

## Review

# Greener gastroenterology and hepatology: the British Society of Gastroenterology Strategy for Climate Change and Sustainability

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## ABSTRACT

There is a global climate emergency, and also a global health concern related to climate change. The British Society of Gastroenterology (BSG) acknowledges these issues, and supports the concerns of its members to address them. Climate change has adverse effects on gastroenterological and liver disease, and on healthcare systems. The healthcare industry, itself, is also a major contributor to greenhouse gases. BSG has developed a strategy on Climate Change and Sustainability, which encompasses all of the activities of the society, and its members: personal, professional, organisational, political, international and research.

## INTRODUCTION

There is a widespread appreciation that there is a global climate emergency, and the latest projections are alarming. The Intergovernmental Panel on Climate Change<sup>1</sup> has concluded that the observed increases in greenhouse gas (GHG) emissions since 1750 have unequivocally been caused by human activities, has noted that each of the last four decades have been successively warmer than any others since 1850 and predicted that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless there is a deep reduction in GHG emission. There is a limited window of opportunity and to achieve a 1.5°C limit in global warming, there needs to be a 45% reduction in GHG emissions by 2030. There are adverse health effects due to climate change, but healthcare itself is a major contributor to GHG emissions: 4% of the total in England<sup>2</sup> and 8.5% in the USA.<sup>3</sup> Within a hospital environment, endoscopy is the third-biggest contributor to GHG emissions,<sup>4</sup> and the green endoscopy group based in the UK, but with a

growing international membership, has led the way globally with publications raising awareness and offering practical advice on how to mitigate the adverse environmental effects of endoscopy.<sup>5–7</sup>

Climate change has widespread adverse effects on health,<sup>8</sup> and particular effects on gastrointestinal and liver disease.<sup>9</sup> At a global level, the adverse effects on water security can lead to an increase in infectious diseases, declining fish stocks, and displacement of peoples and disruption of health infrastructure due to sea level rises. Loss of biodiversity and encroachment of wilderness areas can lead to transmission of pathogens between wild and domestic animals, with the possibility of further pandemics. The drive for increased food production has led to two-thirds of global agricultural land at risk of pesticide pollution. Climate sensitive mycotoxins from fungi have been linked to hepatocellular carcinoma. Adverse effects on food security can lead to a paradoxical increase in obesity and non-alcoholic fatty liver disease.<sup>10</sup> Other concerning aspects of environmental sustainability include the use of non-recyclable plastic waste (or potentially recyclable plastic waste that is not recycled). We witness this in many aspects of our practice, and there is an opportunity to address this.

## BRITISH SOCIETY OF GASTROENTEROLOGY (BSG) STRATEGY

The BSG acknowledges and supports the strong concern from its membership regarding the effects of climate change on health, and the lack of sustainable practices in many aspects healthcare. The National Health Service (NHS) is



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### Box 1 British Society of Gastroenterology (BSG) climate change and sustainability mission statements

#### Missions statements

- ⇒ BSG recognises that there is a global climate emergency, and that this has adverse effects on health.
- ⇒ BSG is committed to support and promote environmental sustainability across all aspects of its practice nationally and internationally, and to support the National Health Service in its aims to achieve a net-zero service.
- ⇒ BSG will promote sustainability through its charitable objectives of research, training and education, and will provide leadership through example, in its business and membership activities.

