Annual Report 2018-2019





Contents

Annual Report: 1 July 2018 - 30 June 2019

From the Co-Chairs	4
Organisational Review	8
Climate Change	9
Air Pollution	11
Vehicles	12
Coal	13
Gas	15
Energy	16
Diet and Agriculture	17
Biodiversity and natural ecosystems	17
Sustainable Healthcare	18
No Time for Games	20
Students in action	22
iDEA19 Conference	25
Parliamentary visits	27
Submissions	27
Media and communications	29
Action around the states	32
Our People	39
Treasurers Report	41
Publications	42
Conferences, talks and lectures	47
Media interviews	50
References	57

From the Co-Chairs



Co-Chairs Dr Eugenie Kayak and Professor Kingsley Faulkner

DEA's activities have never been more relevant, and we look forward to growing the organisation over the following year.

The 2018/19 financial year for DEA has more than ever demonstrated the importance of DEA's work and Mission 'protecting health through care of the environment'. As outlined in this report, there has been 12 months of significant growth and activity for the organisation and we are greatly indebted to our volunteer members for their tireless efforts and dedicated staff. It has also been a period of significant change, with David Shearman, DEA's Founder, long serving Honorary Secretary and driving force behind so many of DEA's activities over the last 18 years, stepping down from the Management Committee and daily running of DEA. David was the instigator of many of DEA's leading initiatives (often years before other groups became involved) in relation to the health implications of climate change, coal combustion and mining, air pollution and gas extraction to mention just a few. Fortunately, David is continuing to be involved in DEA activities as an extraordinarily productive and valued Honorary Advisor.

In October 2018, DEA committed to undergo an extensive Organisational Review, appreciating the advantages in doing so at such a time of organisational growth and environmental peril. An external consultant was contracted, and we will endeavour to ensure the outcomes and implementation to assist DEA's activities, messages and influence reach an even larger audience whilst the governance and management of the organisation is strengthened to allow further growth and impact.

A planet in peril and leaders in denial

The past 12 months have been filled with increasing evidence of environmental damage with global warming and associated climate change being central to most of it. Yet Australia's carbon emissions continue to rise. The pleas of our South Pacific nation neighbours fall upon deaf ears.

Temperature records continue to be exceeded in many Australian cities and regions and in countries across the globe. Extreme weather events have been causing havoc to the environment, infrastructure, agriculture, essential services, livelihoods and often the loss of lives.

The Great Barrier Reef, one of the seven natural wonders of the world, is under increasing threat and Australian governments continue to fail in adopting essential mitigation measures or accept that climate change is a central

factor. The Murray-Darling river system is ailing and mired in self-interest, allegations of corruption, jurisdictional disharmony and lack of effective leadership.

The approaching summer is predicted to herald in further heat waves and they are expected to result in deaths, particularly amongst the elderly and vulnerable. There is increasing evidence that economic stresses and mental health problems can be initiated and/or aggravated by the consequences of climate change, including prolonged droughts, with suicide an all too frequent outcome.

With these warning signs, collaborated by Australia's own Bureau of Meteorology, it is extraordinary that the federal government and many state governments are still persisting with plans to utilise more fossil fuels for domestic energy production and extoll the economic and employment virtues of expanding our fossil fuel exports overseas. Australia is already the third largest, and aspires to become the greatest, exporter of fossil fuels after Saudi Arabia and Russia, adding enormously to the global burden of carbon emissions.

The climate science is clear - the current trajectory of global greenhouse gas emissions is unsustainable. Limiting average global atmospheric temperatures to 1.5°C above pre-industrial levels must be achieved if the world is to prevent the cascade of events that could well lead to escalating temperatures and the 6th mass extinction mentioned by David Attenborough. The next decade is absolutely critical. Political leaders in Australia and in many, though not all, other countries, fail to grasp the enormity of the problem.

Horizon scanning

Despite governmental folly at home and abroad, there are some rays of hope shining through the pollution and the gloom. France, Germany, the UK and some smaller nations have shown real leadership on this issue that should make our own country feel ashamed. The corporate world, including companies that are the largest emitters of carbon, are beginning to accept some responsibility for the problem, seeing the real possibility of stranded assets in a world under existential threat and are suggesting carbon reduction measures. Leaders of the insurance industry are also taking note and will be raising premiums where relevant, to meet the increasing financial risks. Those concerned about the risks of climate change to national security have become alarmed.

As the scientific evidence continues to become stronger and the warnings of the dangers of inaction become louder, renewable energy technologies, including multiple interconnected solar, solar thermal and wind power generators, battery storage, pumped hydroelectric facilities and hydrogen continue to advance. Their economic credentials are convincing and are well ahead of the nuclear option from a cost as well as the time delay and safety aspects of the latter. If the true cost of carbon, including the externality costs, morbidity and mortality associated with fossil fuels, are included then renewable energy is clearly superior and should be developed and utilised without further delay.

Australia, with its enormous natural resources of radiant heat and wind across vast spaces could provide sufficient electricity, with the associated storage capacities developed in tandem, to power the nation and to export that power via cabling to neighbouring countries.

Yet, particularly disturbing is that the proposed expansion of gas extraction, liquification and export overseas from WA and NT has the potential to raise rather than reduce our domestic GHG emissions and dwarf the global carbon emissions burden that would occur from the Adani/Carmichael coal mine and further expansion of the Galilee Basin coal deposits. DEA has and will continue to be active in this area.

Community Action

Faced with the dangers and uncertain future, with the vast majority of the population now accepting the scientific evidence of human caused climate change and dismayed at the failure of political leadership to address it urgently and effectively, millions of individuals and hundreds of local communities, associations, companies, NGOs, shires, towns and cities are introducing measures to reduce waste and dispose of it more wisely, conserve electricity and recycle materials, and install domestic and/or community based renewable energy facilities. Many organisations including DEA have declared climate change a Health Emergency.

Healthcare's carbon footprint is estimated as 7% of Australia's total and hence it is environmentally important that there is increasing awareness in the health care sector of its responsibility to drive down its own emissions. DEA and the AMA have proposed that a National Healthcare Sustainability Unit should be instituted to help drive this process, as has been successfully achieved by the NHS in the UK.

Non-government organisations, including community groups, continue to blossom and become increasingly vocal about the various problems, both local and global, associated with climate change and pollution. The remarkable 16-year-old Swedish schoolgirl Greta Thunberg has inspired thousands of school children across the globe to voice their concerns, to express their withering criticism of current political leadership and demonstrate their determination to stage internationally coordinated school strikes.

DEA Activities

Federal Election

The Federal Election provided an opportunity to raise climate change as an issue of vital importance and DEA was active in promoting its objectives in a non-partisan manner. The return of a Federal government, still with no clear long-term energy policy or apparent concern for the seriousness of climate change and multiple other environmental threats, highlights that the work of DEA and other organisations sharing our concerns needs to become more urgent and strategically astute.

As a scientifically informed, evidence-based organisation of medical doctors and medical students, DEA aims to make clear what should be done via education and vigorous advocacy in a democratic society within the law. Our work must continue for the sake of the heath of the people we serve and the health of future generations. To do otherwise would be an abrogation of professional and community responsibility.

Australian Medical Association

During the course of the year, several meetings were held with the leadership of the Federal AMA, its policy officers and several of its state branches. These meetings followed considerable involvement in providing scientific evidence and assistance with policy development over many years.

On 3 September 2019, the AMA formally recognised climate change as a health emergency.

"AMA has joined other health organisations around the world - including the American Medical Association, the British Medical association, and Doctors for the Environment Australia - in recognising climate change as a health emergency".

"The Federal Council recognises climate change as a health emergency, with clear scientific evidence indicating severe impacts for our patients and communities now and into the future. The AMA commits to working with government agencies and other organisations to prioritise actions in line with the AMA's 2015 Position Statement on Climate Change and Human Health".

This action by the AMA follows similar statements made by the Australasian College for Emergency Medicine in November 2018, a motion passed by DEA at the iDEA Conference in Hobart in April 2019, a group of 70 American health organisations, including the American Medical Association and the American College of Physicians in June 2019 and the British Medical Association in July 2019.

iDEA conference

DEA's annual conference was once again a highlight and a credit to Kris Barnden and the organising committee. There were multiple outstanding scientific presentations including those on the impact of climate change on human health (including mental health), biodiversity in health and disease, the oceans and their marine life, regenerative agriculture and sustainable urban environments. Challenging presentations by Richard Dennis, chief economist with the Australia Institute, Tessa Khan on climate change and human rights and author Richard Flanagan were rallying cries for urgent and effective action.

DEA's other extensive activities are outlined in this report.

Particular acknowledgement goes to Ingo Weber and his wonderful No Time for Games (NTFG) team who have worked exceptionally hard over the year to raise awareness of climate change's impact on our children and future generations. The campaign was launched on the steps of Parliament House, Canberra on the 27th November 2018 and attended by MPs Mark Butler, Kerryn Phelps and Rebekha Sharkie as well as several prominent doctors. There were also over 2,000 signatories to the NTFG pledge and endorsement from several of Australia's major medical colleges and prominent Australians.

