

Incorporating Environmental Sustainability Outcomes Into Health Technology Assessment: Issues, Challenges and Solutions



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BACKGROUND AND OBJECTIVES

In 2021, NICE made a pledge to explore ways to incorporate environmental impact data into its guidance. More specifically, in the NICE strategy 2021-2026, it is stated under Strategic Pillar 4: Leadership in Data, Research and Science, that NICE will:

“Consider how environmental impact and wider societal values should be reflected in our advice.”

And to meet this ambition, NICE will:

“Lead globally on the potential to include environmental impact data in our guidance to reduce the carbon footprint of health and care.”

A feasibility report developed by YHEC concluded that, whilst it would be technically feasible to develop a framework for environmental sustainability, notably around inclusion of greenhouse gas (GHG) emissions, there would be several challenges associated with the implementation of such a framework from an operational perspective. This report explores further how these uncertainties might be addressed, and the aims included the following:

- To scope potential definitions and domains of sustainability and associated quantification techniques and data sources that could form the framework.
- To highlight potential challenges, evidence gaps and limitations of the framework and suggest solutions or ways of mitigating such factors.
- To consult with relevant stakeholders, including those from other industries who may be more advanced in this field, to understand how this framework could be developed and used most effectively.

METHODS

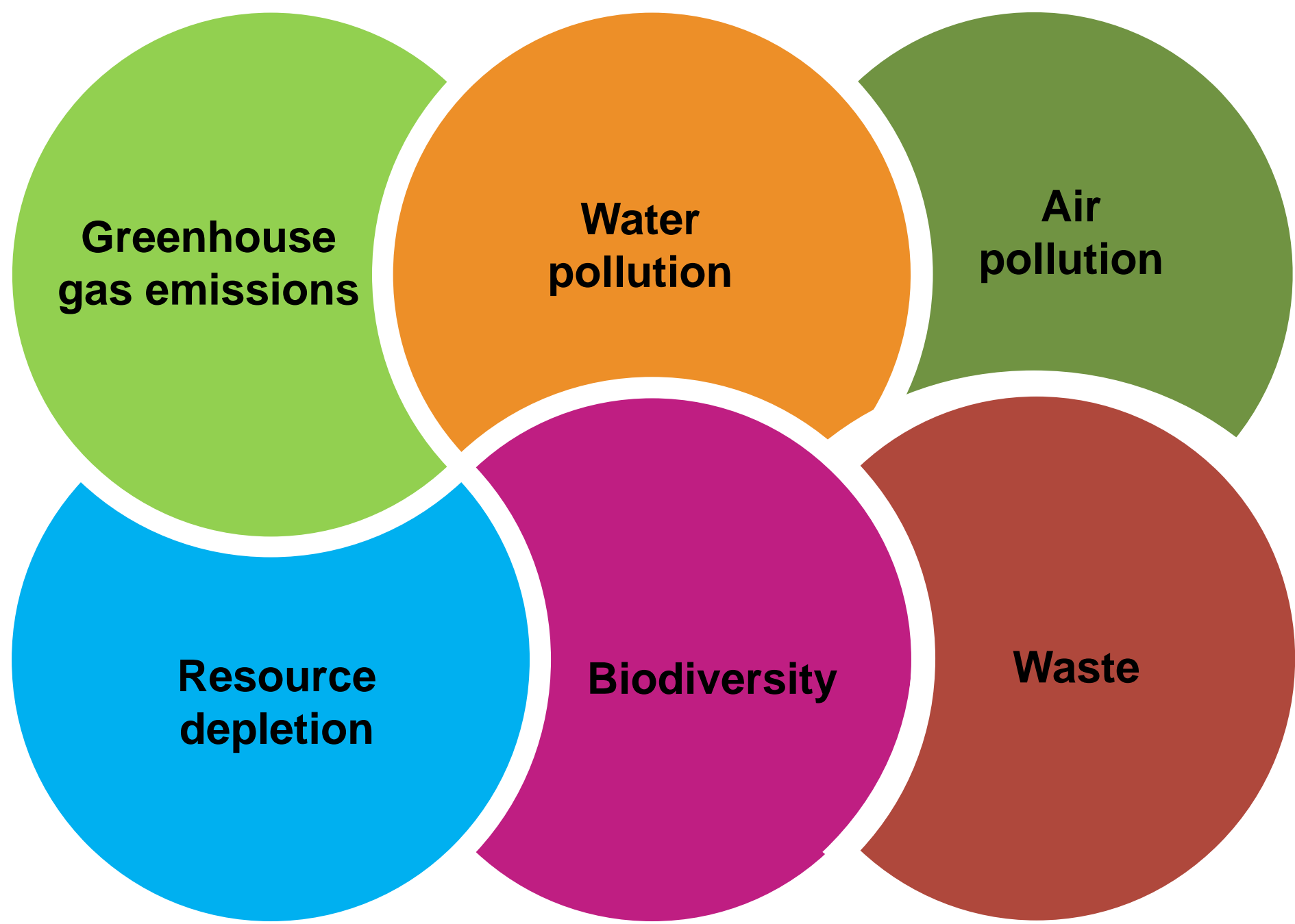
We attempted to meet the research objectives through:

