

Charting a greener path: ESGE and ESGENA's vision for sustainable gastrointestinal endoscopy



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Endoscopy 2024; 56: 712–714
DOI 10.1055/a-2283-7327
ISSN 0013-726X

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Georg Thieme Verlag KG, Rüdigerstraße 14,
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As the climate crisis casts an ever-growing shadow over our planet, it is imperative for all sectors, including healthcare, to reassess their impact on the environment and redefine their practices. Healthcare, a field intrinsically linked to the well-being of humanity, finds itself at a crossroads. The necessity to harmonize healing with environmental stewardship is paramount, compelling the medical community to innovate and adopt sustainable practices. In this critical context, the role of gastrointestinal (GI) endoscopy, with its significant environmental footprint, comes into sharp focus, prompting a transformative journey towards sustainability [1].

A mere five years ago, the notion of 'green endoscopy' was virtually unheard of. Today, it stands at the forefront of GI forums. Tomorrow, 'green endoscopy' must be the norm. We may still be at the inception of this concept, yet undeniable data about our professional activities' environmental toll exists. It is estimated that an endoscopic procedure can produce up to 30 kg of CO₂e, significantly driven by staff and patient commutes via private fuel-powered vehicles [2]. Moreover, the ecological footprint of each endoscopic biopsy [3] or unnecessary endoscopic procedures [4] are becoming increasingly evident. Additionally, the prevalent use of 'single-use' endoscopy devices adds significantly to the burden. This has been further intensified by the recent release of single-use endoscopes under the premise of 'net zero' infection risk.

The European Society of Gastrointestinal Endoscopy (ESGE) and the European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA) have stepped forward, recognizing the urgency to reconcile our core mission of improving health with environmental stewardship. ESGE and ESGENA's commitment is multi-dimensional, striving to bring about a paradigm shift in perception and practice. ESGE and ESGENA

embarked on this journey by being the first GI scientific societies to release a collaborative position statement on reducing the environmental footprint of GI endoscopy [5]. This is an effort aimed at not only raising awareness but also delineating a clear trajectory towards environmentally conscious endoscopy practices [5]. This ESGE/ESGENA position statement emphasizes the need for a holistic approach in GI endoscopy, addressing all aspects from clinical procedures and logistics to resource utilization and waste management. It also highlights the importance of incorporating research into this framework, ensuring a comprehensive strategy for sustainable endoscopy practice. The statement is a clarion call to action, urging all agents involved to integrate sustainability into every aspect of GI endoscopy, aligning the practice with the broader, more profound goals of healthcare.

The responsibility of ESGE on providing further guidance and raising awareness on sustainable GI endoscopy has subsequently led to the development of the ESGE Green Endoscopy Working Group. Our first research project as a working group revealed that most endoscopists agree that climate change is real and anthropogenic, yet interestingly, one-third did not consider GI endoscopy to be a significant contributor to climate change [6]. Also, the current general lack of institutional support and knowledge from endoscopy unit staff regarding sustainable endoscopy practice were identified as the main barriers to green endoscopy [6]. The need of a thorough mindset change seems clear. But turning ideas into reality encompasses much more and embracing this societal change is not without challenges. The path is fraught with logistical hurdles, financial constraints, and the inertia of established endoscopy practices. Yet, it is a path brimming with opportunities. Adopting sustainable practices in GI endoscopy can lead to significant cost sav-

STRATEGIC AIMS AND RESPONSIBILITIES

- 🌱 To **raise awareness** and **reduce** the **ecological footprint** of GI endoscopy.
- 🌱 To **quantify** and work to **reduce** the **environmental impact** of **ESGE**, the **ESGE Days congresses** and the **Endoscopy journal**, with the **aim** to become a **net-zero** organization.
- 🌱 To **provide guidance** to ESGE and ESGENA members, endoscopy stakeholders, corporate partners, equipment manufacturers and other interested parties to reduce the environmental impact of GI endoscopy.
- 🌱 To **develop an international research network** around the issue of environmental awareness, including the launching of research studies and research grants with a **focus on 'green' subjects**.
- 🌱 To **create** and **develop educational activities** such as webinars, congresses, and communications in ESGE newsletters.
- 🌱 To **collaborate** with **industry** and **policymakers** on reducing the environmental impact of GI endoscopy and **advocating** sustainability.

► **Fig. 1** ESGE Green Endoscopy Working Group – strategic aims and responsibilities. ESGE – European Society of Gastrointestinal Endoscopy; ESGENA – European Society of Gastroenterology and Endoscopy Nurses and Associates; GI – gastrointestinal.

ings, enhance patient safety and quality of care, and bolster the public image of healthcare institutions. The mindful commitment of ESGE and ESGENA to promote this endeavor was prominently discussed at the European Parliament in September 2023, highlighting the societies' vision of a future defined by sustainable healthcare excellence.

