

BERITA ANESTESIOLOGI

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Malaysian Society
of Anaesthesiologists



College of
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AMA



GREEN ANAESTHESIA
NOW or NEVER

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Message from the EDITOR-IN-CHIEF

Dr Anand Kamalanathan

Dearest readers,

A poignant reminder of the passing of time is that all good things must come to an end. I am writing to express my gratitude to Dr Gunalan Palari Arumugam, the former Chief Editor of our Berita, for his outstanding service and dedication over the past twelve years. Dr Gunalan's tireless efforts and unwavering commitment since 2011 have been instrumental in shaping the magazine into the reputable publication it is today. His passion for the field of anaesthesiology and his ability to convey complex concepts clearly and concisely have been invaluable to our readers. Under his leadership as Editor-in-Chief from 2013, the Berita has grown in both readership and quality and has become a trusted source of information for anaesthesiologists in Malaysia and beyond. Dr Gunalan's contributions will be remembered for

years to come, and we are grateful for the mark he has left on our publication and our lives. But alas, he has decided to take a step back and leave the Berita in our hopefully capable hands. His parting words to me before he left for greener pastures were, 'We only hold it (Berita) in trust for the next generation to build on from it.'

Speaking of greener pastures, as we navigate the intricate realm of anaesthesiology, let us remember our vital role in fostering sustainability within our practices. Like the delicate balance of gases in our operating rooms, the equilibrium of our planet's ecosystem relies on our conscious efforts towards a greener future. This month's theme is aptly titled Green Anaesthesia: Now or Never, showcasing the MSA's vision to elevate our standing to the next level. To help us achieve these lofty goals, we have curated five articles detailing

how to not only to administer anaesthesia but also preach a sustainable and environmentally conscious approach to our practice.

Just as we meticulously monitor the pulse and respiration of our patients, let us extend our vigilance to the health of our environment. From reducing our carbon footprint to implementing eco-friendly anaesthesia techniques, our collective commitment to sustainability can create ripples of positive change beyond the confines of our medical facilities. Remember, the efficiency of our work is not merely measured by the precision of our techniques but also by the consciousness with which we minimize our environmental impact.

Finally we wish you all, a Happy Deepavali, Merry Christmas and a Happy New Year !



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EMPOWERING TOMORROW

Malaysian Society of Anaesthesiologists' Pledge to a Sustainable Future

by **Dr Samuel Tsan Ern Hung**

Universiti Malaysia Sarawak, Sarawak, Malaysia

We, the undersigned professionals in the field of anaesthesiology, acknowledge the critical importance of incorporating sustainability principles into our practices. With a steadfast commitment to improving patient care while minimising our environmental impact, we hereby pledge to uphold and champion the following principles:

1. Efficient Resource Management:

We commit to optimising the utilisation of resources within our anaesthesiology practices. By implementing efficient techniques and technologies, we will reduce waste, conserve resources, and minimise our ecological footprint.

2. Green Anaesthetic Agents:

Recognising the significance of anaesthetic agents in our practice, we pledge to prioritise the use of environmentally friendly options whenever feasible. We will remain informed about the latest research and advancements to select agents with reduced environmental impact.

3. Waste Minimisation:

We will actively adopt strategies to minimise waste generation during our anaesthesiology procedures. Through responsible waste disposal, recycling, and thoughtful management, we will contribute to a cleaner and healthier environment.

4. Embrace Reusability:

We will advocate for the integration of reusable medical equipment where safety and clinical outcomes permit. By minimising single-use items, we aim to decrease our contribution to the waste stream and promote sustainable practices.

5. Energy Efficiency:

In our pursuit of sustainable anaesthesia, we are committed to employing energy-efficient equipment and procedures. By monitoring and regulating energy consumption, we will reduce our energy footprint while maintaining optimal patient care.

6. Lifelong Learning:

We will proactively seek opportunities for continuous education in sustainable anaesthesiology practices. Staying current with the latest developments will empower us to seamlessly incorporate environmental consciousness into our patient care routines.

7. Champion Sustainability:

Recognising our role as advocates, we pledge to actively promote sustainability within our healthcare institutions and professional networks. Through our leadership and example, we aim to inspire the widespread adoption of eco-conscious practices.

8. Collaborative Approach:

We understand that sustainability is a collaborative endeavour. We will collaborate with all advocates of sustainability to drive sustainable practices throughout the perioperative care process, promoting interdisciplinary teamwork.

In unison, we pledge to adhere to these principles and integrate sustainability seamlessly into our daily practices in anaesthesiology. By doing so, we aim to enhance patient outcomes, contribute to environmental preservation, and lead by example in the pursuit of a healthier, more sustainable world.

