



# How Will Next Generation Technology Affect Climate Talks?

**Deborah Gordon**  
Senior Principal, Climate Intelligence Program

**NASA CMS Policy Speaker Series**  
**March 14, 2023**





THE  
NORTH STAR.

---

Average  
annual  
greenhouse  
gas emissions  
were at their  
highest levels  
in human  
history over  
the past  
decade.

We can halve  
emissions by  
2030.

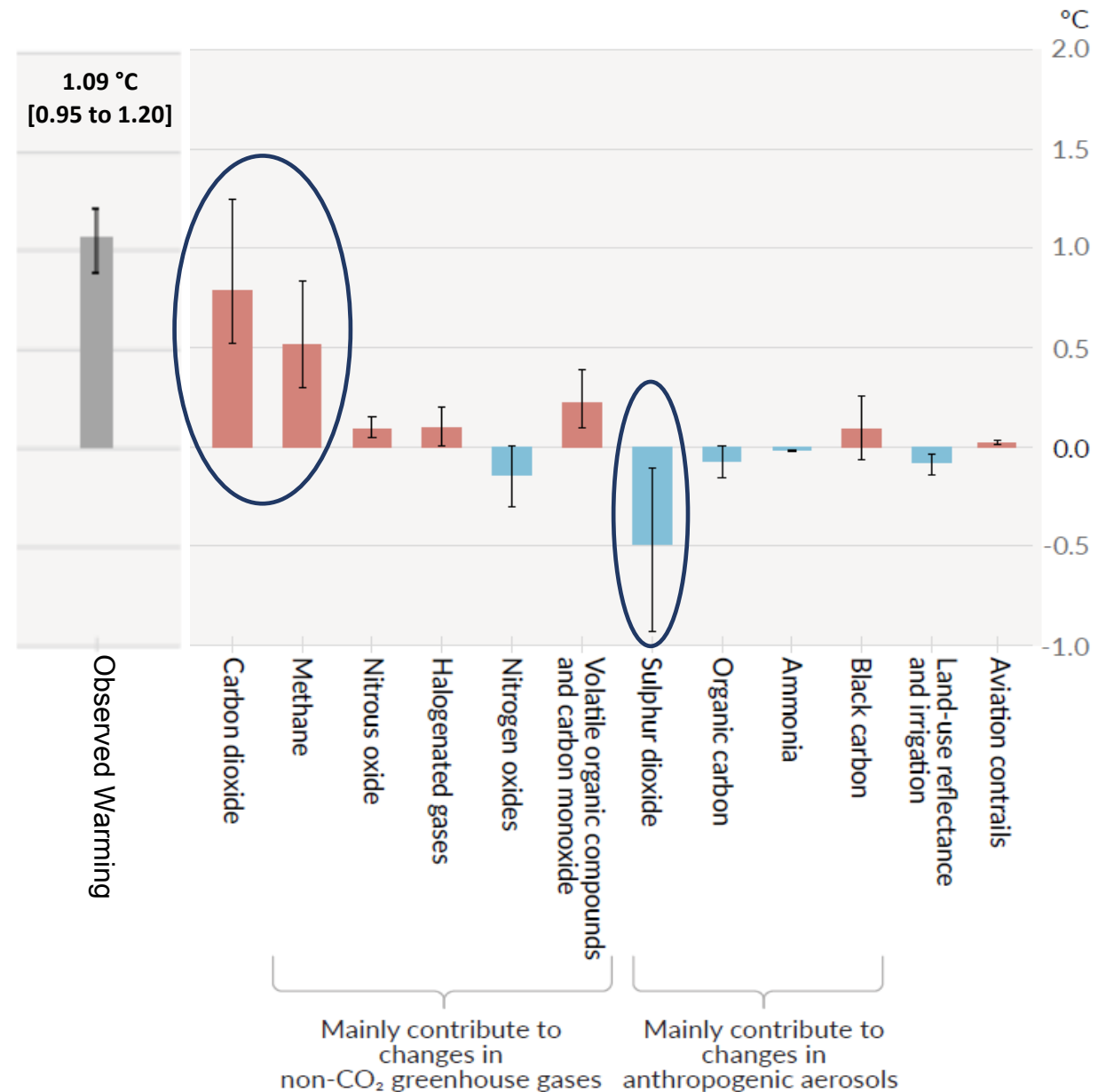
# THE EVIDENCE IS CLEAR: THE TIME FOR ACTION IS NOW.

