Per email: sgcentral@un.org

An OPEN LETTER to António Guterres, Secretary-General of the United Nations

September 18, 2019

REQUEST TO THE UNITED NATIONS TO CALL FOR A GLOBAL BAN ON FRACKING

Dear UN Secretary General Guterres:

The undersigned organizations submit this letter to highlight the fact that continued production, trade and use of fracked hydrocarbons for energy, petrochemicals and plastics torpedoes our global efforts to tackle climate change and violates basic human rights.

As you are aware, manmade climate change is the biggest and most comprehensive existential threat humanity has ever faced – apart from a nuclear war.

Scientists confirm that we have maximum 10-30 years left to phase-out all fossil-fuels (including fossil gas) if we want to avoid overshooting significant climate tipping-points. Scientific evidence shows that methane emissions from gas extraction in general and from shale gas in particular are a significant driver of global warming and climate change.ⁱ

However, at a time when all global forces must be combined to combat the foreseeable and enfolding mass extinction on our planet, the oil and gas industry – backed by many irresponsible governments – bets on a fossil fuels extraction technique that will destroy the joint forces of humanity: hydraulic fracturing, better known as fracking.

As early as 2012, the UN Environment Program (UNEP) issued a "Global Alert" on fracking, concluding that fracking may have environmental impacts even if done properly.ⁱⁱ

Rather than working towards increased development of the fracking industry we must focus on ways to eliminate our continuing reliance on fossil fuels, including fossil gas, as quickly as possible. To do otherwise ignores the existing crucial scientific evidence that proves the significant negative climate role of gas, in particular fracked gas, and the dire economic consequences related to ongoing fossil fuel consumption.

1. Negative climate impacts of fossil gas

The UNFCC's press release from January 19, 2018, highlighted an important study by NASA which has confirmed that oil and gas industry is responsible for the global rise in methane emissions.ⁱⁱⁱ

Dr. Robert Howarth, a researcher from Cornell University, recently concluded that the global increase in methane over the last 10 years is largely driven by the oil and gas industry. His updated estimate for average, full-cycle methane leakage rate from natural gas operations (fracked and non-fracked) is 4.1%.^{iv} These kinds of leakage rates render natural gas just as, if not more, climate harmful than coal. Recent pushed trade in Liquefied Natural Gas (LNG) will increase global emissions and its overall full lifecycle greenhouse gas balance is comparable to or even worse than that of coal.^v

But even if we leave the existing significant methane emissions aside, we know that global economically recoverable - fossil fuels extraction projects (currently producing and underconstruction), would take the world far beyond safe climate limits. Further development and trade of gas reserves is inconsistent with the implementation of the vital climate targets.^{vi} We also know that the industry also strongly relies on fracking for the current and future extraction of oil and gas worldwide. $^{\mbox{\tiny vii}}$

2. Environmental and public health implications of fracking

More than a decade of large-scale use of fracking to extract fossil fuels from the ground has underscored how harmful and destructive this extraction process can be, as confirmed and acknowledged by countless peer-reviewed scientific studies. There are numerous proven risks and impacts related to the development of fracking projects, such as heavy freshwater consumption, water and soil contamination, public health impacts and the significant contribution to global warming.^{viii}

In heavily fracked areas in southwestern Pennsylvania there have been high rates of cancer, including Ewing's Sarcoma, a rare type of childhood bone cancer. The Pennsylvania Department of Health and the U.S. Centers for Disease Control and Prevention have launched a study to determine if the number of cases constitute a cancer cluster. Families are suffering from the effects of contaminated air and water and there is increasing fear as fracking activities show no sign of slowing down.^{ix}

Pregnant women who live near active fracking operations in Pennsylvania are at an increased risk of giving birth prematurely, according to research by the John Hopkins Bloomberg School of Public Health.^x

3. Fracking supports polluting plastics industry

The plastics industry has reaped under-the-radar benefits from the environmentally destructive fracking boom and an oversupply of cheap ethane in the past few years. This surge has been a boon for the plastics industry, which relies on petrochemical manufacturing to turn ethane, a hydrocarbon present in natural gas, into plastics. Beginning in 2012, chemical companies started aggressively investing in petrochemical plants, pipelines and export facilities focused on tapping the ethane glut, creating further negative implications for human and environmental rights – right at a moment when we try to solve the big global plastic health and climate crisis.^{xi}

According to calculations recently published by the Center for International Environmental Law (CIEL), full plastic lifecycle emissions (including the extraction of fossil fuels, production, transport, consumption and disposal) alone will generate 56 gigatons of CO2 by 2050. This corresponds to 10 – 13 percent of the global carbon budget we have left to stay within a 1.5 ° global warming scenario.

4. Fracking impacts human rights

In May 2018, the Permanent Peoples Tribunal (PPT) on Human Rights, Fracking and Climate Change heard testimony and received other evidence relating to fracking and its impact. Included were very substantial reports from four prior PPT Citizens' Tribunals that had gathered scientific, technical, social, cultural and experiential testimony from many community organizations, experts and individual citizens.

According to the preliminary statement of the PPT judges, "the evidence clearly demonstrates that the processes of fracking contribute substantially to anthropogenic harm, including climate change and global warming, and involve massive violations of a range of substantive and procedural human rights and the rights of nature.... The evidence also shows that governments have, in general, failed in their responsibility to regulate the industry so as to protect people, communities and nature. In addition, they have failed to act promptly and effectively to the dangers of climate change that fracking represents."^{Kii} In the final Advisory Opinion, the PPT recommended that "fracking be

banned" and that "the Special Rapporteur on Human Rights and the Environment be asked to investigate the violations of the rights of humans and nature by the Unconventional Oil and Gas Extraction industry."^{xiii}

This finding is echoed elsewhere: In October 2018, the UN's CESCR issued an official warning concerning fracking for shale gas in Argentina, saying that *"the Committee is concerned that this hydraulic fracturing project contradicts the State party's commitments to the Paris Agreement, with a negative impact on global warming and the enjoyment of the economic and social rights of the world population and future generations. (Article 1 (1) and 2 ((1))^{(xxiv} In March 2019 the United Nations Committee on the Elimination of Discrimination Against Women (CEDAW) urged the British Government to "consider introducing a comprehensive and complete ban on fracking."^{xv}*

In June 2019, the Human Rights Council published a report on climate change and poverty, clearly highlighting the fact that "fossil fuel companies are the main driver of climate change" and that "the track record of the fossil fuel industry makes clear that overreliance on profit-driven actors would almost guarantee massive human rights violations".^{xvi}

He further points out that *"if climate change is used to justify business-friendly policies and widespread privatization, exploitation of natural resources and global warming may be accelerated rather than prevented."*

That is definitely true for the fracking industry and the false and positive promotion of natural gas.