State committees have all undertaken important work on national and state-specific issues including the Adani coal mine proposal, the plight of the Great Barrier Reef, the impact of the prolonged drought, gas, air pollution, biodiversity, environmentally sustainable healthcare, divestment, renewable energy technologies, Global Health collaboration and proposed major gas expansions in several states. The details are outlined within.

Several important documents, policies and multiple submissions were also produced including an extensive Oil and Gas Report.

The future

DEA's activities have never been more relevant, and we look forward to growing the organisation over the following year. Membership numbers are increasing faster than ever. Although the task before DEA remains immense, we are confident that the Organisational Review and appointment of a new Executive Director will assist in meeting the challenges ahead.

Finally, DEA would like to thank again all our wonderful members for the support, expertise and enthusiasm they bring to the organisation and of course the efforts of our Office Manager, Joy Oddy, Media and Communications Manager, Carmela Ferraro and interim Executive Officer, Cate Ealing.

Kingsley Faulkner and Eugenie Kayak

Protecting health through care of the environment

Organisational Review

DEA's reach and activities have expanded significantly over the last few years as has the importance and urgency of our work.

DEA's Management Committee, taking this into account as well as the enormous (and ever increasing) workload of many of our volunteers and staff, agreed in October 2018 to undertake an extensive Organisational Review with wide membership and external consultation to enable the necessary ordered expansion of the organisation.

Following initial internal workings on the Terms of Reference it was agreed in February 2019 to contract Jeremy Hobbs from Development Essentials Pty Ltd to assist. Jeremy has over 20 years of experience working with national and international NGOs going through significant change including governance, strategy objectives, campaigning and advocacy. Jeremy is the current Board President of Action Aid Australia as well as holding several other directorships and was founder of the International NGO Accountability Charter.

An Organisational Review Steering Committee was formed of DEA Management Committee members Eugenie Kayak (Chair), Beau Frigault, Sallie Forrest and Richard Yin, member Virginia Reid and Jeremy Hobbs. Terms of Reference (TOR) for the Organisational Review were then developed and agreed on before an extensive consultation process. The Review aimed to focus primarily on organisational strategy; Theory of Change (TOC) for DEA; and governance arrangements.

The consultation process included Jeremy conducting a wide range of in-depth interviews with 10 external stakeholders (who had some working relationship or knowledge of DEA) and over a dozen internal members (not on the Management Committee) from as broad a demographic as possible. A membership survey was also sent to all DEA members with results collated and presented to the Management Committee at their April meeting.

The DEA Organisational Review Report was delivered in May 2019 with eight of the main recommendations accepted in principle. DEA is now looking to the implementation of the report's recommendations over the coming year and embracing the changes and expansion this process aims to deliver.

Eugenie Kayak Chair, Organisational Review



Climate Change

Hope that the "Climate Election" would finally see some real progress and action on climate change were dashed on May 21 when the Coalition secured another term in office. DEA worked very hard in the lead up to the election, but the task of addressing climate change failed to win hearts and minds against a well-financed conservative media blitz and a confused Labor campaign.^{1, 2}

For years, DEA has worked with environmental lawyers to press for stronger national environmental laws through an independent statutory body. Although the Labor Party had not fully embraced this concept, its election platform did include "Strong, well resourced, science based, independent environment institutional structure with strong legislative and financial basis to proactively protect environmental assets..." However, with the election in sight, Labor appeared to abandon its platform and to take an equivocal position on the future of coal. Fortunately, several states will pursue their own strategies targets and actions in spite of a lack of unifying federal policies.

Prior to the election, DEA developed a "Prescription for a Healthy Australia", which outlined in simple language climate policies which should be supported for our future health. Several thousand of these were distributed in the pre-election weeks. A most welcome addition to DEA's campaign was the rapper video "Call Out" from a DEA member. 5

At this year's iDEA in Hobart, DEA made a declaration that climate change was a health emergency requiring immediate action from all levels of government and society. DEA joins over 70 major health and medical organisations which have declared a climate health emergency, including the American Medical Association, the British Medical Association, the World Health Organization and the Lancet Commission. As the UN Secretary General Antonio Guterres has said: "If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous (health) consequences for people and all the natural systems that sustain us".7

Comparisons are being made with a medical emergency which, when recognised, triggers a rapid, comprehensive, team-based, evidence-based response.⁸ As professor Will Steffen has said of the challenge for climate action, "It's not a technological

or a scientific problem, it's a question of humanities' socio-political values...we need a social tipping point that flips our thinking before we reach a tipping point in the climate system". The question is: "What thinking needs flipping?"

Perhaps it requires a movement such as School Strike for Climate initiated by Sweden's Greta Thunberg to change public mood. DEA became a strong supporter of student action and has joined the thousands of protesting students who have not knowingly contributed to greenhouse gas emissions but will suffer the consequences and do not have a vote to influence current policies.¹⁰

Over the last 12 months, the *No Time for Games* campaign was launched and has been gathering online pledges from doctors and health professionals to support action on climate change. More on this campaign later in the report.

Mitigating climate change and reducing air pollution underly DEA's advocacy for cleaner fuel, better engines for cars, and ultimately the goal of electrical energy for all forms of surface transport.

Submissions on these transport recommendations are covered in more detail elsewhere in this report.

DEA is among a wide-ranging international coalition of medical and healthcare organisations that have signed 'A Call for Clinicians to Act on Planetary Health' which was published in The Lancet. 11, 12

Health and medical groups, including DEA, the Climate and Health Alliance, the Royal Australian College of Physicians, and the Australian Medical Students' Association wrote an open letter to all political parties in April, pointing out the "significant and profound impacts climate change has on the health of people and our health system".¹³

The moral and legal implications of failure of climate action have also been explored. It has been said that 'the unethical conduct of big business and governments is the basic cause of climate change" as these institutions favour immediate profits to the detriment of sustainable practices. ¹⁴ In the words of young Greta Thunberg, who spoke at the climate conference COP24 in December 2018: "Our civilisation is being sacrificed for the opportunity of a very small number of people to continue making enormous sums of money."

While humanity relies on governments to manage matters of serious global consequence, it is clear that many are not up to the task. More will eventually be sued for failing to take action, but can the world wait?

Urgency for action will dominate our advocacy for the foreseeable future. 15



Air Pollution

Australia's air quality standards are under review, and in May this year the National Environmental Protection Measures (NEPM) review documentation was finally released, outlining the update process for SO₂, NO₂ and ozone standards in ambient air. The review has been stalled for about 2 years, and the documentation is of poor quality. Since the release, DEA has been building a coalition of health and environment groups to become involved in the somewhat technical questions of air quality standards. Early in the year Ben Ewald compiled a report NSW air quality results for 2018, which showed particle air pollution was substantially worse than in previous years.¹⁶

Ben Ewald provided a submission to proposed variations on air quality standards on behalf of DEA¹⁷, and a number of DEA members have contributed media articles and social media comments to draw attention to Australia's poor standards. Prior to the NSW election a Community Candidates Forum was held in the Upper Hunter, with speeches by DEA members. Most of the discussion was on air quality issues from coal mining, with relevance to the nearby Liddell and Bayswater power stations. DEA is also raising the issue at politician visits.



DEA stall at AMA National Conference

DEA wrote a submission to the EPA's Dec 2018 review of operating licenses for three NSW power stations. In preparation for this, Ben Ewald did an analysis for Environmental Justice Australia (EJA) of the health burden from coal-fired power in NSW. 18 DEA collaborated with EJA by providing speakers at 5 community forums held in Sydney and in coal affected communities. The licenses were subsequently renewed without change, and without the NSW EPA even seeking advice from NSW Health who have expertise on this question. The license renewals have since been challenged in court on the basis of an improper review process.

The National Pollution Inventory covers 93 toxic substances (cf. US where over 500 are covered) and is a shared program between the federal, state and territory governments. In April 2019 they released data for the 2017-2018 year, derived from estimates provided by the polluters. One Queensland coal fired power station using actual measurements rather than estimates showed a doubling in its recorded date from one year of pollution. Ben Ewald has repeatedly called for more accurate measurement and pollution controls on Australia's coal-fired power stations. ^{19, 20}

Vehicles

The Energy Sub-committee has devoted much time and commitment over the last 3 years to writing submissions for federal reviews of fuel and vehicle standards. However, it has taken until February 2019 for a report to finally be released.²¹

In essence, the review concluded that sulphur in petrol should be reduced to 10 ppm from 1 July 2027, to retain regular unleaded petrol and to reduce the pool average of aromatics in petrol from 42 per cent to 35 per cent, effective 1 January 2022. The most favoured option promoted by the automotive industry and health groups which would have

enabled the latest engine technologies, established the strongest alignment with European standards and delivered maximum health and environmental benefits was dismissed by the Review as it was considered to be a net cost to the community. Further reading of the Report does not support this contention. DEA considers these recommendations to be most inadequate (too little, too late) as in a possible ironic twist, if the uptake of electric vehicles ever proceeds apace, improvement in fuel standards might be rendered redundant.



Coal

Firstly, some good news. In February, the Rocky Hill coal mine proposal was disallowed by a court decision. In a landmark judgement, the NSW Land and Environment Court considered climate change in part of its ruling. This is an Australian first, and a highly significant ruling. Its importance is not only that the mine would contribute to climate change, but that the issue is relevant under the applicable law.



