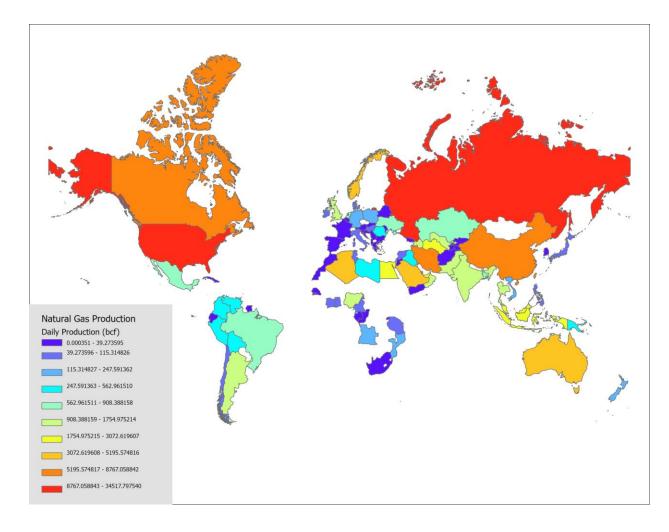
# Emissions

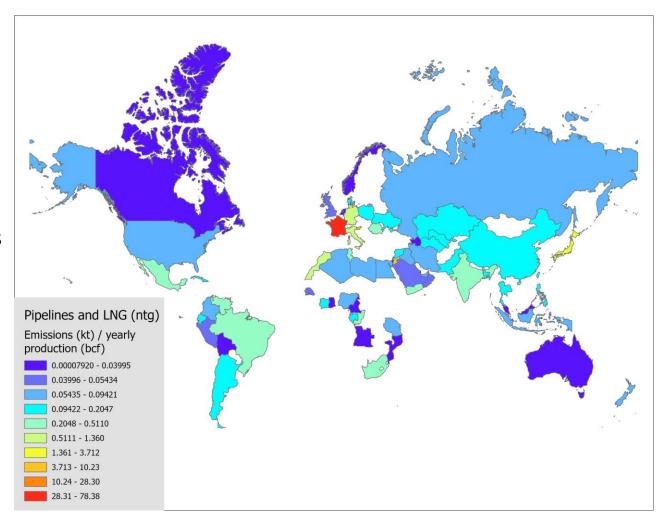
#### Gas Production

- Larger producers tend to have more land.
- Map is for reference of upcoming analyses
- Does not distinguish between onshore and offshore



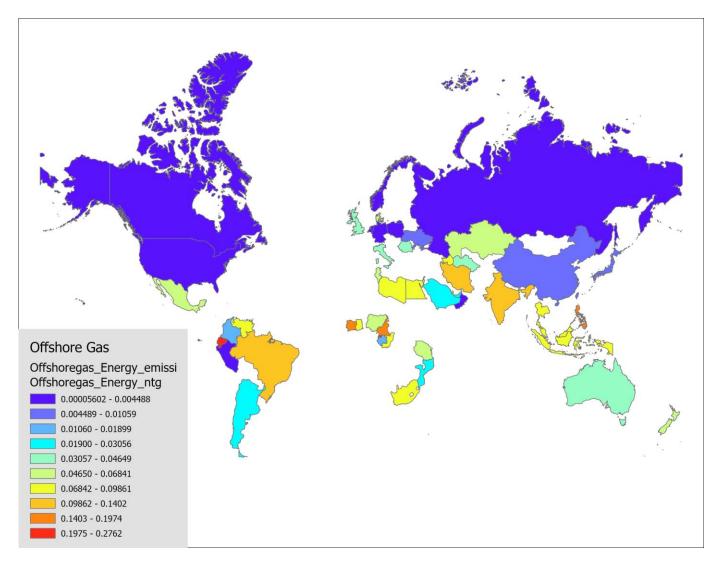
## Gas Emissions (LNG and Pipelines)

- France and Israel appear to have extreme emissions per NTG(natural gas) production
- France actually has minimal NTG production, but some large LNG facilities for importing (<a href="https://en.wikipedia.org/wiki/List\_of\_LNG\_terminals">https://en.wikipedia.org/wiki/List\_of\_LNG\_terminals</a>)
  - Also likely had a surge in gas imports as response to Ukraine invasion, since emissions data is from 2022
- Israel also has a large LNG gas facility that supplies half it's gas needs, since Israel is effectively an island in its region
  - (<a href="https://excelerateenergy.com/projects/hadera-deepwater-Ing-terminal/">https://excelerateenergy.com/projects/hadera-deepwater-Ing-terminal/</a>)