Directly affected regions and communities all over the world rely on a strong and bold public position of the United Nations on this significant and existential issue.

Dear Secretary General Guterres, as the United Nations prepares for its Climate Action Summit 2019, we call on you to accept this climate champion role and to publicly demand a global ban on fracking!

Sincerely,

Initiators

- Andy Gheorghiu, Policy advisor & Campaigner, Food & Water Europe
- 2. Michele Fetting, Program Manager, Breathe Project
- Scott Edwards, Legal Director, Food & Water Action

Supporters/Co-signatories

	Organization	Full name of signatory	Title/Function
1	350	Bill McKibben	Founder
2	-/-	Mark Ruffalo	Actor/Producer
3	-/-	Naomi Klein	Award-winning journalist, bestselling author & activists
4	-/-	Karenna Gore	Attorney, advocate, writer & educator
5	-/-	Amber Heard	Actress and UN Human Rights Champion Human rights lawyer and
6	-/-	Jennifer Robinson	barrister with Doughty Street Chambers
7	-/-	Vivienne Westwood	Fasion Icon
8	-/-	Emma Thompson	Actress and activist
9	-/-	Raffi Cavoukian	Singer & author, Raffi Foundation
10	198 methods	Drew Hudson	Founder
11	350 Argentina	Ignacio Zavaleta	Organizer
12	350 Brazil	Nicole Oliveira	Diretora de Mobilização
13	350 Brooklyn	Sara Gronim	Co-leader
14	350 Butte County	Mary Kay Benson	Steering Council Manager
15	350 Colorado	Micah Walker Parkin	Executive Director
16	350 Montgomery County Maryland	Jeffrey Weisner	President, Steering Committee
17	350 NYC	Leslie Stevens	350NYC Steering Committee

18	350 San Antonio	Kathy Glass	organizer
19	Abgefrackt Bündnis Weidener Becken gegen Fracking	Hilde Lindner-Hausner	Sprecherin
20	Academia Cidadã Citizenship Academy, Portugal	João Costa	Volunteer
21	Academic/Scientist	Dr. Peter Strachan	Professor Energy Policy, Robert Gordon University, Aberdeen, UK
22			Professor of ecology & Earth systems science, Cornell University (for identification
	Academic/Scientist	Prof. Robert Howarth	only), Ithaca, NY USA
23	Academic/Scientist	Mohsen - KALBOUSSI	Teacher Assistant Professor of
24	Academic/Scientist	Martina Angela Caretta	Geography at West Virginia University
25	Academic/Scientists at SUNY ADK, US	Lale Davidson	English Professor
26	Academic/Scientists, Massey University New Zealand	David T S Hayman	Professor of Infectious Disease Ecology
27	Adéquations	Yveline Nicolas	Coordinator
28	Adorers of the Blood of Christ, US Region	Sara Dwyer, ASC	JPIC Contact
29	AFT Local 2026	John Braxton	Co-president
30	Aktionsbündnis No Moor Fracking	Wibke Langhorst	Spokesperson
31	Alerte Pétrole Rive-Sud	Marie Samson	Coordinator
32	Alianza Mexicana contra el Fracking	Claudia Campero	Facilitator
33	Allegheny County Clean Air Now	Thaddeus M. Popovich	Co-founder
34	Amazon Watch	Leila Salazar-López	Executive Director
35	Amigos de la Tierra (FoE Spain)	Héctor de Prado	Climate and Energy Justice campaigner

36	Amigos de la Tierra Argentina	Natalia Salvatico	Presidente
37	Animals Are Sentient Beings, Inc	Sarah Stewart	President
38	Antwerpen Schaliegasvrij	Annick Vanisterbecq	Activist
39	Appalachian Gas Working Group	Elaine Ferry	Member activist
40	Aquamarine Studio	Janet S Carlson	Graphic Artist
41	Art Body & Soul	Thea Becker	Owner
42	Art Monastery	Qayyum Johnson/Art Monastery	Co-Director/Farmer
43	ASEAN Green Justice Network	Go Takahashi	Co-Chair
44	Asociación de Cultura Popular Alborada	Ángel López Manero	presidente
45	Asociación Latinoamericana de Medicina Social (ALAMES) - Bolivia	Nila Heredia	Spokesperson
46	Associació Naturalistes de Girona Athens County's Future Action	Carolina Coll Marques	President
47	Network, aka Athens County (OH) Fracking Action Network	Heather Cantino	Steering Committee Chair
48	Attac France	Maxime Combes	spokesman
49	Avoid Disposables And Plastic Trash!	Margaret S. Dabney	Designer, Planner
50	Aytzim: Ecological Judaism	David Krantz	President
51	Ballona Creek Renaissance (BCR)	James W. Lamm	President Emeritus
52	Basel Action Network	James Puckett	Founder, Executive Director
53	Beaver County (PA) Marcellus Awareness Community	Marcia L. Lehman	Treasurer, Steering Committee
54	Beaver County Marcellus Awareness Community (BCMAC)	Anita Teresa Baumgardner	Steering Committee

55	Bench Marks Foundation	David van Wyk	Lead Researcher
56	Berks Gas Truth	Karen Feridun	Founder
57	Berliner Wassertisch	Sigrun Franzen	Spokesperson
58	Better Path Coalition	Karen Feridun	Co-founder
59	Beyond Pesticides	Jay Feldman	Executive Director
60	Beyond Plastics	Judith Enck	Founder and former EPA Regional Administrator
61	BI Gesundheit und Klimaschutz Unterelbe	Stephan Klose	Spokesperson
62	BI lebenswertes Korbach	Harald Ruecker	Speaker
63	Big Reuse	Justin Green	Executive Director
64	Biofuelwatch	Rachel Smolker	codirector
65	Blauvelt Dominican Sisters	Cecelia Lavan	Sister/Justice Promoter
66	Break Free From Plastic	Von Hernandez	Global Coordinator
67	Breathe Easy Susquehanna County	Rebecca Roter	Chairperson
68	Bronx Climate Justice North	JENNIFER SCARLOTT	Coordinator
69	Broome Tioga Green Party	Rick Sprout	Chair
70	Carmelite Vedruna	Maureen Foltz	Intercontinental Coordinator of JPIC
71	Catholic Network US	Marie Venner	Coordinator
72	Centar za životnu sredinu/Friends of the Earth Bosnia and Herzegovina	Natasa Crnkovic	President
73	Center for Biological Diversity	Jean Su	Energy Director, Climate Law Institute

