

## **CHES and the Institution of Environmental Sciences**

*Response to the Department for Education's Sustainability & Climate Change Draft Strategy*

### **Executive Summary**

The Department for Education's (DfE) Sustainability and Climate Change Draft Strategy<sup>1</sup> contains lots of positive ambition, and a strong recognition of many of the most important issues which will need to be addressed in the education system to combat climate change and promote long-term sustainability. Whilst broadly positive, it is not yet ambitious enough to deliver transformative change and secure a sustainable future.

Crucially, the Draft Strategy's commitment to science, evidence, and data will be vital, though it must extend to action beyond pledges. The final Strategy will need to provide explicit targets and tangible science-driven actions in order to achieve the change it desires. Although the Draft Strategy demonstrates some awareness of what will be necessary for implementation, there are a number of instances where the success of the Strategy is put in jeopardy by ambiguity about how its goals will be practically achieved.

Successful action to address sustainable development and the climate crisis will require transformation across the workforce, so it is positive that the Draft Strategy correctly recognises the need to increase skills to achieve the transition, including outside of formal education. The Draft Strategy does not yet go far enough to secure that aim, requiring further ambition to achieve a 'whole system' approach to the role of education in the transition. On key issues such as carbon literacy and delivering transformative change at pace, the Draft Strategy currently does not propose the scale of action required.

Overall, the Draft Strategy represents a key development in leveraging the education system to secure a sustainable future. Whilst the work so far is significant, it is not yet complete, so CHES and the Institution of Environmental Sciences (IES) offer several recommendations to improve the Draft Strategy in order to achieve the necessary level of transformative change. These have been grouped across five key themes: (1) aspirations and values; (2) evidence and data; (3) implementation; (4) skills across the workforce; and (5) embedding climate citizenship.

### **About CHES and the Institution of Environmental Sciences**

CHES is an active networking organisation which provides representation and leadership to the environmental education communities, enhancing the quality of outcomes for education institutions teaching environmental disciplines, facilitating connections between members, and developing new avenues of international co-operation within the environmental science



The institution of  
**environmental sciences**



community. CHES oversees the largest accreditation scheme of environmental degree programmes in the world.

The Institution of Environmental Sciences (IES) is a professional body representing environmental scientists and standing up for the voice of science, scientists, and the natural world. The IES's interdisciplinary background gives it a firm appreciation of the interconnected nature of environmental problems and the need to promote systems-based approaches to address them.

### **Part One: Aspirations and values**

As a mission statement for the education system, the Draft Strategy fulfils its role in increasing ambition. It represents a significant rise in the commitment of the Government to addressing the social and economic drivers of climate change at the crucial educational level. In a small number of instances, key commitments are missing while some of the commitments in the Draft Strategy do not reach far enough, particularly in terms of the level of ambition required to secure transformative change and widespread carbon and sustainability literacy.

To ensure sustainable development, and for the climate transition to be successful, it is essential to fully recognise the role of education, so it is positive that the Draft Strategy identifies both the role that the Department for Education can play, as well as the ability for the education system to capture multiple co-benefits, including for health, climate, and biodiversity. This 'systems approach' that recognises the link between ecosystem health and human health will be crucial to maximising environmental, economic, and social benefits in response to the interlinked crises facing society.<sup>2</sup>

In order to do so, the Strategy needs to embed that approach beyond the aspirational level, with greater consideration of the student pipeline and how to ensure learners are correctly placed to achieve those multiple benefits. Currently, the Draft Strategy does not sufficiently encourage study (either through Further or Higher Education) in environmental programmes, or those which will explicitly impart the skills needed for the future.

Similarly, Higher Education must have the capacity to secure depth of knowledge as well as breadth. While all people will need carbon literacy, green skills, and knowledge to facilitate sustainable development, there are also specific areas of technical expertise which must be promoted and encouraged to support the transition, such as environmental science, the circular economy, environmental land management, water resource management, research, and broader carbon and sustainability literacy.<sup>3</sup>

The Draft Strategy does not set aspirations high enough to spread skills across all subjects and streams of education and training, nor does it protect the depth of specialism which will be required. Areas of study associated with environmental science, climate change, and sustainability have not traditionally reached the diverse pool of students necessary to



facilitate a more inclusive environmental profession. The Strategy should reflect the need to promote interdisciplinary knowledge and learning beyond STEM subjects and across society.

