



edsa

European Dental
Students' Association

Sustainability in Dentistry

European Dental Students' Association

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TABLE OF CONTENTS

PAGE

1. Introduction.....	3
2. Definitions	3
3. Purpose.....	3
4. Scope.....	4
5. Policy Statement.....	4
6. Roles and Responsibilities.....	4
7. Related Documents.....	5
8. Frequently Asked Questions (FAQs).....	5
9. Policy Review	5
10. References:	5

1. Introduction

Climate change is a defining challenge of our time, and the FDI World Dental Federation aligns with the United Nations' 2030 Agenda for Sustainable Development, urging dentistry to integrate sustainable goals into daily practice and support a shift toward a green economy for healthier lives across generations. The current delivery of dental healthcare exerts considerable environmental pressure, characterised by high water and electricity usage, reliance on disposable materials, generation of hazardous and chemical waste, and heavy use of sterilisation and radiography systems. In this context, dental professionals and institutions hold a professional duty and social responsibility to adopt sustainable, eco-friendly transformations in clinical care and education.

2. Definitions

- **Sustainability:** The capacity to operate without depleting natural resources or harming ecosystems over the long term.
- **Sustainable Development:** Meeting present needs without compromising future generations' ability to meet theirs.
- **Green Dentistry:** Dental practice that delivers high-quality care while minimising environmental impact through resource efficiency, preventative care, and ethical material use.

3. Purpose

This policy aims to integrate sustainability into dental care delivery by encouraging educational institutions, practitioners, and policymakers to adopt environmentally conscious strategies. From optimised clinical pathways and resource-efficient materials to preventive care and eco-conscious decision-making, these measures support reduced carbon emissions and alignment with SDG 12: Responsible Consumption and Production. Integrating such content into undergraduate curricula ensures future professionals lead the charge for sustainable dentistry.

4. Scope

This policy applies to the whole EDSA network, including delegates, member institutions, students, and dental healthcare teams, and aims to promote the broad use of sustainable frameworks in both teaching and clinical practice to preserve patient and environmental health.

5. Policy Statement

EDSA urges institutions to:

- **Introduce sustainability modules into dental curricula**, covering environmental impacts, SDGs, carbon footprint reduction, and ethical use of resources.
- **Prioritise preventive and minimally invasive dentistry** to reduce unnecessary procedures and environmental burden.
- **Reduce dependence on single-use disposables** where safe and feasible.
- **Use digital radiography, intraoral scanners, and paperless documentation** to dramatically lower chemical and paper waste.
- **Implement LED lighting, energy-efficient HVAC systems, water-saving handpieces**, and consider renewable energy to reduce emissions and costs.
- **Provide recycling infrastructure**, including amalgam separation, to minimise hazardous waste and support circular economy principles.
- **Encourage sustainable commuting**—active travel, public transport, car sharing—to reduce overall carbon footprint, given that travel contributes over 60% of dental emissions.

6. Roles and Responsibilities

It is the responsibility of EDSA delegates, board members, officers, and supervisory bodies to raise awareness, annually review this policy, and support its adoption across institutions. Dental professionals, educators, and students share accountability for embedding sustainable practices in both curricula and daily operations.

7. Related Documents

- FDI World Dental Federation, 2022. Consensus Statement on Environmentally Sustainable Oral Healthcare. \[online] FDI World Dental Federation.
Available at: <https://www.fdiworlddental.org/resources/policy-statements-and-resolutions/sustainability-dentistry>
- Duane, B., Lee, M., White, S., et al., 2023. A life cycle analysis of carbon emissions in general dental practice: identifying hotspots and areas for change. British Dental Journal, \[online] 234(5), pp.245–250.
Available at: <https://www.nature.com/articles/s41415-023-6710-z>
- Harris, J. and Patel, A., 2023. Reducing single-use plastics in dental practice: a quality improvement project in London dental clinics. BMJ Open Quality, \[online] 12(1), e002312.
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- Ahmed, R., Singh, N. and Thompson, K., 2025. Embedding sustainability in dental education: a scoping review. BMC Medical Education, \[online] 25(1), pp.1–12.
Available at: <https://link.springer.com/article/10.1186/s12909-024-05501-3>

8. Frequently Asked Questions (FAQs)

If you have any further inquiries regarding this policy, please contact the EDSA Policy Officer at policy_officer@edsaweb.org

9. Policy Review

This policy will be reviewed every two years by the current Policy Officer of EDSA. It will be aligned with global health priorities and will incorporate feedback from professionals, stakeholders, and the community.

10. References:

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6. Gitnux, 2025. Sustainability in the Dental Industry Statistics. \[online] Available at: <https://gitnux.org/sustainability-in-the-dental-industry-statistics>
7. British Dental Journal, 2022. Top tips for making your practice more environmentally sustainable. \[online] Available at: <https://www.nature.com/articles/s41415-022-4938-7>
8. Harris, J. and Patel, A., 2024. Reducing single-use plastics in dental practice: a quality improvement project. BMJ Open Quality, \[online] Available at: <https://pubmed.ncbi.nlm.nih.gov/39333822/>
9. El-Gendy, H., Omar, D. and Fekry, M., 2024. Carbon footprint of private dental clinics in Egypt: a cross-sectional study. BMC Oral Health, \[online] Available at: <https://link.springer.com/article/10.1186/s12903-024-05413-0>



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