to manage and reduce their own carbon emissions, provide their staff and students as future decision

makers with tools to mitigate climate change and encourage research, partners and other stakeholders to develop and embed the best climate change mitigation tools.

The PRME Working Group on Climate Change and Environment has three main objectives:

1. **Policy/Strategies:** This section provides business schools and universities with policy templates on how climate change and other environmental issues can be integrated into operational policies and strategies, but also into learning and teaching policies/strategies.
2. **Teaching:** Sharing of good ideas, best practice and innovative training methods on how to integrate climate change and other sustainability issues into management education and training within universities and beyond. A special focus is on how to encourage students to work towards sustainable solutions.
3. **Cooperation:** Explores the dialogue between business schools and private/public sector organisations especially through Global Compact in order to work together on solutions to climate change and other environmental challenges. The vision is that companies put up ‘wicked’ problems and the best brains across the world will contribute to solving them as part of climate change mitigation.

While the focus of the PRME Working Group on Climate Change and Environment is on Sustainable Development Goal (SDG) 13: Climate Action, all other SDGs will be influenced by the decision taken with regards to climate change as the SDGs are interlinked. Islam and Winkel (2017, p.1) pointed out that we already have – within a country and between countries – ‘a vicious cycle, whereby initial inequality causes the disadvantaged groups to suffer *disproportionately* from the adverse effects of climate change, resulting in greater *subsequent* inequality’. Therefore, climate solutions need to be assessed on the impact the different suggested solutions would have immediately on reducing social inequality and increasing other multiple benefits (FLOWER framework, 2020) as well as the impact these solutions will have in the future on addressing food poverty and all the other SDGs.

Odell et al. (2020) highlighted the need for transformative education which reflects the urgency of, and acts towards a planetary response to the climate and ecological crisis. There is some indication that business schools engaged

in Education for Sustainable Development (ESD) tend to focus on social inequalities and engage with other values rather than explicitly addressing SDG 13 'Climate Action'. Recently, some of the Working Group members (Molthan-Hill et al., 2020a) published a chapter in *The SAGE handbook of responsible management learning and education* highlighting the need for business schools to engage more with climate change education. However, Bushell et al. (2017, p.40) pointed out that climate change is often seen as a 'super-wicked problem' and as difficult to teach due to its complexity and the following key challenges:

1. Climate change needs action now but the consequences cannot be seen easily nor understood and measured.
2. Climate is a public good and affects every person in the world, but the vested self-interests of certain actors hinder the debate.
3. Action (Decarbonisation) needs to happen on an unprecedented timescale to bring transformative change.
4. Cognitive dissonance is common with individual believing that climate mitigation needs to happen, e.g. reducing flights, but not taking personal action to do so.
5. In line with cognitive dissonance many individuals feel that they do not need to act but someone else.
6. Integrating climate change mitigation is not seen as the social norm and it is not mainstreamed.

The **PRME Working Group on Climate Change and Environment** is working towards overcoming these major challenges for example through offering a **Carbon Literacy Training for Educators, Communities, Organizations and Students (CLT-ECOS)** (more information later in this chapter) and as shown in our vision at the end of this chapter welcoming the opportunity to work with many stakeholders within and beyond the PRME community.

21.2 History of the PRME Working Group on Climate Change and Environment

This PRME Working Group on Climate Change and Environment was configured at the Global Forum 2015 in New York originally led by João Dias da Silva of Porto Business School, Portugal, and Professor Petra Molthan-Hill of Nottingham Business School, Nottingham Trent University, UK as

co-chairs. The group came together again at the PRME Global Forum in New York in the summer of 2017 with Dr Alex Hope of Newcastle Business, Northumbria University, UK school joining as an additional Chair. Dias da Silva stepped away from the group leaving Professor Molthan-Hill and Dr Hope as Co-Chairs from then until the present day. Dr Rachel Welton of Nottingham Trent University took on the role of working group Vice Chair in 2019. The focus of the working group was set primarily on SDG 13: Climate Action but all other SDGs are also addressed as they are clearly interlinked, one example being SDG 3 'Good health and Wellbeing', which is in most cases linked to the best high impact climate solutions by reducing heat stress, avoiding obesity and other health issues by cycling to work, for example. The aim of the Working Group, then as now, goes beyond that of assisting business schools and management academics in prioritising sustainability, climate change education and carbon management, but also aims to act as a resource for all organisations who wish to embed climate change mitigation tools and education into their teaching and training.

