



EPT AGENDA 2023

The time is now!

#EPTAgenda2023

About this paper:

The Environmental Physiotherapy Agenda 2023 was written by:

Dr Filip Maric (Founder and Executive Chair of the Environmental Physiotherapy Association, EPA)

In close collaboration with EPA Executive Committee Members:

Prof Dr David Nicholls (AUT University Auckland, NZ)

Assoc Prof Dr Karien Mostert (University of Pretoria, SA)

Dr Jane Culpan (QMU University Edinburgh, Scotland, UK)

Dr Olivia Stone (University of Otago, Christchurch, NZ)

Joost van Wijchen (MSc, HAN University of Applied Sciences, Nijmegen, NL)

Marion Kennedy (PhD cand., University of Otago, Dunedin, NZ)

Isobel Long (PT Student, Cardiff University, Wales, UK)

Thies Bundtzen (PT Student, Saxion University of Applied Sciences, Enschede, NL)

In addition to those listed above, the EPA Executive Committee would like to acknowledge and thank the following individuals for their support, contributions, time, review, and/or advice:

Esther-Mary D'Arcy, Ireland

Dr Cecilia Winberg, Vice-President of the Swedish Association of Physiotherapists (Fysioterapeuterna)

Prof Dr. Anne Marit Mengshoel, Institute of Health and Society, University of Oslo, NO

Prof Dr Julia Chevan, Chair of the Department of Physical Therapy at Springfield College, Massachusetts, USA

Suggested citation:

Maric, F., Nicholls, D., Mostert, K., Culpan, J., Stone, O., van Wijchen, J., Kennedy, M., Long, I., Bundtzen, T. (2020). The Environmental Physiotherapy Agenda 2023. Oslo: Environmental Physiotherapy Association (EPA). ISBN: 978-82-303-4491-0

The Environmental Physiotherapy Association (EPA) is the first international collaborative network of academics, clinicians, practitioners, researchers, and students interested in exploring and advancing the field of environmental physiotherapy. The EPA is grounded on the recognition that physiotherapy always takes place on a planetary scale, and must therefore be thought of and practised ecologically. The association is founded on the belief that the physical therapies can make a much more valuable and significant contribution to human and planetary health than the historically and socially self-imposed limits on the profession have previously allowed. The Association has been made possible by a growing sense that a critical mass of physiotherapists are eager to advance contemporary physiotherapy theory and practice towards a more positive, inclusive, environmental future for the profession.

The Environmental Physiotherapy Agenda 2023 is a project initiated by the Executive Committee and members of the Environmental Physiotherapy Association (EPA) on 02 March 2020. The Agenda's aspiration is to maximise the physiotherapy profession's contribution to human and overall planetary health and flourishing.

First published by
Environmental Physiotherapy Association (EPA) 2020, Oslo Norway,
ISBN: 978-82-303-4491-0

www.environmentalphysio.com

Table of contents

Environmental Physiotherapy Agenda 2023	4
Examples for curriculum integration	9
Example 1: Physical activity and active transport	
Example 2: Health, Social determinants and the SDGs	
More on the rationale underpinning the EPTAgenda 2023	11
Challenges and reservations	17
Crowded curricula	
Legal restraints	
The relative shortage of content	
De/colonialising curricula	
Explanation to lists of signatories	24
Individual Signatories	
Supporting Organisations	
Participating physiotherapy education institutions	
Proposal for ongoing collaboration	27
Part 1: Refining the EPTAgenda 2023	
Part 2: Development of an online, open-access environmental physiotherapy education inspiration-base	
Part 3: Summary report	
Final words	29
Individual signatories	30
Supporting professional organisations	31
Participating physiotherapy education institutions	32
Resources and references	33
Sustainable healthcare and planetary health centres and networks	
Sustainable Healthcare training tools	
Inspiration from indigenous knowledges, philosophy, social sciences and humanities	
Articles on sustainable healthcare education	
SDG teaching tools and resources	
Other references cited in the EPT Agenda 2023	

Environmental Physiotherapy Agenda 2023

The time is now!

The Environmental Physiotherapy Agenda 2023 (EPT Agenda 2023) is a global call to action built around a single aim relevant to physical therapy or physiotherapy¹ education respectively. This aim of the agenda is:

*To ensure that every student beginning **entry-level physiotherapy education** from 2020 onwards will have education regarding the relationship between the environment, human health and functioning, and how this pertains to physiotherapy as part of their programme.*

Current international agendas like the UN Sustainable Development Goals, the EU Green Deal, and extensive research across healthcare are highlighting the inextricable relationship between the environment, human health and functioning, as well as the urgent need for decisive, corresponding action across all sectors of society (EC, 2019; Haines & Scheelbeek, 2020; Myers, 2017; Roe, 2019; UN, 2015). Firmly aligning with these calls to action and the extensive evidence in their support, the purpose of the EPT Agenda 2023 is to elicit a strong commitment to immediate action across the physiotherapy profession in light of the largest health threat that humanity has faced to date (Watts et al., 2019).

We believe that integrating environmental and sustainability perspectives into entry-level physiotherapy education is the single most effective action we can take as a profession at this moment to ensure a maximum contribution to planetary health, both now and in the future. Within future uncertainty, we discover hope driving to action, support advocacy and applaud all we share this commitment. Resonating with the recent EU Green Deal, we believe that the physiotherapy profession is exceptionally well placed to turn this ‘urgent challenge into a unique opportunity’ and provide considerable help in the global efforts to ‘protect the health and wellbeing of citizens from environment-related risks and impacts’ (EC, 2019; Haines & Scheelbeek, 2020).

¹ We use the terms ‘physiotherapy’ and ‘physiotherapy education’ throughout the remainder of the EPT Agenda 2023. Following global conventions and the recent name change of the World Confederation for Physical Therapy (WCPT) to ‘World Physiotherapy’, we understand and use these terms in reference to both physiotherapy and physical therapy. See also: WCPT (2020) Name change for global physical therapy body. Retrieved from <https://www.wcpt.org/news/name-change-for-global-physical-therapy-body>

In recognition of the fact that integration of new content into physiotherapy curricula requires some thought and time, and in light of the average length of entry-level programmes around the world lying around four years, the EPT Agenda 2023 is set out as a four-year plan. This means that physiotherapy education institutions would have enough time to reach all students that have begun their training in 2020.

It is not our intention to prescribe the exact content or methods that should be integrated and implemented by participating physiotherapy education institutions to achieve the aim of the EPT Agenda 2023. Building on the quickly growing literature across fields including sustainable healthcare, sustainable healthcare education, global health, planetary health and others, we can however, provide some tentative directions throughout this Agenda and hope that this will be of value for further discussion, development and implementation.

Concerning content, we assume that achieving the aim of the EPT Agenda 2023 will mean that participating institutions around the world would integrate at least some amount of education on any of thematic elements in the following list into entry-level physiotherapy education between the years of 2020-2023. All of these concern slightly different, but nonetheless overlapping aspects of the relationship between human health, functioning and our planetary environment:

- The positive contributions of the environment to human health and flourishing;
- Basic understandings of modern-day environmental degradation and climate change;
- The negative impacts of climate change and environmental degradation on human health and functioning in relation to physiotherapy globally, and as they apply to the national, regional and local context of each respective physiotherapy education institution;
- A basic understanding of the philosophical, historical, cultural, social, political and economic conditions leading and relating to our current health and environmental crises;
- Some critical engagement with fundamental concepts like nature, environment, sustainability, development, social and environmental justice and the intersection and interaction of these and other related terms and issues;

- A basic overview and understanding of current policies and strategies for mitigation and adaptation (including the UN Sustainable Development Goals, the WHO Global Strategy on Health, Environment and Climate Change, the EU Green Deal and others) to climate change and environmental degradation, as well as some of their conceptual and practical challenges;
- A basic overview of relevant work across other healthcare professions (e.g. medicine, nursing, occupational therapy and psychology) engaging with environmental issues and other related interdisciplinary developments across sustainable healthcare, planetary health, One Health and related fields;
- A basic understanding of the environmental history of physiotherapy, i.e. its historical relation to ‘nature’ via the therapeutic use of natural elements and low-carbon modalities like touch, communication and movement, as well as its past and current use of natural resources;
- Basic insights into how the environment is implicitly and explicitly addressed and engaged with, in aspects of physiotherapy (including also speciality fields like occupational health and ergonomics, animal physiotherapy, and others);
- A basic understanding of how existing environmental challenges, policies and strategies relate to, can be implemented, and further developed in physiotherapy, and how novel approaches might be envisioned to address challenges and opportunities unique to physiotherapy.

Concerning means and methods, the literature across education in general, but also physiotherapy education and sustainable healthcare education more specifically suggest four general approaches which are likely to be relevant to entry-level physiotherapy education:

- Interweaving environmental physiotherapy content with existing curriculum content;
- The development of standalone environmental physiotherapy workshops, seminars, lectures, and similar;
- A combination of face-to-face and digital education in environmental physiotherapy;
- A practical, learning-by-doing approach where environmental physiotherapy is interwoven in clinical education and student practice.

Existing research thus far suggests that interweaving sustainable healthcare education with existing curriculum content is a particularly feasible and beneficial approach (Walpole, Barna, Richardson & Rother, 2019; Hackett et al., 2020). This is both because healthcare education curricula are already very dense and this poses considerable challenges to change or addition, and because one of the core aspects that need to be illustrated and understood is how the environment is already implied in all of physiotherapy practice, research, and education. In other words, it is to show and understand the inseparable relationship between health and environment in all aspects of physiotherapy, healthcare and beyond. In the following section, we, therefore, provide two examples of how environmental and sustainability perspectives might be interwoven with common physiotherapy curriculum content.

Though not the main focus of this Agenda, but for the same reasons - the inseparable relationship between health/care and the environment - we also strongly recommend that physiotherapy research and education institutions begin seeking and providing support for diverse research involving environmental and sustainability perspectives in physiotherapy at all levels of professional education. A stronger research base is urgently needed to enhance our understanding of the situation we are facing and to inform the best ways to take action at this time.

We also recommend and hope that more national and international professional physiotherapy organisations will put environmental and sustainability perspectives on their respective agendas and discuss how physiotherapy might best contribute to the adaptation to and mitigation of the today's global environmental challenges.