Figure 1: The Malaysian Society of Anaesthesiologists sustainability pledge

"Climate change is the biggest threat to global health in the 21st century", states the 2018 *Lancet Countdown* report,¹ which was carried out to track the impacts of climate change on health. This emphatic pronouncement is a stark warning of the consequences of global warming. If left unheeded, it may lead to untold suffering not just in Malaysia but for the whole world. It has been shown that healthcare is responsible for up to 5% of total emissions of global greenhouse gases.¹ Although data for measures of emissions from anaesthetic practices are lacking, reports from the National Health Service showed that inhalational anaesthetic agents contributed almost 3% of total carbon emissions in England.² Additionally, perioperative services have been shown to intensively consume resources such as materials, energy, and water. Up to 25% of all hospital waste was produced by the operating theatres, of which 25% came from anaesthetic practices.³ These data provide a snapshot of the dire need for action from anaesthesiology healthcare practitioners in Malaysia. The Malaysian Society of Anaesthesiologists (MSA) answered the call for definitive action to protect the environment this year, by incorporating the theme "Green Anaesthesia: It's Now or Never" in this year's national-level World Anaesthesia Day celebration.

As part of the initiatives for environmental friendliness, throughout October, the MSA established a pledge to promote sustainable anaesthetic practices (Figure 1). It was written based on the consensus principles set out by the World Federation of Societies of Anaesthesiologists for environmentally sustainable anaesthesia (Figure 2).⁴ This pledge was subsequently disseminated electronically to all anaesthesiology healthcare practitioners across Malaysia to be signed. During the national-level celebration of World Anaesthesia Day in Kota Kinabalu on the 15th of October 2023, the pledge was officially recited

by all the attendees, followed by the formal signing of the pledge by the President of MSA, President of the College of Anaesthesiologists Academy of Medicine, Chairman of MSA, Head of Service for Anaesthesia in Ministry of Health, and Organising Chairman of National Anaesthesia Day 2023 celebration.

1. Minimise the environmental impact of their clinical practice.
2. Use environmentally preferable medications and equipment when clinically safe to do so.
3. Minimise the overuse/waste of medications, equipment, energy and water.
4. Incorporate environmental sustainability principles within formal anaesthesia education.
5. Embed environmental sustainability principles within anaesthesia research and quality improvement programmes.
6. Lead environmental sustainability activity within their healthcare organisations.
7. Collaborate with industry to improve environmental sustainability.

Figure 2: Consensus principles of environmentally sustainable anaesthesia by the World Federation of Societies of Anaesthesiologists

Overall, the sustainability pledge campaign was a resounding success. In total, 286 anaesthesiology healthcare practitioners comprising specialists, medical officers, assistant medical officers and nurses signed the pledge (Figure 3). More importantly, the sustainability pledge endeavour created a lasting awareness of the importance of environmental-friendly anaesthetic practices, to be propagated further by the new champions of sustainable anaesthesia.