74	CESTA	Ricardo Navarro	President
75	Change Partnership	Sanjeev Kumar	Founder
76	Chicago Area Peace Action	Rachel Elfant	Climate Justice Organizer and Administrator
77	Christians For The Mountains	Allen Ray Johnson	Coordinator
78	Church Women United in New York State	Mary Smith	Communications Director
79	Citizen Action of New York	Bob Cohen	Policy Director
80	Citizen consumer and civic Action Group (CAG)	Om Prakash Singh	Executive Director
81	Citizens for a Healthy Jessup	Jason Petrochko	President
82	Citizens for Clean Water	Vera Scroggins	Spokesperson
83	Citizens United for Renewable Energy (CURE)	Georgina Shanley	Co Founder
84	Clark Strategic Partners	Woodrow W. Clark II, PhD	Managing Director
85	Clay Cross Against Fracking	Anne Thoday	Founding member
86	Clean and Healthy New York	Kathleen A. Curtis	Executive Director
87	Climate Change Ireland	Charlie Williams	Spokesperson
88	Climate Hawks Vote	RL Miller	president
89	Climate Reality WCPA Chapter	Rhonda Dam	Chapter Chair
90	Climate Reality: Pittsburgh & Southwestern PA Chapter	Phoebe Reese	Co-Chair
91	ClimateMama	Harriet Shugarman	Executive Director
92	Coalition of Concerned Medical Professionals	Elisabeth Stevens	President, Board of Directors
93	Coalition to Protect New York	Doug Couchon	Co-Founder

94	COESUS	Osvaldo Mishima	Diretor Administrativo
95	Collectif Arcois pour la Planète	christine varenne	référente
96	Collectif Causse Méjean - Gaz de Schiste NON !	Estelle TARDY	Coordinator
97	collectif Stop GHRM 38	Bob Pilli	Référent Rhône-Alpes France
98	collectif Tarn-et-Garonne	Fournier Nicolas	Représentant
99	Colorado Rising	Patricia Ann Olson	President of the Board
100	Colorbrightongreen	Cheryl Frank	President
101	Columbus Community Bill of Rights	William Lyons	Co-organizer
102	Common Ground Rising	Elaine Cimino	Director
103	Communities First Sewickley Valley	Gail Murray	Communications director
104	Conceivable Future	Josephine Ferorelli	Co-founder, Co-director
105	Concerned Citizens For Change	Gene Binder	Member Steering Committee
106	Concerned Citizens of Rural Broome	Dr. Joan Koster	Secretary
107	Concerned Citizens Ohio	Gwen B Fischer	Coordinator
108	Concerned Health Professionals of New York	Sandra Steingraber, PhD	Co-founder
109	Concerned Ohio River Residents	Beverly Reed	Volunteer
110	Concerned Residents of Oxford	Daniel A Taylor	Co-Founder
111	Confederation Paysanne	Claude Girod	Responsable commerce
112	Congregation of St. Joseph - Justice Team	Mary Ellen Gondeck, csj	Member of the Justice Team
113	Corporate Europe Observatory	Pascoe Sabido	Campaigner

114	Council of Canadians Kent County Chapter	Debbie Hopper	Chairperson
115	Daughters of Charity, USA	Sister Margaret Louise Brown, D.C.	Director, Social Justice & Environmental Advocacy Coordinator of Justice Peace
116	Daughters of Wisdom	Ann Gray	and Integrity of Creation (JPIC USA)
117	Debt Observatory in Globalisation (ODG)	Josep Nualart Corpas	Researcher
118	Defenders of the Earth Outreach Mission	Rev.Monica Beasley- Martin	Spiritual leader member of Executive
119	Democratic Socialists of America	Dave Anderson	Committee of Boulder County DSA
120			
	Derbyshire Climate Coalition Deutsche	Anne Thoday	Founding member
121	Umwelthilfe/Environmental Action Germany	Constantin Zerger	Head of Department, Energy and Climate Protection
122	Divest Strathclyde	Isla Mary Scott	Member
123	Doaktown Health Alliance/New Brunswickers Against Fracking	Mary de La Valette	Spokesperson
124	Dominican Leadership Conference	Margaret Mayce	NGO Representative
125	Dominican Sisters of Sparkill	Sister Eileen Gannon	Member Leadership Team
126	Društvo Ekologi brez meja	Jaka Kranjc	Secretary General
127	Društvo Gibanje za trajnostni razvoj Slovenije - TRS	Lara Jankovič	President
128	Dryden Resource Awareness Coalition	Marie McRae	spokesperson
129	Durbanites Against Plastic Pollution	Steve Cohen	Director
130	Dutchess County Progressive Action Alliance	Caroline Fenner	Environment Team Leader
131	Earth Ethics, Inc.	Mary Gutierrez	Executive Director
132			
	East Bay Public Bank	Susan Harman	member

133	Eco-Eating	Dan Brook	Professor, Department of Sociology, San Jose State University
134	EcoJustice Working Group Thomas Merton Center	Wanda Guthrie	Convener
135	EcoLeaks	Esteban Gaston Servat	Founder
136	Ecologistas en Acción	Samuel Martín-Sosa	International coordinator
137	EcoNexus	Helena Paul	Co-Director
138	Eco-Poetry (Climate Crisis Literature and Alerts)	Daniela Gioseffi	Founding Editor & Director of Events Organizer
139	Ecorecicla Venezuela	Jose ibarra	Director
140	ECOTON	Daru Setyorini	Program Development Manager
141	Eerlijke Geldwijzer	Evert Hassink	project group member
142	Elmirans and Friends Against Fracking Enrironmental Justice	Doug Couchon	Co-Founder
143	Committee Thomas Merton Center	Wanda Guthrie	Convener
144	Environment and Human Rights Advisory	Dr Tom Kerns	Executive Director
145	Environmental Investigation Agency	Clare Perry	Climate and Ocean Campaign Leader
146	Environmentalists Against War	Gar Smith	Co-founder and Director
147	Ernst Environmental Services	Jessica Ernst	President
148	European Environmental Bureau	Jeremy Wates	Secretary General
149	Eurosolar Spain	Josep Puig i Boix	PhD engineer, President
150	Evluth. Kirchengemeinde Varel	Hanspeter Boos	Umweltbeauftragter
151	Extinction Rebellion Kentucky	Alice Melendez	Local coordinator