NSW Land and Environment Court Rocky Hill coal mine hearing

In the words of the presiding chief judge, Brian Preston, "All anthropogenic greenhouse gas emissions contribute to climate change...it matters not that the aggregate of the project's greenhouse gas emissions may represent a small fraction of the global total". An appeal from the mining company was not lodged. 3

DEA has been involved in the advocacy against Rocky Hill from the beginning. DEA members have informed people about the health impacts from open cut coal mining. This raised concern in the local population, which spearheaded local opposition and finally stopped the mine.²⁴

DEA has made two submissions on the Styx mine in Queensland. DEA has also made submissions to the Winchester South and Isaac Downs coal projects in the Bowen Basin, the Bylong Coal Project, a submission opposing a water licence for the New Acland coal mine expansion, and others opposing the expansion of the Moorarben coal mine, the Tahmoor South coal project and the United Wambo open cut coal mine in the Hunter Valley.

Adani

Adani's Carmichael coal mine in the Galilee Basin has loomed large in this year's news, both as an election issue and as a touchstone between the coal industry and real progress on addressing climate change. Although a small amount of work has been done on the rail line linking the mine to the port, the Adani mine has yet to break ground and begin

operation – despite a supportive federal and state government. This has been entirely due to the dedicated efforts of many people around Australia who are working to push for action on climate change, defend traditional lands and to keep coal in the ground.



DEA members attending the Adani hearing Andrew Jerimijenko, Lucy-Jane Watt and Karin Kochmann Over the year, Adani has been found responsible for polluting wetlands at its Abbott Point coal terminal in both 2017 and 2019. Adani is being prosecuted by the Qld state government for providing false and misleading information and is under investigation for illegal groundworks at its mine site. Despite this, the plan for the endangered Black-throated finch, and environmental approvals pushed through federal and state governments.

In addition to many articles and letters condemning the mine, DEA has this year provided two submissions to private member's bills tabled in Federal and Qld state parliaments regarding the prohibition of coal mining in the Galilee Basin.^{25, 26} For the latter, DEA members were invited to give evidence before the Qld Natural Resources and Agricultural Industry Development committee in March 2019.

mining company is still deemed a fit operator by government. Obstacles to the mine have been steadily overcome during the year, with dismissal of a legal challenge from traditional owners on Adani's Indigenous land use agreement (appeal still pending), approval given for Adani's management DEA members have spoken at several Stop Adani rallies to raise awareness of the links between coal mining and health. In June 2019, DEA wrote to the Qld Premier asking her to 'apply a health lens' to the mining approval and consider the long-term impacts on health.²⁷ DEA also supported the Stop Adani convoy that took place pre-election.

Despite our efforts and those of #StopAdani, EDO Qld, other environmental organisations across Australia and massive public demonstrations, work on the mine may start at any time.



Gas

It has been a boom year for the unconventional gas industry in Australia. With bipartisan federal support and every state government (apart from Victoria and Tasmania) also supporting gas development, "Australia's LNG industry is now the largest in the world by capacity, having overtaken Qatar as the last of eight new projects prepares to start up, taking the country's annual export capacity to more than 80 million tonnes of the super-chilled fuel" (APPEA).

Planning continues for huge gas developments in NT and WA, oil and gas developments in the Bight, and offshore gas exploration in Victoria. As these reserves are opened up, Scope 3 emissions will make Australia a significant contributor to global carbon emissions.

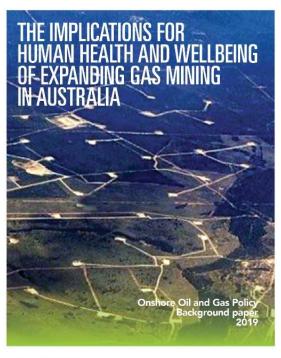
The political and industry line that gas is a transition fuel to renewables has been well publicised, but the reality is that the gas industry competes with renewables and worsens climate change by releasing methane as fugitive emissions. This myth of the 'transition fuel' is thoroughly dispelled by several articles by David Shearman and Melissa Haswell about our "Gas Bomb".^{28, 29}

DEA has recognised expertise in onshore gas and oil development in terms of its health and environmental impacts. David Shearman and Melissa Haswell have written a comprehensive report "The Implications for Human Health and Wellbeing of Expanding Gas Mining in Australia", released in January. This timely and erudite paper covers the current state of knowledge about the health impacts of underground coal gasification (UCG) and the reasons that UCG will worsen climate change. Their summary: "DEA urges the Australian government to commit to a national energy plan that prioritises the urgency of climate change and urges a ban on new gas and oil developments, and stringent regulation of existing gas developments, while vigorously promoting a coordinated transition to renewable energy."30, 31

David and Melissa have had several other articles published in media about the health and global impacts of continuing UCG development.^{32, 33}

In January, DEA released a Position Statement on onshore oil and gas mining, and its serious risk to human health, both locally and globally.³⁴

In August 2018, Melissa Haswell, Helen Redmond and Geralyn McCarron presented at the Coal Seam Gas and Public Health Conference, held at Narribri,





An independent organisation of medical doctors that raises awareness about the link between health and the environment

NSW. Their topics included the health impacts of living near gas fields and the application of health impact assessments.³⁵

At the IPCC's Conference of the Parties (COP24) in Katowice, Poland, Melissa Haswell presented DEA's policy paper³⁶ on the life cycle of gas mining and distribution.

In other news, DEA provided a submission to the Australian Energy Market Commission on the Northern Gas Pipeline, warning against the health and climate change impacts of further gas development.³⁷ DEA's submission to Origin's Kyalla Drilling and Hydraulic Fracturing project is DEA's latest contribution to the opposition of gas drilling in the NT.³⁸

The SA government is trying to establish an UCG enterprise at Leigh Creek, despite the industry's record of environmental and health disasters worldwide, including at a site in Queensland at which legal action is ongoing. DEA has opposed UCG from the outset and has provided a submission (a joint submission with the Conservation Council) to the SA government against this proposal on health and environmental grounds.³⁹

Energy

The federal election in May this year has done nothing to stimulate sound energy policies by the Federal Government, necessitating Australia's states to take up the responsibility. DEA opposed the National Energy Guarantee (NEG) on the basis that it would lock-in a low requirement for renewable sources in the energy mix.⁴⁰ But even this guarantee was deemed to be excessive by members of government and the pursuit of the NEG has been dropped, leaving Australia with no energy policy or plans. DEA continues to encourage the states to strengthen their uptake of renewables, a process which is now receiving attention from the Australian Energy Market Operator (AEMO) which co-ordinates uptake into the electricity grid.

further distribution.⁴¹ In our submission to the preparation of an Environmental Effects Statement (EES), DEA raised concerns about: the validity of the need for gas importation with its necessary infrastructure; greenhouse emissions from the full life-cycle of gas, Victoria's strong emissions reduction targets and environmental concerns at Westernport Bay.

DEA continues its opposition to Equinor's proposal to drill an exploratory oil well in the Great Australian Bight on climate change grounds, and secondly such a project at great depth (>2000m) in potentially extreme conditions of weather and sea-state is



Image: Dimitris Vetsikas Pixabay

One reason for hope of reduction of greenhouse gas emissions from the energy sector is the discussion of hydrogen as an alternative to methane. DEA plans to contribute strongly to the debate on the method of hydrogen production which will be the key to its success as a low carbon, affordable and safe fuel.

To supplement Victoria's gas supplies which, as a consequence of extraordinary contractual arrangements are mainly being exported overseas, Victoria has been exploring a plan to import gas via Westernport and pipe it to an inland storage before

inherently risky and modelling of major oil spills show extensive environmental damage across southern Australia. DEA has presented these arguments at every opportunity.

DEA made submissions to the Wollar Solar Farm and the Senate Select Committee on electric vehicles.

For the Energy Committee's work on federal reviews of fuel and vehicle standards, see air pollution section.

Diet and Agriculture

Emissions from the production, consumption and disposal of food waste accounts for 24% of the global total, with livestock making up another 14.5% of emissions. Clearly, we need to manage the food sector if we are going to deal with climate change. This is well documented by the EAT-LANCET GROUP, which has released a comprehensive report outlining dietary changes that need to occur in

order to feed 10 billion people by 2050 and stay within the planetary boundaries of sustainability.⁴² DEA has been active in trying to get this message out. Kris Barnden and Rosemary Stanton wrote an article published on the ABC website.⁴³ Michael Schien and Virginia Reid presented at the Gloucester Sustainable Futures Conference and Michael Schien wrote a brilliant article published in Medical Republic.⁴⁴

Biodiversity and natural ecosystems

Biodiversity is the health and wealth of the natural world and is essential for human survival. Natural ecosystems provide the foundations of our wellbeing by purifying the air and water we need, stabilising our climate and enriching the soils in which we grow our food. Well over half of all medicines in use today are derived from nature and the extraordinary variety of life on Earth promises future cures if only we can halt the sixth mass extinction event.

The Biodiversity Committee works to highlight the importance of biodiversity for human health by producing articles and other publications, highlighting this issue in the media, creating resources for DEA members and presenting at conferences and in other public forums.