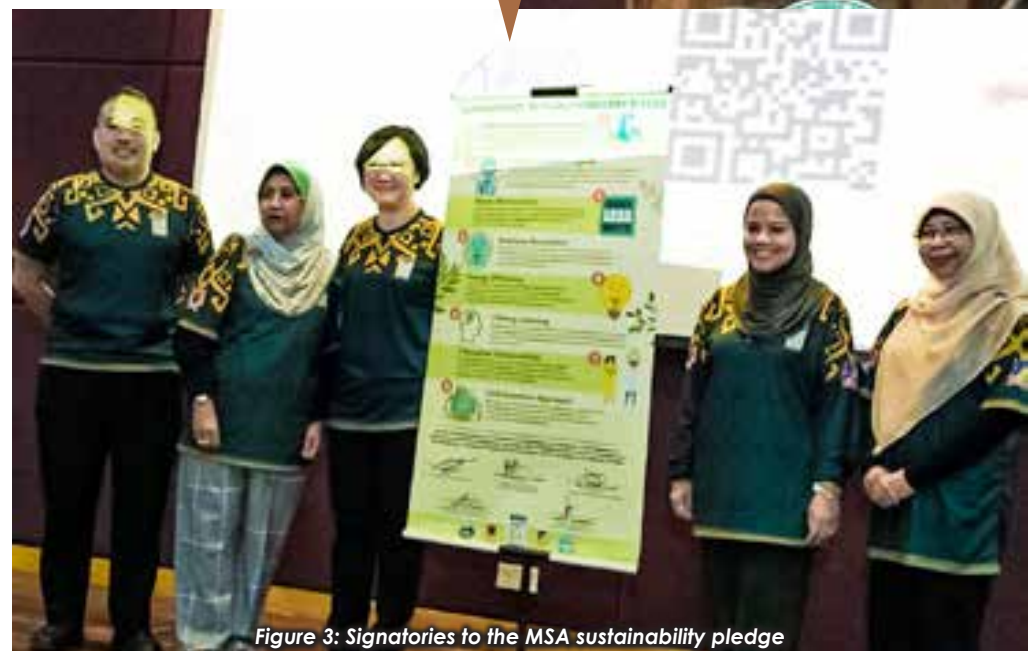


Figure 3: Signatories to the MSA sustainability pledge



Abdul Halim Latheef	Chiew Yee Soon	Joyce Ann Fernandez
Abdul Jabbar bin Ismail	Chong Si Ching	Juliana
Abing A Hamid	Christine	Julie Razak
Adeline Yip	Cisca Gabriel	Jurini binti Jawatah
Adrian Kidar	Connie Chiew Sin Jiew	Jusim binti Lugu
Ahmad Afifi Mohd Arshad	Dayang Shariza binti Abang Abdillah	Justina Tobi
Ahmad Faris Ngimron	Delima Radzwa binti Hasan	Kanesh Kumar Doraisamy
Ahmad Kamil bin Arbain	Della Ferianna binti Ariffin	Katrinah Hamdan
Ahmad Zulhilmi bin Yusof	Eddinawatey binti Lamree	Kenny Tiew Siew Ho
Aida Nazera Abidin	Edward	Kerpagam Nadarajan
Aini Farhana Asmuni	Elka	Kerstie
Ainun Nadwah binti Abdul Raof	Emilda Jimmy	Khairiyah
Alan Wong	Esther Teow	Khaironisa Abu Bakar
Alckysia Pileh	Fakhirudin Mohd Razali	Khairul Fakry bin Mohd Said
Alexander Tan Zhi Sheng	Farah Aziera binti Asmawi	Khairulfaizah binti Isnin
Aliah Farhah binti Azlan	Farah Nasuha Mohd Daut	Khaw Ju Lin
Alice Lee	Fasihatul Hayati binti Dahlan	Khaw Soon Keong
Allan Ang	Fatima Ahmad Katran	Koh Kian Chuan
Amanda Stella Stephane	Felicia binti Stephen	Komathi Nair a/p Murugesan
Aminuddin Ahmad	Fung Eng Ming	Krishalyah A/p Sivasubramaniam
Anand Kamalanathan	Georgina sindin	Kwok Fan Yin
Anantha Raman a/l Selvarajan	Goh Ce Cin	Laura Gampulot
Andeyzemah	Goh Cheng Chun	Lee Gayan
Angelina Beh Ee Leen	Goh Way Phing	Lee Kwan Tuck
Anisah binti Ibnu Hassan	Gowri a/p Jayaraman	Lee Soh Nam
Anizah bt Bin Yamin	Hanim	Liew Kenlee
Annie Ak Maxwell	Herna Marlynnie	Lim Chee Hui
Arman Izzuddin Yahaya	Hion Yuen Teng	Lim Shaun Jing
Arnellia Nelly bt Noivi	Ilmi Mifdhal bin Mustafa	Liow Ying Tian
Asrina binti Man	Ina Ismiarti Shariffuddin	Loh Li Sen
Ayusliza binti Ahmad	Iqbalmunawir bin Ab Rashid	Looi Ji Keon
Azarinah Izaham	Irene Tan Ai Leng	Lynora bt Fong Ming
Azhar Mohamed	Iskandar Khalid	Maizura binti Kadir
Azlina Masdar	Isma Syarina binti Ismail	Marzida Mansor
Azrin Mohd Azidin	Ivy Sim	Maseeda binti Mohamed Yusof
Beatrice Wong Seow Wei	Izza Liyana	Mira Asilah binti Adam
Bede Rukasim	Jacintha Maluda	Miriam Azizi
Caroline binti Ukin	Jahizah Hj Hassan	Mohammad Hanfi bin Mohd
Caroline Jimat Embug	Jalwafi Amirah binti johari	Mohammad Jefri bin Abdullah
Caryn Yeow Kai Ling	Janasca Silip	Mohd Azizan Ghazali
Chan See Yun	Jasmine Jena anak Jabang	Mohd Faeiz Pauzi
Chang Yi Ling	Jenifer Sikah	Mohd Faizal bin Hj Mohd Hisham
Charis Ong Chee En	Jennyfer binti Langit	Mohd Hamdan bin Hassan
Charlene Chew Shao Lynn	Jeremy Tan Sin Hun	Mohd Nurikhwan bin Tai
Cheng Choon Guan	Johnny Kiu Toh Sing	Mohd Rathoshukri bin Yusof