152	FaCT-Faith Communities for a Sustainable Future	Ronald L. Prosek	Vice-President, Board of Directors
153	Fair Finance Guide International	Fair Finance Guide International	Coordinator
154	FOGH (Friends of Grays Harbor)	Arthur Grunbaum	President
155	Foire ÉCOSPHÈRE	Eric Ferland	Directeur général et membre fondateur
156	FoodScraps360	Diana L Wright	Owner
157	Fossilgasfällan	Olivia Linander, Fossilgasfällan	Gas campaigner
158	Fox Chapel Area Cares	Rajani Vaidyanathan	Citizen, of citizen group
159	Frac Sand Sentinel	Patricia J. Popple	Editor
160	Frac Sand Sentinel: Project Outreach	Patricia J. Popple	editor, activist
161	Frack Free Aotearoa New Zealand	Robyn Harris-Iles	Co-ordinator
162	Frack Free Four Corners	Jennifer A. Siri	Co-Founder
163	Frack Free Greater Manchester	Ali Abbas	Campaigner
164	Frack Free Illinois	Joyce Good	Member
165	Frack Free Lancashire	Claire Stephenson	Media Officer
166	Frack Free Sherwood Forest and Edwinstowe	Pauline Meechan	Co-Organiser
167	Frack Free Somerset	andy andrews	Support worker
168	Frack Free United	Steve Mason	Campaign Director
169	Frack Free Wales	Donal Whelan	Steering Group
170	Frack Free Western Australia	Jane Hammond	Co-convenor
171	Frack Free York & Villages	Adrian Palmer	Spokesperson

172	FrackBustersNY	Mary Finneran	co-founder
173	FrackFree South Africa	Judy Bell	Fracktavista
174	FrackFreeDudleston	Jean Hesketh	Coordinator
175	Fracking Free Clare	John Higgins	Coordinator
176	Fracking freies Hessen n.e.V.	Henner Gröschner	Spokesperson
177	FrackingFreeBulgaria	Borislav Sabev	International Coordinator
178	Frackwatch	Isla Mary Scott	Treasurer
179	FracTracker Alliance	Brook Lenker	Executive Director
180	Franciscan Response to Fossil Fuels	Jackie Schramm	Coordinator
181	Franciscan Sisters of the Atonement	Sr. Margaret Margaret Sikora	Director JPIC
182	Franciscan Sisters of the Poor, US Area	Sr. Karen Hartman Hartman, SFP	Co-ordinate JPIC US Area
182 183			Co-ordinate JPIC US Area Shamanic Practitioner
	US Area Frauke Rotwein - Shamanic	Hartman, SFP	
183	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability	Hartman, SFP Frauke Rotwein	Shamanic Practitioner
183 184	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability Project Ohio	Hartman, SFP Frauke Rotwein Leatra J Harper Friends of the Earth	Shamanic Practitioner Managing Director Coordinator Economic
183 184 185	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability Project Ohio Friends of the Earth Europe	Hartman, SFP Frauke Rotwein Leatra J Harper Friends of the Earth Europe	Shamanic Practitioner Managing Director Coordinator Economic Justice Program
183 184 185 186	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability Project Ohio Friends of the Earth Europe Friends of the Earth EWNI	Hartman, SFP Frauke Rotwein Leatra J Harper Friends of the Earth Europe Jamie Peters	Shamanic Practitioner Managing Director Coordinator Economic Justice Program Campaign Lead
183 184 185 186 187	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability Project Ohio Friends of the Earth Europe Friends of the Earth EWNI Friends of the Earth Finland Friends of the Earth	Hartman, SFP Frauke Rotwein Leatra J Harper Friends of the Earth Europe Jamie Peters Kristina Salmi	Shamanic Practitioner Managing Director Coordinator Economic Justice Program Campaign Lead Vice Chair Climate Justice and Energy
183 184 185 186 187 188	US Area Frauke Rotwein - Shamanic Practitioner FreshWater Accountability Project Ohio Friends of the Earth Europe Friends of the Earth EWNI Friends of the Earth Finland Friends of the Earth International	Hartman, SFP Frauke Rotwein Leatra J Harper Friends of the Earth Europe Jamie Peters Kristina Salmi Dipti Bhatnagar	Shamanic Practitioner Managing Director Coordinator Economic Justice Program Campaign Lead Vice Chair Climate Justice and Energy program coordinator

192	Friends of the Earth Scotland	Mary Church	Head of Campaigns
193	Friends of the Earth US	Nicole Ghio	Senior Fossil Fuels Program Manager
194	Fundar, Centro de Análisis e Investigación	Beatriz Olivera, Fundar, Centro de Análisis e Investigación	Investigadora
195	Gallifrey Foundation	antoinette vermilye	co-founder
196			
	Gas Free Seneca Gemeinnütziger	Yvonne Taylor	Vice President
197	Umweltschutzverein pro grün e. V. Paderborn	Fritz Buhr	Vorstandsmitglied
198	Global Alliance for Incinerator Alternatives (GAIA)	Neil Tangri	Science and Policy Director
199	Global Justice Ecology Project	Anne Petermann	Executive Director
200	Grassroots Environmental Education	Patricia Wood	Executive Director
201	Greater New York Labor Religion Coalition	Rabbi MichaelR Feinberg	Director
202	Green America	Green America	Executive Co-Director
203	Green Education and Legal Fund	Mark Dunlea	Chair
204	Green Newton	Marcia Cooper	President
205	Green Party of Nassau County	Joseph Naham	Chairperson
206	Greeners Action	Angus Ho	Executive Director
207	Greenpeace Australia Pacific	David Ritter	Chief Executive Officer
208	Grey Nuns of the Sacred Heart	Diane Bardol, GNSH	Social Justice Coordinator
209	GroundWork, Friends of the Earth South Africa	Niven Reddy	Campaigns Researcher
210	Grup de Cientifics i Tècnis per un Futur No Nuclear	Pere Carbonell	PhD in physics, President

