

GRASPING FOR GAS

Why climate goals and gas are incompatible



Jan Arkert
22 September 2021

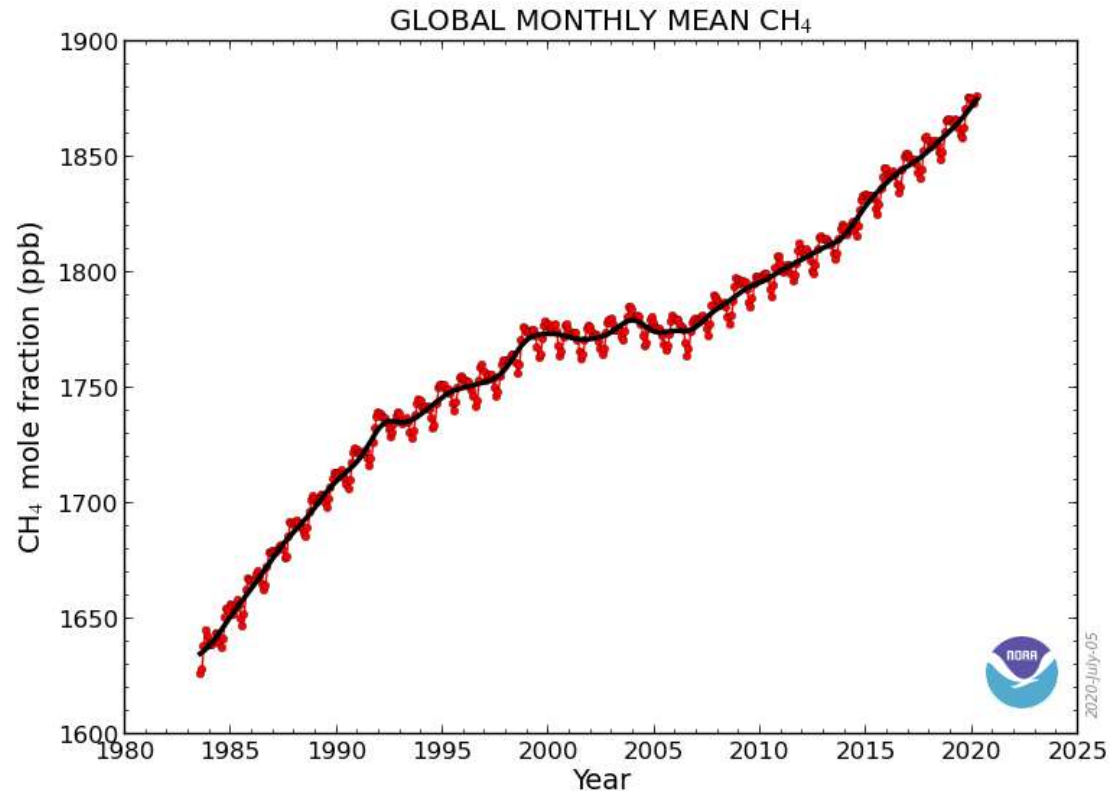


Methane as a Greenhouse Gas

- Methane (CH_4) is a fossil fuel and when burned emits carbon dioxide (CO_2)
- IPCC estimates that over a 20-year time frame, methane will trap 86 times more heat than carbon dioxide and over a 100-year period has a carbon equivalence of 28.
- Flaring, venting and fugitive methane emissions associated with oil and gas production

What does the research tell us?

- Fugitive emissions 0,5 to 12% recorded with a mean of 4,1% of production
- Sharp rise (up to 30% increase) in CH₄ emissions over 12 year period due to super emitters.
- CSIR concluded that leaks amounting to 3,2% offset the benefit of gas over coal.



Global Carbon Budget

- A carbon budget is the cumulative amount of carbon dioxide (CO₂) emissions permitted over a period of time to keep within a certain temperature threshold.
- IPCC (2018) suggested remaining budget of about 420 Gt CO₂ eq exists for 66% chance of limiting warming to 1.5°C.
- Current 2021 estimate is 300 Gt CO₂ eq budget remaining

• 8 to 20 years remaining in the carbon budget

In conclusion, the continued utilisation of gas as a transition fuel as proposed by the oil and gas industry as well as by the Department of Minerals and Energy, is incompatible with climate stability and the goal of rapid decarbonization that is required.