*—Intergovernmental Panel on Climate Change*



# Methane and SO<sub>2</sub> deserve more scientific study and climate action.

- Methane is >80 times more climate forcing than CO<sub>2</sub> using a 20-year global warming potential
- SO<sub>2</sub> role in masking warming is highly uncertain
- **IPCC finds that climatic warming from methane and masking of warming from SO<sub>2</sub> rival carbon dioxide, within error.**



Assessed contributions to observed warming in 2010–2019 relative to 1850–1900.  
Source: IPCC, AR6, Figure SPM.2, 2021.



# GHGs in Oil & Gas, Coal and Waste Sectors



# RMI Oil and Gas Solutions Initiative

*Leverage emissions transparency for decarbonization across supply chains*

Expanded emissions visibility

Will drive decarbonization on several fronts



➔ Emissions-differentiated **market** activation

➔ Climate-aligned **corporate** business models

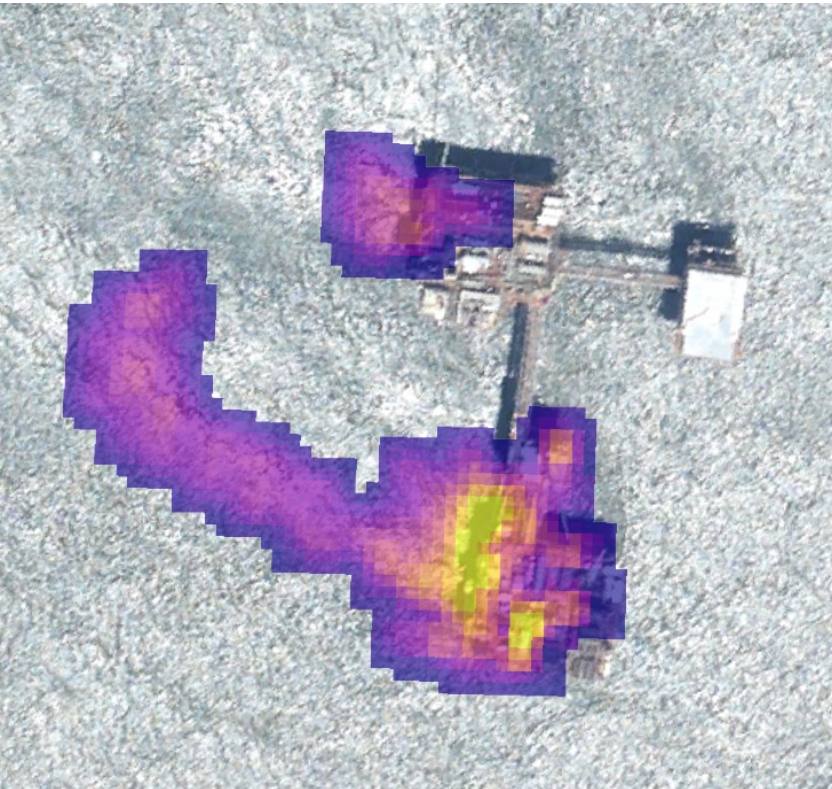
➔ Better **investor** portfolio allocations

