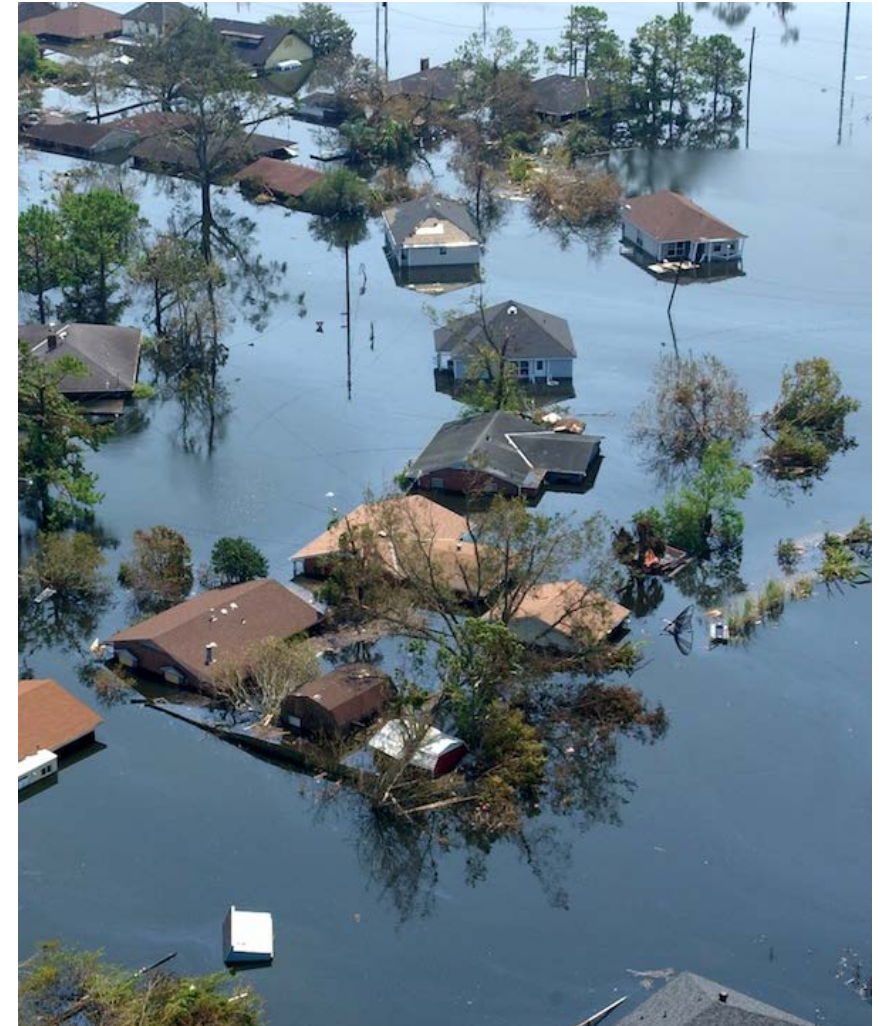


# The CO2 reduction imperative

The IPCC projects that “business-as-usual” will result in temperature increases of 3.7 to 4.8°C above pre-industrial levels.

The World Bank and the Potsdam Institute describe an increase in 4°C as “devastating”, resulting in “the inundation of coastal cities; increasing risks for food production; unprecedented heat waves in many regions, especially in the tropics.”



# CO<sub>2</sub> reduction is imperative for Human Rights

“There is also no certainty that adaptation to a 4°C world is possible. A 4°C world is likely to be one in which communities, cities and countries would experience severe disruptions, damage, and dislocation, with many of these risks spread unequally. It is likely that the poor will suffer most and the global community could become more fractured, and unequal than today.”

World Bank and the Potsdam  
Institute, 2012



# The carbon budget & 2°C

## Carbon budget cumulative emissions targets

Cap emissions below **one trillion tonnes**

(or below a concentration of 450 ppm)  
to avoid 2°C warming scenario

(IPCC, Meinshausen et al)

A cap of **600 billion tonnes**

would be necessary to more  
securely safeguard the climate  
system for future generations

(Hansen & the Columbia Earth  
Institute)