Message from the youth



*“I would like to live in a South Africa that cares for **ALL** its people in a just way. The negatives of carbon derived energy sources definitely outweigh the positive, so why does our government keep going back to it? The good things in life never come easy- If we put in the hard work now and move away from fossil fuel based energy sources through a **just energy transition**, then the future for South Africa is one in which we – the youth of the country- would love to live and thrive in. It is time that we start working with the Earth and not against it. It is up to all of us to stand up and **say no to new coal, nuclear, oil and gas.**” -Sakeena Allie*

“Section 24 of the constitution of South Africa states that Everyone has a right to an environment that is not harmful to their health and well-being, if we continue with the fossil fuels we are infringing on the rights of the citizens. Renewable energy is our present and future” - Ketshepaone Modise

Ketshepaone Modise — Researcher



STANDING FOR ENVIRONMENTAL AND SOCIAL JUSTICE

Research focus

- Need for a new white paper on energy policy in South Africa with clear objectives.



Legacy workshop

"Once upon a time, I conquered" said the Climate CATASTROPHE "Once upon a time, we changed the story". Climate Activists replied -Vanessa Nakate

- Fight for the planet.
- Better future for everyone



WHO STOLE OUR OCEANS?



Think peace

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Enkosi

Dankie

Thank You

WHO STOLE OUR OCEANS?



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STANDING FOR ENVIRONMENTAL AND SOCIAL JUSTICE

‘SILENCE WOULD BE TREASON’

**The expected
economic
impacts of the
oil and gas
industry on
South Africa**

**22-23 September
Gillian Hamilton**



The Paradox of Plenty

Also known as the **resource curse**; countries with an abundance of natural resources tend to have lower levels of economic development and growth than those without such resources.

Dutch disease - describes problems that emerge with the rapid inflow of money that comes from non-renewable resource extraction.

Impacts are:

- **Economic**
- **Social**
- **Environmental**
- **Governance and Politics**

Negative impacts often localised



The benefit of hindsight – lessons from other African countries

Analysed 12 Sub-Saharan Countries:

1. Overvaluing resources e.g. Ugandan upstream oil reserve estimates have fallen by more than 70% (from R887 billion to R262 billion) since 2013.
2. Timeline from discovery to production took longer than expected
3. Government revenues generated lower than predicted. The most recent revenue projection is on average **63% lower than was initially estimated.**
4. The Debt Repayment Crisis – given South Africa's own debt levels, is it prudent to be investing in volatile commodities like oil and gas which could become a serious financial burden on the South African economy?



Economic Impacts

- Gross Domestic Product (GDP) – modelling indicates minor (less than 1%) positive increase in short-run; minor positive decrease in long-run
- Excess supply of oil and gas
- Demand for oil and gas is falling
- Stranded assets and lock-in
- Makes our exports less competitive
- The costs of decommissioning must be included
- Jobs

‘...attracting investment in the oil and gas sector may not deliver significant tax revenue for the *fiscus*.’ Davis Tax Committee



Income multipliers and job creation

Industry	Income multiplier	Employment multiplier
Oil and gas (based on global average)		
Coke, petroleum products and refined petroleum		
Agriculture		
Fishing		
Recreation, cultural and sports		

Why?

1. Exaggeration
2. Automation
3. Skills required

Evidence suggests that in some cases unemployment in oil and gas regions increased.



Recommendation

Ostrom's Principle	Prosocial Version	Function
1. Clearly defined boundaries	Shared identity and purpose	Defines group
2. Proportional equivalence between benefits and costs	Equitable distribution of contributions and benefits	Ensures effectiveness by balancing individual and collective interests
3. Collective choice arrangements	Fair and inclusive decision making	
4. Monitoring	Monitoring agreed behaviors	
5. Graduated sanctions	Graduated responding to helpful and unhelpful behavior	
6. Conflict resolution mechanisms	Fast and fair conflict resolution	Ensures effectiveness while supporting engagement
7. Minimal recognition of rights to organize	Authority to self-govern (according to principles 1-6)	
8. Polycentric governance	Collaborative relations with other groups (using principles 1-7)	Scale to entire systems

We should rather treat the ocean like a commons for everyone to protect, share and benefit from. Consider using Elinor Ostrom's Design Principles to manage the commons for current and future generations, while also thinking of the ocean and the living beings within the ocean as sentient beings