211	Grupo de Financiamiento Climático para Latinoamérica y el Caribe	Aroa de la Fuente López	Administrative Coordinator
212	Health and Environment Alliance (HEAL)	Genon K. Jensen	Executive Director
213	Heinrich-Böll-Stiftung	Lili Fuhr	Head of International Environmental Policy Division
214	Howard County Climate Action	Ruth White	Advocacy Chair
215	Hudson Valley Green Party	Barbara Kidney	Chair
216	Humusz Szövetség. Hungary	Csilla Urbán	president
217	Idle No More SF Bay	Pennie Opal Plant	Co-founder
218	Illinois Coalition Against Fracking	Annette McMichael	Steering Committee Member
219	Indian Social Action Forum (INSAF)	Wilfred Dcosta	Alliances Linkages Convenor
220	Indigenous Environmental Network	Tom BK Goldtooth	Executive Director
221	Indivisible 518: Justice for All	Karen L MacWatters	Chapter Leader
222	Indivisible Ulster 19	Amy Fradon	Rev.
223	Indonesia Plastic Bag Diet Movement Inštitut za trajnostni razvoj -	Rahyang Nusantara	National Coordinator
224	Institute for Sustainable Development, Slovenia	Dr. Anamarija Slabe	Director
225	Institute for Policy Studies	Basav Sen	Climate Policy Program Director
226	Interessengemeinschaft Schönes Lünne	Rozenn Le Calvez	Vertreterin
227	InterFaith Moral Action on Climate	Mark C Johnson	Volunteer
228	International Presentation Association	Dr. Despoina Afroditi Milaki	NGO Representative at the United Nations
229	Jamaa Resource Initiatives, Kenya	Maurice Ouma Odhiambo	Executive Director

230	Jordens Vänner / Friends of the Earth Sweden	Mikael Sundström	chairman
231	Justicia Climática	Juan Pablo Olsson	founder
232			
233	Keep Ireland Fracking Free KEEP KIRDFORD AND WISBOROUGH GREEN,	Charlie Williams	Spokesperson
200	KKWG	JILL SUTCLIFFE	Dr/Chair KKWG
234	Keepers of the Athabasca Watershed Society	Jule Asterisk	Project Manager
235	Kein CO2 Endlager e.V.	Dr. Reinhard Knof	Spokesperson
236	Kent County Environment Watch	james lane	Founding Member, Admin
237	Klimaschutz-AG NABU Oldenburger Land	Martin Heinze	Spokesperson
238	Korea Federation for Environmental Movements	Choony Kim	Vice Executive Director
239	KRuHA (People's Coalition for the Right to Water La Asamblea Veracruzana de	Sigit Karyadi Budiono	research and campaign
240	Iniciativas y Defensa Ambiental = LAVIDA, Mexico	Gerardo Alatorre Frenk	Member
241	Latinamerikagrupperna	Anna Barkered	Secretary General
242	Leadership Conference of Women Religious	Ann Scholz, SSND	Associate Director for Social Mission
243	Les Amis de la Terre France	Lorette Philippot	Private Finance Campaigner
244	Let's Build a Better Jamaica	Dr J Lennon	Founder
245	Let's Do It Foundation	Merili Vares	Executive Director
246	Little Sisters of the Assumption	Sr. Annette Allain	President
247	Lock the Gate Alliance, Australia	Naomi Hogan	National Coordinator
248	Long Beach 350	Alice Stevens	Co-founder

249	Love Leitrim	Scott Coombs	Secretary
250	Lush Ltd	Hilary Jones	Ethics Director
251	Manchester Friends of the Earth	Ali Abbas	Joint Co-ordinator
252	Marist Sisters Congregation	Marist Sisters Congregation	Counsellor Congregational Leadership Team
253	Maryknoll Office for Global Concerns	Susan Gunn	Director
254	Metro NY Catholic Climate Movement	Terry Michaud	Steering Committee Member
255	Midwest Environmental Justice Organization	Dr. Maria Powell	Executive Director
256	Mohawk valley keeper	John Valentine	President
257	Mother Earth Foundation Philippines	Sonia Mendoza	Chairman
258	Não Fracking Brasil pelo Clima, Água e Vida National Association of	Juliano Bueno de Araújo	Fundador
259	Professional Environmentalists (NAPE)	Frank Muramuzi	Executive Director
260	National Toxics Network	Dr Mariann Lloyd-smith	Senior Advisor
261	Nature Coast Conservation, Inc.	DeeVon Quirolo	President
262	Neighborhood Tree Health	Margaret S. Dabney	Tree Steward
263	Neighborhood Zen	Catherine Gammon	Reverend (Zen Buddhist sangha leader)
264	NESMAC -KITARA	Atugonza Mary	Vice Chairperson
265	NeSoVe - Network Social Responsibility (AT)	Carla Weinzierl	Director
266	New Brunswick Anti-Shale Gas Alliance	Jim Emberger	Spokesperson
267	New York Communities for Change (NYCC)	Jonathan Westin	Executive Director

268	New York Progressive Action Network - Enviro Committee	Cari Gardner	Committee chair
269	New York Solar Energy Society	Wyldon King Fishman	Founder and President
270	New York Theological Seminary	Marian Ronan, Ph.D.	Research Professor
271	Newark Science and Sustainability Inc	Tobias Fox	Managing Director
272	Nexus3/BaliFokus Foundation	Yuyun Ismawati	Co-founder & Senior Advisor
273	NGO Eko Kvarner	Vjeran Pirsic	President of the council
274	Nipe Fagio, Tanzania	Ana Rocha	Executive Director
275	No Waste Louisana	Jane Patton	Director
276	NOAH Friends of the Earth Denmark	Nanna Clifforth	Campaigner
277			
	NOFA-VT	Madison Kempner	Policy Advisor
278	Nonprofit civic initiative NAŠ Jadran, Croatia	Vladimir Bajzec	Co-founder
279	North American Climate, Conservation and Environment (NACCE)	Jerry Rivers	Spokesperson
280			
	North Country 350 Alliance Northeast Organic Farming	Ginger Storey-Welch	leader
281	Association of New York (NOFA-NY)	Andriana Natsoulas	Executive Director
282	Northeast Organic Farming Association-Interstate Council (NOFA-IC)	Stephen Gilman	NOFA-IC Policy Coordinator
283	Northern Kentucky University	Andrew E Long	Associate Professor of Mathematics and Statistics
284	Not Here, Not Anywhere, Ireland	Ciara Barry	Member
285	Notre environnement notre choix (NENC), New Brunswick, Canada)	Dallas Vernon McQuarrie	NENC spokesperson