We also wish to highlight that the aim of this Agenda is not just something that we need to do because it is urgent, but it is also something we can achieve, if we work together. According to the recent, 2019 report of The Lancet Countdown on health and climate change the role and responsibility of the healthcare professions is clear and essential. It consists in 'ensuring that the health of a child born today is not defined by a changing climate' by 'communicating the health risks of climate change and driving the implementation of a robust response which will improve human health and wellbeing' (Watts et al., 2019).

In light of this responsibility and our proven capacity to take action, we firmly believe that our profession is in an exceptional place to make a significant contribution to planetary health through the integration of environmental and sustainability perspectives into entry-level physiotherapy education. Considering the additional urgency of the matter, what we know for sure is that *the time is now!*

**Signed, the Executive Committee of the
Environmental Physiotherapy Association (EPA), 18 February 2020:**

Dr Filip Maric (Founder and Executive Chair EPA, Oslo, NO)

Prof David Nicholls (AUT University, Auckland, NZ)

A/Prof Karien Mostert (University of Pretoria, SA)

Joost van Wijchen (MSc, HAN University of Applied Sciences, Nijmegen, NL)

Dr Jane Culpan (QMU University Edinburgh, Scotland, UK)

Dr Olivia Stone (University of Otago, Christchurch, NZ)

Marion Kennedy (PhD cand, University of Otago, Dunedin, NZ)

Isobel Long (PT student, Cardiff University, Wales, UK)

Thies Bundtzen (PT student, Saxion University of Applied Sciences, Enschede, NL)

#EPTAgenda2023

Examples for curriculum integration

In this section, we provide two examples for the possible interweaving of environmental and sustainability perspectives into existing content in clinical and theoretical physiotherapy education. These examples are meant to be broadly suggestive only. We hope that they will not detract from the need for innovation and development of diverse approaches and content relevant to different healthcare contexts around the world.

Example 1: Physical activity and active transport

Possibly one of the most relatable examples is the direct link that can be made between the health benefits of physical activity and the environmental benefits of active transportation. Physiotherapists regularly recommend maintenance and increase of physical activity as a critical intervention for health and wellbeing relevant to a wide variety of health conditions. Physical activity prescription is already deeply interwoven in physiotherapy education curricula around the world. The additional step to take here then would be to explore if, when, for who and in what contexts an increase in active transportation could be one element of clients' physical activity, and to understand and explain its simultaneous benefits for health and environment. There are extensive amounts of research on the many benefits of physical activity and a steadily growing body of research on the environmental benefits of active transport (e.g. walking and cycling) versus passive transport (e.g. driving cars), for example via a reduction in greenhouse gas emissions and the use of fewer natural resources and space. Combining these strands would not be likely to require much additional resources and time, given the firm anchoring of physical activity prescription and could amount to a significant contribution to planetary health if delivered at scale. As a widely discussed intervention in planetary health and sustainable healthcare in general, the primary issue here might lie in physiotherapists understanding the importance of contributing to it alongside colleagues in other healthcare professions (Haines & Scheelbeek, 2020).



Example 2: Health, Social determinants and the SDGs

At one of the physiotherapy programmes in New Zealand, health students from a range of disciplines study together in a shared first semester. One of the four modules/courses they take focuses on health and the environment, and each week of the semester is framed around a different theme. Underpinning the course is an awareness of the link between global and local environmental concerns, indigenous Māori cosmologies, and the call for sustainability. Underpinning each week's teaching are the UN Sustainable Development Goals, and we are asked as lecturers to identify how our subject links to our commitments to the Treaty of Waitangi (New Zealand's founding document), and the SDGs. During one of the weeks, the focus is on the social determinants of health, explaining how things like poverty and affluence link to environmental degradation and health, and identifying ways that healthcare professional work can have a direct impact on people's health and wellbeing. We know, for instance, that poor people often live in polluted, noisy, dangerous areas because they cannot afford the benefits that come with affluence. This has a direct effect on their health and indirectly affects their care because healthcare services may be further away, more expensive, or inflexible. We look at the effects of clean water and sanitation (SDG 6), the health effects of the social gradient (SDG 10), and discuss how we can have a direct impact on social determinants like poverty and access to services.



More on the rationale underpinning the Environmental Physiotherapy Agenda 2023

This is a critical time in healthcare. Large-scale environmental degradation, including climate change, biodiversity loss, land-system change, and other closely related issues, are now widely recognised as the largest current threats to human health and flourishing around the world (Steffen et al., 2015). From the Paris Climate Agreement, the IPCC special report on Global Warming, the UN Agenda 2030 SDGs and the recent 2019 Report to the Lancet Countdown on climate change and health, it is established that immediate action and the ‘mobilisation of all available resources’, as well as ‘participation of all countries, all stakeholders and all people’ is required to ensure the health and wellbeing of current and future generations in light of these challenges (UN, 2015). There are only ten years left to achieve the SDGs, so there are high hopes for this decade becoming a ‘decade of action’, with its beginning year being a particularly critical marker ‘for establishing ambition’ (Horton, 2020; Guterres, 2020 UN, 2020). In recognition of our current environmental crises amounting to the largest health crisis of our time, the essential role of the healthcare professions has become ever more evident. As stated in the recently published 2019 Lancet Countdown report, it consists in communicating the health risks of present environmental issues and ‘driving the implementation of a robust response which will improve human health and wellbeing’ (Watts et al., 2019).

The EPT Agenda 2023 seeks to take up the imperative health needs and responsibilities highlighted in all of these calls by energising and supporting the integration of environmental and sustainability perspectives into the entry-level programmes of an entire healthcare profession around the world. We believe that changing education is the single most effective action with the longest-lasting effect that we can take as a profession at this point to ensure the health of future generations and support the transition to a more sustainable and environmentally responsible future (Hackett et al., 2020). Physiotherapy has not yet taken a clear stand with regard to our current health and environmental crises at a larger scale. We are sure that supporting entire generations of upcoming colleagues to be knowledgeable, skilled and conscious concerning the inseparable relationship between human health and our planetary environment will turn this tide and send a clear message with regard to our professions’ commitment to global health and flourishing in light of today’s most pressing health challenges.

To provide more context, the identified major environmental issues of our time encompass climate change, biodiversity loss, air pollution, tropical and other forest loss, land-system change, resource depletion, changes in biogeochemical flows, and ocean acidification (Steffen et al., 2015). These, in turn, have already been identified as having and driving a range of rapidly increasing impacts on human health and function across the globe, including a rise in non-communicable diseases, malnutrition, obesity, infectious and vector-borne disease, trauma and injury, climate migration, displacement and conflict, and associated mental health problems (Myers, 2017; Rice, Thurston, Balmes, & Pinkerton, 2014; Watts et al., 2019). Apart from this being a striking indication that more people will need more treatment going forward, one of the core insights from all of these health impacts is precisely their underscoring of the inseparable link between and dependence of human health and functioning on our planetary environment. In simple terms, human health can no longer be considered and addressed, without simultaneously understanding and attending to environmental determinants. Failing to do so, not only means failing to prepare for increasing burdens on healthcare provision (as an adaptation strategy), but also failing to protect the health and safety of people around the globe via effective and combined preventative health and environmental action (as a mitigation strategy).

Key international strategies and ‘existing policy processes for sustainable development (i.e., the SDGs), health (i.e., the WHO Global Strategy on Health, Environment and Climate Change and WHO Health Emergency and Disaster Risk Management Framework), environment (the United Nations [UN] Environmental Assembly resolutions on environment, health, and pollution issues), climate change (i.e., The Paris Agreement), disasters (i.e., The Sendai Framework for Disaster Risk Reduction), biodiversity (i.e., the post-2020 global biodiversity framework)’ and others already fundamentally build on the recognition of this inseparable link between human health, society, and environment (Pongsiri, et al., 2019). As strategies ‘for people, planet and prosperity’ they seek to comprehensively and conjointly address global poverty and hunger, health and wellbeing for all, promote sustainability and combat environmental issues (UN, 2015).

Across the healthcare professions, recognition of the inextricable link between the environment and human health has also led to the rise of several closely corresponding fields of research, practice and education, including planetary health, sustainable healthcare, environmental medicine, One Health and others (Myers, 2017; Pongsiri, 2019; Walpole, Barna, Richardson, & Rother, 2019). Approaching the issue from a variety of angles, all of

these efforts resonate with ‘the pursuit of the highest attainable standard of health, wellbeing, and equity worldwide’ (WONCA, 2017) while addressing ‘the health of human civilization and the state of the natural systems on which it depends’ at the same time (Watts et al., 2015).

Efforts in sustainable healthcare education are increasingly introducing the research and evidence across these fields into healthcare curricula around the world (Musaeus et al., 2018; Walpole et al., 2019). Notable endeavours also include the development of relevant learning outcomes that ‘include environmental considerations in clinical ethical reasoning’, the first effective changes to health professional curricula, and even the modelling of sustainable clinical specialities like sustainable primary care and many more (Walpole et al., 2019). Thus far, sustainable healthcare education is increasingly adopted in a growing number of professional education programmes in medicine, nursing, midwifery, occupational therapy, and psychology, and where this is not yet happening, resounding calls for doing so are voiced clearly and loudly by healthcare professionals and students alike (Hackett et al., 2020; IFMSA, 2018; Legar, Green, Tucker, & van Daalen, 2019; NMC, 2019; RCOT, 2019).

The EPT Agenda 2023 aligns with these calls and aims at education as the most effective means to help the physiotherapy profession as a whole transition into a more sustainable and environmentally responsible future and, therewith, further support the health and wellbeing of future generations. We recognise that much needs to be done in the way of research and development to better understand this burgeoning field and how we might contribute most effectively in practice. Yet, these are also urgent times that require us to commence taking action across education, research and practice immediately, in parallel, and together. We hope to have succeeded in setting out the EPT Agenda 2023 in a way that reflects this urgency and generates space for all of these efforts to develop in partnership.

Physiotherapy has a rich history of existing ties to the environment and environmental issues, not least in its use of natural and low-carbon means like movement, touch and communication in the rehabilitation of a wide swath of acute and chronic conditions. Side-by-side with colleagues in other healthcare professions, physiotherapists have also long been involved in occupational health and ergonomics, helping people return to meaningful, healthy and safe occupational environments (Boucaut & McPhee, 2013; IFPTOHE, 2019; Stigmar, Ekdahl, Borgquist, & Grahn, 2014). A considerable number of physiotherapists around the world also do therapeutic work with and for animals, either implementing and further developing animal-assisted approaches improving human health, or working for the health and wellbeing of horses, dogs, and other species through animal physiotherapy (Benda, McGibbon, & Grant, 2004; IAPTAP, 2020; Sudmann, 2018).