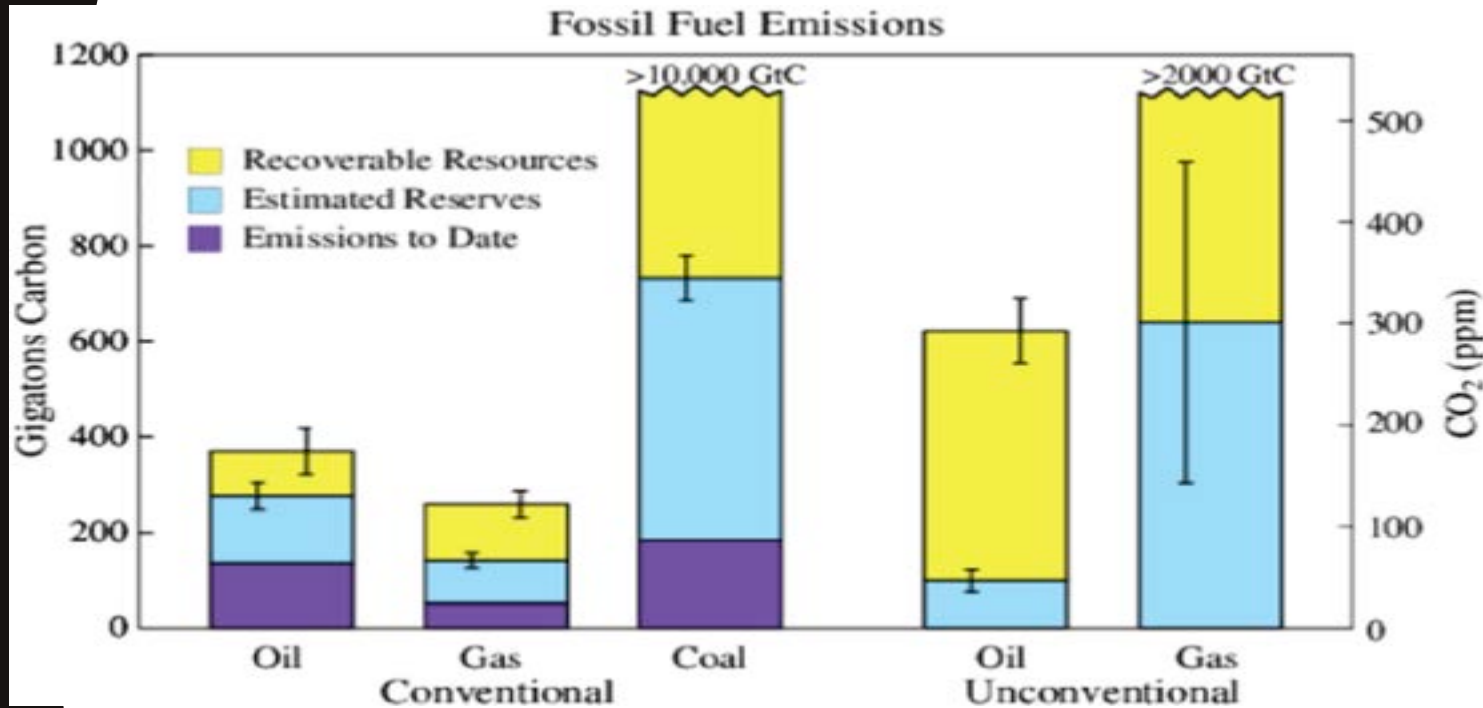




As of June 2014  
580.7 billion tonnes of CO2 have  
already been emitted  
At current rates the trillionth tonne  
would be emitted in December 2040

• [Trillionthtonne.org](http://Trillionthtonne.org),

# •The carbon budget



66% of proven reserves must remain embedded in place to meet the 2°C target\* \*\*

International Energy Agency, 2012

Others estimate 80% of reserves must be unexploited to achieve “safe” levels of warming

- Carbon Tracker, the Grantham Institute on Climate Change & the London School of Economics, 2013



# The "Carbon Majors"

Entity	2010 emissions MtCO <sub>2</sub> e	Cumulative 1854–2010 MtCO <sub>2</sub> e	Percent of global 1751–2010
1. Chevron, USA	423	51,096	3.52 %
2. ExxonMobil, USA	655	46,672	3.22 %
3. Saudi Aramco, Saudi Arabia	1,550	46,033	3.17 %
4. BP, UK	554	35,837	2.47 %
5. Gazprom, Russian Federation	1,371	32,136	2.22 %
6. Royal Dutch/Shell, Netherlands	478	30,751	2.12 %
7. National Iranian Oil Company	867	29,084	2.01 %
8. Pemex, Mexico	602	20,025	1.38 %
9. ConocoPhillips, USA	359	16,866	1.16 %
10. Petroleos de Venezuela	485	16,157	1.11 %
11. Coal India	830	15,493	1.07 %
12. Peabody Energy, USA	519	12,432	0.86 %
13. Total, France	398	11,911	0.82 %
14. PetroChina, China	614	10,564	0.73 %
15. Kuwait Petroleum Corp.	323	10,503	0.73 %
16. Abu Dhabi NOC, UAE	387	9,672	0.67 %
17. Sonatrach, Algeria	386	9,263	0.64 %
18. Consol Energy, Inc., USA	160	9,096	0.63 %
19. BHP-Billiton, Australia	320	7,606	0.52 %
20. Anglo American, United Kingdom	242	7,242	0.50 %
Top 20 IOCs & SOEs	11,523	428,439	29.54 %
Top 40 IOCs & SOEs		546,767	37.70 %
All 81 IOCs & SOEs	18,524	602,491	41.54 %
Total 90 carbon majors	27,946	914,251	63.04 %
Total global emissions	36,026	1,450,332	100.00 %