To make the link between health and biodiversity clear we developed two new, related Fact Sheets for DEA members. 'Why we need forests and native vegetation for our health'⁴⁵ and 'How land clearing harms our health'.⁴⁶ These resources clearly outline the importance of forests for health and therefore why and how Australia's rampant land-clearing is hurting us all.

DEA actively collaborates with other organisations who seek to highlight the value of nature for wellbeing. DEA spoke at Protectors of Public Lands (PPL) in Melbourne (PPL is a coalition of community groups working to protect public lands from being

taken for private purposes) and has presented at a number of Forestry industry events.



DEA Takayna Trip 2019 - Lydia Birch

David Shearman wrote a brilliant op-ed in ABC Opinion about how biodiversity loss and climate change are together set to transform us to an alien world, and how we need leadership to turn this around.⁴⁷ This is based on DEA's submission on the Faunal Extinction Crisis Senate Enquiry.⁴⁸

Sustainable Healthcare

DEA members across the nation have continued to be active, raise awareness and act to mitigate health care's environmental footprint (estimated to contribute to 7% of Australia's total greenhouse gas emissions).

Health organisations and medical colleges have also moved to raise awareness over the last year and many DEA members can be thanked for their involvement and work in facilitating this.

AMA NSW's publication *The NSW doctor* ran a special *The Enviro Edition* for their Nov/Dec 2018 issue.⁴⁹ DEA members made contributions to this issue, highlighting sustainable healthcare, environmental health benefits, healthy diets and DEA's No Time For Games campaign.

The federal AMA published in early 2019 their Position Statement *Environmental Sustainability in Health Care*. ⁵⁰

ANZCA finalised their Statement on Environmental Sustainability in Anaesthesia and Pain Medicine Practice⁵¹ with help from several DEA members. Anaesthetist and DEA member, Shiva Malekzadeh, convened the ANZCA Vic Regional Committee conference on 28th July 2018, themed "Rising temperatures, the heat is on" which dedicated a session to climate change issues and included John Hewson speaking along with several DEA members.



Across the nation

In WA, the Sustainable Health Review's (SHR) final report, to which DEA submitted, was released in April 2019.⁵² It includes key recommendations around climate change and health and waste within the health services. Many individual DEA members also submitted. This year has seen an increased involvement of DEA members, active in increasing awareness and pushing for stronger action from health services in both climate change mitigation and adaptation, in addition to waste management and general sustainability. This, in combination with the recommendations from the SHR, has resulted in several local hospitals and health services in metropolitan and non-metropolitan areas joining the Global Green and Health Hospitals (GGHH) network.

There are a number of small initiatives that are championed by local DEA members - the Green Theatre Group at South Metropolitan Health Service (SMHS), and the 'War on Waste' group in the Rehabilitation Service, Fiona Stanley Hospital (FSH). A core group of DEA members in WA have been also been involved in the establishment of a Community of Practice for Climate and Health (CoP). CoP was organised as an outcome of the Climate and Sustainability Forum, its purpose being to facilitate an informal network for people interested in sharing information, discussing, and taking action on climate change issues relevant to human health, health services and the health sector. CoP provides information and supports events and initiatives that can help health services to become more resilient to climate change and reduce the carbon contribution of the health services.

In SA, DEA members have been looking for opportunities to promote incentives offered by the Adelaide City Council for medical practices in the city under the Carbon Neutral Adelaide initiative. Members also met with partners of a large anaesthetic practice in November, sharing findings from the latest IPCC report, the No Time For Games campaign, and providing information and resources to support the practice in sustainable healthcare. A

number of DEA members have also led steps to recycle waste, particularly anaesthetic products at public and private hospitals in Adelaide.

In NSW, apart from the great contributions to the AMA publication *The Enviro Edition*, DEA members DEA members presented at a heatwave forum in Blacktown on 30th January "Beat the Heat; Heat Wave Care of patients in Western Sydney" – which included upskilling GPs to manage heat-related illness. They also looked at health services' responses to climate change, both mitigation and adaptation.

In Queensland, DEA worked in collaboration with AMAQ to request Queensland Health to consider incorporating sustainability units into their upcoming budget. AMAQ supported this initiative as one of their primary requests when meeting with Qld Health in early 2019. Two Sustainable Healthcare hospital groups were established this year by DEA members at Princess Alexandra Hospital and Prince Charles Hospital.

In Tasmania, DEA members have been active in the Royal Hobart Hospital sustainability committee, Green Health Tasmania. The committee has been effective in raising awareness of environmental issues in healthcare and promoting recycling in the hospital. The Royal Hobart Hospital has recently

become a member of GGHH and has received grant money from the Tasmanian Climate Change Office to write a business case for the employment of a sustainability officer. DEA members are also putting forward a proposal for the Launceston Clinical School to adopt the GGHH framework.

RACGP in Tasmania has voted to review the UK's RCGP Green Toolkit, with view to adapting the toolkits to an Australian version and trialling the kit in GP clinics before expanding this to the state and potentially to the rest of Australia.

In Victoria, medical students at Deakin University, led by Monika Coha, have been advocating for improved sustainability in the hospitals of Barwon Health and for recycling in their clinical school. Victorian members have given numerous talks over the last year on environmentally sustainable healthcare which is hopefully also helping to expose more health professionals to the issues.

Finally DEA is advocating strongly for a National Healthcare Sustainability Unit so please use DEA's documents An Australian Healthcare Sustainability Unit (HSU) – DEA Proposaf³ and Improving a hospital's environmental impact: what can a doctor do?⁵⁴ and the wonderful short clip produced by DEA students The story of Green Hospitals⁵⁵ to help with any sustainably healthcare endeavours

We look forward to developing plans to expand in the coming year further the HSU case and co-ordination amongst DEA's increasing number of members interested in this important area.

19

No Time for Games

No Time For Games (NTFG) is the first large-scale national campaign by DEA. Its aim is to unify the health voice across Australia to demand urgent action on climate change in order to protect children's health and the health of future generations.

In the ensuing months, the NTFG campaign collected over 2000 pledges of support from doctors, students, nurses and allied health professionals, and DEA's profile and membership has increased accordingly.⁵⁷



Work on NTFG inspired and led by Ingo Weber, began early in 2018 as part of DEA's climate change committee. An updated summary report of the original NTFG report from 2015 was written⁵⁶, and the campaign grew through personal communication with colleagues and then social media, gaining pledges from health professionals to take action on climate change.

The campaign was officially launched in front of Parliament House in Canberra on November 27 2018

one day before the SchoolStrike4Climate (ACT). The launch was attended and supported by Prof Fiona Stanley, Dr Suzanne Packer, Prof Kerryn Phelps, Prof Sue Prescott, several politicians, local media and DEA members, some of whom had come from interstate.

To provide strength and legitimacy to the campaign, the NTFG team worked hard to gain the support of many of the medical specialist colleges, prominent Australian practitioners and health professional organisations, which undoubtedly helped to extend the campaign's reach and influence. The NTFG team delivered a petition calling for climate action to the leaders of the government and opposition in the build-up to the May federal election, supported by an open letter to the Prime Minister and Leader of the Opposition in the Sydney Morning Herald and The Age.⁵⁸

Congratulations to the whole NTFG team for their huge effort, to Helen Redmond, Pieter Janssen and Richard Yin for their fund-raising efforts, Carmela Ferraro for her sage advice and availability. But particular thanks and commendations must go to Ingo Weber, who simply never gave up or lost his unfailing enthusiasm and belief in the campaign. Well done all!

It is now planned to deliver the full campaign to politicians in Canberra at the Spring re-opening of federal parliament.



#NoTimeForGames pledge is endorsed by:

- The Royal Australasian College of Physicians (RACP), with particular endorsement by its Paediatric and Child Health Division
- The Royal Australian College of General Practitioners (RACGP)
- The Australian College of Emergency Medicine (ACEM)
- Australian College of Sport and Exercise Physicians
- Australian College of Rural and Remote Medicine (ACRRM)
- Australian Medical Students' Association (AMSA)
- Climate and Health Alliance
- Medical Association for the Prevention of War (Australia) (MAPW)
- Australian Medical Association, South Australia (AMA, SA)
- Doctors Reform Society
- Women's Medical Society (WMS)

Students in action

2019 has been a massive year for the DEA National Student Committee (NSC), with new campaigns and DEA-led events held across Australia at a national, state and university level.

The NSC met in Adelaide at the AGM in October 2018 with the aim to continue the same four main goals of the previous NSC.

These were:

- Environmental: to provide environmental based events and student projects that are in line with DEA's vision of educating and promoting a passion for human health and the environment.
- Political: facilitating the means for students and reps to hold meetings with their local MP and submissions of reports to the media.
- Social: to create a friendly and welcoming community that invites anyone interested environment related human health. Additionally, to increase student membership and engagement through local-national events.
- Economic: to use funds that promote the vision of DEA through events and promotion of DEA.



NSC in Adelaide at 2018 AGM

This year we set our sights on three main campaigns run at campuses across Australia.

1. Health Status of Australian Climate

Our first campaign was led with the idea of improving the understanding of how climate change is affecting human health throughout each state within Australia. 'The Health Status of Australian Climate' is an article put together by the NSC and was promoted through social media to Facebook and Instagram on our DEA pages as well as in AMSA, Code Green and DEA newsletters.