While the Draft Strategy correctly recognises, to some extent, the role of skills across the workforce, across streams of education (including Further Education, Technical Education, and Higher Education), and outside of formal education, its ambitions for utilising those streams are insufficient. For example, the aspiration extends to supporting 190,000 jobs by the middle of the decade and 440,000 by its end. Whilst that commitment is itself positive, it will not be sufficient to meet the scale of the challenge ahead.

The approach to the curriculum in the Draft Strategy is also broadly positive. Recognition of the importance of embedding nature in the science curriculum, as well as the broader accessibility of nature, are both vital to supporting a sustainable future, and it is good that the Draft Strategy also recognises that young people in different rural and urban contexts will have different needs when it comes to engaging in the natural environment.

To achieve these positive aspirations it will be necessary to ensure that these goals are shared with other relevant government departments, particularly those with responsibilities associated with planning and land use. It is not clear from the Draft Strategy that capacity will be available to ensure a joined-up approach that makes access to nature a reality for all young people.

Another positive aspect of the Draft Strategy is the goal of aligning climate education to Education for Sustainable Development (ESD). This should go beyond “identify[ing] appropriate opportunities”, as the current commitment risks inaction and will be insufficient to capture the potential benefits of ESD.<sup>1</sup> Aligning with ESD wherever possible will support young people in facing the complex interlinked social, economic, and environmental challenges ahead.

#### Recommendations of CHES and the IES:

1. Where the Draft Strategy has made positive commitments, these cannot be reduced or made subject to caveats in the final Strategy.
2. There must be greater ambition to encourage study in environmental fields, as well as other subjects which will be necessary to support the transition.
3. The aspiration for potential green jobs to be achieved under the Strategy should be increased, and appropriately supported by further resources and measures (as identified in the remaining recommendations).
4. The Strategy should commit to aligning climate education with Education for Sustainable Development wherever possible, rather than “identify[ing] appropriate opportunities” to do so.
5. Sustainability and Education for Sustainable Development should be embedded across all subjects and all streams of education (such as Further Education, Technical Education, and Higher Education).



The institution of  
**environmental sciences**



6. A cross-departmental consensus should be reached to make access to nature a universal reality, securing any policies needed to make that possible.

## **Part Two: Evidence and data**

Education and evidence are inextricably linked, so the Draft Strategy's commitment to evidence based solutions is essential and encouraging. In particular, the inclusion of both collaboration and evidence as guiding principles of the Draft Strategy is important. For those principles to be realised, the Strategy needs to more effectively transform broad support for evidence into specific and enforceable commitments.

Where the Draft Strategy refers to "evidence", slightly greater clarity is required on the nature of that evidence to ensure that decisions are being made appropriately. While a broad category of evidence will be relevant and necessary to making sound decisions, the principle cannot become so wide in its interpretation that it leads to the exclusion of scientific data in favour of other sources in practice. The Strategy's guiding principle on evidence and insight should therefore reflect that, where possible, scientific data will be utilised in evidence-based approaches.

A number of positive commitments on accountability are made in the Draft Strategy, including those on "clear measurable objectives" and "ongoing measurement and monitoring".<sup>1</sup> The success of these commitments will depend on selecting the correct objectives and how to monitor against them. The Strategy should set an explicit and transparent process for target-setting which allows for co-design with relevant stakeholders. This will be necessary to producing objectives which create meaningful accountability and results in line with the aspirations set out in the Draft Strategy.

Data from across sectors will be necessary to take a 'whole system' approach, so the Draft Strategy's commitment to empowering sectors to report data is valuable. To gain the full potential of the data held by relevant sectors, reporting must be verifiable and consistent to allow for aggregation and cross-comparison. The Department for Education should take a common approach to reporting standards, working with sectors to encourage their adoption. Common standards also provide greater certainty which may encourage more widespread reporting from sectors which do not have a history of data transparency.

