Open letter to The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory and the Northern Territory Government.

February 24, 2018.

Dear Chair, Inquiry panel members and ministers,

Development of onshore shale gas and shale oil fields in the Northern Territory should not go ahead under any circumstances.

The consequences of global warming are already extremely serious; including loss of human life, extreme weather, destruction of natural ecosystems and property damage.

The Northern Territory is in the region likely to experience the most severe impacts of global warming. For example, it is highly susceptible to temperature increases. In Darwin the number of days over 35 degrees Celsius is expected to increase from 11 per year currently to up to 308 in 2070[1] if emissions are not reduced. Heatwaves have killed more Australians than any other extreme weather events.[2]

The *Scientific Inquiry in Hydraulic Fracturing in the Northern Territory* has found that the development of a single new onshore shale gas field would increase Australia's greenhouse gas emissions by 5%. This is a large and unacceptable increase in Australia's emissions. It is completely incompatible with Australia's carbon budget and our commitments under the Paris agreement.

The Northern Territory Government submitted a higher scenario of shale gas production to the inquiry. It would result in lifecycle emissions equal to 18% of Australia's greenhouse pollution. Given the amount of shale gas identified, emissions could be higher still.[3]

Our view is based on the scientifically robust *carbon budget* framework. On this basis, most existing fossil fuel reserves must remain unburned. Any new fossil fuel development is incompatible with the goal of the 2015 Paris climate agreement that aims to limit the rise in

---

[1] Without global action to reduce emissions: Australian Government, Department of the Environment and Energy, Climate change impacts in the Northern Territory, Accessed 28/01/17 http://www.environment.gov.au/climate-change/climate-science-data/climate-science/impacts/nt

[2] Hughes et al (2016) The Silent Killer: Climate Change and the Health Impacts of Extreme Heat, Climate Council.

[3] Shale gas resource identified by the Inquiry at 257,276 PJ, over 200 trillion cubic feet of gas

global temperature to well below 2.0 degrees Celsius above pre-industrial levels and to make every effort to limit the rise to 1.5 degrees Celsius.

As scientists and experts concerned about the wellbeing of the people of the Northern Territory, Australia and the rest of the world, we strongly urge that onshore shale gas and shale oil development does not go ahead in the Northern Territory under any circumstances.

Signatories	
Professor Peter Doherty AC	Nobel Prize in Physiology or Medicine 1996; Australian of the Year 1997; Laureate Professor.
Professor Fiona Stanley AC FAA	Distinguished Research Professor, School of Paediatrics and Child Health; Australian of the Year 2003
Professor Lesley Hughes	Councillor, Climate Council; Ecologist, Macquarie; IPCC Lead Author.
Professor Will Steffen	Councillor, Climate Council; Climate Scientist, Australian National University.
Professor David Karoly	Leader, Earth Systems and Climate Change Hub National Environmental Science Program CSIRO Oceans & Atmosphere.
Professor Andy Pitman	Climate scientist, University of New South Wales.
Dr Andrew Glikson	Climate Scientist, Australian National University.
Associate Professor Malte Meinshausen	Melbourne.
Professor John Church	ARC Laureate Fellow, ARC Centre for Climate System Science and ARC Centre for Climate Extremes, University of New South Wales.
Ian Dunlop	Former senior executive Shell, former Chairman of the Australian Coal Association, former CEO of the Australian Institute of Company Directors and Chairman the Australian Government Greenhouse Office Experts Group on Emissions Trading.

Brett Murphy	Senior Research Fellow / ARC Future Fellow, Charles Darwin University.
Associate Professor Tilman Ruff AM, FRACP	Global Health, Melbourne; Co-President, International Physicians for the Prevention of Nuclear War (Nobel Peace Prize, 1985)
Emeritus Professor Mark L Wahlqvist AO	Medicine, Monash; Former Head of Medicine at Prince Henry's Hospital.
Professor Colin Butler	Public Health, University of Canberra; co-founder BODHI Australia.
Professor Hilary Bambrick	Chair of Population Health, Western Sydney University.
Professor Rick Cavicchioli	Biotechnology and Biomolecular Sciences, University of New South Wales.
Tim Forcey	Former AEMO Gas Principal, International gas industry engineer Exxon, Esso BHP, former researcher University of Melbourne Energy Institute (MEI).
Associate Professor Bayden Wood	Australian Research Council Future Fellow; Director of Monash Centre for Biospectroscopy, Monash University.
Dr Peter Sainbury	Adjunct Association Professor, School of Public, Health School of Public Health University of Sydney.
Frank Talbot AM FRZS (NSW)	Fellow California Academy of Science.
Dr Sue Wareham AOM	President Medical Association for Prevention of War (Australia)
Luke Kemp	Senior Economist, Vivid Economics.
Professor David Bowman	School of Biological Sciences, University of Tasmania.
Professor Richard Fuller	University of Queensland.
Hugh Saddler	Honorary Associate Professor, Crawford School of Public Policy, Australian National University.

Fiona Armstrong	Associate, Melbourne Sustainable Societies Institute, University of Melbourne; Sessional Lecturer, School of Public Health and Human Biosciences, Latrobe University.
Associate Professor Victor Galea	Plant Pathologist & Deputy Head School of Agriculture and Food Sciences, University of Queensland.
Professor Peter Dart	Queensland University of Technology.
Dr David Holmes	Director, Climate Change Communication Research Hub, Monash University
Professor John Wiseman	Professorial Research Fellow, Melbourne Sustainable Society Institute, University of Melbourne.
Associate Professor Tim Cohen	School of Earth and Environmental Sciences, University of Wollongong