2. The 2019 Federal election

For the 2019 election we distributed scorecards on the parties' environmental promises.

3. Greening MedSocs

This initiative involved cooperation with Code Green, where we worked together to provide a universal template proposal on divesting as many MedSocs throughout Australia as possible.

National events and Student recruitment

The NSC and Uni Reps have continued the annual events of the iDEA conference recruitment competition and Make-A-Meme competition, both of which were huge successes. The iDEA recruitment competition gained approximately 120 new memberships. The meme competition had 40

submissions, gained an additional 40-50 memberships, and will be continually promoted on the DEA Facebook and Instagram. At the iDEA conference there was also a specific student-run talk that addressed concerns of climate change and how students can get involved.

When you leave your Keep-cup at home but then find your back up one in your bag



Social media



1,121 followers



419 followers

University Events

DEA Uni Reps and year reps have been actively involved in raising awareness of the health impacts brought on by climate change. Events include film screenings, tree-planting and sustainability initiatives.

NSC highlights

- NSW A Sydney Sustainability Networking Lunch was held where passionate medical students across Sydney met up at the 'Green Gourmet Kitchen' to discuss climate related health and future university greening endeavours
- VIC UniMelb coordinated a Doctors vs Students trivia night for NTFG with environmental/political based trivia questions and catered vegan meals
- QLD DEA UQ participated the National Tree Planting Day
- SA Adelaide held a highly successful event alongside SS4Climate, with signage and media presence and in which we generated a lot of new student interest in DEA.
- WA Curtin University held a successful beeswax wrap-making event, encouraging the use of multiuse, biodegradable materials in lieu of plastic wrap. University of Notre Dame has also initiated the recycling of soft plastics in the medical building and is working on encouraging the use of biodegradable coffee cups
- TAS Screening of the 350.org film "Accelerate" and brief documentary about Greta Thunberg at University of Tasmania (40-45 people attended)
- ACT ANU held a DEA info night with a presentation from students and Dr Arnagretta Hunter on what DEA does nationally and locally in the ACT

DEA National Student Committee

National Student representative:

Clancy Read

(University of New South Wales)

National Student Rep-elect:

Georgia Behrens

(University of Notre Dame)

Secretary

Rewena Mahesh

(Australian National University)

Projects manager

Jessica Zhou

(University of New England)

Media editor

Lakshana Boominathan

(James Cook University)

Graphics designer

Karly Potts

(University of Queensland)

State Representatives

NSW - Aidan Tan

(University of New South Wales)

NSW - Alice Shen

(Western Sydney University)

VIC - Manasa Sarapalli

(University of Melbourne)

QLD - Stewart Just

(University of Queensland)

SA - Abby Moore

(University of Adelaide)

WA - Sharon Kaur

(Curtin University)

TAS - Michael Young

(University of Tasmania)

ACT - Chrisy Richardson

(Australian National University)

DEA mentoring program for students

Students have been offered a mentoring program organised by Rohan Church in Hobart. The program has just commenced and aims to:

- Help our developing activists build experience and skills in health & environmental advocacy.
- Provide friendship and a supportive sounding board for the inevitable challenges that arise from working in this sphere.
- Foster closer links between DEA doctor and student members, including opportunities to work together, share experiences and learnings.



iDEA19 Conference

Over 200 delegates attended DEA's annual conference, iDEA, in Hobart in April this year. The conference theme was "Keeping the Lights On", with the dual aims of highlighting the serious and urgent nature of environmental problems affecting human health and focusing on positive solutions.



The day of pre-conference workshops offered an extensive array of activities, including a mentoring workshop, a Mount Wellington walk led by local indigenous guides, a permaculture workshop, and storytelling and art workshops. We were also privileged to have Annabel Workman lead a workshop based on her research into the health cobenefits of climate action, and James Whelan from The Change Agency gave insights into the strategies behind a successful political campaign.

The conference opened with a call from doctors for the declaration of a climate emergency.⁵⁹

In the opening session Professor Helen Berry discussed her ground-breaking research into the mental health effects of climate change in Australia, Professor Susan Prescott spoke about the importance of biodiversity in health and disease, and Richard Denniss from The Australia Institute challenged us to consider the different ways we engage with the climate crisis.

Other conference themes included community engagement, environmental justice and human

rights, and the human relationship to landscapes and urban environments. Open Space sessions on each day of the conference allowed delegates to nominate topics they were passionate about and come together in groups to discuss opportunities for action.

Social events had a distinctly Tasmanian flavour. Friday night saw the opportunity to sample local restaurants and live music at Salamanca, followed by a showing of short Tasmanian films. The venue for Saturday night's cocktail function was the stunning Tasmanian Museum and Art Gallery, and the guest of honour was Tassie icon First Dog on the Moon.

Sustainability is an important consideration in event management. As DEA we have a great opportunity to lead by example when it comes to sustainable conferences. The organising team at iDEA 2019 had a great time incorporating sustainable ideas into all areas of the conference. This included minimising waste at planning meetings, meat and waste free catering, and estimating total emission for the conference and subsequently offering an opt out emission offset option with conference registration. Our sustainability initiatives were well received by delegates and became a hot topic for discussion

over the weekend. We hope subsequent conferences will continue to build on our efforts and take event sustainability even further.

The conference ended with an address from Tasmanian author and activist Richard Flanagan. He spoke about the World War II prisoner of war camps in Asia, where Australians in the camps tended to have higher survival rates due to their practice of looking out for each other, and where doctors emerged as natural leaders. Once again, we find ourselves in times where doctors must choose

whether to step forward to fight the forces that are threatening our existence. Richard concluded by saying that as doctors we not only have the moral standing to deal with the issues of climate change and environmental destruction, but a profound duty. The presentation was both sobering and inspiring, and a brilliant and poignant end to the conference.

iDEA 2019 was made possible by a large, dedicated and creative team of local doctors and medical students, and we offer our thanks to all of them.



Images: Zi Long

Parliamentary visits

DEA members met with politicians across the states, especially in the lead up to the federal and two state elections. Meetings include:

Rebekha Sharkie MP – Independent member for Mayo, SA – committed to action on climate change and is opposed to drilling in the Bight (seen by David Shearman, Graeme McLeay and students)

Mark Butler MP – Labor Shadow Minister for Energy and the Environment – long and productive meeting discussing new environmental laws, oil and gas mining and emissions. (Seen by David Shearman, Graeme McLeay and Chris Juttner).

Senator Rex Patrick – SA – supports action on climate change and opposed to drilling in the Bight (seen by Chris Juttner, John Willoughby, Maude Taylor and Graeme McLeay).

Pat Conroy MP – Shadow Minister Assisting for Climate Change – understands the urgent need for action on climate change (seen by John Van Der Kallen and Jane Morgan).

Submissions

A total of 29 submissions were made during the 2018/19 financial year.

National Energy Guarantee - Draft Detailed Design for Consultation, July 2018

https://www.dea.org.au/wp-content/uploads/2018/07/National-Energy-Guarantee---Draft-Detailed-Design-for-Consultation-07-18.pdf

ESB Draft Detailed Design of the NEG Consultation Paper, July 2018

https://www.dea.org.au/wp-content/uploads/2018/07/ESB-Draft-Detailed-Design-of-the-National-Energy-Guarantee-Consultation-Paper-07-18.pdf

Proposed changes to timber harvesting in NSW coastal forests, July 2018

 $\underline{https://www.dea.org.au/wp-content/uploads/2018/07/Proposed-changes-to-timber-harvesting-in-NSW\%27s-coastal-forests-submission-07-18.pdf}$

Senate Select Committee on Electric Vehicles, July 2018

https://www.dea.org.au/wp-content/uploads/2018/09/Senate-Select-Committee-on-Electric-Vehicles-submission-07-18.pdf

Rix's Creek North Mod 8, July 2018

https://www.dea.org.au/wp-content/uploads/2019/03/Rixs-Creek-North-Mod-8-Submission-07-18-.pdf

Australia's Faunal Extinction Crisis submission, August 2018

https://www.dea.org.au/wp-content/uploads/2018/09/Australia's-faunal-extinction-crisis-submission-08-18.pdf

Review of the NPI, August 2018

https://www.dea.org.au/wp-content/uploads/2018/08/Submission-to-the-Review-of-the-NPI-08-18.pdf

Qld Improving resource approval efficiency consultation, October 2018

 $\underline{\text{https://www.dea.org.au/wp-content/uploads/2018/10/Queensland-Improving-resource-approval-efficiency-consultation-submission-10-18.pdf}$

Draft SA Public Health Plan 2019-2024, October 2018

https://www.dea.org.au/wp-content/uploads/2018/10/Draft-SA-State-Public-Health-Plan-2019-2024-submission-10-18.pdf

Underwriting New Generation Investments, November 2018

Bylong Coal Project, November 2018

https://www.dea.org.au/wp-content/uploads/2018/11/Bylong-Coal-Project-submission-11-18.pdf

Northern Gas Pipeline - AEMC, December 2018

https://www.dea.org.au/wp-content/uploads/2019/03/Northern-Gas-pipeline-submission-12-18.pdf