Early on, the Working Group has striven to provide examples of best practice, innovative teaching ideas and suitable projects for integrating climate (change) and environment-focussed topics into management education. A learning and teaching repository was created in 2016 allowing readers to browse the repository by subject/discipline area such as accounting and marketing, and to find resources related to each of the relevant Sustainable Development Goals. The repository was aiming to provide a broad selection including academic articles, games and community projects that allow for integration into the curriculum. The first material had been put together by the Green Academy Team from the Nottingham Trent University in the UK; however, contributions and additional material from people working in the field had been added. Some of this material was captured in the textbook *The Business Student's Guide to Sustainable Management* (Molthan-Hill, 2017) offering seminars and other teaching material on how to integrate the Sustainable Development Goals into accounting, marketing, HR and other subjects in management/business studies but also ideas on how to teach system thinking, corporate peace-making and the crowd-sourcing of sustainable solutions, which would be of interest to lecturers/students from other disciplines. The second edition is part of the PRME book series and published by Routledge. In the long term, the Working Group was hoping that Academics would take ownership of one of the topics. For example, an interested party

could summarise different teaching material for accounting, and therefore become the Academic Coordinator for Accounting in the repository, with their name appearing as the contact person. The repository was used in this way until unfortunately the link to the repository was broken and the repository was lost. The Working Group decided to create a **new website** with a similar function (unprmeclimate.org, 2020), to share good teaching practice and offer training material, which can be used by the participants of the Carbon Literacy Training.

The group progressed at a slow rate over 2017–2018 adding ten new members before taking the opportunity to showcase the work at a number of international academic conferences such as the 5th Responsible Management Education Research Conference in Cologne, Germany (Hope, 2018a; Welton et al., 2018), the 8th International Conference on Sustainability and Responsibility (Molthan-Hill et al., 2018), the 5th UN PRME Regional Chapter UK and Ireland Conference, London, United Kingdom (Hope, 2018b), the 6th Responsible Management Education Research Conference at Jönköping International Business School, Sweden in 2019 and the UNPRME Global Forum which took place virtually during June 2020. The group was also promoted at the UN PRME Champions meetings throughout 2018–2020 in which both Nottingham Business School and Newcastle Business Schools took part. As a result, of this promotion, as well activities such as regular Carbon Literacy training, membership of the working group stands at 270 individuals from over 100 organizations across 33 countries (as of November 2021). As the working group has grown in size and the number of activities being offered, there was a need to develop a website to further promote the working group (unprmeclimate.org, 2020). During September 2021, a new governance structure was created with a steering group overseeing key activities and geographical leads.

As mentioned before the PRME Working Group on Climate Change and Environment has three main objectives and has created **three subgroups** to achieve its objectives:

1. Carbon Management in universities and business schools
2. Dissemination of Carbon Literacy Training and other teaching material
3. Developing climate solutions in partnership with companies and students

21.3 Carbon management in Universities and Business Schools (objective 1 and related subgroup)

Climate change and the rise of carbon emissions are emerging as the greatest challenges facing society at present. The major cause of the global problem and the key to its solution are carbon intensive organisations that emit carbon emissions due to the nature of their core business operations (Cadez et al., 2019). Business organisations of all types including universities contribute significantly to global carbon emissions (Robinson et al., 2018). Previous research has pursued to understand the ways in which business organisations are managing carbon emissions through appropriate actions including good practice carbon management strategies. However, further work is required that provides a strategic perspective to understand the role of business for the creation of a low carbon future (Busch and Schwarzkopf, 2013; Wade and Griffiths, 2020).

Carbon management has received significant attention in universities over the last few years in response to various drivers such as climate change, regulatory pressures, financial and reputational matters. There is now increasing pressure from governments and stakeholders to reduce carbon emissions from universities' business activities such as buildings' operation, travel and transport as well as procurement and supply chain. It is recognised that prioritising carbon emissions reductions not only harvests environmental benefits for organisations but promotes cost savings and enhances competitive advantage in the market (Dangelico and Pujari, 2010). University sector has significant social, environmental and economic impacts alongside a key leadership role in society and must act promptly in the era of climate emergency. Universities and business schools need to practice what they preach through their teaching and learning activities. Universities are not exempted from the challenging carbon reduction targets set nationally and globally for a sustainable future (Mazhar et al., 2017). Bryan et al. (2011) suggest that the most cost-effective opportunities to achieve carbon reduction targets exist in the higher education sector which also includes business schools. Therefore, proactive actions at scale are required by public sector organisations including universities to implement the principles of carbon management to mitigate climate change.