The de-politicisation of climate science will be vital to ensuring the spread of carbon literacy to the population-at-large. CHES and the IES commend the Strategy's vital statement that "teaching about climate change and the scientific facts and evidence behind this, does not constitute teaching about a political issue and schools do not need to present misinformation or unsubstantiated claims to provide balance".<sup>1</sup>

This sentiment must remain at the heart of the Strategy and cannot be undermined by ambiguity. The Draft Strategy's comments on "specific campaigning groups ... [and] specific political activity, such as protests" should be clarified to reflect that climate citizenship is not



itself a contentious political act, and to ensure that teachers feel comfortable discussing the interactions between non-political science and citizenship.<sup>1</sup>

#### Recommendations of CHES and the IES:

1. The Strategy's guiding principle on evidence and insight should be clear about its commitment to utilising science and data in decision-making wherever possible.
2. The Strategy should set out an explicit and transparent target-setting process to co-design its measurable objectives such that they make the difference needed and provide effective accountability for the Department and the Secretary of State.
3. The Department should use the Strategy to lay the foundations for common reporting standards for relevant data, working with the sector to encourage adoption.
4. The Strategy should encourage climate citizenship and support for climate science with no ambiguity that could make teachers feel uncomfortable when discussing how young people can become more engaged, explicitly separating political acts from non-political climate citizenship.

### **Part Three: Implementation**

Any plan or strategy is only as effective as its implementation. The Draft Strategy demonstrates a commitment to positive action on many of the issues necessary to transform the education system. It is understandable that full details of the exact manner of delivery on those commitments are not provided in the Draft Strategy, though implementation remains a key area of concern, especially where plans to achieve outcomes in the Draft Strategy are vague or intangible.

Similarly, resources and capacity will be crucial to delivering on the ambitions presented in the Draft Strategy. While these needs are recognised in the Draft Strategy, a further commitment will be necessary by the Department for Education and the Treasury to ensure that appropriate funds are available across the lifetime of the Strategy to guarantee its full implementation. In the context of increasing recognition of the costs of failing to address the climate crisis, which the UK's Climate Change Risk Assessment 2022 estimates to be between 1% and 1.5% of GDP by 2045, investments in the short-term could avoid considerably greater costs to the Exchequer in the long-term.<sup>4</sup>

On the linked issue of training and support for teachers and practitioners to ensure best practice and embedded approaches to sustainability across subjects, the Draft Strategy correctly identifies the need to "further enhance best practice in teacher training".<sup>1</sup> Despite this, details of how this enhancement will occur are not yet sufficient to ensure the levels of expansion necessary to embed best practice on sustainability across all subjects and all streams of education.

While initial training will help to fill the gap for new teachers, the transition will also rely on spreading best practice to existing teachers and practitioners. The Strategy should go beyond



making CPD opportunities available, rolling out the same best practice training across the existing workforce.

The Draft Strategy makes a number of positive commitments on the education system's overall sustainability, including the recognition of the need to adapt existing schools, colleges, and universities to reach 'net zero', plans to support electric vehicle infrastructure, work with WRAP on best practice for food waste prevention, initiatives to promote active travel, and commitments to sustainable procurement. These initiatives will need to be widely accessible and properly resourced to be successful.

Despite positive progress, the commitments on the sustainability of the Department for Education and its buildings could be significantly improved to accelerate the Draft Strategy's objectives. In terms of emissions from the Department for Education's buildings, the Draft Strategy commits to "urgently ... get a better understanding of the scale of the problem and start resolving it".<sup>1</sup> At this stage, the commitment from the Strategy should be far greater in its ambition, with a stronger push for action. For example, plans to address energy efficiency through smart meter pilots under the Draft Strategy are limited in scale. Though data gathering is important, there are already well-evidenced options for improving energy efficiency and building decarbonisation, so the pace of action under the Draft Strategy could be significantly hastened.