Mt Piper Power Station Licence Review, December 2018

https://www.dea.org.au/wp-content/uploads/2018/12/NSW-EPA-Mt-Piper-Power-Station-License-Review-submission-v2-12-18.pdf

Eraring Power Station Licence Review, December 2018

Vales Point Power Station Licence Review, December 2018

AGL APA Gas Import Jetty and Pipeline Project, December 2018

https://www.dea.org.au/wp-content/uploads/2019/03/AGL-APA-Gas-Import-Jetty-and-Pipeline-Project-submission-12-18.pdf

Galilee Basin (Coal Prohibition) Bill 2018, December 2018

https://www.dea.org.au/wp-content/uploads/2019/03/Galilee-Basin-Coal-Prohibition-Act-2018-Submission-12-18.pdf

Review of the South Australian Public Health Act 2011, January 2019

https://www.dea.org.au/wp-content/uploads/2019/03/Review-on-the-South-Australian-State-Public-Health-Act-2011-submission-01-19.pdf

Mineral Resources (Galilee Basin) Amendment Bill 2018, January 2019

https://www.dea.org.au/wp-content/uploads/2019/01/Mineral-Resources-Galilee-Basin-Amendment-Bill-2018-submission-01-19.pdf

United Wambo Open Cut Coal Mine Project, February 2019

https://www.dea.org.au/wp-content/uploads/2019/03/United-Wambo-Open-Cut-Coal-Mine-Project-02-19.pdf

Tahmoor South Coal Project, March 2019

https://www.dea.org.au/wp-content/uploads/2019/03/Tahmoor-South-Coal-Project-submission---03-19.pdf

Stromlo-1 Exploration Drilling Programme, March 2019

https://www.dea.org.au/wp-content/uploads/2019/03/Stromlo-1-Exploration-Drilling-Program-Draft-Environment-Plan-submission-03-19.pdf

Moolarben Coal Mine Stage 1 and 2 modifications, April 2019

https://www.dea.org.au/wp-content/uploads/2019/06/Moolarben-Coal-Mine-Stage-1-and-2-modifications-submission-04-19.pdf

Leigh Creek Energy Underground Coal Gasification EIR, April 2019

 $\underline{https://www.dea.org.au/wp-content/uploads/2019/04/Leigh-Creek-Energy-Underground-Coal-Gasification-EIR-\underline{Submission-04-19.pdf}$

New Acland Coal application for AWL for the Acland Stage 3 coal mine expansion, May 2019

https://www.dea.org.au/wp-content/uploads/2019/05/New-Acland-Coal-NAC-application-for-an-Associated-Water-Licence-AWL-for-the-Acland-Stage-3-coal-mine-expansion-Submission-05-19.pdf

Wollar Solar Farm, May 2019

https://www.dea.org.au/wp-content/uploads/2019/06/Wollar-Solar-Farm-Submission-05-19.pdf

Origin Kyalla drilling and hydraulic fracturing, May 2019

https://www.dea.org.au/wp-content/uploads/2019/05/Origin-Kyalla-drilling-and-hydraulic-fracturing-submission-05-19.pdf

Winchester South Project, June 2019

https://www.dea.org.au/wp-content/uploads/2019/06/Winchester-South-Project-Submission-06-19.pdf

Thermal Energy from Waste Activities, June 2019

Modernisation of Victorian Regional Forestry Agreements, June 2019

https://www.dea.org.au/wp-content/uploads/2019/07/Modernisation-of-Victorian-Regional-Forestry-Agreements-Submission-06-19.pdf

Media and communications

Environmental degradation and consequent risks to public health continue to pose major challenges for Australians and people everywhere.

Certainly, the media reports at great length on each new disaster - every bushfire, flood, heatwave and drought - and reports on local health burdens form coal mines and air pollution. But getting media to link these issues to climate change has continued to be an ongoing challenge, despite the overwhelming scientific evidence.

There are various reasons for this: Australia's highly concentrated media (all major newspapers are owned either by News Corp Australia or Nine Entertainment Co., formerly Fairfax Media) plus the challenge of limited resources in newsrooms; the digital disruption which favours stories by the number of clicks they attract; the fear of being seen as biased towards the "left"; and the campaign to discredit climate science by vested interests each have a role.

Despite the significant challenges, especially on mainstream platforms, DEA has continued growing its exposure in the media. This has largely driven by DEA's authoritative voice on a range of issues, sustained determination to engage with and to establish good relationships with targeted journalists and prompt responses by passionate, articulate spokespeople.

Additionally, collaboration with several media initiatives have helped to amplify DEA's messages. Over the summer months our members contributed to a column on local climate in Victoria's Leader newspaper stable as a result of a partnership between this newspaper group and the Climate Communication and Research Hub at Monash University. The Climate Media Centre has included DEA in many of its alerts to journalists, and on social media DEA members have joined the Croakey blog twitter festivals during the Federal election and the NSW State election.

Much of DEA's media focus during this financial year has been on the urgent need to address climate change, voicing our firm opposition to new coal mines, demanding stricter licensing standards for coal-fired power stations, calling out the myth of gas as a transitional fuel, advocating for the protection of biodiversity and highlighting a healthy diet's role in reducing emissions.

We also attracted media with our submissions and reports, including "The Health Burden of Coal-Fired

power in NSW", the comprehensive review "The Implications For Human Health And Wellbeing Of Expanding Gas Mining In Australia", as well as the "No Times For Games Summary Report Update" which spearheaded DEA's national NTFG campaign.

Our members wrote opinion pieces and Letters to the Editor, they were interviewed for news stories and on radio for the ABC and commercial media, and several made TV appearances. DEA also featured in medical media - MJA Insight+, the Medical Republic, the Medical Observer, Ausdoc, NewsGP and local medical publications across Australia. Informing medical colleagues about important issues to the medical profession and about DEA's work is a critical part of our work, given our profession's history as strong advocates for protecting public health.

DEA's social media – Facebook, Twitter and Instagram (the latter largely driven and managed by our student members) has increasingly become an important platform for sharing reports, fact sheets, campaigns, events, contributions in the news and our responses to key events both in Australia and overseas.

DEA's Facebook page has become a landing place for DEA members and interested members of the public to share their ideas, comments, and to make contact with our organisation - whether it's to find a local branch, a special interest group, join up, ask for related event promotions or to share vital links to health articles in medical and other journals. And as social media has continued to shift and change, we have continued to step up to the challenges.

In early 2019, DEA commissioned a digital media firm, OrganiseUs, to compile a review of DEA's social media platforms and to develop our social media engagement and paid advertising strategy. They were also asked to review the NTFG website and digital campaign strategy.

Strategic social media engagement with the help of OrganiseUs over the months March, April to May showed marked increases in Facebook post engagement and reach and a 28% growth in Twitter impressions, engagement and page growth. Our iDEA conference in Hobart, DEA's declaration of a climate emergency, the NTFG campaign, and the federal election provided opportunities for focussed and targeted posts.

The digital review made many useful recommendations for our FB and Twitter strategies going forward and recommended active collaboration

with the broader climate movement. The review also gave guidance and advice about promoting posts on FB, simplifying DEA's membership page, how to structure e-mails and sending out "e-mail blasts". OrganiseUs also facilitated a CANVA account for DEA. CANVA is a simple graphics design website, that allows for the creation of high-quality graphics for web and print media, templates, banners and posters.

Australia continues its laggard status of addressing the challenges of climate change and other

environmental risks. As an advocacy group with medical expertise and front-line experience of dealing with environmental impacts on public health, DEA's voice has been needed more than ever.

The fact that the link between a healthy planet and healthy people is on the national agenda is a testament to DEA's drive.

Media releases

Doctors warn the NEG will increase deaths, 9 July 2018

https://www.dea.org.au/media-releasenbspdoctors-warn-the-neg-will-increase-deaths-nbsp/

Reject the NEG, urge doctors, 9 August 2018

https://www.dea.org.au/media-release-reject-the-neg-urge-doctors/

NEG "plus": We need a national plan on power—but not one that's toxic to health, urge doctors, 13 August 2018 https://www.dea.org.au/media-release-neg-plus-we-need-a-national-plan-on-powerbut-not-one-thats-toxic-to-health-urge-doctors/

Medical specialists examine the risks of fracking in the NT, 20 September 2018

https://www.dea.org.au/media-release-nbspmedical-specialists-examine-the-risks-of-fracking-in-the-nt/

Doctors urge Government to recognise climate change as a health emergency after BOM reports January as hottest month on record, 1 February 2019

 $\frac{\text{https://www.dea.org.au/media-release-doctors-urge-government-to-recognise-climate-change-as-a-health-emergency-after-bom-reports-january-as-hottest-month-on-recordnbsp/}{}$

Major new report sounds alarm over worsening air pollution in NSW, 7 February 2019

https://www.dea.org.au/media-release-major-new-report-sounds-alarm-over-worsening-air-pollution-in-nsw/

Doctors call for no more coalmines after Court rejects Rocky Hill on climate change grounds, 8 February 2019, https://www.dea.org.au/media-releasenbspdoctors-call-for-no-more-coalmines-after-court-rejects-rocky-hill-on-climate-change-grounds/

Medical group backs next school-children's rally on climate action, 27 February 2019

https://www.dea.org.au/media-release-medical-group-backs-next-school-childrens-rally-on-climate-actionnbsp/