- Working with an environmental economics expert to identify a list of potential domains of sustainability to be included based on their past-experience of measuring sustainability in non-healthcare settings.
- Input from the environmental economics expert to understand how each domain might be measured in a consistent way, allowing for reasonable comparison across different areas of HTA activity and also for health and care decision makers outside of HTA bodies.
- Interviews with environmental researchers and environmental economists to understand the likely data sources to estimate the sustainability impact of different types of healthcare technology.
- Interviews with relevant stakeholders to understand their experiences of measuring environmental impact in healthcare, whether through formal frameworks or other methods.

For the purposes of this research, YHEC defined environmental sustainability for healthcare as:

“Healthcare that is delivered in ways that not only improve health outcomes but also reduce environmental damage or mitigate environmental impact that cannot be avoided”.

We considered six different potential domains for environmental impact:



METHODS (cont.)

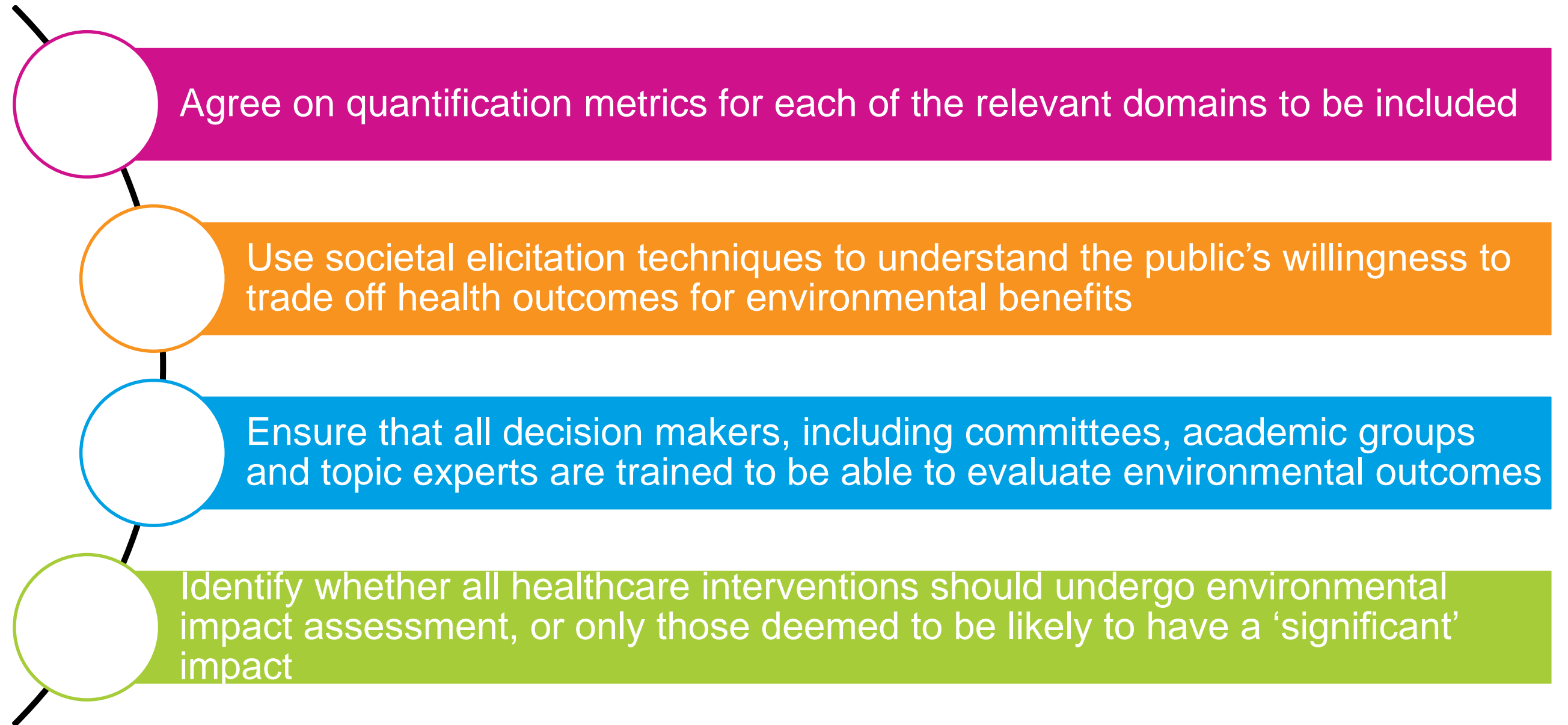
Of those domains, greenhouse gas emissions is the only domain for which well-established quantification techniques currently exist. Some other domains, particularly biodiversity and resource depletion, are highly unlikely to be able to be quantified, although this does not mean that the impact is small or does not matter.

CONCLUSION AND RECOMMENDATIONS

Because methods for quantifying those impacts are very limited at present, we believe that forming a framework around the quantification techniques and data sources that are currently available would result in important consequences being missed or ignored. Quantifying environmental outcomes (as defined by the six domains described here) would be highly challenging within an economic model, for example. Very little evidence is available for the environmental impact of specific changes