Though still underrepresented, at least in some countries indigenous worldviews and approaches to health and wellbeing are already included in physiotherapy curricula and nearly always encompass an explicit link between land, water, and animal life and people's health. Many physiotherapy education institutions around the world are beginning to integrate the SDGs and other green initiatives into their operations and education programmes. Finally, there are also a growing number of clinics and clinicians working to make their workplace more environmentally friendly and responsible (Thomas, 2020). We wish to amplify, encourage and support the sharing of all of these existing efforts such that they can help others refine and develop their own approaches and enrich our efforts.

Being in a good place to build on what we have, we should invest in reframing what we are already doing to make the link between physiotherapy, the environment and environmental stewardship more explicit. We should also invest in refining and advancing this link, and develop corresponding efforts as we take on more environmental responsibility (Foo, 2016; Jones, 2009a, 2009b; Maric & Nicholls, 2019). In doing so, we should also build on the work of our colleagues in other healthcare professions that are already deeply involved in enhancing greater environmental responsibility and stewardship in healthcare and beyond, and collaborate with them, as well as governments and policymakers to maximise our combined impact (e.g. UN, 2015; EC, 2019; Myers, 2017; Spencer & Gee, 2009; WFOT, 2012; and many more). To support this process, we are actively building strong partnerships across the healthcare professions and beyond, and endeavour to continue growing the list of links, resources, references provided in this document and the EPT Agenda 2023 website as the Agenda takes effect. We are confident that collaboration and building upon what we already have within physiotherapy is imperative and cannot fail to support our combined efforts for long-lasting planetary health and wellbeing.

Because 'environmental physiotherapy' is a relatively young field of engagement within our profession in this explicit manner, we also believe that it presents us with a great opportunity and responsibility to take to it with care, criticality, and creativity. We hope that the broadly defined primary aim of the EPT Agenda 2023 will support this, beyond just making it achievable for all physiotherapy education institutions. That is, we hope that it will foster diverse novel understandings of how, e.g. the SDGs, planetary health, and sustainable healthcare apply to physiotherapy specifically and what our professions' unique contribution to these interdisciplinary, global efforts might be. In our discussion of various aspects of this Agenda, we have sought to point to different directions that this care, nuance, criticality and

creativity might take us. We do not consider these to be exhaustive and hope that our outlining of them will not be a limitation to creative ingenuity, but a support of it.

Engaging care and criticality was also crucial in the development and formulation of the EPT Agenda 2023 and the challenges that doing so presented. Far from being resolved, we actively continue to wrestle with terms like environment, sustainability, climate change, environmental sustainability, environmental responsibility, stewardship, and sustainable development. We are aware that none of these terms are without contention and problems of their own and so retain an open and eager-to-learn attitude to all of them.

Concerning the terms sustainability and environment, for example, our final choice of naming this the ‘Environmental Physiotherapy Agenda 2023’ is meant to be more reflective of these difficulties than an expression of a final verdict on them. As highlighted by Jean-Paul Moatti, one of the 15 scientists selected to draft the 2019 report on the SDGs, for example, we are not only off-track on most of the SDGs, but even backtracking on many of them. This includes the critical goals of ‘reduction of inequalities (SDG10), limitation and adaptation to climate change (SDG13) and reduction of the environmental and ecological footprint of our modes of production and consumption (SDG 12)’ (Deighton, 2019). It has also repeatedly been highlighted that this is, at least partially, due to the unsustainability of our economic growth and development models, as well as our production and consumption patterns (Deighton, 2019; UN, 2019). From our perspective, this does not mean that we should not strive for sustainability or the achievement of the SDGs. Quite the contrary. But it highlights that to do so also requires that we carefully and critically consider each aspect of the social - environmental - economic triad to avoid perpetuating any element of them that has contributed to our current predicament.

In addition to this, we also believe it relatively safe to assume that the Earth’s natural systems must be thought of as the foundation of health, sustainability and sustainable development. All growth, development and advancement, therefore, have to consider of and remain within the planetary boundaries provided by the Earth’s natural systems (Oluwatoyin Onabola, 2019; Pongsiri, 2019, Steffen, et al., 2015; WONCA, 2017). Putting the term ‘environment’ first in the title of the EPT Agenda 2023 is thus also meant to reflect the recognition of the planetary boundaries in which live and on which we depend for our health, wellbeing and flourishing, first and foremost.

It has been pointed out that modern-day health gains have been made in parallel with unsustainably generated wealth associated with degradation and pollution of ecosystems, and thus also at the cost of the health of future generations (Gill & Benatar, 2019; Pradyumna, 2019; Whitmee, Haines, Beyrer, et al., 2015). Recent studies have also shown the considerable contribution of healthcare systems to greenhouse gas emission and other environmental issues (Eckelmann & Sherman, 2016; Karliner et al., 2019). As argued by Oluwatoyin Onabola (2019), we thus concur that we need to emphasise ‘the established interdependencies of human health and natural ecosystems’ as a framework to guide ‘appropriate conduct and stewardship of economic, environmental, political, social, and cultural processes’ such that the health of present and future generations can be ensured.

Even if our understanding and assessment of these complex issues and relationships change over time, the key points remain that our naming of the EPT Agenda 2023 was decided in the hope to: firstly, invite, foster, and support diversity, care, nuance, criticality, and creativity to be brought to the environmental and health issues at hand; and secondly, use terminology that might speak more directly to upcoming physiotherapists and thus draw out the further development and specific application of the SDGs, planetary health and sustainable healthcare, and other relevant fields, to physiotherapy research, education, and practice.

Young people, as well as upcoming and practising healthcare professionals around the world are clearly and loudly calling for more action on the conjoint issues of environment, health and equity ((ACP-UK, 2019; CHA, 2019; PHA, 2020; PSC, 2019)). As pointed out by Hackett and colleagues (2020), it is now up to us to heed their call, and ‘recognise and address this opportunity by tapping into the strong movement to change’ and equipping future generations of healthcare professionals to understand and ‘manage the effects of ecological change on health and health systems’ (Hackett et al., 2020). It is our hope the EPT Agenda 2023 will help us to join forces with the younger generations and collaboratively build our knowledge and skills to respond to pressing novel healthcare needs and responsibilities.

Challenges and reservations

While the urgent need for integrating environmental and sustainability perspectives into physiotherapy is apparent, we understand that we are likely to encounter reservations and challenges along the way. We consider it critical to acknowledge and address these challenges and reservations from the outset of this endeavour, because they represent genuine issues and struggles for physiotherapy educators and physiotherapy education institutions seeking to change their curricula, or even introduce new content. At the same time, we also think that engaging with these challenges, for example also in collaboration with students can, in itself, be an incredibly fruitful approach to environmental physiotherapy education and achieving the aim of the EPT Agenda 2023. In this way, challenges and reservations can provide relevant content, highlight existing expertise in the field, provide inspiration and foster innovation directed at further resolving identified issues.



Crowded curricula

One of the key challenges we can foresee results from the fact that, much like other healthcare professions curricula, physiotherapy programmes around the world are already extremely crowded with content (Walpole, Barna, Richardson & Rother, 2019; Hackett et al., 2020). Ongoing innovation across diverse areas of education, physiotherapy, healthcare, digital technologies, and artificial intelligence, means that physiotherapy educators and education institutions are under immense pressure to reconsider what and how they are providing to their students. This comes mainly with the sense that there is ever more material that needs to be added into curricula, yet coincides and collides with hesitation to discard already existing content with valid justification. Evidence of this can also be found in the current debate about

extending entry-level physiotherapy courses to five years as a means to create more space for already identified new content. Finally, we also wish to acknowledge that these are not just pressures perceived and borne at a somewhat impersonal, institutional level, but also at a very personal one, by the physiotherapy educators in charge of making decisions about content and ultimately delivering it.

It is not the intention of this Agenda to add to these pressures, though we realise and acknowledge that we are moving within this space. We are not seeking to leverage power but to collaborate and engage conversation. We hope that these pressures are additionally lightened by our highlighting that physiotherapy has an inherent, historical affinity to the environment that readily lends itself to making it more explicit. The challenge presented by already crowded curricula is also one of the reasons for which the EPT Agenda 2023 is not calling for the production, addition and delivery of comprehensive and ideally assembled content. Rather, the aim of the EPT Agenda 2023 is for physiotherapy education institutions *to make a start*; to begin thinking and talking about the relationship between human health, environment, and physiotherapy, to make this process explicit (where it is happening already), and importantly, *to involve physiotherapy students in the conversation*.

To make an interesting proposition by example, one way in which this conversation could take place is via a physiotherapy education institution deciding against formally integrating environmental physiotherapy due to a lack of space in its curriculum, or similar. From our position, making this decision and its reasons explicit, and communicating this with students or involving them into the decision-making process would, in itself, be a viable way to achieve the aim of the EPT Agenda 2023. That is, by discussing that and why broader environmental concerns should be included or excluded, we would already be engaging with questions concerning the relationship (or lack thereof) between human health and functioning, the environment, and physiotherapy and so a beginning to this conversation would have been made. This, in turn, would undoubtedly open for a range of new and fertile questions that could help all of our further development of this field.

Notwithstanding this challenge and the different approaches that could be taken to addressing it, we also strongly believe in the passion and ingenuity of all of our colleagues in physiotherapy education, as much as the passion and enthusiasm of physiotherapy students around the world. To quote a recently published article on leadership in physiotherapy, ‘physiotherapists are problem solvers...give me a problem and I will explore and find a solution’ (McGowan & Stokes, 2019). With that in mind, we are confident that we can

find exciting, rewarding and novel ways of integrating environmental and sustainability perspectives into entry-level physiotherapy education that can be meaningful for our clients, our entire profession, and our colleagues across the world of healthcare and beyond.

Legal restraints

We also recognise that there are considerable differences in the legalities and regulation relating to physiotherapy education and practice around the world. These include the possibility that physiotherapy education institutions in different countries might be more or less able to integrate environmental physiotherapy into their curricula, depending on the extent to which this is possible without initially being enabled by respective rules and regulations.