286	Nuclear Age Peace Foundation	David Krieger	President
287	Nuclear Information and Resource Service	Timothy Judson	Executive Director
288	NYC H2O	Matt Malina	Director & Founder
289	NYCD16 Indivisible	Iris Hiskey Arno	co-chair, Environment Committee
290	NYPIRG	Elizabeth Moran	Environmental Policy Director
291	Ocean Conservation Research	Michael Stocker	Director
292			
	Ocean Protection Coalition	Ann Rennacker	Secretary-Treasurer
293	Oceana Office of Peace, Justice, and	Melissa Valliant	Senior Communications Manager
294	Ecological Integrity, Sisters of Charity of Saint Elizabeth	Terrence Moran	Director
295	Oil Change International	Lorne Stockman	Senior Research Analyst
296	Ojos Esmeralda, S.A.	G. Talcott S. y M. Brigid S.	President & Vice-President
297	Omni Center for Peace, Justice & Ecology	Gladys Tiffany	Executive Director
298	Our Revolution Boulder	Mark J. Williams	Chair
299	OVEC-Ohio Valley Environmental Coalition	Vivian Stockman	Executive Director
300	Park Watershed	Mary Rickel Pelletier	Director
301	PAUSE - People of Albany United for Safe Energy	Diana Wright	Facilitator
302	Peacemakers of Schoharie County	Wayne R Stinson	Action Committee
303	Pennsylvania Council of Churches	Rev. Sandra L. Strauss	Director of Advocacy and Ecumenical Outreach
304	People Demanding Action	Andrea Miller	Executive Director

305	People for a Healthy Environment	Doug Couchon	Co-Founder
306	Peoples Climate Movement- NY	Nancy Romer	Administrative Team Member
307	Physicians for Social Responsibility	Barbara Gottlieb	Director for Environment & Health
308	Physicians for Social Responsibility Philadelphia	Tammy Murphy	Medical Advocacy Director
309	Physicians for Social Responsibility, AZ Chapter	Barbara Warren	ED- Arizona Chapter
310	Piitsburgh 350 PetroChemical Action Team	Wanda Guthrie	Interim Convener
311	Plastic Change	Anne Aittomaki	Strategic Director
312	Plastic Free Chesterfield	Greg Hewitt	Coordinator
313	Plastic Free Seas	Tracey Read	CEO
314	Plastic Pollution Coalition	Dianna Cohen	Co-Founder & CEO
315	Plastic Soup Foundation	Jeroen Dagevos	Head of Programs
316	Plataforma Boliviana frente al Cambio Climático (PBFCC)	Martin Vilela Peredo	Responsable área justicia climática
317	Plataforma Ciudadana Zaragoza sin Fractura (ZsF)	Juan Carlos Gracia	Board member & spokesman
318	Plymouth Friends of Clean Water	Peter Hudiburg	Founder
319	Ponca Nation	Casey Camp-Horinek	CouncilWoman
320	Popular Resistance	Kevin Zeese	co-director
321	Pro Natura / Friends of the Earth Switzerland	Bertrand Sansonnens	International coordinator
322	Project CoffeeHouse	Barbara Jarmoska	president
323	Property Rights and Pipeline Center	Rebekah Sale	Executive Director
324	Protect All Children's Environment	Elizabeth O'Nan	Director

325	Protect Franklin Park	Patrick J. Pagano	Founding Member
326	Protect our Loveland	Sharon J. Carlilse	President
327	Protect PT	Gillian Graber	Executive Director
328	Putnam Progressives	B. R. Lemonik	Facilitator
329	Quick Service Bike Shop	Beverly Reed	Bike Mechanic
330	Radioactive Waste Alert	Carolyn Harding	Organizer
331	Reach Out America	Patty Katz	VP and Green Committee Chairwoman Assistant Director for Thriving
332	Reconstructing Judaism	Rabbi Micah Geurin Weiss	Communities and Tikkun Olam Specialist
333	Reconstructionist Rabbinical Association	Rabbi Elyse Wechterman	Executive Director
334	Regional Farm and Food Project	Suzanne Carreker-Voigt	Chair
335	Religious of the Sacred Heart of Mary	Veronica Brand RSHM	Main NGO Representative
336	Religious Sisters of Charity	Pereka Nyirenda	Board member-UNANIMA International
337	Religious Sisters of Charity in CA	Sr, Kathleen Bryant RSC	Regional Vicar
338	Renewable Energy Long Island (reLI)	Gordian Raacke	Executive Director
339	Renewables Now Loveland	Jane Clevenger	Co Founder
340	Residents Allied for the Future of Tioga (RAFT)	Gerri Wiley	Facilitator, Co-Founder
341	Resolution Media Fund	mark Lichty	Exec Producer
342	Retired Independent Research in Ecology	Jean-Paul Bourque	Founder
343	Rise and Resist	Claire F. Ullman	Spokesperson
344	River Guardian Foundation	George Matthis	President

345	Riverdale Jewish Earth Alliance	Elliott Rabin	Organizer
346	Rochester People's Climate Coalition	Susan Hughes-Smith	Co-founder
347	Roots Action	David Swanson	Campaign Coordinator
348	Roseacre Awareness Group	Barbara Richardson	Chair
349	Safe Energy Rights Group (SEnRG)	Nancy Vann	President
350	Sahabat Alam Malaysia (Friends of the Earth Malaysia)	Meenakshi Raman	President
351	Sanctuary Woods	William Luke Mason	Owner
352	Sane Energy Project	Kim Ann Fraczek	Director
353	Santa Barbara Standing Rock Coalition	Grace Feldmann	Co Founder
354	Santa Cruz Climate Action Network	pauline seales	Organizer
355	Santa Cruz Zen Center	Kokyo Henkel	Teacher
356	SASD	Michael J. Chojnicki	President
357	Save Our Sandhills	Joe McDonald	President
358	Save The Hills Alliance, Inc.	Cheryl Miller	President
359	Save the Pine Bush	Grace Nichols	Board member
360	School sisters of Notre Dame Atlantic Midwest province JPIC Department	Arlene Flahertyop	director
361	Sciaena	Gonçalo Carvalo	Executive Director
362	Securing Economic and Energy Democracy for SW NM	Debaura james	representative
363	SEE Change Network	Garret Patrick Kelly	Principal