While the Draft Strategy correctly recognises the need to act across supply chains and the education system's value chain as a whole, the Strategy would benefit from far greater recognition of other circular economy principles to drive transformative change. Aligning action with the circular economy will be essential and Circle Economy's 2022 Circularity Gap Report recently demonstrated the strong link between resource use and greenhouse gas emissions.<sup>5</sup> The full hierarchy of resource use should be utilised across departmental procurement and decision making, seeking opportunities to avoid increasing consumption and production wherever possible.

As an example, where the Draft Strategy commits to new school buildings being 'net zero' in operation, there will be many scenarios where it is more sustainable to adapt or acquire existing buildings rather than constructing new ones. The Strategy should actively address this level of decision-making to ensure a wider approach to circularity. The commitment itself could also be considerably stronger. While many existing contracts will not be able to be renegotiated, the Department for Education should work with contractors where possible to make new builds as sustainable as possible within the terms of existing contracts.

The Draft Strategy's commitment to implementing climate adaptation measures is an important step towards the proper recognition of the importance of resilience, particularly in the education system where disruption can cause considerable social harms. Flood risk is extensively addressed in the Draft Strategy, though the Strategy should strengthen plans for other areas of resilience which will be crucial in the context of systemic risks caused by climate change, particularly around transport, energy, and food security.



It is important that the implementation of the Draft Strategy is planned to begin in 2022, and that it seeks to address both direct and indirect emissions, because delays or half-measures are no longer sufficient. The final 'net zero' goal of 2050 mirrors the national target, though the education system should be considerably faster than this, and a faster commitment in the Strategy would help to support the UK's overall objectives where other sectors will be slower to reach 'net zero' than the Department for Education.

#### Recommendations of CHES and the IES:

1. Where possible, the Department should create Action Plans with greater detail on the delivery of commitments under the Strategy to ensure transparency and accountability.
2. Appropriate funds, resources, and capacity must be available to implement the Strategy in full.
3. Best practice for sustainability should be fully-embedded for all teachers, educators, and practitioners. The Strategy should explicitly outline how it will achieve the full rollout of sustainability training to the existing workforce, going beyond the availability of CPD opportunities.
4. There should be a greater reflection of circular economy principles in the Strategy's approach to procurement, covering the entire value chain, including in its approach to building use.
5. The Department should commit to avoiding new construction where it is possible to adapt existing stock instead. Where possible, the Department should also work with existing contractors to make new builds as sustainable as possible within the scope of their contracts.
6. The Strategy must address adaptation and resilience beyond the context of flood risk, including risk areas such as transport, energy, and food security.
7. The Strategy should reach its overall 'net zero' commitment faster than 2050, ideally addressing the efficiency of the Department's buildings by 2030, even if the short-term costs of doing so are greater.

#### **Part Four: Skills across the workforce**

Climate change and unsustainable practices are driven by pressures which are embedded in the social and economic systems we live within. The Draft Strategy's recognition of a 'whole system' approach will be essential to addressing all sectors and reaching beyond formal education, and it is positive that the Draft Strategy aligns with the Net Zero Strategy on skills and recognises the roles of apprenticeships, Institutes of Technology, T-Levels, technical qualifications, and other streams of education. All streams of education will require further support to achieve the transition.

The Strategy presents a crucial opportunity to elaborate beyond the Net Zero Strategy to provide greater clarity and certainty for businesses and providers that skills in sustainable industries will be supported and rewarded. The Draft Strategy does not currently provide the



level of detail needed to drive the private sector's investment in the right kinds of jobs and skills.

In particular, the Draft Strategy's examples of "key green industries" suggest a mixed approach to the transition which may be less ambitious than the transformative change necessary to address the climate crisis and to ensure sustainable development.<sup>1</sup> While housing retrofit, vehicle electrification, and diverse energy sources will all be important in the transition, emphasis should also be placed on other key skill areas such as environmental science, the circular economy, environmental land management, water resource management, research, and broader carbon and sustainability literacy.<sup>3</sup>

Recent research by the Royal Society of Chemistry found that 68% of chemists believed there was "a gap in current chemical knowledge and skills and those needed for green jobs now and in the future".<sup>6</sup> The Strategy should also reflect the ongoing need for skills to ensure a broad base of interdisciplinary scientific knowledge.