As with the challenge of crowded curricula, an exciting way to integrate environmental physiotherapy into curricula presents itself here just as much. It could begin via the participatory discussion of the challenges that legal, governmental and related restraints pose on doing so. At this level, some of the interesting questions might be to explore how and why environmental and sustainability concerns are hindered or even prohibited from entering physiotherapy education curricula, what the social, cultural, and political reasons for this are, and what might be done to amend this if so desired. We could ask, for example, if ideas of health and safety of the public, which so often prominently feature in health regulations, to some extent foreclose and implicitly label ‘the environment’ as something dangerous from which the public is to be protected.

Combining such discussions with evidence of the rapid rise of national and international sustainable development and ‘green agendas’ like the UN SDGs, the EU Green Deal, etc. might then help direct efforts toward changing legal restraints to relevant curriculum innovation. Based on the understanding that e.g. exposure and connection to the environment are conducive to health under certain conditions, driving respective regulations change would, in turn, constitute a new health intervention in itself and pave the way for the development of further novel interventions innovation. It could also be the case that our efforts should be directed towards ensuring that everyone has access to safe, natural environments, and this would represent another important new pathway for engagement.

The relative shortage of content

Given the relative novelty of environmental and sustainability perspectives as an explicit feature in entry-level physiotherapy education curricula and a relative scarcity of research linking environmental and sustainability concerns with physiotherapy in an explicit manner, one of the challenges is to decide what should be integrated into curricula in terms of content. To address this issue, we have tried to point to various possible directions for inquiry and education throughout the EPT Agenda 2023 that could be drawn upon as potential starting points. This includes, e.g. drawing on the rapidly growing bodies of work across overlapping, interdisciplinary fields like global and planetary health, environmental medicine, sustainable healthcare and education, environmental Medicine, OneHealth, as well as physiotherapy in occupational health and medicine, and animal physiotherapy, and more. In addition to these, there is also an extensive range of materials on existing strategies and policies like the SDGs, including readily available material for teaching (with) them. Not least, a significant amount of resources has developed across local and indigenous knowledge systems, philosophy, the social sciences and the humanities, all of which have long thought about and sought to improve our relationship with the environment, highlighted problems in our thinking that have contributed to our current situation and investigated novel futures. Because this combines to an extensive amount of resources, we have only been able to provide a modest and indicative selection in the ‘Resources and References’ section of this Agenda, but hope it will be helpful.

Once again, it should also be clear that we are aware that many of our colleagues working in physiotherapy education are already integrating sustainability and environmental perspectives into their courses and curricula. As outlined in the ‘Proposal for ongoing collaboration’ section of this Agenda, we hope to draw on these efforts to support and inspire other colleagues around the world to develop their unique approaches to sustainability and environmental physiotherapy education.

Just as in the case of the so-called basic sciences of anatomy, and physiology, which have played a central role in the history of the physiotherapy profession so far, there is also an amount of basic knowledge, e.g. about environment, ecology, or climate, that needs to be considered prior to more specialised application to healthcare and physiotherapy. Considering this raises another interesting issue relating to the increasing efforts to integrate teaching about sustainability, climate change, environmental degradation, the SDGs, and even eco-anxiety into secondary school education around the world (Berger, 2019; Graham-McLay, 2020; [The World’s Largest Lesson](#)). When more of this basic knowledge becomes general knowledge

held by students before entering tertiary education, it will enable us to be more particular about what needs to be included into physiotherapy education and what prior knowledge we can build on. This might also help further clarify our specific role and contribution as physiotherapists in, e.g. achieving the SDGs versus our roles as members of society in general, or in other specific capacities, as much as discussing to what extent this distinction is or should be treated as categorical, interwoven, or otherwise.

Continuing on this discussion, we suggest that even talking about what to include and exclude in the curricula with physiotherapy students, what is general knowledge already taught in schools, what the specific aspects relevant to physiotherapy are, and how these should be approached could equally already mean achieving the aim of the EPT Agenda 2023 in itself. It would represent an approach to beginning the conversation and the development of the subject field, but doing so in partnership with our students. That integrating students into curriculum development and its challenges in this manner might be a particularly pertinent approach is also echoed in current calls for more participatory approaches in teaching and learning (Peseta & Bell, 2020). Literature in sustainable healthcare education equally seems to support such strategies (Walpole et al., 2017; Walpole & Mortimer, 2017). We believe that the potential discussions concerning environmental physiotherapy in this regard provide an especially amenable forum for doing so, precisely because environmental physiotherapy is an underexplored field that is yet to be developed collaboratively, thus turning yet another apparent challenge into an exciting strength and opportunity.

We hope that refraining from prescribing specific content in an overly rigid manner throughout the EPT Agenda 2023 will also support the development of as many locally diversified approaches to achieving its primary aim as possible. Taking an environmental, or planetary perspective must inherently imply acknowledging, thinking and acting in accordance with the diversity of national, regional, and local contexts. What might be particularly relevant to one ecosystem, or possible in one culture or society, might not be the same as in another, even in a neighbouring one. Respecting and acknowledging this geo-regional diversity is at the core of effective 'glocal' solutions (Sudmann & Breivik, 2018). It is also echoed in, and we would argue, a pertinent extension and implementation of the World Physiotherapy statement on diversity and inclusion (WCPT, 2019). Practice, research and education in sustainability and environmental physiotherapy therefore inherently calls for highly diverse, non-standardised, glocal approaches that will need to be nurtured as they emerge, rather than limited by the a priori imposition of overly rigid, predefined parameters. Yet again, we therefore believe that starting from what seems like a relative shortage of content effectively constitutes an outstanding strength and opportunity.

Finally, the EPT Agenda 2023 provides a timeframe of four years for participating institutions to envision their very own, glocal approaches and achieve its aim. We hope and believe that this should be ample time for doing so because the aim of this Agenda is to begin the explicit integration of sustainability and environmental perspectives into entry-level physiotherapy curricula, rather than develop and deliver comprehensive and highly polished novel content. As has been argued about planetary health, as well as sustainable and regenerative development, we have to approach our aim with the full awareness that we are embarking on ‘a continuous learning journey that will need many adjustments of course and constant redesign to adjust answers and solutions to changing conditions’ (Wahl, 2018).

De/colonialising curricula

One of the most significant concerns we have felt in the development of the EPT Agenda 2023 is the genuine risk of, paradoxically, perpetuating a kind of ‘eco-colonialism’ where the health and survival of people and planet provide yet another vehicle for spreading and imposing particular, cultural, economic or political interests and values on the rest of the world (Sachs, 1992; 2015). To provide some context, colonialism has, amongst many other things, also been exposed as a significant contributor to our current planetary health predicament, inciting large-scale environmental degradation in a manner that continues to pervade modern-day, growth-based global economics (Enfield & O’Hara, 1999; Rees, 2010; Saravanan, 2004; Willow, 2014). In addition to this, colonialism has also been recognised as not only an issue of economic and territorial, or terrestrial undoing and taking over, but also of culture, thought and education. Recent years have therefore seen a steady increase in calls for decolonising science and education (Battiste, 2019; Battiste, Bell & Findlay, 2002; Boshoff, 2009; Dahdouh-Guebas et al., 2003; Nagtegaal & de Bruin, 1994; Gorski, 2008).

We consider it important to acknowledge upfront this difficulty and consider the role of colonialism as a contributor to our current crises, whether this be geographical, cultural, ideological, or scientific. By extension, this also implies acknowledging the paradox complicity of Western healthcare and tertiary education cultures in creating the global health and environmental crises of our time and, ultimately, the need for a diversity of other modes of thinking and doing together that will enable us to transition into a more sustainable, and environmentally and socially just future.

Beyond acknowledging this problem, we have therefore tried to address and minimise it by introducing a variety of strategies into the EPT Agenda 2023, all while being fully aware of

the paradox nature of doing so in a global call to action that is seeking to engage an entire profession. The first of these strategies consists of leaving the exact content and methods by which sustainability and environmental physiotherapy might be introduced as minimal, nondescript and non-binding as possible. As discussed throughout this Agenda, we hope that this will help draw out a diversity of national, regional, and local approaches to environmental physiotherapy education relative to the historical, cultural, ecological, social and political context of each respective physiotherapy education institution.

Secondly, the issue of de/colonialising curricula also affords an additional exciting opportunity for innovation in environmental physiotherapy education. It could, e.g. consist of focussing precisely on this issue as its primary or starting content. In this way, speaking about colonialism and its complicity in global environmental degradation, bio/diversity loss, environmental injustice, and so on, and the resultant impacts on planetary health could itself be exceptionally fertile grounds for collaborative teacher and student engagement with sustainability and environmental perspectives in physiotherapy. Choosing such issues over other, potentially more apparent, or less contentious ones might help draw out the actual complexity of planetary health and environmental physiotherapy. It would also highlight that reaching conclusions quickly, might have to begin with or, at least, be accompanied by thinking more deeply and thoroughly.

Finally, it has also been argued that working in partnership with students is an essential strategy for the decolonialisation of medical curricula and practice (Nazar et al., 2015). This underscores the sense that environmental physiotherapy education might be an especially amenable field for engaging decolonialisation because precisely its relative novelty opens it up to collaborative exploration and development. We hope that students and teachers will find this an exciting opportunity that could help us address and take responsibility for an unjustly distributed global issue in more locally and globally just ways.



Explanation to lists of signatories

The recently published 2019 report to the Lancet Countdown on Health and Climate Change once again underscores that we need the involvement of 7.5 billion people to achieve the necessary changes to tackle the combined environmental and health challenges we are currently facing (Watts et al., 2019). A critical element of ensuring that the physiotherapy profession can make a substantial contribution is, therefore, to recognise that we can, must, and do meet the challenges ahead together, physiotherapy clinicians, researchers, students, educators and professional representatives alike, and in collaboration with our clients and colleagues across the world of healthcare and beyond.

The three lists of signatories included in the EPT Agenda 2023 - Individual Signatories, Supporting Organisations, and Participating Institutions - aim to reflect this need for comprehensive collaboration and give further strength to our combined voices. Their brief explanations in the following hope to provide more context to those considering supporting the EPT Agenda 2023 as individuals, organisations, or participating institutions.