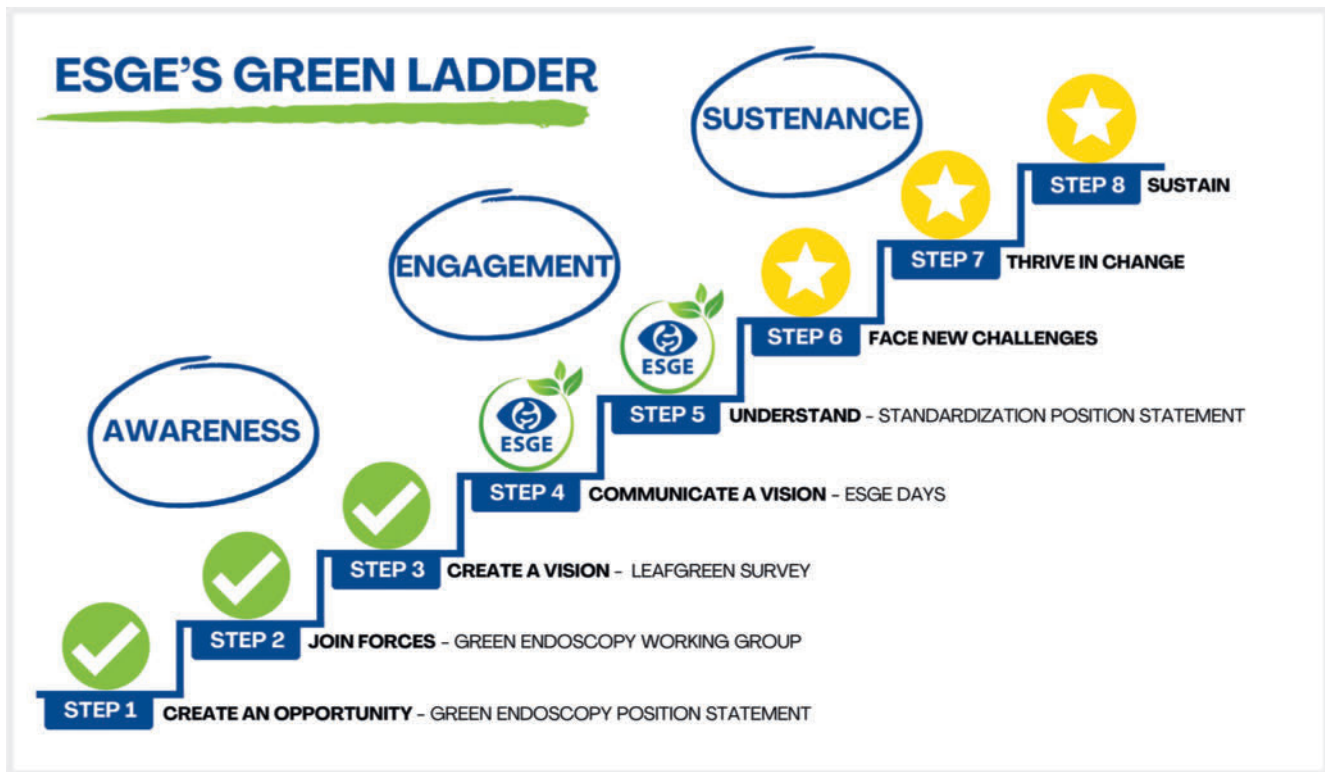
As ESGE/ESGENA look ahead, we do so with a clear, actionable roadmap (► **Fig. 1**). The societies' specific aims for the next two years reflect a pragmatic, yet ambitious approach. From reducing the environmental footprint of its own activities to nurturing an educational and research ecosystem in green endoscopy. Since 2023, the focus on reducing the environmental impact of ESGE Days has become a priority. Several measures have been implemented, from reducing giveaways and prioritizing digital signage, to partnerships with service providers and venues with renowned and accredited sustainability policies. The recent COVID-19 pandemic has highlighted the importance of face-to-face interaction, but it has also shown the value of hybrid formats. This shift has made events like ESGE Days accessible both remotely and in person, reducing travel emissions without sacrificing quality interaction and knowledge exchange. Green endoscopy sessions have been created, allowing a dedicated space for discussion and networking amongst enthusiasts. While research is thriving, speaking the same language in sustainable GI endoscopy has revealed itself to be a major challenge. Looking to overcome this hurdle, the ESGE Green Endoscopy Working Group is presently crafting a position statement centered on standardized approaches to sustainable endoscopy research. This initiative underscores the significance of a standardized language, as in health-

care and research, speaking the same language is not just a communication strategy, it is the foundation upon which groundbreaking discoveries and transformative care are built.

In conclusion, the substantial environmental impact of GI endoscopy calls for an immediate and profound transformation in how we approach our practice. ESGE's journey towards green endoscopy is a compelling narrative of vision, commitment, and action. It is a narrative that speaks to the heart of healthcare's dual mandate: to heal and to preserve. As ESGE and ESGENA continue to champion this cause, it calls upon every stakeholder to be part of this transformative journey. The transition to green endoscopy is more than an environmental or medical imperative, it is a moral one. Driving change is ambitious and challenging, and while we may still be at the outset of this journey, ESGE is motivated and resolute in its commitment to catalyze this transformation (► **Fig. 2**). As we continue to drive this essential transformation, let us unite in this endeavor, fostering collaboration and collective action.

Conflict of Interest

Enrique Rodríguez de Santiago declares: Olympus (educational activities and advisory), Apollo Endosurgery (educational activities), Norgine (congresses fee), Adacyte Therapeutics (Advisory) and Casen Recordati (congresses fee). João A. Cunha Neves declares that he has no conflict of interest.



► **Fig. 2** ESGE's Green Ladder (based on Kotter's 8-Step Change Model). ESGE – European Society of Gastrointestinal Endoscopy.

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