to healthcare pathways such as those normally captured in a decision analytic model. Consequently, no specific quantification techniques and data sources are recommended in this report, but an alternative ‘free text’ approach might be proposed suggested that does not rule out the use of existing methods, relying instead on a deliberative approach.

We proposed two potential approaches to incorporating environmental sustainability into guidance. The first option is a fully integrated assessment, where the environmental impact is fully quantified, and is transparently fed into the decision-making process in a ‘mechanical’ fashion (for example, as a modifier to an incremental cost-effectiveness ratio). Such an approach would require methodologies with a level of detail similar to that currently provided. The second approach is a parallel evaluation, where the impact is discussed alongside other factors (such as cost effectiveness) and any adjustments to decision making are made using a deliberative process. This can be seen as a ‘middle ground’ between fully integrated assessment and not considering environmental impact in decision making.

We conclude that, whilst a fully integrated approach would be optimal from a scientific point of view, there would be a number of practical challenges associated with such an approach. If a parallel assessment approach is preferred, this should take a pragmatic approach and should not be overly prescriptive in its requirements. However, under a parallel valuation approach, we recommend that no restrictions should be placed on boundaries such as the domains, time horizon, sectoral or geographic perspectives. A number of additional challenges are discussed, including ensuring that decision makers and experts are fully trained to interpret any environmental data that are presented as part of the decision-making process. Finally, a series of detailed recommendations are made that should be addressed in order for a successful HTA framework to be fully realised.



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