Individual Signatories

The list of Individual Signatories invites people from across the physiotherapy profession to support the call to action proposed in the EPT Agenda 2023 irrespective of their current role or history in the profession. That is, physiotherapy clinicians, educators, researchers, professional representatives and, importantly, students are equally invited to express their support by signing the EPT Agenda 2023 Individual Signatories list and add strength to the call for the integration of environmental physiotherapy and sustainability perspectives into entry-level physiotherapy education.

Reaching beyond our profession, we also cordially invite colleagues from other healthcare professions to express their support and help us achieve its aim by signing this list. We are grateful and aware that you are working on similar efforts and would appreciate all of your support, encouragement and collaboration.

Last but by no means least, we would equally like to invite our clients to do the same. Boldly speaking for our colleagues in physiotherapy and healthcare in general, we genuinely seek to improve our work on a daily basis and believe that acknowledging the bigger, planetary picture of health represents a timely addition to these efforts.

An additional element of the Individual Signatories list is that we envision its signing also to express a commitment and leadership at the personal level. As with education, we do not seek to be too prescriptive here. Many actions that can be taken at the individual level are already known and well supported in the literature, from small adjustments to one's diet to adjusting one's travelling habits, and more. Physiotherapists might feel especially familiar with personal pledges to a switch from passive to active transport where feasible. The physiotherapy profession currently consists of more than 1.6m physiotherapists and a large number of physiotherapy students worldwide. Whatever personal adjustments we might choose to make, with so many physiotherapists and physiotherapy students committed to not only taking professional but also individual action aimed at improving environmental sustainability in other parts of their lives, we cannot fail to contribute to the significant societal shift required to meet today's most urgent health challenges.

Supporting Organisations

The list of Supporting Organisations is meant to multiply what is expressed in the Individual Signatories list at an even large-scale, calling on professional organisations within healthcare and beyond to express their support for the EPT Agenda 2023. We have no particular expectations or restrictions here as to who or what classifies as an organisation that can sign the EPT Agenda 2023. Organisations can include large-scale international professional groups, national and regional professional organisations, small and large special interest groups, as well as other healthcare professional and patient groups and organisations. With all of your support, we will undoubtedly achieve the aim of this agenda and help improve health and wellbeing around the globe.

What applies to us as individuals naturally also applies to the organisations we have formed and that represent us. Support and leadership at the level of organisations are therefore equally critical and indispensable in the realisation of the EPT Agenda 2023. If your organisation wishes to support the EPT Agenda 2023, please [contact us here](#). We will then be in touch with you regarding your organisation logo (preferably PNG format with transparent background) and, once received, this will be added to the Supporting Organisations list in the PDF publication and Agenda website.

Participating physiotherapy education institutions

The final list gathers the physiotherapy education institutions that offer entry-level programs and have decided to implement the EPT Agenda 2023. Much courage, passion, leadership and drive are required for this given that tertiary education institutions around the world are under a variety of considerable and growing pressures, financially, politically, and environmentally. To take on a task as bold as the one proposed in this Agenda is no small feat, irrespective of the extent or approach chosen to achieving it. We, the signatories and supporters of the EPT Agenda 2023, are therefore particularly grateful for your support and participation and are eager to collaborate with you in these efforts.

If your physiotherapy education institution wishes to support and participate in the EPT Agenda 2023, please [contact us here](#). We will then be in touch with you regarding the addition of your institution logo (preferably PNG format with transparent background) to the Participating Physiotherapy Education Institutions list and provide you with all required detail regarding our proposition for collaboration on the further development of environmental physiotherapy education.

Proposal for ongoing collaboration

The situation we are facing today requires a resolute collaborative and multidisciplinary approach to meeting the challenges it entails. This is also clearly expressed in SDG 17, which calls for strong ‘Partnerships for the Goals’ as a critical means to further implementing and achieving the SDGs (UN, 2015). As the Environmental Physiotherapy Association (EPA), we are therefore planning for and propose a larger collaborative project consisting of three main parts to accompany the implementation of the EPT Agenda 2023. We hope that this collaborative project will significantly support the further advancement of sustainability and environmental physiotherapy education both during and beyond the core action years of the Agenda.

Part 1: Refining the Environmental Physiotherapy Agenda 2023



As the first part of this larger environmental physiotherapy education project, we aim to continue refining the EPT Agenda 2023 throughout the year of 2020 by drawing on the feedback of all supporting organisations and participating institutions. This is with the intention to more clearly reflect the aim of the Agenda in the context and realities of entry-level physiotherapy education around the world, but also to reflect and continue the collaborative effort that this Agenda has already been and is intended to remain throughout.

We will also continue to establish working relationships with other professions and experts working with related issues to help further refine the EPT Agenda 2023 and the integration of environmental and sustainability perspectives into entry-level physiotherapy education.

Part 2: Development of an online, open-access environmental physiotherapy education inspiration-base



The second and central part of the project consists in the development of a dynamic, open-access, online inspiration- and collaboration-base focussed on the integration of environmental and sustainability perspectives into physiotherapy education.

We hope to make this available throughout the process of its development, but should this not be possible for technical or other reasons, we aim to create a publicly visible version ready by the end of 2024.

The primary aim for this inspiration-base is for it to contain information on the content, methods, advantages and challenges of environmental physiotherapy education, alongside other aspects emerging from this earliest stage of development and implementation between 2020-2023. In conjunction with this, we also hope to add interactive functionalities to it that would allow, for example, elements of it to be used as a toolkit for teaching, learning, and collaboration, with emergent content being made available throughout the development process. In this way, we hope that the inspiration-base will grow into a vital tool and resource for further research and development in environmental and sustainable healthcare education in physiotherapy, as well as other healthcare professions.

Crucially, we hope to develop this inspiration-base by drawing together the feedback from partnering educators and institutions, as well as via ongoing collaboration with them throughout the development phase. Further detail on this process will be provided to all participating institutions in time and are arranging all necessary means to coordinate this endeavour. As an element of this second part of the EPT Agenda 2023 project, we also hope to conduct various forms of meetings or symposia in which key stakeholders from participating institutions and supporting organisations can meet and exchange experiences, challenges, and ideas. Information on these opportunities will follow in due course.

Our intention behind creating an ‘inspiration-base’, rather than a ‘knowledge-base’ is related to our very acute awareness of the risk of perpetuating colonial patterns and the hegemony of particular knowledges over others in tertiary education, as discussed in the ‘Challenges and Reservations’ section of this Agenda. To foster diversification, we do not seek to represent absolute knowledges or truths, but engage and inspire each other in an open, non-imposing way that leaves ample space for, and thrives on, questioning, change and difference.

Part 3: Summary report



The project will conclude with the production of a report towards the end of 2024 to document what has been achieved throughout the core years of the EPT Agenda 2023. This report will reflect what content and methods have been used and developed throughout this period and what challenges have presented themselves along the way. In conjunction with the online inspiration-base, the purpose of this report will be to summarise and critically reflect on the next steps required to refine the integration of environmental and sustainability perspectives in physiotherapy education and beyond.

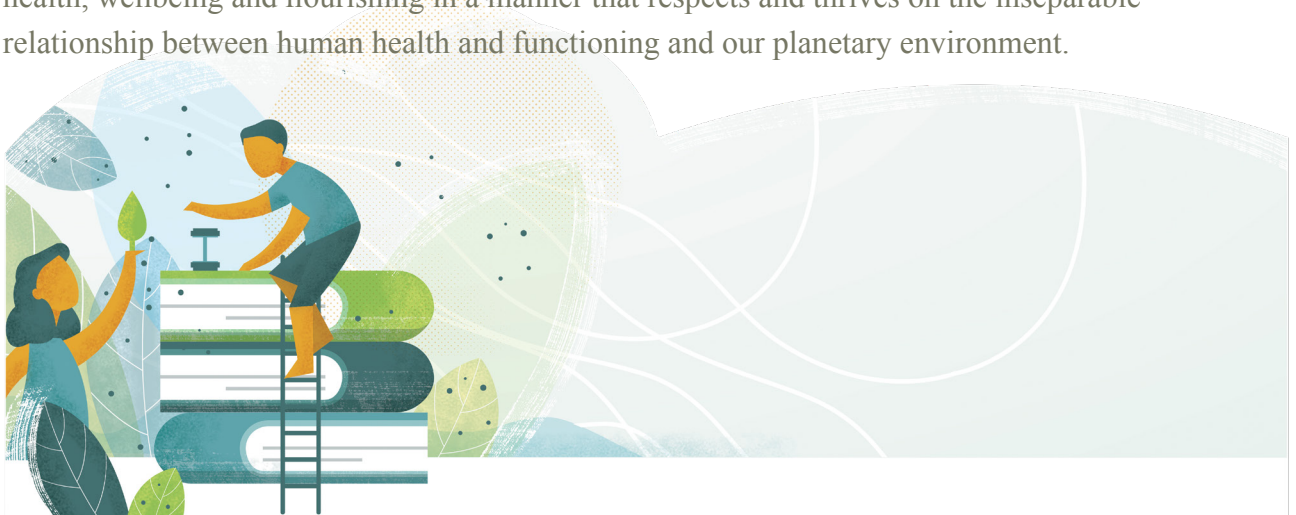
Final words

We are certain that we have not been able to capture all the possibilities and challenges that might present themselves along the way as we seek ‘to ensure that every student beginning entry-level physiotherapy education from 2020 onwards will have education regarding the relationship between the environment, human health and functioning, and how this pertains to physiotherapy as part of their programme.’ We nonetheless hope that the rationale for doing so, the possible directions, the examples for integration into existing curriculum content, the challenges and reservations discussed, and the indicative selection of resources and references will provide inspiration and useful starting points for our creative and collaborative efforts.

We firmly believe that achieving the aim of the EPT Agenda 2023 will enable us to make a greater contribution to planetary health than ever before, especially as we collaborate with our clients and colleagues from other healthcare professions and beyond the healthcare sector. It should be clear that any efforts in environmental physiotherapy, planetary health, sustainable healthcare or similar education inherently imply interdisciplinary, international, cross-generational and cross-cultural engagement from the very start.