Similarly, while green construction skills will be essential, the Draft Strategy's commitment to building and construction as a key green sector may be unsustainable in the long-term. The Strategy should seek to provide skills which support the economy in making the transformative change of unsustainable systems a realistic and achievable option.

Beyond providing skills, the education system also has a key role to play in the proliferation of carbon and sustainability literacy. The Draft Strategy recognises the importance of carbon and sustainability literacy but does not do enough to secure its delivery across the population. Full carbon literacy covers more than just knowledge of the scientific basis of climate change, but also the capacity to apply it to the actions of society and create positive shifts in our lives.<sup>7</sup>

To lead to the objectives set out in the Draft Strategy, carbon literacy must spread beyond formal education, and the Strategy should seek to support young peoples' understanding beyond providing limited examples of how the Department is applying it in practice.

For example, in Figure 1, the Draft Strategy suggests that when "operational activity and supply chains [become] greener", young people will "understand the importance of reducing waste and making sustainable choices", and that when "schools transition to net zero carbon emissions", their lived experiences will increase the strategic aim of reaching 'net zero'.<sup>1</sup> This broad approach to action arising primarily 'through osmosis' from lived experiences will not be sufficient to drive the level of change necessary to achieve the objectives of the Draft Strategy.

Outside of formal education, the Draft Strategy seeks to achieve the development of sustainable understandings of the world primarily through skills and green jobs, which will not provide everyone in society with access to the carbon literacy needed to engage in climate issues and reach the intended 'whole system' approach. While the Draft Strategy recognises the need to reach carbon and sustainability literacy for young people, the vast



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environmental sciences



majority of people will be affected by the transition, so the Strategy should go further than learning ‘by osmosis’.

#### Recommendations of CHES and the IES:

1. The Department should provide a specific plan for achieving widespread carbon and sustainability literacy, either through the Strategy or independently, which goes beyond learning ‘by osmosis’.<sup>7</sup>
2. The Strategy should explicitly reference a wider category of green skills and sectors, including environmental science, the circular economy, environmental land management, water resource management, research, and broader carbon and sustainability literacy.
3. As in part three, where possible, the Department should create Action Plans with greater details on the delivery of commitments under the Strategy to ensure transparency and accountability (especially in the context of skills, elaborating beyond the Net Zero Strategy).

#### **Part Five: Embedding climate citizenship**

A ‘whole system’ approach to sustainable development and the climate crisis will require an engaged public that understands the need to adapt to sustainable systems of consumption and production.<sup>2</sup> Beyond green skills and sustainability literacy, appropriate forms of climate citizenship will need to be embedded to drive forward change.

In that context, it is positive that the Draft Strategy makes commitments to young citizenship through measures such as the Climate Leaders Award. These measures must be appropriately resourced to be widespread and accessible, and the finite nature of funding and capacity in the education system is an inescapable reality for how far the ambition of the Strategy will extend in practice.

As previously stated, the Strategy should also avoid any ambiguity about the importance of climate citizenship and environmental stewardship in general. Teachers must feel empowered to discuss climate citizenship in its entirety, including the interactions between non-political science and citizenship. The Draft Strategy’s references to “specific political activity, such as protests” should be clarified to reflect that climate citizenship is not itself a contentious political act.<sup>1</sup>

Beyond the content of the Draft Strategy, the Department should ensure that its broader policy approach supports the Strategy’s objective to “empower all young people to be truly global citizens”.<sup>1</sup> CHES and the IES support the positive steps taken by the Department to ensure that this Draft Strategy was developed in a process of engagement with diverse stakeholders. This includes the Department’s public survey, which CHES and the IES have engaged with directly. Relevant members of both organisations are also encouraged to participate.



To ensure maximal access and clear paths of accountability, future action in this area should also be subject to full consultation with the scope for comprehensive responses, as well as informal engagement processes. Using co-production methods to transform the education system will be essential to creating sustainable futures which engage young people in issues of sustainability.