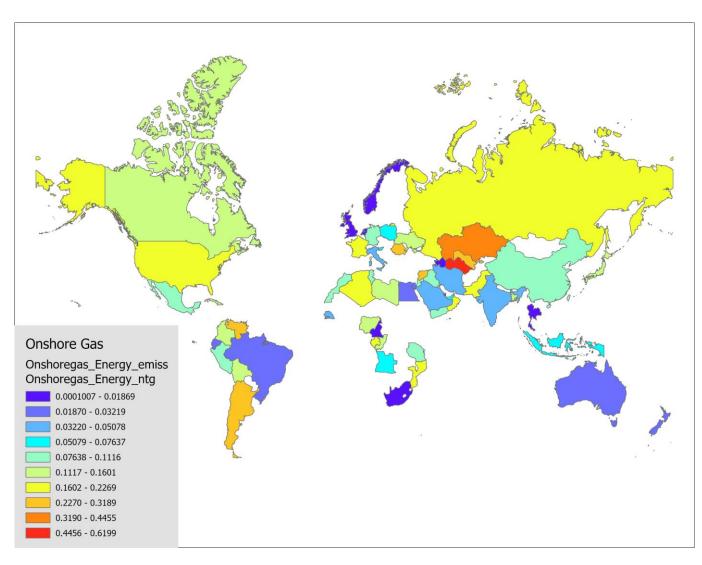
### Gas Emissions (Offshore Production)

- Ecuador appears to have the highest emissions per gas production, and probably has all of their gas production offshore
- Higher per NTG countries seem have most their gas production offshore
  - Iran and Qatar have world's largest gas field offshore(<a href="https://en.wikipedia.org/wiki/S">https://en.wikipedia.org/wiki/S</a> outh Pars/North Dome Gas-Condensate field#:~:text=The%20South %20Pars%2FNorth%20Dome,shared%20 between%20Iran%20and%20Qatar.)



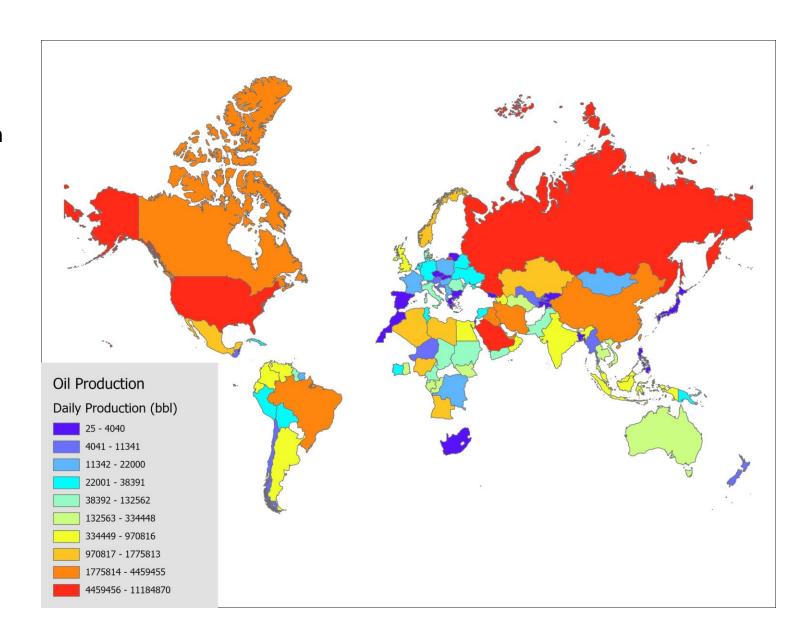
## Gas Emissions (Onshore Production)

- Norway still has low emissions per production of gas, despite its relatively high production
  - Lines up with Norway's strongly green ideology
- Turkmenistan has an extremely high emission rate per production
  - They have the 'Door to Hell', which is basically a giant hole of burning gas, could contribute a large part, but might not be counted since it isn't really 'production'.
- Kazakhstan has large emission per production, could be worse than shown since it appears to have sizable offshore production as shown in previous image
- Lower income countries appear to have higher emissions rate per production