Our initial focus on physiotherapy education results only from the sense that, while physiotherapy is one of the largest allied healthcare professions in the world, it is also a relatively well-coordinated and cohesive professional group that might enable us to achieve the aim of the EPT Agenda 2023 as a whole and relatively quickly. Yet we hope that this will also help to further turn the tides in this direction across the healthcare sector and beyond, thus considerably adding to the global mobilisation of efforts to achieve the SDGs and planetary health and wellbeing for all.

In the final instance, the purpose of the EPT Agenda 2023 is for us to contribute to all of our health, wellbeing and flourishing in a manner that respects and thrives on the inseparable relationship between human health and functioning and our planetary environment.



Individual signatories

Dr Filip Maric, Norway, Founder and Executive Chair Environmental Physiotherapy Association (EPA)

Dr Jane Culpan, Scotland/UK, Senior Lecturer

Marion Kennedy, New Zealand, PhD Candidate

Prof Anne Marit Mengshoel, Norway, Researcher

Prof Julia Chevan, USA, Chair of Department of Physical Therapy (Springfield College, MA)

Arthur Desachy, France, PT student & Secrétaire général Adjoint & Chargé de mission Outre-mers à la FNEK

Dr Caroline Fryer, Australia, Educator

Dr Gita Ramdharry, United Kingdom, Clinical Academic

Maximiliaan Meester, Netherlands, PT Student

Bsc Jolien Scholten, Germany, PT student

Erin Bicknell, Australia, Clinician

Professor & Program Director Todd Davenport, United States, Educator, Clinician, and Researcher

Dr Mark Williams, United Kingdom, Programme Leader/Principal Lecturer Physiotherapy and Rehabilitation, Oxford Brookes University

M. Sc. Complementary Medicin Steffen Deubener, Germany, CEO, Clinician, Researcher

Natalie Exner, Germany, PT Student

Finn Bundtzen, Germany, PT Student

Anne Wittich, Germany, PT student

Dr Waqas Khan, Pakistan, Sports Physio

Focus Professional, United Arab Emirates, Educator

Ms Carley Turner, United Kingdom, Lecturer

Prof David Nicholls, New Zealand, Lecturer; Researcher and Author

Dr Olivia Stone, New Zealand, Professional Practice Fellow

Isobel Long, Wales/UK, Physiotherapy Student

Esther-Mary D'Arcy, Ireland

Dr Emer McGowan, Ireland, Assistant Professor at Trinity College Dublin

Hannah Krappmann, Germany, Vorstand Physio Deutschland - Landesverband Baden-Württemberg

Dr Sivaram Shanmugam, United Kingdom, Educator, Researcher

Tanja Rakocevic, Germany, PT Student

Amir Mohammad Zahmatkesh, Netherlands, PT Student

PhD, Msc Veronika Vasilcova, Slovakia, Clinician and researcher

MSc Roland Reezigt, Netherlands, Educator

Marleen Klauschke, Germany, PT Student

Guillaume Christe, Switzerland, Educator, Clinician and Researcher

Mr Srikesavan Sabapathy, United Kingdom, Clinician

Sebastian, Germany, Self employed clinician

Ms Pesteruwe Cooray, Australia, PT Student

Ms Holly Mitchell, Canada, Clinician, Healthcare Business Development

Miss Zoe Morrice, United Kingdom, Clinician

Meike Geurtsen, Netherlands, PT Student

Sergej Zavrnik, Slovenia, PT Student

Alice Belliot, France, Lecturer

Miss Lucy, United Kingdom, PT Student

SPTA, CSCS Richard Krueger, United States, PT Student

A/Prof Karien Mostert, South Africa, Researcher and Educator

Joost van Wijchen, Netherlands, Senior Lecturer

Thies Bundtzen, Germany, Physiotherapy Student

Dr Cecilia Winberg, Sweden, Vice-President of the Swedish Association of Physiotherapists (Fysioterapeuterna)

Anne Lauterbach, Germany, Schulleitung Schule für Physiotherapie Friedrichsheim, Frankfurt

Professor Ann-Katrin Stensdotter, Norway, Educator / Researcher

Dr Susan Lyle, United Kingdom, Researcher

Krishna Bahadur Khatri, Nepal, Clinician physiotherapist educator

Mr Christopher Mahy, United Kingdom, PT Student

Mr Dan Culpin, United Kingdom, PT Student

Miss Alice, United Kingdom, Student physio

Julian Koepke, Germany, PT Student

Adam Toner, Ireland, Clinician

Elise Bats, Netherlands, PT Student

Dr Gillian Webb, Australia, Educator Researcher Mentor

Miss Bethan Wesley, United Kingdom, PT Student

Felix Gottermeier, Germany, Clinic Owner

Anil Daniel Prasad, United Arab Emirates, Clinician

Katarina Frazier, United States, PT Student

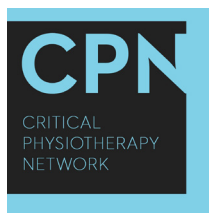
Miss Hana Wilkinson, New Zealand, Clinician

Sabrina Kistner, Germany, Clinician, Educator

Nicky Wilson, United Kingdom, Clinician

For more signatures please visit:
<http://eptagenda2023.com/signatories>

Supporting professional organisations



For an updated list of supporting organisations please visit:
<https://eptagenda2023.com/organisations>

Participating physiotherapy education institutions



For an updated list of participating institutions please visit:
<https://eptagenda2023.com/participating-institutions>

Resources and references

In this section we provide a range of existing resources and references that could inspire environmental physiotherapy education. We draw especially those currently less endemic to physiotherapy so far, including sustainable healthcare, planetary health and the UN SDGs.

Sustainable healthcare and planetary health centres and networks

[Centre for Sustainable Healthcare](#), Oxford, UK. The Centre for Sustainable Healthcare is renowned for its work on sustainable healthcare research and practice and provides strategic input and consultancy to international, national and local programmes.

[Centre for Sustainable Healthcare Education \(SHE\)](#), University of Oslo (UiO), Norway. SHE is a Centre for Excellence in Education at the Faculty of Medicine that will educate students to become change agents for the sustainable healthcare in both the global and local contexts, and will provide them with competencies to make sustainable evidence-based decisions.

[Centre for Sustainable Health Systems](#) - Redefining sustainable healthcare, Canada. The Centre for Sustainable Health Systems is a research and innovation lab, a training shop, and a network of allies and partners working on the transition to truly sustainable and social health care.

[inVIVO Planetary Health](#): A collaborative network for planetary health with the mission 'To transform personal and planetary health through awareness, attitudes and actions, and a deeper understanding of how all systems are interconnected and interdependent'.

[Planetary Health Alliance](#): The Planetary Health Alliance is a consortium of over 200 universities, non-governmental organizations, research institutes, and government entities from around the world committed to understanding and addressing global environmental change and its health impacts.

[Planetary Health Platform](#), University of Sydney, Australia. The Planetary Health Platform fosters understanding of how natural systems support civilisation health, drives research, education and leadership on the relationships between ecological, economic and social change and the health and wellbeing of future generations.

[Sustainable Development Unit](#): The Sustainable Development Unit (SDU) help organisations across health and care embed and promote sustainable development in order to reduce emissions, save money and improve the health of people and communities.

Sustainable Healthcare training tools

Canadian Association of Physicians for the Environment (2019). [Climate Change Toolkit for Health Professionals](#).

Nicholas, K. (2018). Climate Change [We Can Fix It World Cafe](#): A 3 hour activity where students analyze, compare, and present climate solutions proposed and now underway from governments, non-governmental organizations, businesses, scientists, citizens, and more.

Climate for Health (2019). [Moving Forward Toolkit](#). The Climate for Health: Moving Forward Toolkit provides guidance and tools to reduce energy use, to build resilient clinics and health departments, and advocate for climate solutions that prioritize health and equity. The website also provides a range of other helpful resources.

Harvard University (2019). [The Health Effects of Climate Change](#): Learn how global warming impacts human health, and the ways we can diminish those impacts. A free online course by Harvard University's Global Health Institute.

International Federation of Medical Students' Associations (2016). [Climate and Health Training Manual](#). Enabling students and young professionals to understand and act upon climate change using a health narrative. Developed by IFMSA, with the support of World Health Organisation (WHO).

[NurSusTOOLKIT](#) for Sustainability Literacy and Competency (SLC) in nurse education. International Erasmus+ Project seeking to enhance the availability of an evidence-based learning offer in Sustainability Literacy and Competency (SLC) in nurse education.

[One UN Climate Change Learning Partnership](#): The One UN Climate Change Learning Partnership (UN CC:Learn) is a joint initiative of more than 30 multilateral organizations helping countries to achieve climate change action both through general climate literacy and applied skills development. UN CC:Learn provides strategic advice and quality learning resources to help people, governments and businesses to understand, adapt, and build resilience to climate change.

Rehr, R.C., & Perkowitz, R.M., ecoAmerica (2019). Moving Forward: A Guide for Health Professionals to Build Momentum on Climate Action. Washington, DC. Retrieved February 16, 2020.

The Canadian Coalition for Green Healthcare: [Green Hospital Scorecard](#). The Green Hospital Scorecard (GHS) is the only comprehensive health care benchmarking tool in Canada measuring energy conservation, water conservation, waste management and recycling, corporate commitment and pollution prevention.

US National Institute of Environmental health Sciences: [Climate Change and Human Health Lesson Plans](#). Climate and Health learning modules for a variety of student audiences that explore the health impacts of climate change both in the United States and globally.

Inspiration from indigenous knowledges, philosophy, social sciences and humanities

Barnhardt, R., & Kawagley, A.O. (2008). Indigenous Knowledge Systems and Alaska Native Ways of Knowing. 36(1), 8-23. doi:[10.1525/aeq.2005.36.1.008](#)

Haraway, D. (2003). The Companion Species Manifesto: Dogs, People, and Significant Otherness. Prickly Paradigm Press, Chicago.

Hill, R., et al. (2020). Working with indigenous, local and scientific knowledge in assessments of nature and nature's linkages with people. Current Opinion in Environmental Sustainability, 43, pp. 8–20. doi:[10.1016/j.cosust.2019.12.006](#)

Jonas, H. (1984). The imperative of responsibility. In search for an ethics for the technological age. Chicago: University of Chicago Press.

Kawagley, A.O., Barnhardt, R. (2008). Education Indigenous to Place: Western Science Meets Native Reality. Alaska Native Knowledge Network, Alaska University, Fairbanks.