the first national healthcare system in the worldwide to set a net-zero emission target,<sup>2</sup> and BSG executive expressed enthusiastic support for this. A BSG multidisciplinary working party was convened in June 2021 and a strategy subsequently approved by the BSG Trustees in October of that year. The BSG Climate Change and Sustainability Strategy<sup>11</sup> was launched in November, coinciding with the COP26 global climate change conference in Glasgow. We are aiming for a programme of green gastroenterology and hepatology, as well as green endoscopy. Fundamental to the strategy we recognised the need to publically acknowledge the global climate emergency, to support the Greener NHS programme, and to ensure that we met the objective of our strategy in line with charitable objectives of BSG, encompassed in three mission statements (box 1). We set the ambitious aim to encompass sustainability in all aspects of BSG's activities, and where possible in its dealings with other organisations or suppliers of services. Conferences, for example, involve bringing large numbers of delegates, organisers, industry representatives and supplier of services together, usually with a huge amount of associated travel. Virtual conferences negate a great deal of the associated carbon footprint, but face-to-face conferences still have great value for our members. Recognising this, we have critically examined the sustainability not only of the contribution of BSG, but also of the conference venue.<sup>12</sup>

Our strategic objectives encompass all aspects of the work of the society and its members: personal, professional, organisational, political, international and research (table 1). The aim is for all of the committees within the organisation to develop individual sustainability strategies, and to consider the environmental impact of current and future activities. The organisation already has a 'paperless' office and has 'decarbonised' all of its financial investments. We will take into consideration the environmental credentials of any organisations contracted for services. The pandemic forced us to re-evaluate how we work, and

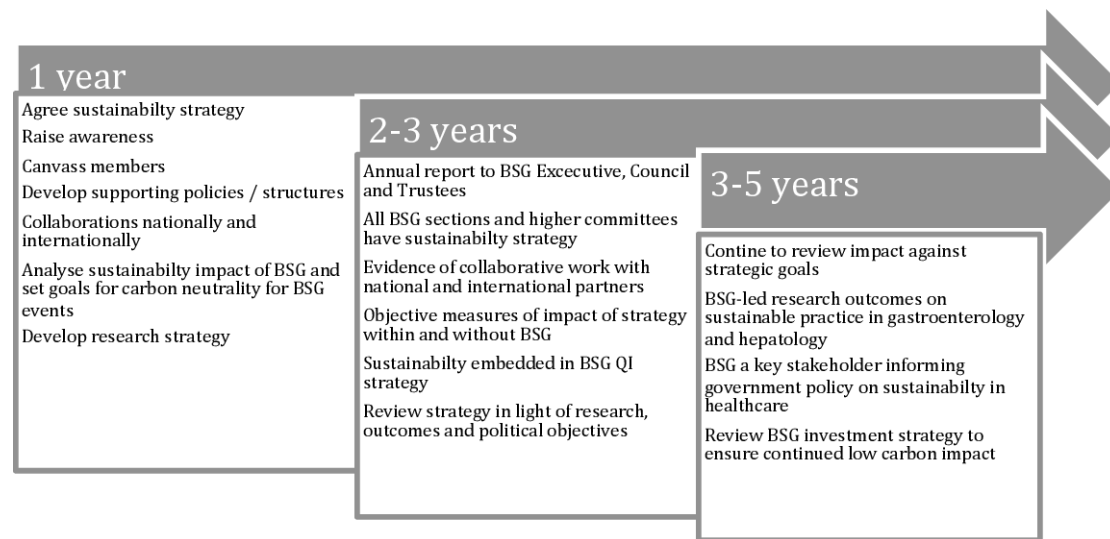
**Table 1** BSG climate change and sustainability strategic objectives

Strategic objectives	
Personal	BSG will promote awareness and share knowledge regarding climate change and sustainability with regard to gastrointestinal and liver health, and delivery of services. We will not be advising members on how to conduct their personal lives with regard to sustainability.
Professional	BSG will share knowledge on relevant issues, and advise on how sustainability can be practised and promoted within our professional services. This will align to the NHS net-zero strategy, and innovative practice will be encouraged and developed. Within BSG professional practice, higher committees and sections will consider how sustainability affects their field of practice.
Organisational	BSG will aim to achieve, where practicable, sustainable practice across all aspects and activities of the organisation.
Political	BSG will consider direct or collaborative options to highlight the gastroenterology and hepatology issues with regard to sustainability at a governmental level, with an aim to improve practice where evidence for this exists.
International	BSG will collaborate with other professional organisations internationally to achieve the aims of our climate change and sustainability strategy. This will be in coordination with BSG International Committee.
Research	BSG will encourage, promote and support research into opportunities to reduce the carbon footprint arising from gastrointestinal, hepatology and endoscopy services. This has been incorporated into the BSG Research Strategy
BSG, British Society of Gastroenterology; NHS, National Health Service.	