The WA Government and gas industry is peddling myths, 8 March 2019

https://www.dea.org.au/media-release-the-wa-government-and-gas-industry-is-peddling-mythsnbsp/

Doctors join School Strike 4 Climate, 15 March 2019

https://www.dea.org.au/media-release-doctors-join-school-strike-4-climate/

Major new report busts the myth of gas as a safe "transition" fuel, 20 March 2019

https://www.dea.org.au/wp-content/uploads/2018/12/DEA-Oil-and-Gas-final-28-11-18.pdf

DEA welcomes the AMA's call for environmental sustainability in health care, 27 March 2019

https://www.dea.org.au/dea-welcomes-the-amas-call-for-environmental-sustainability-in-health-care/

Doctors declare a climate emergency and call on governments to support the move, 3 April 2019 https://www.dea.org.au/media-release-doctors-declare-a-climate-emergency-and-call-on-governments-to-support-the-move/

DEA welcomes the ALP announcement on Climate Change and Health Strategy, 3 April 2019 https://www.dea.org.au/dea-welcomes-the-alp-announcement-on-climate-change-and-health-strategy-nbspnbsp/

Doctors welcome report as first step in treating the climate change health threat, 3 April 2019 https://www.dea.org.au/western-australian-doctors-welcome-first-steps-taken-in-sustainable-health-care-review/

AMA Key Health Issues for the 2019 Federal Election, 14 April 2019

https://www.dea.org.au/deas-response-to-the-ama-key-health-issues-for-the-2019-federal-election-nbsp/

Australian doctors among global coalition calling for urgent action on environmental change, 19 April 2019 https://www.dea.org.au/australian-doctors-among-global-coalition-calling-for-urgent-action-on-environmental-change/



Action around the states

New South Wales

It has been a very busy year for DEA in NSW. Air quality and pollution continues to be a major part of our work. Ben Ewald wrote a report on NSW's air quality and its health impacts in conjunction with Environmental Justice Australia (EJA) and reviewed EPA's air quality monitoring from 2018.⁶⁰

DEA provided submissions regarding the licence reviews of 3 coal fired power stations in NSW⁶¹ and DEA members in the Hunter Valley and elsewhere have been writing and speaking about the health impacts of air pollution, as well as calling on the government to do more.⁶²

Unconventional Gas remains a serious issue in NSW. The CSG proposal for Narrabri is still to be approved after years of delay. There is much opposition to CSG in NSW, and the number of submissions against this proposal set records, but there is still political momentum for approval. Helen Redmond, Melissa Haswell and Geralyn McCarron presented at a Health Forum in Narrabri which got a lot of local media attention.



Helen Redmond, Melissa Haswell and Geralyn McCarron presenting at the Health Forum on CSG in Narribri.

Sydney is particularly susceptible to the urban heat effect, and DEA members have spoken at a number of community meetings regarding this issue and contributed articles and op-eds to journals and media.



Virginia Reid, John Van Der Kallen, Jane Morgan, Garry Lyford, Steve Robinson, Jen Broughton, Melissa Haswell, Michael Schien.

DEA in NSW has been working with the NSW AMA on advocacy regarding health impacts due to environmental issues. This culminated in DEA having 5 articles in the November edition of the "The NSW Doctor" AMA journal.⁶³

The AMA has also assisted members of DEA in media training. This has been extremely useful, and the invitation is open for more training.

Visits with politicians have continued. Generally, DEA has had a good interaction with the politicians and are usually surprised with the evidenced based health impacts that we discuss but there is more work to be done.

NSW DEA has been involved in the school strikes for climate. DEA will continue to be part of this process as it is clear that global warming is occurring rapidly. It is truly becoming an emergency and DEA will continue to represent our concerns at rallies in NSW. NSW DEA was also was involved in the Stop Adani advocacy, especially in the lead up to the Federal Election.

John Van Der Kallen, State Chair

Victoria

Student-member activity in Victoria has expanded, particularly at the Melbourne and Deakin campuses, and has resulted in discussions with Barwon Health to improve hospital sustainability. Students have also been advocating divestment from fossil fuels by both the institutions and employees within the hospital networks. Students are the prime drivers of suggested changes to the medical curriculum which may see a wider mention of the health effects of climate change in under-graduate teaching. An upsurge in DEA's student membership has occurred augurs well for DEA's future.



Kristen Pearson and Eugenie Kayak manning the DEA stall - ANZCA Conference 2018

In the last 12 months DEA has disseminated material including "Prescriptions for a healthy Victoria/Australia" promoting action on climate change prior to both state and federal elections. Members also spoke at pre-election forums and meetings.

We continue to engage with the state public service and have contributed to the setting of Victoria's interim emissions reduction targets, and to discussions with Sustainability Victoria on electoral attitudes. Just prior to the federal election we attended discussions with the Shadow Minister for Energy and were dismayed to hear of a softening of anti-fossil fuel policy.

University of Melbourne - NTFG Trivia night

DEA assisted in editing a film "Our Power" which we presented to DEA members at a local cinema in November 2018, together with Victoria's newly appointed Latrobe Valley Health Advocate. The film documented the disastrous 2014 Hazelwood coalmine fire and the resultant shift in community attitudes to power generation in the Latrobe Valley, and featured an interview with Eugenie Kayak.

John Iser, State Chair



VIC members complete another Melbourne Marathon (2018)

Queensland

Over the last year, DEA's Queensland committee has held monthly videoconference meetings and, together with the larger membership group, have continued to be involved in advocacy and action around the state. During the last months particularly, we have actively engaged with the media, with a number of members writing articles and participating in radio interviews on bush fires, extreme heat and air quality issues. We have liaised with the Wilderness Society and Farmers for Climate Action.

The School Strike for Climate rallies have been key focuses for DEA in QLD. In March, DEA members teamed up with other health professionals from the Climate and Health Alliance (CAHA) to support school children demanding action on climate change.



In early 2019, DEA members met with the AMAQ council to give a presentation and answer questions on behalf of DEA. Requests were made for the AMA to conduct more advocacy on climate and health and boost climate change education in the medical profession.

DEA was also involved with the AMA National conference in Brisbane in May. A stall was hosted, and local DEA members chaired a discussion on climate change and health for delegates on Sunday morning. This was the first time DEA has been involved in such a way at an AMA conference and we hope to further strengthen our relationship with the AMA and further collaborate with them in future.

July's Gold Coast Marathon was yet again one of the annual highlights for DEA. It was a particularly successful year, with 18 people entering as part of team 'No Time For Games, Let's run'.

DEA QLD made submissions in regard to the Adani mine to the Queensland Mineral Resources Amendment Bill. We were invited to present our evidence at a state government public hearing (see section on Adani). It was the first time the state government committee were addressed by health professionals and while the Bill did not pass, they characterised our evidence and opinions as valuable.

We also made a submission regarding the planned Winchester South coal mine in the Bowen Basin.



DEA QLD supported local groups such as the Maleny Community Group and Wynnum Clean Air Community forum with environmental health issues and delegates from DEA QLD participated in the Climate Risk strategy group meeting initiated by Qld Health.

Beau Frigault, State Chair

South Australia

Adelaide had the dubious honour of being the hottest city on the planet on Thursday 24 January, reaching a temperature of 46.6°C, surpassing Melbourne (46.4°C in 2009) as the hottest Australian city ever! But spare a thought for our colleagues in Port Augusta where the temperature reached 49.1°C.



Air-conditioned DEA SA Committee meeting on 23 January 2019 – the day before the records fell!

This "highlight" powerfully reinforces why we must continue our advocacy for a healthy planet. We have done this through strengthening links with the AMA in South Australia, DEA has been active in giving and attending presentations and workshops, taking these opportunities to build networks, including our

ongoing links with the Carbon Neutral Adelaide initiative. We ran lectures on climate change and health for medical students at Flinders University and the University of Adelaide.

Along with DEA members nationally, we joined the Global School Strike for Climate Change in March where our No Time for Games banner was right at the front of the march.



Our committee has been actively involved with SA Health in a consultation process to guide development of the new *State Public Health Plan 2019-2024*. This plan will replace SA's inaugural *State Public Health Plan*, which was released in 2013 and which was designed to facilitate the initial implementation of the *South Australian Public Health Act 2011*.64, 65

Doug Shaw, State Chair



West Australia

Early in 2018 the Department of Health of Western Australia initiated a Sustainable Health Review. DEA members actively contributed to the groundwork for the document, including the running of a WA state forum on Climate Change and Sustainability held in August of 2018. The forum gathered together key stake holders and experts for meaningful discussions on climate and health, with several DEA members contributing to the dialogue.

The Sustainable Health Review was released in early 2019. The final review document included these recommendations:

- Addressing climate change as a health threat and including specific resources on a systemwide basis similar to the successful model used in the United Kingdom's Sustainable Development Unit.
- Reviewing and reducing the health sector's waste and environmental footprint.
- Increasing our focus and investment in prevention, to account for at least 5 percent of total health spending in WA by 2029.
- Addressing inequity, mental health, and the social and environmental determinants of health.