Kropotkin, P. (1993). Mutual Aid: A Factor of Evolution. London: Freedom Press.

Morton, T. (2017). Humankind: Solidarity with nonhuman people. London: Verso Books.

Næss, A. (1989). Ecology, community and lifestyle. Cambridge: Cambridge University Press.

Nicholls, D. (2018). New Materialism and Physiotherapy. In: Manipulating practices: A critical physiotherapy reader (Edited by Gibson, B.E., Nicholls, D.A., Setchell, J., Groven, K.S.). Oslo: Cappelen Damm Akademisk.

Nicholls, D. (2020). What's real is immaterial: What are we doing with new materialism? Aporia, 11(2), 4-14. doi:[10.18192/aporia.v11i2.4594](#)

O’Gorman, E., et al. (2019). Teaching the Environmental Humanities: International Perspectives and Practices. *Environmental Humanities*, 11(2): 427–460. doi:[10.1215/22011919-7754545](https://doi.org/10.1215/22011919-7754545)

Redvers, N. (2018). The Value of Global Indigenous Knowledge in Planetary Health. *Challenges*, 9, 30. doi:[10.3390/challe9020030](https://doi.org/10.3390/challe9020030)

Surrales, A., & Hierro, P.G. (eds.)(2005). *The Land Within: Indigenous Territory and the Perception of Environment*. Copenhagen: Centralrtykkeriet Skive A/S.

Tuhiwai Smith, L. (2001). *Decolonizing methodologies: Research and Indigenous peoples*. Dunedin: University of Otago Press.

UNESCO (2017) [Local Knowledge, Global Goals](#). UNESCO: Paris, 48 pp. Retrieved February 24, 2020. See also UNESCO [Local and Indigenous Knowledge](#).

Articles on sustainable healthcare education

Alvarez-Nieto, C., Richardson, J., Parra-Anguita, G., Linares-Abad, M., Huss, N., Grande-Gascon, M.L., Grose, J., Huynen, M., Lopez-Medina, I.M. (2018). Developing digital educational materials for nursing and sustainability: The results of an observational study, 60, pp. 139-146. doi:[10.1016/j.nedt.2017.10.008](https://doi.org/10.1016/j.nedt.2017.10.008)

Barna, S., Goodman, B., Mortimer, F. (2012). The health effects of climate change: What does a nurse need to know? *Nurse Education Today*, 32(7), pp. 765-771. doi:[10.1016/j.nedt.2012.05.012](https://doi.org/10.1016/j.nedt.2012.05.012)

Hackett, F., Got, T., Kitching, G.T., MacQueen, K., Cohen, A. (2020). Training Canadian doctors for the health challenges of climate change. *Lancet Planetary Health*, 4(1), PE2-E3. doi:[10.1016/S2542-5196\(19\)30242-6](https://doi.org/10.1016/S2542-5196(19)30242-6)

Madden, D., McLean, M., & Horton, G. (2018). Preparing medical graduates for the health effects of climate change: an Australasian collaboration. *The Medical Journal of Australia*, 208(7), 291-293. doi:[10.5694/mja17.01172](https://doi.org/10.5694/mja17.01172)

Maxwell, J.; Blashki, G. (2016). Teaching about climate change in medical education: an opportunity. *Journal of Public Health Research*, 5, pp. 673. doi:[10.4081/jphr.2016.673](https://doi.org/10.4081/jphr.2016.673)

Musaeus, P., Wellbery, C., Walpole, S., Rother, H.A., Vyas, A., Leedham-Green, K. (2018). E-collaborating for environmentally sustainable health curricula. In: *Climate literacy and innovations in climate change education*. Berlin: Springer: 151–167.

Thompson, T., Walpole, S., Braithwaite, I., Inman, A. Barna, S., Mortimer, F. (2014). Learning objectives for sustainable healthcare. *The Lancet*, 384(9958), pp. 1924-1925. doi:[10.1016/S0140-6736\(14\)62274-1](https://doi.org/10.1016/S0140-6736(14)62274-1)

Walpole, S., Barna, S., Richardson, J., & Rother, H. (2019). Sustainable healthcare education: integrating planetary health into clinical education. *The Lancet Planetary Health*, 3(1), e6. doi:[10.1016/S2542-5196\(18\)30246-8](https://doi.org/10.1016/S2542-5196(18)30246-8)

Walpole, S. Mortimer, F. (2017). Evaluation of a collaborative project to develop sustainable healthcare education in eight UK medical schools. *Public Health*, 150, pp. 134-148. doi:[10.1016/j.puhe.2017.05.014](https://doi.org/10.1016/j.puhe.2017.05.014)

Walpole, S., Mortimer, F., Inman, A., Braithwaite, I., Thompson, T. (2015). Exploring emerging learning needs: a UK-wide consultation on environmental sustainability learning objectives for medical education. *International Journal of Medical Education*, 6, pp. 191-200. doi:[10.5116/ijme.5643.62cd](https://doi.org/10.5116/ijme.5643.62cd)

Walpole, S., et al. (2017). Building an environmentally accountable medical curriculum through international collaboration. *Medical Teacher*, 39(10), 1040-1050. doi:[10.1080/0142159X.2017.1342031](https://doi.org/10.1080/0142159X.2017.1342031)

SDG teaching tools and resources

[TEACH SDGs](#): Volunteer organisation with the goal to actively support and enhance the work of the United Nations' efforts within K-12 classrooms by connecting with global educators dedicated to responding to a call to action within education to meet the Sustainable Development Goals, pointing to open and accessible resources, lessons plans, and global projects directly aligned to the Sustainable Development Goals. See also their comprehensive '[Responding to a Call to Action: How do you #TeachSDGs?](#)' blogpost.

[The Worlds Largest Lesson](#) in collaboration with UNICEF: A UNICEF project looking to integrate 'A lesson about the #GlobalGoals for Sustainable Development in every school on the planet'. Free materials available on the website.

UNESCO: [What is Education for Sustainable Development?](#) Retrieved February 20, 2020.

UNESCO (2018) [Education for Sustainable Development and the SDGs: Learning to Act, Learning to Achieve. Policy Brief: Advancing ESD Policy](#). UNESCO Global Action Programme on Education for Sustainable Development. Retrieved February 20, 2020.

UNESCO (2017) [Education for Sustainable Development Goals](#): learning objectives

UNESCO and Gaia Education:

- [Introducing the SDG Training of Multipliers, the SDG Flashcards and the SDG Canvas](#)
- [SDGs Training for Multipliers](#)
- [SDGs Training for Multipliers in Review: from Migrant Communities to Social Innovators](#)
- [SDG Multipliers Handbook](#)
- [SDGs Flashcards](#)

Other references cited in the EPT Agenda 2023

Association of Clinical Psychologists UK (2019). [Practitioner psychologists and the trauma of climate change. An open letter demanding immediate and effective action](#). Association of Clinical Psychologists (ACP-UK). Retrieved March 1, 2020.

Battiste, M. (2019). *Decolonizing Education: Nourishing the Learning Spirit*. UBC Press. Vancouver, BC, Canada.

Battiste, M., Bell, L., Findlay, L.M. (2002). Decolonizing education in Canadian universities: An interdisciplinary, international, indigenous research project. *Canadian Journal of Native Education*, 26(2): 82-95.

Benda, W., McGibbon, N.H., & Grant, K.L. (2004). Improvements in Muscle Symmetry in Children with Cerebral Palsy After Equine-Assisted Therapy (Hippotherapy). *The Journal of Alternative and Complementary Medicine*, 9(6), 817-825. doi:[10.1089/107555303771952163](https://doi.org/10.1089/107555303771952163)

Berger, M. (2019). [Italy's government becomes first to mandate climate change education in schools](#). *The Washington Post*. Retrieved November, 6 2019.

Boshoff, N. (2009). Neo-colonialism and research collaboration in Central Africa. *Scientometrics* 81, 413. doi:[10.1007/s11192-008-2211-8](https://doi.org/10.1007/s11192-008-2211-8)

Boucaut, R. & McPhee, B, (2013). Physiotherapists in occupational health — the Australian experience. *Physical Therapy Reviews*, 18(5), 327-335, doi:[10.1179/1743288X13Y.0000000091](https://doi.org/10.1179/1743288X13Y.0000000091)

Climate Health Action (2019). [US Call to Action on Climate, Health, and Equity. Climate Health Action: A Policy Action Agenda](#). Climate Health Action (CHA). Retrieved March 1, 2020.

Dahdouh-Guebas, F., Ahimbisibwe, J., Van Moll, R., Koedam, N. (2003), Neo-colonial science by the most industrialised upon the least developed countries in peer-reviewed publishing, *Scientometrics*, 56(3): 329–343. doi:[10.1023/A:1022374703178](https://doi.org/10.1023/A:1022374703178)

Deighton, B. (2019). [Q&A: Most SDGs ‘going into reverse’ - UN expert group member. SciDevNet](#): Bringing science and development together through news and analysis. Retrieved February 14, 2020.

Eckelman, M.J., Sherman, J. (2016). Environmental Impacts of the U.S. Health Care System and Effects on Public Health. *PloS One*, 11: e0157014. doi: [10.1371/journal.pone.0157014](https://doi.org/10.1371/journal.pone.0157014)

Enfield, G.H. & O’Hara, S.L. (1999). Degradation, Drought, and Dissent: An Environmental History of Colonial Michoacán, West Central Mexico, *Annals of the Association of American Geographers*, 89(3): 402-419, doi:[10.1111/0004-5608.00155](https://doi.org/10.1111/0004-5608.00155)

European Commission (2019). Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Green Deal. COM/2019/640 final. Brussels, 11.12.2019.

Foo, R. (2016). The role of physiotherapy in climate change mitigation. *Physiotherapy*, 102(3), e5. doi:[10.1016/j.physio.2015.10.009](https://doi.org/10.1016/j.physio.2015.10.009)

Gill, S.R., & Benatar, S.R. (2019) Reflections on the political economy of planetary health. *Review of International Political Economy*, 27(1), 167-190. doi:[10.1080/09692290.2019.1607769](https://doi.org/10.1080/09692290.2019.1607769)

Gorski, P.C. (2008). Good intentions are not enough: a decolonizing intercultural education. *Intercultural education*, 19(6): 515-525. doi:[10.1080/14675980802568319](https://doi.org/10.1080/14675980802568319)

Graham-McLay, C. (2020). [New Zealand schools to teach students about climate crisis, activism and ‘eco anxiety’](#). The Guardian. 13 Jan 2020. Retrieved from

Guterres, A. (2020). [Remarks to the General Assembly on the Secretary-General’s priorities for 2020](#). Retrieved 16 Feb 2020.