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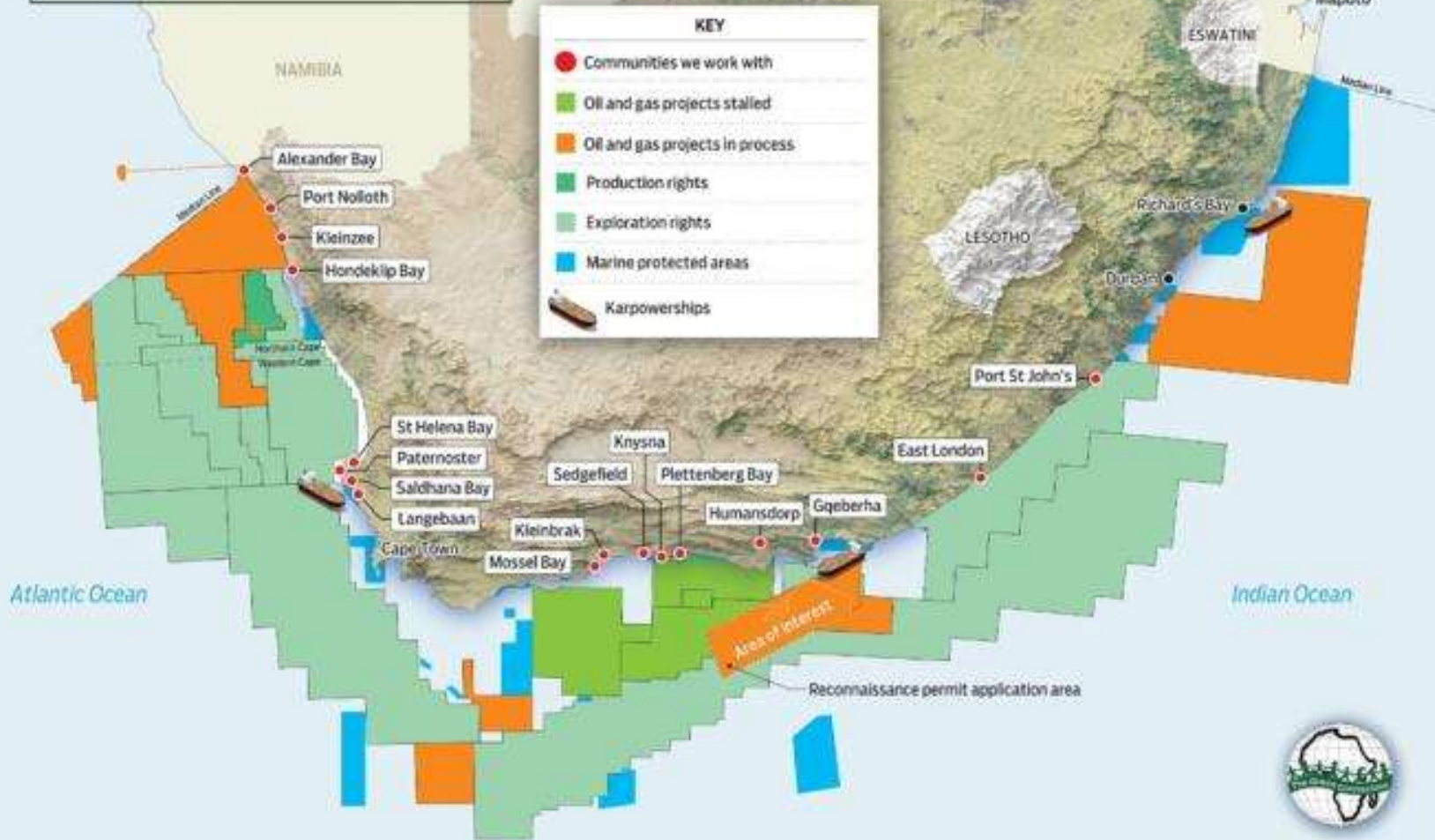
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OFFSHORE OIL AND GAS EXPLORATION IN SOUTH AFRICA