Business schools are part of universities and they must follow and contribute towards university's organisational policies and strategies related to

carbon management. University wide carbon management plans (CMPs) may assist business schools as Mazhar et al. (2019) state that CMPs are a valuable tool to support universities in the implementation of carbon management policies and strategies. There are a lot of carbon management resources in the context of universities, but there is limited advice and guidance when it comes to carbon management (policies and strategies) specific to business schools. In business schools, there is focus on tackling climate change and reducing carbon emissions through responsible management education (Gill, 2020; Molthan-Hill et al., 2020b). Business schools seem to have focused on carbon management strategy from educational and curriculum perspective and research has not addressed carbon policy and strategy from operational aspects as the university as a whole organisation takes a lead to develop carbon management policy and strategy. This operational area is a key domain where wider university strategy and initiatives have significant impacts in the context of business schools (Brammer et al., 2012).

Evidence suggests that business schools are addressing wider sustainability in parts of activities such as teaching, research and operations. In most business schools, this is addressed through key terms such as sustainability, sustainable development, sustainable development goals (SDGs), corporate responsibility, corporate social responsibility (CSR), business ethics or citizenship. However, business schools need to prioritise sustainability in general and carbon management in particular in their operations due to their jurisdiction. Therefore, PRME Climate Change and Environment Working Group subgroup provides strategic support and resources to bridge this gap in business schools and universities from holistic perspective. This can potentially help address the resource and knowledge gap.

21.3.1 Policies and strategies subgroup

The PRME Working Group on Climate Change and Environment strives to provide examples of best practice and innovative project ideas for universities and business schools for learning. Policies and Strategies subgroup offers resources as templates on how climate change, carbon management and other environmental issues can be addressed in relevant policies and strategies within the university. There are quite a few resources that can be found across the internet; however this section provides an easy-to-access

toolbox, which can be used by PRME members as they align not only with the PRME Principles, but the organisational practices in business schools. The resources are organised according to the policy and strategy areas. The Working Group encourages colleagues to send policy and strategy templates from their countries to be shared on the PRME working group website with other colleagues. The templates cover the following:

1. Carbon Policy for a Business School/University
2. Environmental Policy for a Business School/University
3. Environmental strategy for a Business School/University
4. Learning and teaching strategy including climate change education and other SDGs

Policies and Strategies subgroup has a Coordinator, Dr Muhammad Mazhar from Nottingham Business School at Nottingham Trent University, UK, aiming to offer information on how to specifically join this subgroup and/or whether people would be interested in webinars or events that centre around a topic. The Coordinator oversees the resources within the repository.

This section provides universities and business schools with policy and strategy guidance on how climate change and other environmental issues can be integrated into operational policies/strategies, and learning and teaching policies/strategies (see Table 1 for details and universities/organisations showcased). These resources are publicly available through the official website of universities and other organisations. The future plan of the subgroup is to organise online sessions, regional events and webinars to develop competency of academics in business schools and universities. The main aim is to share knowledge and best practices for replication globally and learning not only within the working group but beyond. The initial resources have been put together by the working group team, however, contributions and additional material from people across the world in the field are encouraged to have global perspective. The subgroup has an ambition to involve practitioners going forward. Furthermore, there is an ambition to bring resources and good examples from institutions across the world. One of the lessons learnt is that resources need to be updated on regular basis as many of the organisational documents get outdated, for example, policy and strategy documents of universities/business schools.

Table 21.1 Policies and Strategies Resources: PRME Working Group on Climate Change and Environment Global Repository (created in 2017 by Muhammad Mazhar)