➔ Informed **government** policy and regulation

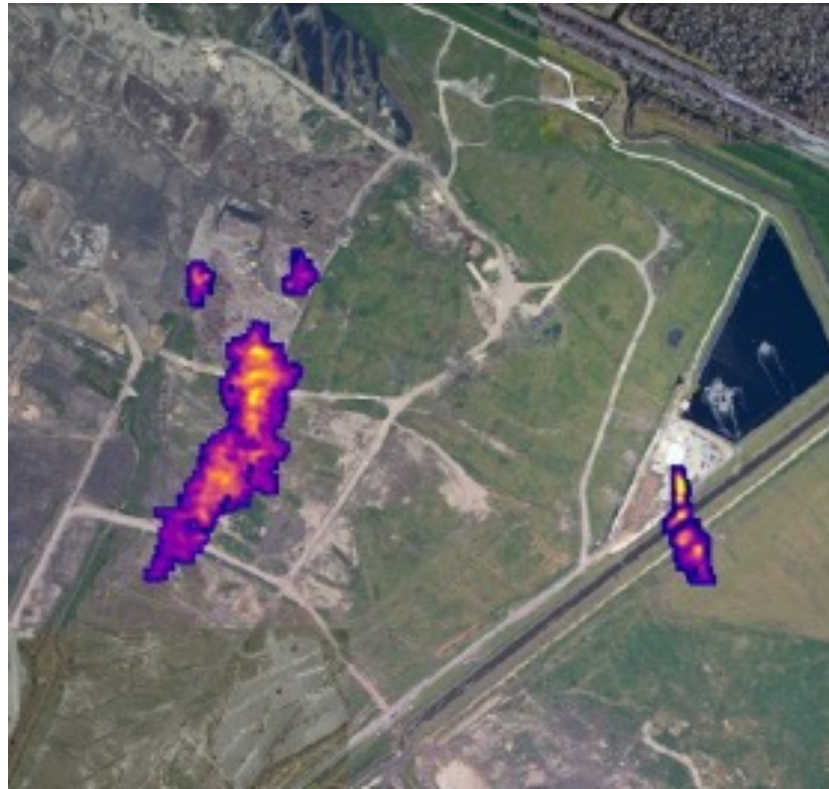
# Making emissions visible

*Targeting the outsized threat and opportunity by preventing super-emitters*

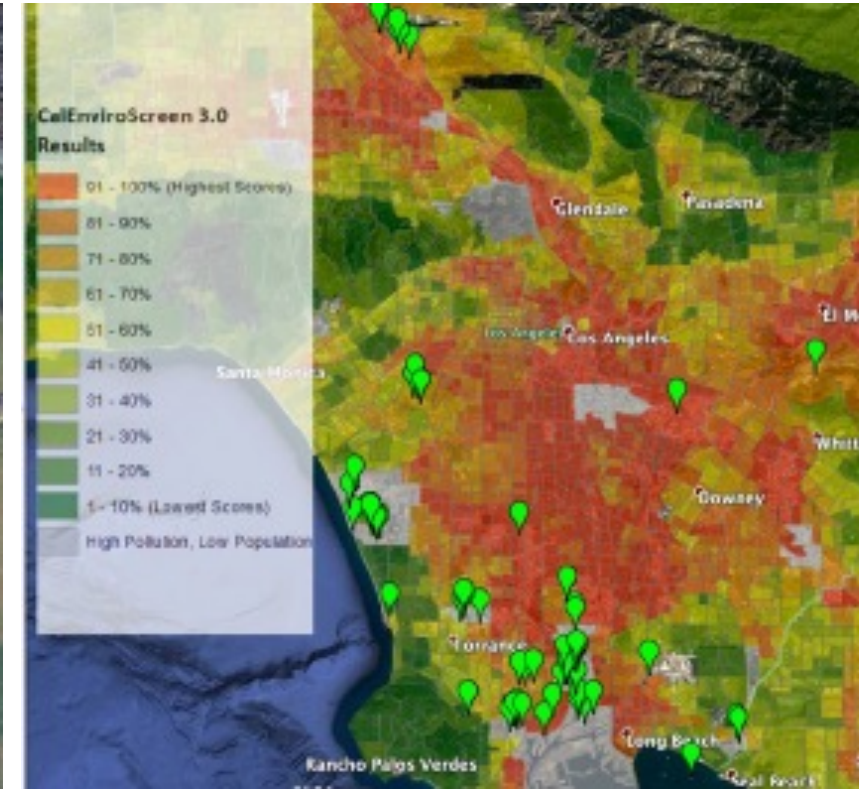
Satellites are a game changer for climate, air quality, and public health.