Advocacy by members of DEA, was pivotable in achieving some of these outcomes. Congratulations to those involved!⁶⁶

Following the release of this document in May, the WA government announced an inquiry under the Public Health Act on the issue of the health impacts on climate change. It is currently underway and is being conducted by the state's former chief health officer Professor Tarun Weeramanthri. The outcome of the inquiry is to make recommendations on how to strengthen the community and health services in the face of climate change.⁶⁷

Ongoing advocacy from members continues within hospitals and at the health board levels on sustainability in the health sector.

The issue of gas in the state relates to both unconventional (fracking) and conventional LNG mining.

In April of 2019, the WA EPA made reformative proposals on emissions which were forcefully and successfully opposed by both industry and the government.

On 1 November we wrote to the Premier following on from our submission to the state's Fracking Inquiry, to argue against a lifting of the fracking ban in WA. Despite protestation from large sections of the community, unconventional gas mining has been allowed in parts of the state. While the state's geology and vastness are an impediment to unconventional gas mining, the size of the gas deposits continues to attract business interest. LNG is booming in WA with still more projects coming on board.⁶⁸

DEA has been supportive of the Clean State campaign⁶⁹ by way of trying to slow down and apply offsets on our rampant LNG industry.



A very cordial and constructive meeting was held in Perth on 26 September 2018 between Federal AMA President Dr Tony Bartone, DEA National Chair Kingsley Faulkner and DEA WA Chair Richard Yin. Leading into the elections we had members at Subiaco markets distributing DEA's Prescription for a Health Planet flyer and members met with Senator Josh Wilson.

We had a presence at School Strike for Climate in March and promoted the No Time For Games campaign with meetings at various general practices. DEA's WA running team joined 30,000 others in the HBF Run for a Reason raising \$2905.

Richard Yin, State Chair.

Tasmania

Since Hobart's iDEA 2019, DEA Tasmania has formalised their state structure, adopted a new meeting arrangement to ensure better engagement with non-executive members and implemented the use of cloud-based storage and communications.

We have supported the Climate Resilience Network, a coalition of groups aimed at supporting people experiencing climate anxiety and have provided strong opposition to the recent announcement of a new coal mine in Tasmania. We have run several writing groups and have aided our members in making high-quality representations to the local news media.

Kris Barnden, State Chair



ACT

The federal election was a prime focus for many ACT DEA members at the beginning of the year. We worked collectively and as individuals, writing letters, attending events and meeting with election candidates. The process expanded our local network in ways which will continue to be helpful for years to come.

Events have been held at the Australian National University Medical School with enthusiastic medical students discussing the health issues of climate change, and the politics that prevent action. Our student membership remains small but has grown and is actively engaged with the organisation locally.

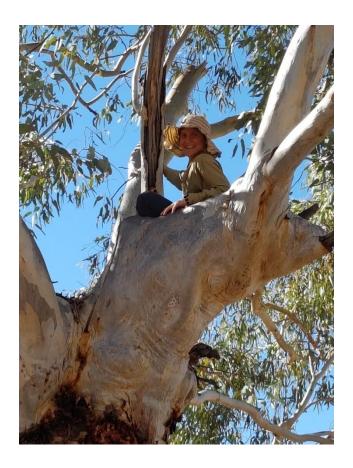
The ACT government leads Australia in addressing the challenge of Climate Change with government

action. The ACT electricity market is now 100% carbon neutral. The recent ACT Climate Change Strategy highlights the benefits of improving Healthcare Sustainability in the hospital sector. We hope that DEA continues to be a useful voice working with government to achieve decreased carbon footprint within healthcare in Canberra.

DEA in ACT has taken on the task of organising iDEA2020. It will be held at ANU in April and should bring together ideas on climate change and health from many different perspectives! We are delighted to be hosting the conference and look forward to welcoming our friends and colleagues to Canberra.

Arnagretta Hunter, State Chair

Northern Territory



When the moratorium on fracking was lifted in early 2018, it was made clear the industry would be subject to all 135 recommendations of the scientific inquiry. Nevertheless, the contribution to global emissions from the NT gas industry will be considerable, and the commencement of fracking exploration will mean increasing rates of land clearing and other contributors to biodiversity loss. The Northern Territory Government has declared over 50% of the NT open for fracking gas fields. 70

Last summer's temperatures of 60 degrees in central Darwin mark the need for urgent action on climate change mitigation and adaptation.

Rosalie Shultz, NT

Our people

Scientific Committee

A distinguished number of scientists provide evidence-based support for the work we do:

- Professor Stephen Boyden AM
- Professor Chris Burrell AO
- Professor Peter Doherty AC
- Professor Michael Kidd AM
- Professor David de Kretser AC
- Professor Steve Leeder AO
- Professor Ian Lowe AO
- Professor Robyn McDermott
- Professor Lidia Morawska
- Professor Peter Newman AO
- Sir Gustav Nossal AC
- Professor Hugh Possingham FAA
- Professor Lawrie Powell AC
- Professor Fiona Stanley AC
- Rosemary Stanton OAM
- Dr Norman Swan

Honorary Advisor - Professor David Shearman, AM

Emeritus Professor of Medicine, University of Adelaide.

Professor Shearman has contributed to reports Three and Four of the Intergovernmental Panel on Climate Change. He is a former President of the Conservation Council of South Australia.

Management Committee

Co-Chair - Professor Kingsley Faulkner, AM

Professor within the School of Medicine, Fremantle of the University of Notre Dame Australia. Professor Kingsley was President of the Royal Australasian College of Surgeons 2001-2003 and formerly Chairman, Australian Council on Smoking and Health.

Co-Chair - Dr Eugenie Kayak Anaesthetist

Secretary – Dr Richard Yin GP

Treasurer - Dr Hakan Yaman

Emergency Physician and General Practitioner Master of Public Health

National Student Representative – Clancy Read

Medical student at the University of New South Wales

Dr Sujata Allan, GP

Dr Kristine Barnden, Obstetrician

Dr Marion Carey, Public Health Physician

Dr Sallie Forrest, Public Health Physician

Dr Beau Frigault, RMO

Dr Graeme McLeay, Anaesthetist

Dr John Van Der Kallen, Rheumatologist

National DEA Committee

Management Committee members (as above)

Dr Ben Ewald, Epidemiologist

Dr Liz Bashford, Anaesthetist

Dr Arnagretta Hunter, Cardiologist

Dr John Iser, Gastroenterologist

Dr David King, Academic GP

Dr Kristen Pearson, Geriatrician

Dr Helen Redmond, Rehabilitation Physician

Dr Dimity Williams, GP

National Student Representative - Elect

Georgia Behrens, medical student at the University of Notre Dame, Sydney

State Chairs and representatives

Dr John Van Der Kallen, NSW

Dr John Iser, VIC

Dr Beau Frigault, QLD

Dr Doug Shaw, SA

Dr Richard Yin, WA

Dr Kristine Barnden, TAS

Dr Arnagretta Hunter, ACT

Dr Rosalie Schultz, NT

Sub-committees representatives

Air pollution - Sujata Allan and Ben Ewald

Agriculture and diet - John Van Der Kallen

Biodiversity and natural ecosystems - Dimity Williams

Climate change -Liz Bashford and John Iser

Divestment - Helen Redmond

Environmentally sustainable healthcare - Eugenie Kayak and Forbes McGain

Gas and unconventional gas - David Shearman

Health and Energy - Chris Juttner

Treasurers Report

I am excited to report that DEA baseline income has significantly increased this year. This was almost exclusively due to our rapidly expanding member base as more of our colleagues understand the urgency of action that is needed. They are unwilling to take on the role of bystander whilst our families and patients are at risk and understand the inextricable link between our natural environment and our wellbeing.

The largest proportion of DEA expenditure was spent on a small group of paid staff that supported and maximised the effectiveness of the work of our large member base. However, as you would rightly expect, all members of our management committee are volunteers. They self-fund their DEA expenses and have no pecuniary interest in DEA finances.

Further detailed information can be obtained by viewing our full audited financial statement. This will be uploaded as a public document on the Australian Charities and Not for Profit Commission website⁷¹. Any questions regarding the financial statement are welcome and I am confident that all funds have been used to pursue the primary environmental purpose of DEA.

There are many to thank for their assistance over the last year. Our hard-working staff members have consistently worked well beyond their job description, reflecting their passion for the organisation. These include Joy Oddy who runs our Adelaide base office and our media and communications officer Carmela Ferraro.

Our deepest gratitude extends also to our accountant Cameron Batterham from Batterham & Associates whose support has now continued for over a decade. He has again generously donated his time and expertise to independently prepare the DEA Annual Financial Statement.

A special mention must also be made to Mr Mark White of Panama Software who shares our passion in protecting our environment. His work on our website and database has been invaluable and we thank him for his accessibility and enthusiasm.

Finally, our thanks to all our members for their vital contributions, the spectrum of which is from simply maintaining membership to extensive involvement with our State and National committees. Many of our members have been alongside us for over a decade and are now being joined by an expanding cohort of student members and new graduates.

We have many goals for 2020 and our position to achieve them is far greater as our new members come with us. I welcome our new members and thank those who have been with us for so many years and hope you will continue to work with us as we announce some exciting new plans for the coming year.

Dr Hakan Yaman Honorary Treasurer

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52

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