#### Recommendations of CHES and the IES:

1. As in part two, the Strategy should encourage climate citizenship and support for climate science with no ambiguity that could make teachers feel uncomfortable when discussing how young people can become more engaged, explicitly separating political acts from non-political climate citizenship.
2. Future action by the Department to embed sustainability (including any subsequent strategies or action plans) should be subject to comprehensive formal consultations, and where possible should be co-produced with relevant stakeholders, including citizens, appropriate youth voice organisations, and science.
3. As in part three, appropriate funds, resources, and capacity must be available to implement the Strategy in full.

#### **Part Six: Recommendations**

Overall, the Draft Strategy has made significant steps in improving the approach of the Department to addressing climate change and sustainability. The commentary and recommendations in this document are intended to support that goal, helping to extend the final Strategy to appropriately balance the resources, capacity, and restrictions of the Department with its ambition to ensure sustainable development and to meet the urgent challenge of the climate crisis. Many of the other responses to the Draft Strategy, such as the response of Teach the Future, provide useful insights which may also be valuable.<sup>8</sup>

A full list of recommendations is provided below. CHES and the IES can elaborate on any aspect of this document in greater detail upon request.

#### Recommendations of CHES and the IES:

1. Where the Draft Strategy has made positive commitments, these cannot be reduced or made subject to caveats in the final Strategy.
2. There must be greater ambition to encourage study in environmental fields, as well as other subjects which will be necessary to support the transition.
3. The aspiration for potential green jobs to be achieved under the Strategy should be increased, and appropriately supported by further resources and measures (as identified in the remaining recommendations).
4. The Strategy should commit to aligning climate education with Education for Sustainable Development wherever possible, rather than “identify[ing] appropriate opportunities” to do so.



5. Sustainability and Education for Sustainable Development should be embedded across all subjects and all streams of education (such as Further Education, Technical Education, and Higher Education).
6. A cross-departmental consensus should be reached to make access to nature a universal reality, securing any policies needed to make that possible.
7. The Strategy's guiding principle on evidence and insight should be clear about its commitment to utilising science and data in decision-making wherever possible.
8. The Strategy should set out an explicit and transparent target-setting process to co-design its measurable objectives such that they make the difference needed and provide effective accountability for the Department and the Secretary of State.
9. The Department should use the Strategy to lay the foundations for common reporting standards for relevant data, working with the sector to encourage adoption.
10. The Strategy should encourage climate citizenship and support for climate science with no ambiguity that could make teachers feel uncomfortable when discussing how young people can become more engaged, explicitly separating political acts from non-political climate citizenship.
11. Where possible, the Department should create Action Plans with greater detail on the delivery of commitments under the Strategy to ensure transparency and accountability (including in the context of skills, elaborating beyond the Net Zero Strategy).
12. Appropriate funds, resources, and capacity must be available to implement the Strategy in full.
13. Best practice for sustainability should be fully-embedded for all teachers, educators, and practitioners. The Strategy should explicitly outline how it will achieve the full rollout of sustainability training to the existing workforce, going beyond the availability of CPD opportunities.
14. There should be a greater reflection of circular economy principles in the Strategy's approach to procurement, covering the entire value chain, including in its approach to building use.
15. The Department should commit to avoiding new construction where it is possible to adapt existing stock instead. Where possible, the Department should also work with existing contractors to make new builds as sustainable as possible within the scope of their contracts.
16. The Strategy must address adaptation and resilience beyond the context of flood risk, including risk areas such as transport, energy, and food security.
17. The Strategy should reach its overall 'net zero' commitment faster than 2050, ideally addressing the efficiency of the Department's buildings by 2030, even if the short-term costs of doing so are greater.
18. The Department should provide a specific plan for achieving widespread carbon and sustainability literacy, either through the Strategy or independently, which goes beyond learning 'by osmosis'.<sup>7</sup>
19. The Strategy should explicitly reference a wider category of green skills and sectors, including environmental science, the circular economy, environmental land management, water resource management, research, and broader carbon and sustainability literacy.



20. Future action by the Department to embed sustainability (including any subsequent strategies or action plans) should be subject to comprehensive formal consultations, and where possible should be co-produced with relevant stakeholders, including citizens, appropriate youth voice organisations, and science.

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