a very effective switch to remote working and communication was established with a lasting reduced carbon legacy. In our clinical practice, there are unresolved questions regarding the environmental impact of pharmacological, endoscopic and outpatient services, and sustainability has been incorporated as a key feature in the BSG Research Strategy. We will collaborate with other organisations including the Greener NHS Programme in England, equivalent programmes in the devolved nations, and the Royal Colleges of Physicians in England and Scotland. As recent members of the UK Health Alliance on Climate Change, we have the opportunity to work with a wide range of professional organisations to form a large and influential lobbying force for change. Members of the Green Endoscopy Group have been very effective nationally and internationally at raising awareness of the environmental impact of endoscopy through social media (@GreenEndoscopy) and through peer-reviewed publications, and representatives sit on the BSG Climate Change and Sustainability Working Group. Translating environmental awareness into action is challenging, but is a key BSG priority. Practical advice to our members will be developed to enable them to influence change in their own services. Statements of policy and intent are important, but BSG has developed a 5-year strategy with measurable outcomes (figure 1).

#### GLOBAL PARTICIPATION

The BSG strategy is the first of its kind in the world from a gastroenterology professional society, and is being seen as an exemplar by national and multinational



**Figure 1** British Society of Gastroenterology (BSG) 5-year strategy with measurable outcomes.

gastroenterology societies worldwide. The global momentum for environmental sustainability in gastroenterology and hepatology is growing, and professional societies have an opportunity for leadership in this area. The World Gastroenterology Organisation, which encompasses 117 gastroenterology societies from all continents and demographic groups, developed a climate change working group and has published commentaries with global representation, including the UK.<sup>9</sup> The European Society of Gastrointestinal Endoscopy has 50 member societies and is developing a position statement on green endoscopy which constructively challenges professional and industry practices. The American Gastroenterology Association, American Society for Gastrointestinal Endoscopy, American College of Gastroenterology and American Association for the Study of Liver Disease are collaborating to develop a sustainability strategy. Other societies around the world are highlighting these issues and raising awareness. Constructive collaboration between these groups, representing large populations globally, has the potential to influence both pharma and the medical device industries to adopt more sustainable practices in healthcare delivery, not just in their products but in their manufacturing, delivery and supply chains.

## OVERCOMING BARRIERS TO IMPLEMENTING CHANGE

Many of us involved in healthcare are concerned about the effects of climate change, but translating that concern into action can be difficult for a number of reasons. In a multinational survey of professional societies in 12 geographically dispersed areas 4564 health professionals responded.<sup>13</sup> The overall response rate was low, and not as representative as intended, but the findings are interesting. Overall, 95% of respondents accepted that climate change was happening, and 81%

felt that it was mostly or entirely caused by human activities. A majority of respondents felt that climate change had already adversely affected the health of the people in their population, and that this would become worse in the next 10 years. With regard to their professional societies, 69% felt that these organisations should cut ties with fossil fuel companies, and 85% felt they should offer opportunities for virtual meetings. Overall, 54% said that time constraints limited their willingness to communicate with the public about climate change and health. Other limiting factors including the feeling that their actions would not make a difference. These are common factors identified in the literature, and indeed one environmental psychologist commentator identified 33 reasons why individuals may fail to act on climate change.<sup>14</sup> At BSG, however, we are committed to not only raise awareness of the issues, but also to take action ourselves as an organisation, and to give practical advice to enable our members to do the same.

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