**GOM Offshore Platform:**  
66% methane leakage rate in state waters



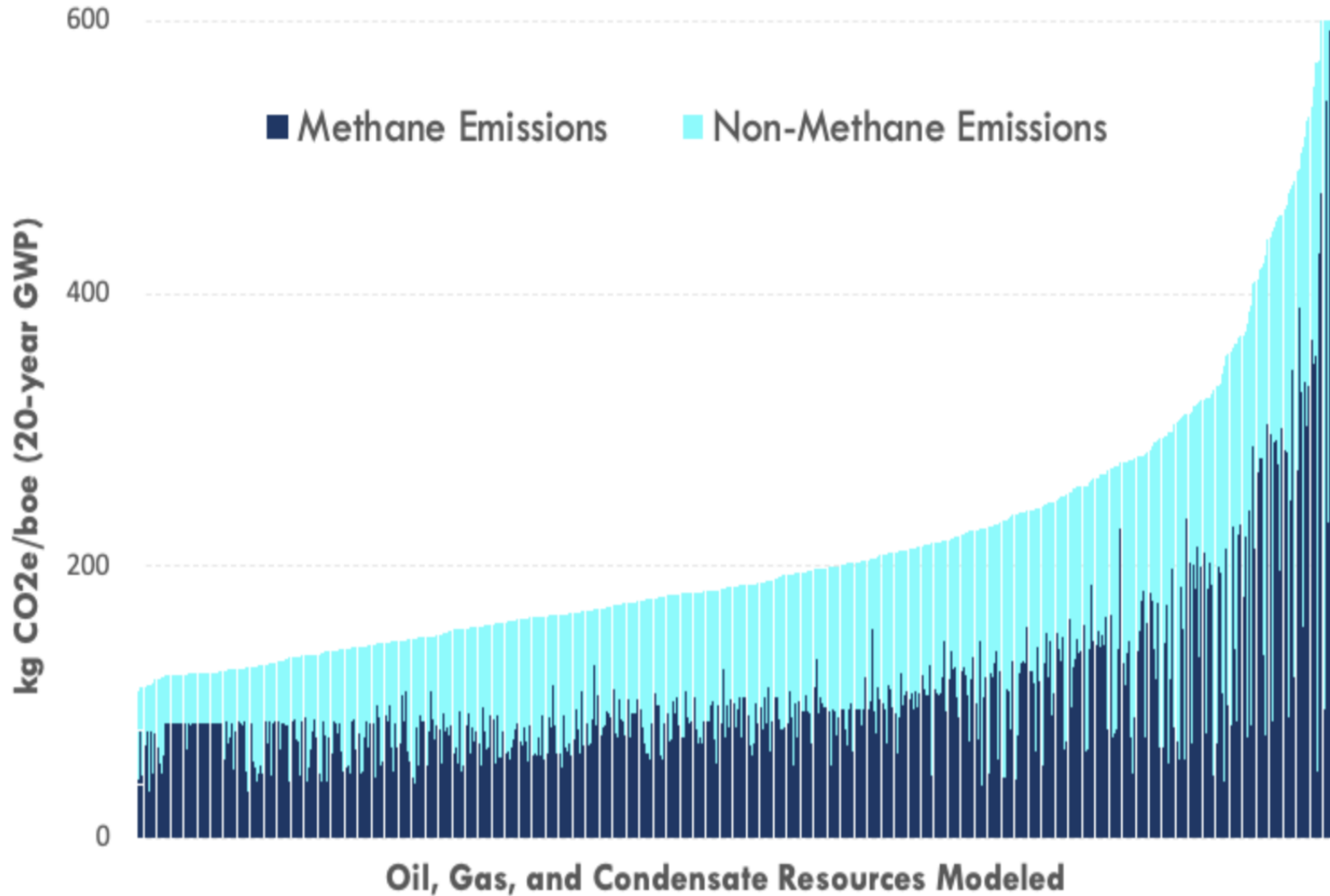
**New Orleans Landfill:**  
2,000 kg methane per hour



**Methane super-emitters in disadvantaged communities**

# Quantify, attribute, and mitigate methane

*Preventing leakage eliminates one-half of the oil and gas industry's climate impact.*

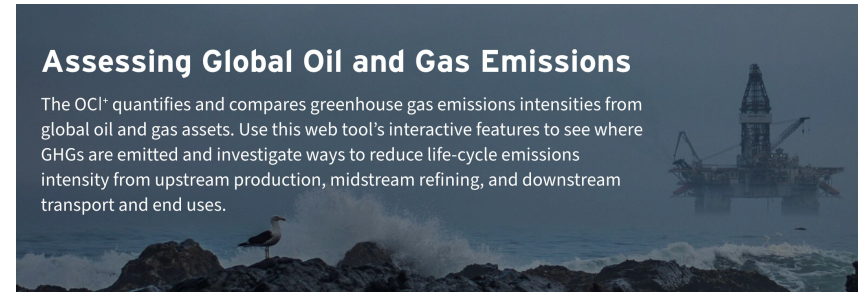


**OCI+** Oil Climate Index plus Gas

[Welcome](#) [Map](#) [Total Emissions](#) [Supply Chain](#) [Analysis](#)