63% of CO<sub>2</sub> and methane emitted between 1751 and 2010 can be attributed to just 90 emitters (states and their corporate permittees)

Heede, 2013

# CLIMATE LITIGATION - KEY CASES

1. **HOLLAND - "Urgenda"** - Court Orders Netherlands to make 25% Reduction in Carbon Emissions by 2020
2. **PAKISTAN - "Leghari"** - High Court Finds Pakistan government has constitutional duty to protect citizens from climate impacts; orders government to take concrete measures
3. **PHILIPPINES** - Citizens Petition Human Rights Commission to Investigate responsibility of foreign based "Carbon Majors" for climate induced human rights violations
4. **Washington State, U.S.A. - "Our Children's Trust"** - court finds state government has public trust duty to ensure stringent carbon emission standards to protect children from the burden of future climate change emissions



# CARBON AS A TOXIC SUBSTANCE



**In future, carbon reserves may be regarded as toxic substances and would, therefore, need to remain embedded**

- Except under conditions assuring no new GHG emissions during
  - extraction / use
- Limited exceptions would apply in exigent local circumstances or for
  - fairness to those substantially lacking access to energy



## Yesterday

*According to repeated nationwide surveys,*

# More Doctors Smoke **CAMELS** than any other cigarette!

*You'll enjoy Camels for the same reasons so many doctors enjoy them. Camels have cool, cool mildness, pack after pack, and a flavor unmatched by any other cigarette.*

*Doctors in every branch of medicine were asked, "What cigarette do you smoke?" The brand named most was Camel!*

*Make this sensible test: Smoke only Camels for 30 days and see how well Camels please your taste, how well they suit your throat as you study smoke. You'll see how enjoyable a cigarette can be!*

**THE DOCTORS' CHOICE IS AMERICA'S CHOICE!**



*For 30 days, test Camels in your "T-Zone" (T for Throat, T for Taste).*

## Today

# WARNING: Cigarettes cause strokes and heart disease.



© U.S. HHS 1-800-QUIT-NOW

# WARNING: TOBACCO SMOKE CAN HARM YOUR CHILDREN.



© U.S. HHS 1-800-QUIT-NOW



Today

Another reason why he's

*The best friend your car has ever had!*



He sells top octane *Sky Chief* with **PETROX** for maximum power . . . plus engine protection!

If you want to get all the power possible, and top engine protection too — get Texaco Sky Chief gasoline. For Sky Chief and only Sky Chief has Petrox.

Petrox is unlike any other gasoline additive. It's an exclusive, petroleum-base element . . . and creates no harmful chemicals that can leave harmful deposits.

Petrox helps out maximum power, increases gasoline mileage — because it acts deposits that waste power. What's more, Petrox leaves a fine film of protection on rings . . . valves . . . on about 120 parts in all. Results: up to 10% longer engine life. Millions of hot car miles prove it.

Even if it is gone out. Fill up with top octane Sky Chief, recommended with Petrox. The more you use Texaco Diesel, the best friend your car has ever had.

**TEXACO DEALERS** in all 48 states  
Texaco Products are distributed in Canada and Latin America.

TEXACO is a registered trademark of the International Petroleum Company. © 1954 International Petroleum Company. All rights reserved.

Tomorrow




**WARNING**

Use of this fuel product contributes to climate change which may put up to 30% of species at a likely risk of extinction.

Required by Municipality of Courage by-law 2013-058.

Future carbon resources: toxic just like tobacco


# CITIZEN ACTION



**CAN A  
SIMPLE STICKER  
HELP US ACT ON  
CLIMATE CHANGE?**

CLIMATE CHANGE INFORMATION  
LABELS ON GAS PUMPS.

The first step in addressing any challenge is to honestly face it. That's why we're asking municipalities to require gasoline retailers to place climate change and air pollution information labels on gas pumps.



**CLIMATE CHANGE  
IS THE GREATEST CHALLENGE  
OF OUR TIME.**

**#FaceTheChange**

[www.ourhorizon.org](http://www.ourhorizon.org)

## Fossil fuel labeling to change purchasing behaviour:

- Not-for-profit, Our Horizon, works with municipalities to pass by-laws placing warning labels on gas pumps
- The Municipality of West Vancouver recently voted to pursue a such by-law



# Achieving the carbon budget: Reframing for action?

- **Who's responsible?**
- **Approaches to achieving the 2°C target**
  - Direct regulation of carbon by local, provincial, national, or global authorities
  - Phasing out fossil fuel subsidies
  - Political leadership and funding to implement renewable energy and energy efficiency
  - Legal reforms
  - Citizen action