Haines, A., & Scheelbeek, P. (2020). European Green Deal: a major opportunity for health improvement. *The Lancet*, Online First. Retrieved February 20, 2020.

doi:[10.1016/S0140-6736\(20\)30109-4](https://doi.org/10.1016/S0140-6736(20)30109-4)

Horton, R. (2020). A “super-year” for the environment. *Lancet Planetary Health*, 4(1), PE1.

doi:[10.1016/S2542-5196\(20\)30007-3](https://doi.org/10.1016/S2542-5196(20)30007-3)

International Association of Physical Therapists in Animal Physiotherapy (2020). [WCPT Network for animal physical therapy practice. \(www.iaptap.com\)](https://www.iaptap.com). Retrieved February 16, 2020.

International Federation of Physical Therapists working in Occupational Health and Ergonomics (2019). [Subgroup of WCPT](#). Retrieved February 12, 2020.

International Federation of Medical Students’ Associations (2018). [Statement on Draft WHO global strategy on health, environment and climate change](#). Sixty-fifth session of the WHO Regional Committee for the Eastern Mediterranean. 2018, Retrieved: December 16, 2019.

Jones, L.E. (2009a). Physiotherapy and the Earth’s global climate: a need for cultural change. *Physiotherapy Research International*, 14(2): 73–76. doi:[10.1002/pri.441](https://doi.org/10.1002/pri.441)

Jones, L.E. (2009b). Thinking vertically about carbon emissions. In *Motion*, September 2013: The Green Issue. Australian Physiotherapy Association (APA).

Legard C, Green M, Tucker Y, van Daalen K (2019). [Climate change is impacting population health and our future patients: remaining silent is not an option - The BMJ](#). Opinion. (Sept 26) 2019. Retrieved: October 16, 2019.

Karliner, J., Slotterback, S., Boyd, R., Ashby, B., Steele, K. (2019). [Health Care’s Climate Footprint: How the Health Sector Contributes to the Global Climate Crisis and Opportunities for Action](#). Health Care without Harm, Climate-smart healthcare series Green Paper Number One, produced in collaboration with ARUP. Reston, VA. Retrieved: February 15, 2020.

Maric, F. & Nicholls, D. (2019) A call for a new environmental physiotherapy – An Editorial, *Physiotherapy Theory and Practice*, 35:10, 905-907. doi:[10.1080/09593985.2019.1632006](https://doi.org/10.1080/09593985.2019.1632006)

McGowan, E., Stokes, E. (2019). Leadership in physiotherapy: experiences of leaders of physiotherapy professional organisations. *BMJ Leader* 2019; 3(4): 115-122.

doi:[10.1136/leader-2019-000185](https://doi.org/10.1136/leader-2019-000185)

Myers, S. (2017). Planetary health: protecting human health on a rapidly changing planet. *The Lancet*, 390, 2860- 2868. doi: [10.1016/S0140-6736\(17\)32846-5](https://doi.org/10.1016/S0140-6736(17)32846-5)

Nagtegaal, L.W., de Bruin, R.E. (1994). The French connection and other neo-colonial patterns in the global network of science. *Research Evaluation*, 4(2): 119–127. doi:[10.1093/rev/4.2.119](https://doi.org/10.1093/rev/4.2.119)

Nazar, M.; Kendall, K., Day, L., & Nazar, H. (2015). Decolonising medical curricula through diversity education: Lessons from students. *Medical Teacher*, 37:4, 385-393, doi:[10.3109/0142159X.2014.947938](https://doi.org/10.3109/0142159X.2014.947938)

Nordling, L. (2018). How decolonization could reshape South African science: A generation of black scientists is gearing up to transform the research landscape. *Nature*, 554: 159-162.

Nursing and Midwifery Council (2019). [Standards of proficiency for midwives](#) - NMC, London, UK. Retrieved December 12, 2019.

Oluwatoyin Onabola, C. (2019). Planetary Health as a Central Context to the Sustainable Development Goals (SDGs). *Journal of Environmental Health and Sustainable Development*, 4 (3), 798-801. doi:[10.18502/jehsd.v4i3.1495](https://doi.org/10.18502/jehsd.v4i3.1495)

Peseta, T. & Bell, A. (2020). Seeing institutionally: a rationale for ‘teach the University’ in student and staff partnerships. *Higher Education Research & Development*, 39:1, 99-112. doi:[10.1080/07294360.2019.1676200](https://doi.org/10.1080/07294360.2019.1676200)

Planetary Health Alliance (2020). [Clinicians for Planetary Health](#). Planetary Health Alliance (PHA). Retrieved March 1, 2020.

Pongsiri, MJ., Bickersteth, S., Colón, C., DeFries, R., Dhaliwal, M., Georgeson, L., Haines, A., Linou, N., Murray, V., Naeem, S., Small, R., Ungvari, J. (2019). Planetary Health: From concept to decisive action. *Lancet Planetary Health*, 3(10): PE402-404. doi:[10.1016/S2542-5196\(19\)30190-1](https://doi.org/10.1016/S2542-5196(19)30190-1)

Pradyumna, A. (2018). Planetary Health and Food Systems: Insights from global SDGs. *Lancet Planetary Health*, 2(10): PE417-E418. doi:[10.1016/S2542-5196\(18\)30202-X](https://doi.org/10.1016/S2542-5196(18)30202-X)

Psychologists for Social Change (2019). [Manifesto 2019](#). Psychologists for Social Change (PSC). Retrieved March 1, 2020.

Royal College of Occupational Therapists (2019). [Learning and development standards for pre-registration education - RCOT](#), London, UK. Retrieved January 12, 2020.

Rees, W.E. (2010). Globalization and Extended Eco-footprints: Neo-colonialism and (Un)sustainability. In (2010). *Democracy, Ecological Integrity and International Law* (pp. 467-489). Cambridge Scholars Publishing.

Rice, M.B., Thurston, G.D., Balmes, J.R., Pinkerton, K.E. (2014). Climate Change. A Global Threat to Cardiopulmonary Health. *American Journal of Respiratory and Critical Care Medicine*, 189(5), 512-519. doi:[10.1164/rccm.201310-1924PP](#)

Roe, D. (2019). Biodiversity loss—more than an environmental emergency. *The Lancet Planetary Health*, 3(7): PE287-289. doi:[10.1016/S2542-5196\(19\)30113-5](#)

Sachs, W. (1992). *The Development Dictionary - a guide to knowledge as power*. Zed Books Ltd., London, UK.

Sachs, W. (2015). *Planet dialectics: Explorations in environment and development*. Zed Books Ltd., London, UK.

Saravanan, V. (2004). Colonialism and coffee plantations: Decline of environment and tribals in Madras Presidency during the nineteenth century. *The Indian Economic & Social History Review*, 41(4), 465–488. doi:[10.1177/001946460404100405](#)

Spencer, C., & Gee, K. (2009). [The roots and branches of environmental psychology](#). *The Psychologist*, 22, 180-183. The British Psychological Society. Retrieved January 11, 2020.

Steffen, et al. (2015). Planetary Boundaries: Guiding human development on a changing planet. *Science*, 347(6223), 1259855. doi:[10.1126/science.1259855](#)

Stigmar, K.; Ekdahl, C., Borgquist, L., & Grahn, B. (2014). How do physiotherapists perceive their role in work ability assessments? A prospective focus group study. *Primary Health Care Research and Development*, 15(3), 268-276. doi:[10.1017/S1463423613000170](#)

Sudmann, T.T. (2018). Equine-facilitated physiotherapy – devised encounters with daring and compassion. In: *Manipulating practices: A critical physiotherapy reader*. Oslo: Cappelen Damm Akademisk.

Sudmann, T.T., & Breivik, J.-K. (2018). Editorial: special issue on community work and going glocal in Scandinavian Welfare States. *Community Development Journal*, 53(3), pp. 407–423. doi:[10.1093/cdj/bsy018](https://doi.org/10.1093/cdj/bsy018)

Thomas, E. (2020). [A physiotherapy clinic on Vancouver Island blazes a trail in eco-friendly clinic design](#): Blogpost by Evan Thomas from Dockside Physiotherapy. Environmental Physiotherapy Association (EPA), Oslo, Norway. Retrieved January 28, 2020.

United Nations (2015). *Transforming Our World, the 2030 Agenda for Sustainable Development*. General Assembly Resolution. A/RES/70/1. New York: United Nations Publishing.

United Nations (2019). *Harmony with Nature: Report of the Secretary General*. A/74/236. New York: United Nations Publishing.

Wahl, D.C. (2018). [What if?](#) — Scaling-out regenerative development glocally: Building educational ecosystems of collaboration to improve planetary health. The Medium. Retrieved February 19, 2020.

Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., et al. (2019). The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *The Lancet*, 394(10211), pp.1836-1878. doi:[10.1016/S0140-6736\(19\)32596-6](https://doi.org/10.1016/S0140-6736(19)32596-6)

World Federation of Occupational Therapists (2012). [Position Statement: Environmental Sustainability, Sustainable Practice within Occupational Therapy \(WFOT\)](#). Retrieved November 28, 2019.

World Physiotherapy (2019). [WCPT Policy Statement: Diversity and Inclusion](#). Retrieved 24 February 2020.

Whitmee, S., Haines, A., Beyrer, C., et al. (2015). Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health. *Lancet*; 386: 1973-2028; doi:[10.1016/S0140-6736\(15\)60901-1](https://doi.org/10.1016/S0140-6736(15)60901-1)

Willow, A.J. (2014). The new politics of environmental degradation: un/expected landscapes of disempowerment and vulnerability. *Journal of Political Ecology*, 21(1): 237-257. doi:[10.2458/v21i1.21135](https://doi.org/10.2458/v21i1.21135)

WONCA (2017). [WONCA Statement on Planetary Health and Sustainable Development Goals](#). *World Organisation of Family Doctors (WONCA)*. Retrieved February 19, 2020.



#EPTAgenda2023



www.eptagenda2023.com