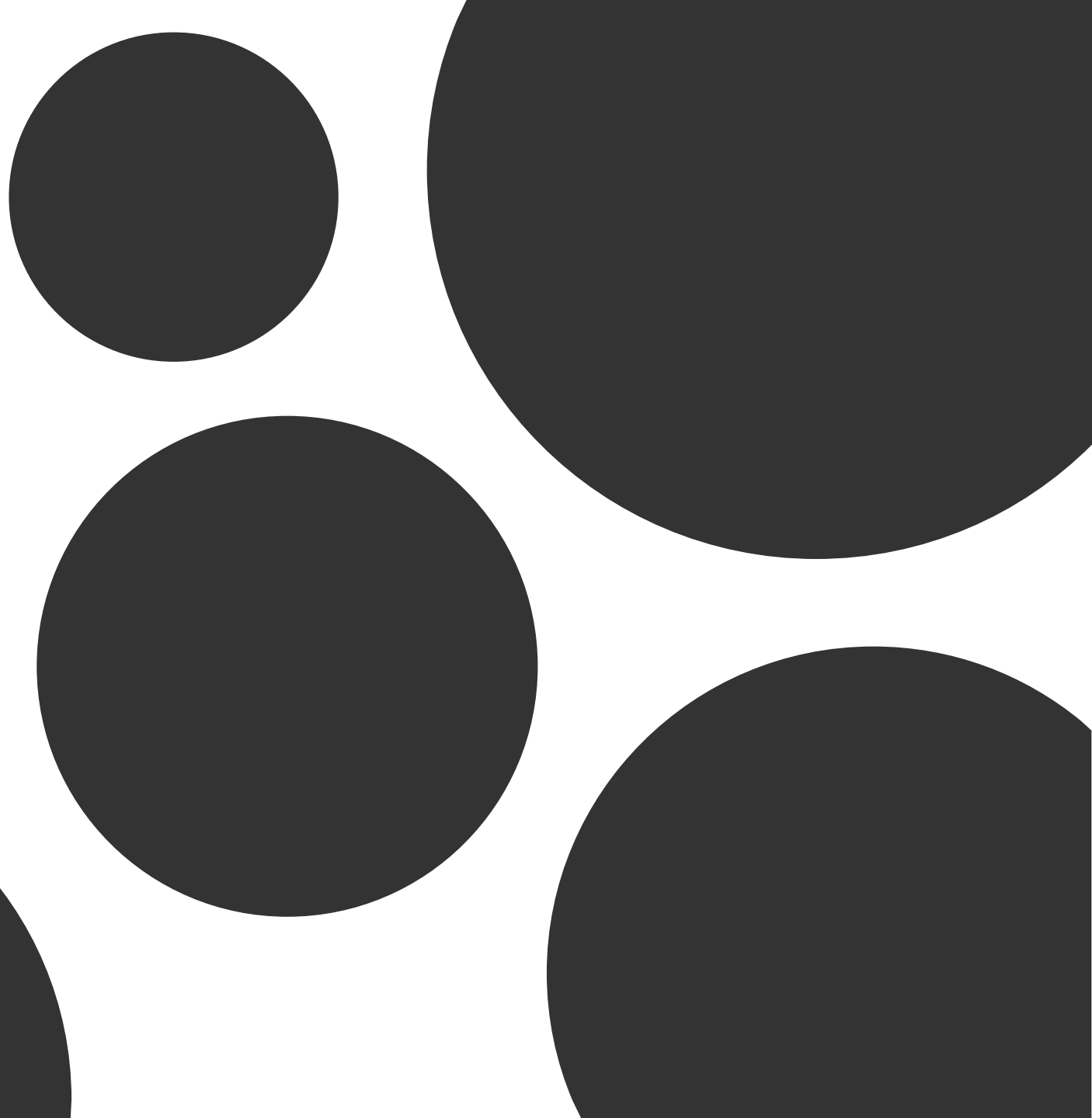


LINDA ARKERT
SPECIALIST
RESEARCHER
GREEN
CONNECTION



SOCIAL IMPACTS OF OFF-SHORE OIL AND GAS

- Influx of large number of people
- Pressure on social services/schools/hospitals.
- Increase in crime rate
- Levels of prostitution and GBV rises
- Increase in alcohol and drug abuse.
- Divided communities/ increase in conflict and xenophobia.
- Pollution of drinking water/food





Visiting Mossel Bay and engaging with community.



ENGAGING
WITH THE
LEGACY TEAM
IN NEIU
BETHESDA.

TALKING ABOUT THE
SOCIAL IMPACTS THAT
FRACKING IN THE KAROO
COULD HAVE.



THE END

THANK YOU VERY MUCH