364	Seneca Lake Guardian, a Waterkeeper Alliance Affiliate	Joseph Campbell	President
365	Seven Circles Foundation	Michael Stocker	President
366	Sierra Club	Carl Arnold	Chair, NYC Group
367	Sisters of Charity Federation	Teresa Kotturan	Main NGO Representative at the UN in New York
368	Sisters of Charity of Nazareth Congregational Leadership	J. Venneman Sisters of Charity of St.	Director, OSEJ Director of Office of Peace,
369	Sisters of Charity of New York	Vincent de Paul of New York	Justice and Integrity of Creation
370	Sisters of Charity of Our Lady of Mercy	Sister Carol Wentworth	NGO Liaison/Justice Representative
371	Sisters of Charity of Seton Hill US Province	Barbara Einloth, SC	Provincial Councilor/Vice President Vice President of Sisters of
372	Sisters of Saint Joseph of Chestnut Hill, Philadelphia, PA	Sister Eileen Marnien	Saint Joseph of Chestnut Hill, Philadelphia, PA
373	Sisters of St Anne	Regina O'Connor	Coordinator of Social Concerns
374	Sisters of St. Dominic of Blauvelt, New York	Joan Agro, OP	Congregational Secretary
375	Sisters of St. Francis of Philadelphia	Nora Nash	Director Corporate Social Responsibility
376	Sisters of St. Francis Sylvania OH	Sister Mary Jon Wagner, OSF	Congregational Minister
377	Sisters of St. Joseph of Baden Pennsylvania	Sr. Kari Pohl	Congregational Coordinator of Justice and Peace
378	Sisters of St. Joseph of Boston	Betty Cawley, CSJ	Justice Promoter
379	Sisters of St. Joseph of Carondelet	Sr. Danielle Bonetti, CSJ	Congregational Leadership Team
380	Sisters of St. Joseph of Northwestern PA	Betsy Wiest	Social Justice Coordinator Coordinator, Sisters of St.
381	Sisters of St. Joseph of Rochester	Phyllis A. Tierney	Joseph of Rochester Justice & Peace Office
382	Sisters of St. Joseph, Brentwood, NY	Susan Wilcox	Coordinator for Office of Justice, Peace, Integrity of Creation
383	Sisters of St. Martha	Sister Bernice Steele	Sister

SLO CLEAN WATER JEAN'NE BLACKWELL DIRECTOR 385 Songs of Freedom Television Joel Landy Executive Producer / Host South Asian Fund For 386 Education, Scholarship and Training (SAFEST) Founder Mazeda A.Uddin 387 Southwest Native Cultures **Terry Sloan** Director 388 Stichting Schaliegasvrij Nederland Jacobus van Huissteden Vice President 389 Stop NY Fracked Gas Pipeline Ruth Foster **Board Member** 390 Stop the Algonquin Pipeline Expansion (SAPE) Susan Van Dolsen Co-founder 391 Strawtown Studio Laurie Seeman Director 392 **Director of Communications** STS Rosario Ignacio Alejandro Zapata and Content Creation 393 SumOfUs Hannah Lownsbrough **Executive Director** 394 Sunrise Cleveland Hub Coordinator Amy Muntean Coordinator of the #BanFracking campaign, 395 Support Centre for Land Chriszanne Janse van South Africa / SCLC Change (SCLC), South Africa **Programmes Manager** Vuuren 396 Pete Stauffer Surfrider Foundation **Environmental Director** 397 Sussex Area for a Frack Free Coordinator Environment (SAFE) Laura Cushnie 398 Sustainable Energy Group Samuel Arnold Co-ordinator 399 Sustainable Monroeville Elisa Beck Founder 400 Talk Fracking Joseph Corré Head of Talk Fracking 401 Vladimir Moskat Coordinator Taller Ecologista 402 **Tantramar Alliance Against** Hydrofracking Linda Dornan Member

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403	The Banner Newsletter	Dwain Wilder	Editor/Publisher
404	The Climate Mobilization Santa Barbara County	Grace Feldmann	Co Founder
405	The Democracy Center	Philippa de Boissière	Corporate and climate project manager
406	The Green Earth	Hahn Chu hon-keung	Director of Environmental Advocay
407	The Natural History Museum	Beka Economopoulos	Executive Director
408			
409	The Shalom center Thomas Berry Forum for	Rabbi Arthur Waskow	Exec Dir
409	Ecological Dialogue at Iona College	kevin cawley	Executive Director
410	Three Parks Independent Democrats	Daniele Gerard	First Vice President
411	Tikkun Magazine	Rabbi Michael Lerner	Editor in Chief
412	Tompkins County Democratic Committee	Jim Gustafson	Chair
413	Transition US	Don Hall	Co-Director
414	Tree Anne Collective	Brianne Adams	Ceo & Founder
415	Trenzando Ilusiones & OBCCD	Elizabeth Peredo Beltrán	Member
416	Tribal Link Foundation	Andy Wanning	Consultant
417	Tricounty NY Transition	Lisa Adamson	core team member
418	Turtle Island Restoration Network	Joanie Steinhaus	Program Director, Gulf of Mexico
419	UK Youth Climate Coalition	Eilidh Robb	Organiser
420	Umanotera	Gaja Brecelj	Managing Director
421	Umweltinstitut München/Munich Environmental Institute	Franziska Buch	Energy and Climate Campaigner