No	Template Area	Policies and Strategies	Good Practice Examples
1	Carbon Management Policy and Plan for a University/ Business School	I. Carbon/energy management policy ii. Carbon management plan	Energy and carbon management Policy – Lancaster University, UK Carbon management policy – University of Wales Trinity Saint David, UK Energy policy – De Montfort University, UK Carbon Reduction Target and Strategy for Higher Education in England: Higher Education Funding Council (HEFCE), England, UK Carbon management plan – University of Birmingham, Coventry University, Manchester Metropolitan University, London Metropolitan University, UK Carbon Management Good Practice Guide – Brite Green Sustainability Strategy Consultancy, UK
2	Environmental Policy for a University/ Business School	I. General Environmental Policy II. Waste management policy III. Sustainable procurement policy IV. Sustainable travel plan	Environmental Policy – University of Bristol, UK Environmental Policy – Oxford Brookes University, UK Environmental policy – Loughborough University, UK Waste management policy – Open University, UK Recycling and waste policy – University of Edinburgh, UK Sustainable Procurement Policy – University of Birmingham, UK Sustainable Procurement Policy – Nottingham Trent University, UK Sustainable travel plan – Coventry University, UK
3	Environmental Strategy for a University/ Business School		Environment Strategy – University of Winchester, UK Sustainability Strategy – University of Leeds, UK Next Generation Sustainability Strategy and Structure Whole-Institution Approaches to Sustainability in Universities and Colleges – Environmental Association of Universities and Colleges (EAUC), UK Climate Strategy – University of Edinburgh, UK Be Sustainable Guide – University of Edinburgh, UK

21.4 Dissemination of carbon literacy training and other teaching material (objective 2 and related subgroup)

The PRME Working Group on Climate Change and Environment has been instrumental in rolling out the carbon literacy training project globally. Members of the working group were involved in a research project exploring the implementation and impacts of Carbon Literacy Training on the Heads of Departments in ‘Coronation Street’ – a popular soap in the UK (Chapple et al., 2019). The exposure to the successful, vibrant and dynamic communities involved in embedding CLT within the TV sector prompted the development of Carbon Literacy Training for Business Schools (CLT4BS).

The basic premise was to educate business school academics with an understanding of climate change science, climate justice, and high impact mitigation solutions to enable them to integrate climate change mitigation education into their teaching. Once they had this basic knowledge, they would utilise it within their teaching for example, academics in accounting would roll it out to accounting students. There was also the recognition that different disciplines within the broader business subject areas would want to focus upon different aspects, for example carbon accounting/operations/marketing, teaching material to be used in their courses/programmes. In 2018, CLT4BS was nominated as a PRME Champions’ Project; in 2020 we fed back key progress at the Virtual PRME Global Forum and in 2020/2021 the working group initiated CLT-ECOS training as part of COP 26 reaching over 5000 participants.

Carbon literacy training has been developed by NBS in collaboration with the PRME Champions, oikos International and PRME Working Group on Climate Change. We were fortunate to work closely with Dan Jackson, former senior production manager at ‘Coronation Street’ to design the teaching material. Cooler Projects CIC, a social enterprise based in Manchester, is the founding partner of the Carbon Literacy Project (CLP) and aims to make carbon literacy learning accessible to everyone. NBS and the PRME working group work together with Cooler Projects to provide CLT certification for participants who complete the full training course and assessment. While designing the face-to-face training, we worked with Manchester Metropolitan University, who also run Carbon Literacy Training aimed mainly at students, to exchange best practice. We also worked with students from oikos International, an

international student organisation aiming to integrate responsible management education into business schools through co-creation. The oikos students agreed to work with us to pilot part of the training and then give further recommendations on how to design the training, this was an essential part of the development. We then tested the material with the help of other PRME Champions schools as we wanted to ensure it was relevant in different countries, for example, in South Africa, Pakistan and the United States. In autumn 2019, we started to roll out the completed CLT4BS within our business school, but also by training academics from other business schools as a 'train the trainer' model. In parallel, NTU's Green Academy led by Professor Petra Molthan-Hill designed a version to be used with academics and students from all disciplines, and also operational staff in a university.

After running eight face-to face training sessions in 2019/2020 and numerous planned for 2020, Covid-19 happened, and we had to take the CLT4BS online. We did this while already training business schools and universities, for example via a PRME event hosted by Birmingham Business School and another PRME event hosted by the University of Winchester. Instead of the one day planned, we divided the day into four two-hour online sessions, weeks apart so that we could develop the new online material for the next session in between. The full virtual version of the CLT4BS has been ready since June 2020 and we ran our first worldwide PRME CLT4BS training in July 2020; and several more since then.