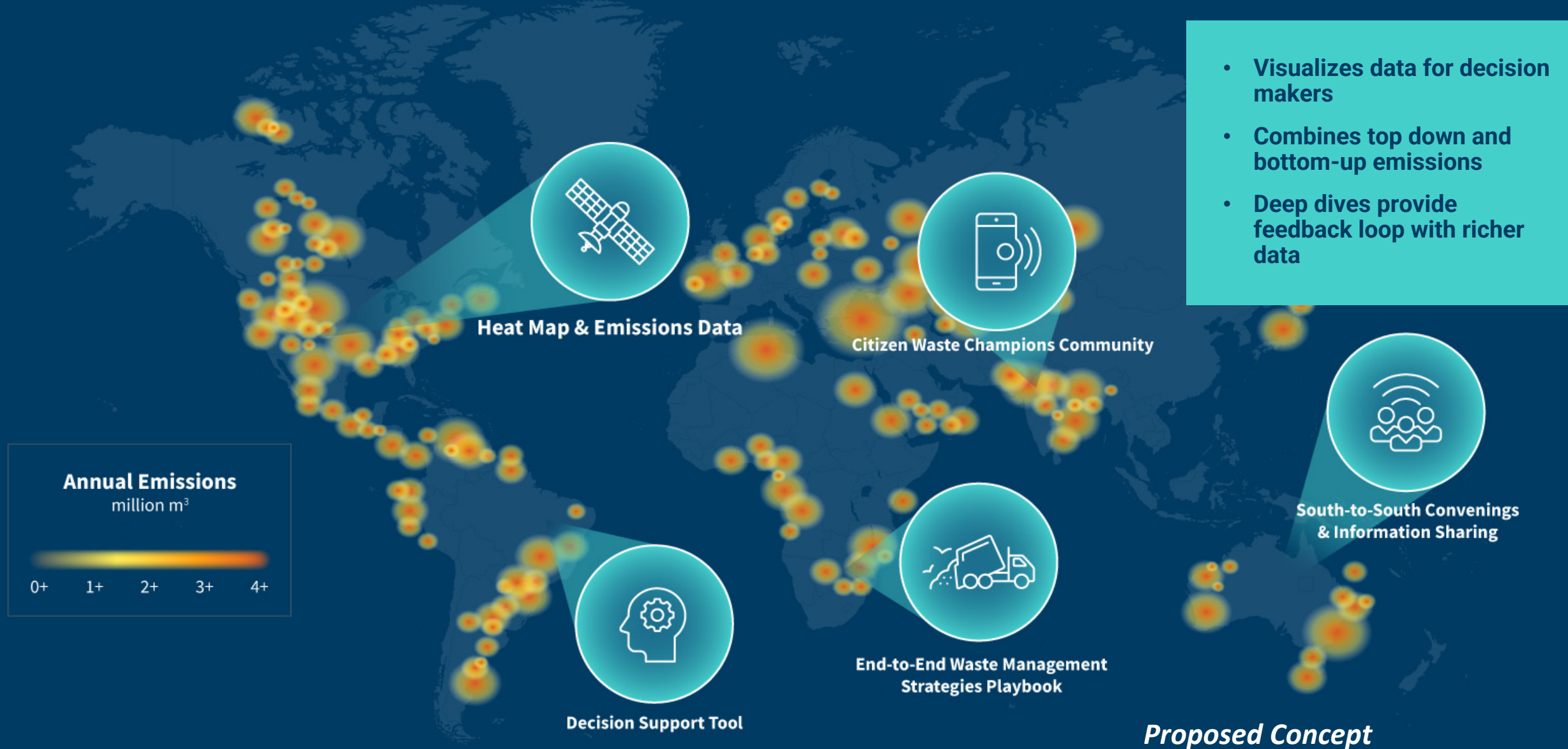
### Assessing Global Oil and Gas Emissions

The OCI+ quantifies and compares greenhouse gas emissions intensities from global oil and gas assets. Use this web tool's interactive features to see where GHGs are emitted and investigate ways to reduce life-cycle emissions intensity from upstream production, midstream refining, and downstream transport and end uses.



Source: RMI, OCI+ Web tool, 2023. Modeling ~70% global O&G supplies.

# Waste MAP (Methane Assessment Platform)





# Technology conversations at COP28.

## ***Increase transparency:***

–Fund public methane monitoring to spot leakage in industry supply chains using satellites, aerial leak detection, and ground-based optical imaging.

## ***Track assets ownership and operation:***

–Track, quantify, and attribute emissions through public reporting so that responsible parties update the global stock take and implement mitigation measures.

## ***Establish methane markets:***

–Use an independent, verifiable certification process to differentiate commodities and price them based on their emissions to incentivize rapid methane reduction.

## ***Advance technical understanding:***

–Continue to advance climate models (especially for SO<sub>2</sub> / sulfate aerosol, methane, hydroxyls); prepare for multiple operational satellites; develop accords on net negative emissions technologies (CCS/DAC), solar geoengineering, and methane removal.



**Thank you!**

**Deborah Gordon**  
**dgordon@rmi.org**  
**@RMLemissions**