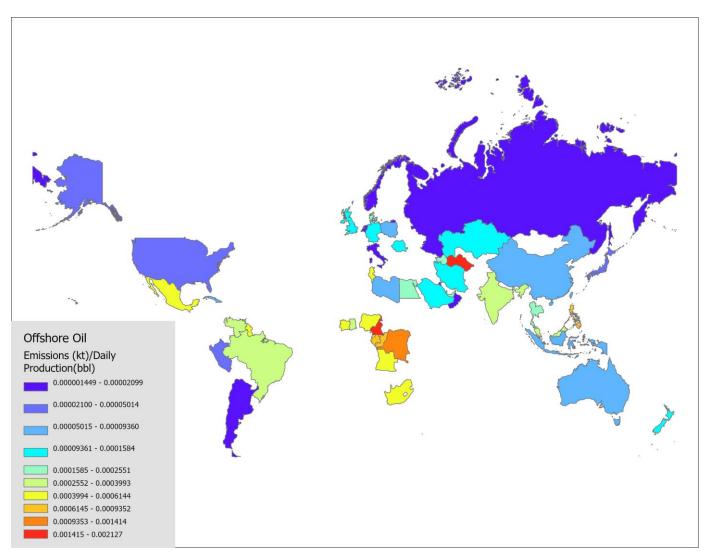
### Oil Production

• Like natural gas, doesn't distinguish between offshore and onshore production



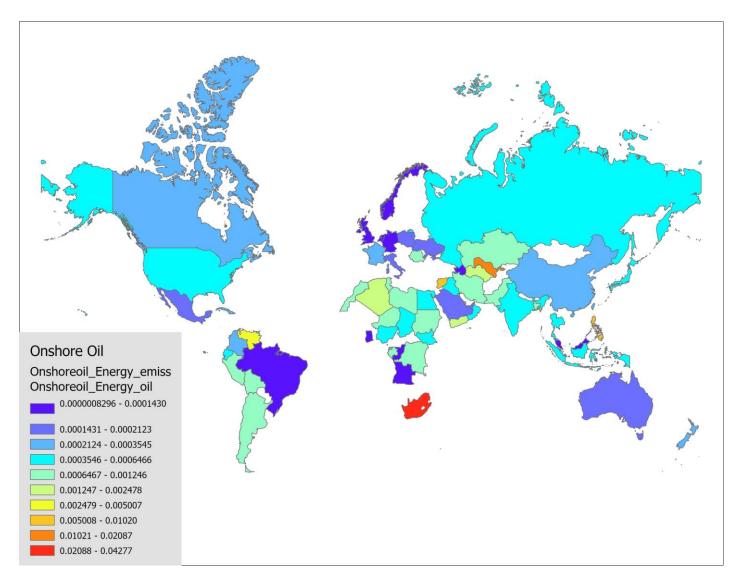
### Oil Emissions (Offshore Production)

- Turkmenistan extreme methane emitter in offshore production like onshore natural gas
- Cameroon also extreme emitter from offshore production
- African countries appear to have larger emissions per production



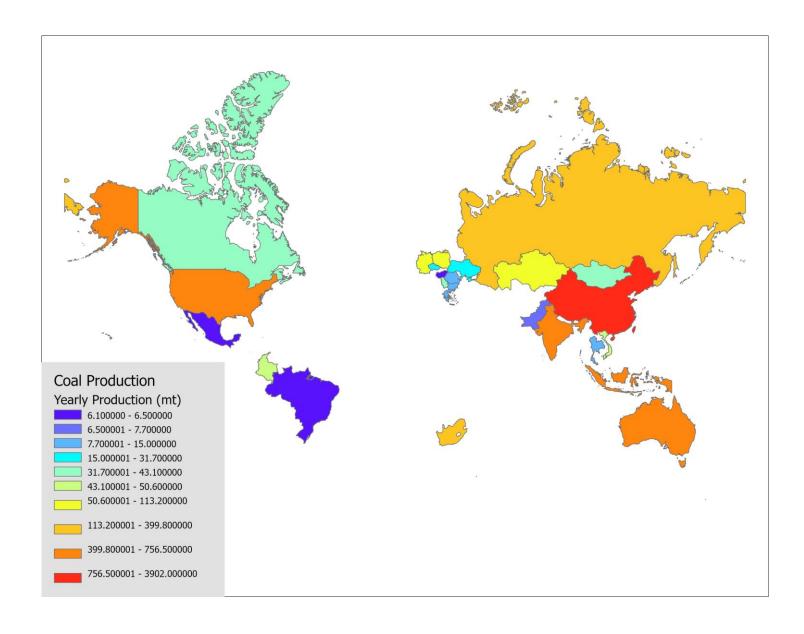
### Oil Emissions (Onshore Production)

- South Africa worst emitter, however it has extremely low production, therefore skewing the color values.
- Venezuela has relatively high emissions in both oil and gas and both onshore and offshore.
  - Has been reported that Venezuela faces deteriorating facilities due to corruption and negligence.
  - Reminder that its emissions are divided by production from both onshore and offshore combined



### **Coal Production**

China produces by \*far\* the most coal



#### Sources:

- Oil production: https://en.wikipedia.org/wiki/List of countries by oil production
- Coal production: https://en.wikipedia.org/wiki/List of countries by coal production