21.4.1 Fundamentals of the carbon literacy training

The CLT programme provides participants with a new level of understanding regarding climate change and high impact climate solutions, teaching participants to make feasible changes from an informed position. Upon successful completion of a written assignment after the training sessions, participants are granted the Carbon Literacy Certificate assessed by Cooler Projects. NBS has been leading in terms of delivering the CLT with the ambition to expand the collaborative network so that other business schools/universities deliver their own trainings, and the training is scaled up this way across all continents to have impact. CLT is an ongoing project aiming to provide an awareness of carbon costs and impacts of everyday activities, and the ability and motivation to reduce emissions on an

individual, community and organisational level. CLT is cost efficient and requires only staff (trainer and facilitator) time cost and logistics cost, as well as a modest certification fee. By taking part in the CLT, attendees gain an understanding of:

- Positive Futures Scenarios and Climate Justice
- Climate Science and the matching high impact climate solutions
- Carbon calculation and individual action
- Climate Change Mitigation: a systems approach
- Your own Action Plan

It is planned that we will develop a more tailored version, for example, for specific industries such as the fashion industry and/or specific disciplines such as Carbon Accounting and countries. For example, CLT-ECOS is currently translated into Russian. In 2020, we have included an introduction to En-ROADS developed by Climate Interactive in collaboration with MIT Sloan and Ventana Systems (Jones et al., 2019).

21.5 Collaboration opportunities – business schools/ universities and the public/private sector (objective 3 and related subgroup)

The Working Group aims to encourage partnerships between business schools/universities and the private or public sector. Some examples of engagement opportunities are listed below. Of course, there are mere suggestions, and partnerships of this nature can in fact take on many forms:

- Companies to offer an essay competition around a ‘wicked’ problem for master’s students at PRME signatories, with an incentive provided by the organisation for students who produce the best work.
- Organisations could work with regionally appropriate signatories to set up projects, where students develop a plan that would aid the host organisation increase their carbon efficiency.
- Organisations could provide a business school/university with a relevant challenge that they are facing (for example, ‘How can we change the behaviour of our employees/customers to incorporate ...’). The students would be assessed by their tutors, with the best solutions to be presented to the organisation.

Currently the unprmeclimate.org website¹ offers one example for such partnerships and resulted in two publications (Molthan-Hill et al., 2017, 2020b), one of them in the PRME book *Redefining success: integrating the UN Global Compact into management education*. As stated in the abstract the project achieved the following:

The total recommended greenhouse gas emissions savings from two years of the project were 507, 435 kg CO_{2e}, averaging over 10 tonnes per organisation and 2 tonnes per student. If this project was extended over 5 years and taken on by an additional educator, the potential reductions increase to 2,562,418 kg CO_{2e}. ... This initiative has proven very successful in delivering SDG 7, SDG 13 and SDG17; if taken up by more business schools the impacts on the targets of these SDGs and the climate change agreements could be significant.

21.6 Future activities

The UNPRME Climate Change working group formalized the governance of the group during 2021 through the **development of steering committee** comprised of its members and through the creation of defined positions for members to take on specific activities such as oversight of the website and social media, training and development plans, membership and our library of resources. The latter will be a key focus in the future as the group aims to develop a one-stop repository for information, case studies, teaching materials, academic publications and other resources that educators and business practitioners can access to assist them in communicating climate change issues, and developing climate change mitigation strategies.

A key ongoing activity is the delivery of the **carbon literacy training** which since its development as a virtual course has enabled the group to deliver sessions globally and with many more participants. As the course develops more colleagues able to deliver sessions themselves, it is hoped that the group will be able to reach more people in the coming years. To facilitate this, we are constructing a trainer resource repository on our website to support their needs with material and instructions for running both online and face to face sessions (Molthan-Hill et al., 2020a; Molthan-Hill et al., 2021).

As we progress, the group aims to collate and curate discipline-specific training material contributions from those with a corporate background and challenges set by private and public organisations. This will better enable us to contextualise our training and development activities for both educators and students towards the changing needs of organisations dealing

with climate related issues. We also aim to be able to offer our training to corporate clients in the future to enable them to become carbon literate. Finally, the working group aims to step up its work with other PRME chapters and working groups to make climate mitigation and the carbon literacy training a priority so that we get and stay on target to achieve all the SDGs.

As people learn that climate change is anthropogenic, they realize they hold the key to mitigate it by embedding the right high-impact climate solutions and institutional policies addressing all SDGs and creating economic, social and environmental benefits. Addressing this gap in the provision of climate change mitigation education, our Carbon Literacy Training for Educators, Communities, Organizations and Students (CLT-ECOS) – a virtual Train-the-Trainer developed and upscaled by Nottingham Business School, Nottingham Trent University, UK, in collaboration with the UN Global Compact PRME Working Group on Climate Change – seeks to empower everyone to embed high-impact climate solutions in their personal, professional and community life.

Note

- 1 Available at: <https://www.unprmeclimate.org/greenhouse-gas-management-project>

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