422	UNANIMA International	Jean Quinn	Executive Director
423	United for Action	Edith Kantrowitz	Board Member
424	United Native Americans	Quanah Parker Brightman	Executive Director
425	United Sludge Free Alliance	Darree A. Sicher	founder, president
426	Unity Through Creativity	Margaret Baco	Board Chair
427	Université TELUQ	Marina Adriana Lopez Chavez	Master Degree Student
428	Upper Green Side	Sarah Woodside Gallagher	President
429	Upper Valley Affinity Group (Vermont, USA)	Geoffrey Gardner	Communications
430	UPSTREAM	Lauren C. Moore	Unicoordinator
431	Urgewald	Regine Richter	Energy Campaigner
432	UU Congregation of Binghamton, Green Sanctuary	Wes Ernsberger	Chair
433	Vermont Yankee Decommissioning Alliance	Debra Stoleroff	Member/facilitator
434	VOICE	Mindy O'Brien	Coordinator
435	VšĮ "Žiedinė ekonomika"	Domantas Tracevičius	Director
436	Wagon Mound Development Association	Theresa Carmody	President
437	Wall of Women Colorado	paddy mcclelland	Co-Founder
438	Water and Environmental Protection for Albert County	Deborah Carr	Chair
439	Water Justice and Gender	Juana Rosa Vera-Delgado	consultant
440	Waterspirit	Blair Nelsen	Executive Director
441	WECF (Women Engage for a Common Future)	Johanna Hausmann	Project Management Chemicals and Health

442	Wen (Women's Environmental Network)	Kate Metcalf	Co-Director
443	WESPAC Foundation, Inc	Nada Khader	Executive Director
444	West Dryden Residents Against the Pipeline	Linda Parks	Founding Member
445	Western New York Environmental Alliance	Jay Burney	Advocacy Chair
446	What the Frack Arapahoe	Sonia Skakich-Scrima	Founder
447	White Rabbit Grove RDNA	Helgaleena Healingline	Spokesperson
448	Wittenberg Center for Alternative Resources	Rev. James C. Davis	Environmental Director/Videographer
449	World Can't Wait	Stephanie Rugoff	National Office Staff
450	Za Zemiata/Friands of the Earth Bulgaria	Radostina Slavkova	Energy and Climate Coordinator
451	Zelena akcija / Friends of the Earth Croatia	Marko Košak	Waste Programme Coordinator
452	Zen Center North Shore	Joan K Amaral	Founder and Teacher
453	ZERO - Association for the Sustainability of the Earth System	Susana Maria Duarte Fonseca	Member of the Board
454	Zero Hour NYC	Rachel Lee	Co-head coordinator of Zero Hour NYC
455	Zero Waste Europe	Delphine Lévi Alvarès	European Coordinator for #BreakFreeFromPlastic
456	Zero Waste France	Laura Châtel	Advocacy officer

^{iv} https://www.youtube.com/watch?v=1NPuYr1LGMI

^v Oil Change International. "First Comprehensive Analysis of Climate Impact of Jordan Cove LNG Terminal & Pacific Connector Pipeline" 11 January 2018. Available at: http://priceofoil.org/2018/01/11/report-first-comprehensive-analysis-of-climate-impact-of-jordan-cove-Ing-terminal-pacific-connector-pipeline/.

^{vii} Friends of the Earth. "Fracking Frenzy: How the fracking industry is threatening the planet". 1 December 2014. Available at: https://www.foeeurope.org/fracking-frenzy-report-011214

Food & Water Watch. "The Fracking Endgame: Locked Into Plastics, Pollution, and Climate Chaos". 3 June 2019. Available at: https://www.foodandwaterwatch.org/insight/fracking-endgame-locked-plastics-pollution-and-climate-chaos

viii Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil

Extraction). Available at: <u>http://concernedhealthny.org/</u>. Sixth edition (June 2019): http://concernedhealthny.org/wp-content/uploads/2018/03/Fracking_Science_Compendium_SFINAL.pdf

^x John Hopkins Bloomberg School of Public Health. "Study: Fracking industry wells associated with premature birth". 8 Oktober 2015. Available at: https://www.jhsph.edu/news/news-releases/2015/study-fracking-industry-wells-associated-with-premature-birth.html ^{xi} Food & Water Watch. "How Fracking Supports the Plastic Industry". Available at:

https://www.foodandwaterwatch.org/sites/default/files/ib_1702_fracking-plastic-web.pdf

CIEL. "Plastic & Health – The hidden costs of a plastic planet. Available at: https://www.ciel.org/news/plasticandhealth/

xii https://www.tribunalonfracking.org/judges-statements/

xⁱⁱⁱ Permanent Peoples' Tribunal. "Session on Human Rights, Fracking and Climate Change. 14-18 May 2018. Advisory Opinion. Available at: https://www.tribunalonfracking.org/wp-content/uploads/2019/04/AO-FINAL-3-28-19.pdf

xiv CESCR - International Covenant on Economic, Social and Cultural Rights. E/C/12/ARG/CO/4

https://tbinternet.ohchr.org/_layouts/treatybodyexternal/SessionDetails1.aspx?SessionID=1200&Lang=en

xv CEDAW - Concluding observations on the eight periodic report of United Kingdom of Great Britain and Northern Ireland, C/GBR/CO/8

(https://tbinternet.ohchr.org/ layouts/treatybodyexternal/Download.aspx?symbolno=CEDAW%2FC%2FGBR%2FC0%2F8&Lang=en)

^{xvi} UN Human Rights Council. "Climate Change and Poverty: Report of the Special Rapporteur on extreme poverty and human rights". 25 June 2019. Available at: https://srpovertyorg.files.wordpress.com/2019/06/unsr-poverty-climate-change-a_hrc_41_39.pdf

ⁱ http://www.eeb.cornell.edu/howarth/summaries_CH4.php

ⁱⁱ UNEP Global Environment Alert Raises Concerns About Gas Fracking. 4 Dezember 2012. Available at: http://sdg.iisd.org/news/unep-global-environment-alert-raises-concerns-about-gas-fracking/

^{III} UNFCC. "NASA confirms methane spiek is tied to oil and gas". 19 January 2018. Available at: https://unfccc.int/news/nasa-confirmsmethane-spike-is-tied-to-oil-and-gas

^{vi} Oil Change International. "Debunked: The G20 Clean Gas Myth". 11 June 2018. Available at: http://priceofoil.org/2018/06/11/debunked-g20-clean-gas-myth/

Oil Change International. "Burning the Gas Bridge Fuel Myth: Why Gas Is Not Clean, Cheap, or Necessary". 30 May 2019. Available at: http://priceofoil.org/2019/05/30/gas-is-not-a-bridge-fuel/

^{1x} Frazier, Reid. "Something's wrong here: Washington County parents want Pa. to look deeper at whether fracking could be related to cancer cases." StateImpact. 26 June 2019. Available here: https://stateImpact.npr.org/pennsylvania/2019/06/28/somethings-wrong-here-washington-county-parents-want-pa-to-look-deeper-at-whether-fracking-could-be-related-to-cancer-cases/