Mohd Rohisham bin Zainal Abidin
 Mohd Sany bin Shoib
 Mohd Shaiful Zahiri bin Mohd Yusoff
 Molly Kong
 Monica Tau Sang
 Muhamad Rasydan bin Abd Ghani
 Muhammad Fikri Johari
 Muhammad Haziq Hasbullah bin
 Zainal Abidin
 Muhammad Iqbal bin A Ghani
 Muhammad Maaya
 Muhammad Nur Amin
 Muhammad Ridhwan Abd Razak
 Muhd Ihsan bin A Wahab
 Muhd Nur Aiman bin Sazali
 Murni Sari
 Nabilah binti Abdul Ghani
 Naeemah binti Abd Aziz
 Nagarajan Nagalingam
 Nahla Irtiza Ismail
 Nancy Mantan
 Nanthini Balakrishnan
 Natasha Yasmin binti Hashim
 Navkiran Singh Gill
 Nazatul Shahnaz binti Mohd Nazri
 Nik Abdullah Nik Mohamad
 Noor Aida Hajamohidin
 Noor Zahidah binti Yahya
 Noorjahan Haneem Md Hashim
 Noorshasheila Faradila binti Ab Hamid
 Noorul Asyikeen
 Nor Hafiza binti Ibrahim
 Nor Hidayah binti Zainool Abidin
 Nor Khali Salhah binti Ahmad Zaini
 Nor Syafawati Osnamila binti Abdullah
 Noraslawati Razak
 Norazim Sabdani
 Nordalila binti Ali
 Noreen Noman
 Norfazilah Hazzah binti muslimin
 Norliza Othman
 Norlyn Syafiqha binti Roslin
 Norsiah binti Mat Hussin
 Nozieana binti Digong
 Nur Athira Azhar

Nur Fatin Aishah binti Stapa
 Nur Khairunnisa binti Abdul Aziz
 Nur Shahida binti Ahmad Rasidi
 Nur Shazatul Rahimah binti Rosli
 Nur Syamimi binti Zulkikli
 Nurhidayu binti Ismail
 Nurul Farahin Izzati binti Ismail
 Nursyazwani binti Badron
 Nurul Farhain
 Nurul Fatiehah binti Marzuki
 Nurulsyazana Nabila binti Abd Hamid
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 Peter Tan
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 Priscilla a/p Manymuthu
 Priscilla Delbert
 Putri Nabilah binti Abdul Razak
 R Usha S Rajah
 Rachel Christel Richard Jolly
 Raechell Soibin
 Rahilah binti Zahari
 Raveenthiran Rasiah
 Raynee binti Kumilau
 Rohayu binti Ahmad Kasim
 Rosenani binti Jali
 Rosnah binti Ab Latif
 Rosnani Masulin
 Rosnariza binti Kusairi
 Rukiah Yahya
 Rukina Gilod Abdullah
 Rynessa binti Rinu
 Salfarina binti Kassim
 Samsualang bin Bacho
 Samuel Tsan
 Sarah Mong Xiao Yi
 Selnie binti Walun
 Shairil Rahayu Ruslan
 Sharifah Nor binti Mohd Salleh
 Shazharn bin Muhammad Zain
 Shereen Shabudin
 Sherliza binti Wahab
 Shivany a/p Sinnappu
 Siti Aznida
 Siti Fatimah binti Bakar
 Siti Nor Azbaiah Othman

Siti Normalawani binti Ismail
 Siti Suhaida binti Suliman
 Siti Syakirah binti Mohd Shaibi
 Sivaraj Chandran
 Soo Ki Yang
 Soo Sean Li
 Soo Wei Ji'e
 Su Thin A/D Din Chom
 Suha Norzam
 Suhaimi Jaafar
 Suhartina Kudien
 Suzanna James
 Suzy ak Belaja
 Syahirah Ghazali
 Syaima Naqiah binti Kamarudin
 Syed Rozaidi Wafa bin Syed Hussain Wafa
 Tam Kah Chun
 Tan Hai Siang
 Tan Ru Yi
 Tay Kah Hey
 Terrenz Tay Mui Ping
 Thanalakshimi Ravinttiran
 Thiyagu Ramachendren
 Thohiroh binti Abdul Razak
 Thong Chwee Ling
 Tioh Beng Siong
 TKumaravadivel Dharmalingam
 Victor Johnny
 Vimal Varma
 W Mohd Nazaruddin bin W Hassan
 Wan Ahmad Asyraf bin Wan Md Adnan
 Wan Rahiza Wan Mat
 Wong Wai Kit
 Wong Zi Sien
 Yew Cheng Hoe
 Yong Chow Yen
 Yusnita Yusri
 Yusnizah binti Mohd Nasir
 Yusrina Zahari
 Zayuah binti Mat Sulaiman
 Zion Lik Ka Vui
 Zul Iskandar Fareezal bin Zulkepli
 Zulkifli Salleh

