

Climate Change and the role of the Oil & Gas industry

By: Farah Ghanem



Agenda

- Alpin Introduction
- Climate Change – The Challenge
- Climate Change – The Solutions
- Q & A

Alpin Introduction

Climate Change & Sustainability Consultancy



Alpin Introduction



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Alpin Introduction



Alpin is part of the Setec Group, an International Engineering Company based out of Paris, with more than 3,000 experts spread all across the world.

Alpin's global headquarters are ideally located in the world's first sustainable city, Masdar, in Abu Dhabi, UAE



Alpin Introduction

Alpin's HQ is LEED GOLD certified since 2015



Alpin's Office is WELL certified



Our offices are ISO Certified

ISO 9001:2015

ISO 14001:2015

OHSAS 18001:2007



Alpin Introduction



01

- Decarbonization & Net Zero
- GHG Assessment & Digitalization
- Carbon Mitigation Projects
- Climate Risk & Resilience



02

- Corporate Reporting
- ESG Strategy
- On-Demand Advisory



03

- Green Rating Systems
- ESIA
- SEAs



04

- Commissioning Management
- Energy Auditing
- Acoustic Auditing

Climate Change – The Challenge



Climate Change – The Challenge

Water availability and food production

 ..	 ..	 .	 ..
Physical water availability	Agriculture/crop production	Animal and livestock health and productivity	Fisheries yields and aquaculture production



Health and well-being

 ..	 ...	 ...	 ...
Infectious diseases	Heat, malnutrition and harm from wildfire	Mental health	Displacement

Cities, settlements and infrastructure

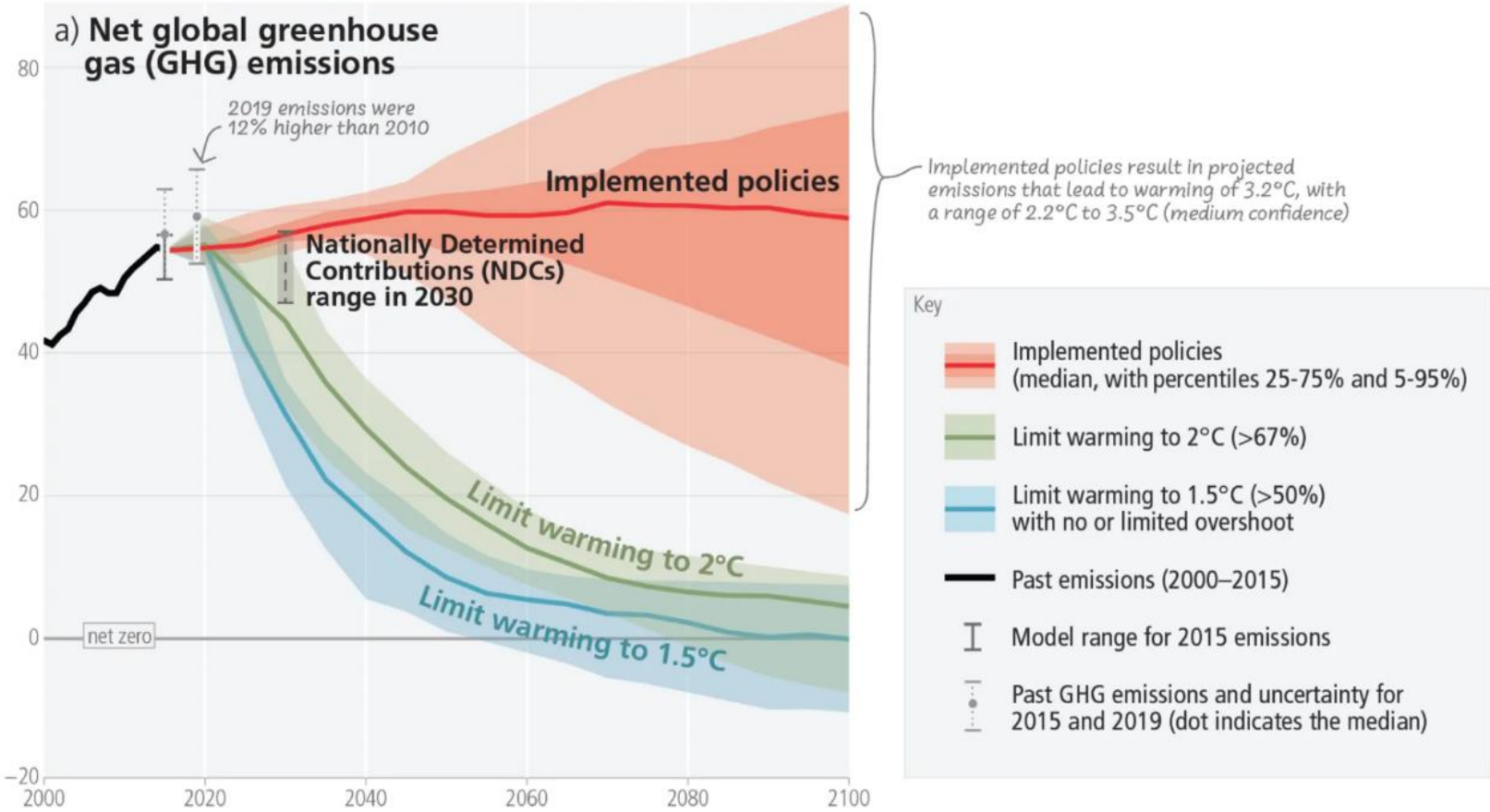
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Inland flooding and associated damages	Flood/storm induced damages in coastal areas	Damages to infrastructure	Damages to key economic sectors

Biodiversity and ecosystems

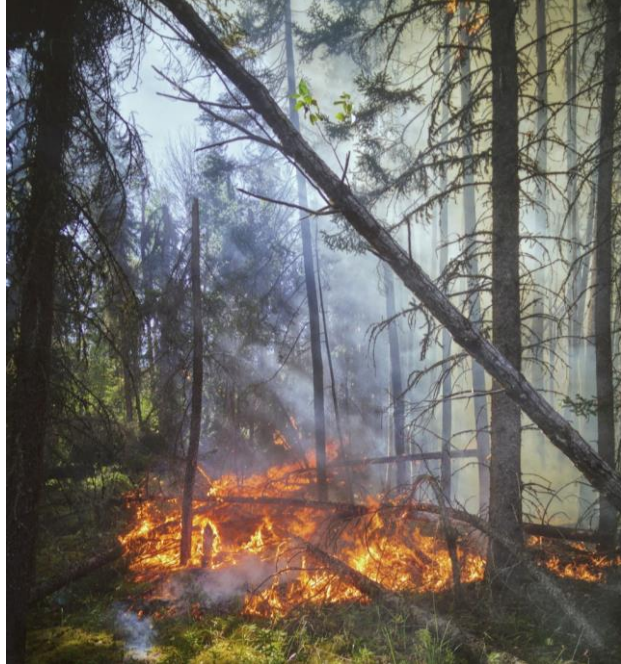
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Terrestrial ecosystems	Freshwater ecosystems	Ocean ecosystems

Includes changes in ecosystem structure, species ranges and seasonal timing

Climate Change – The Challenge

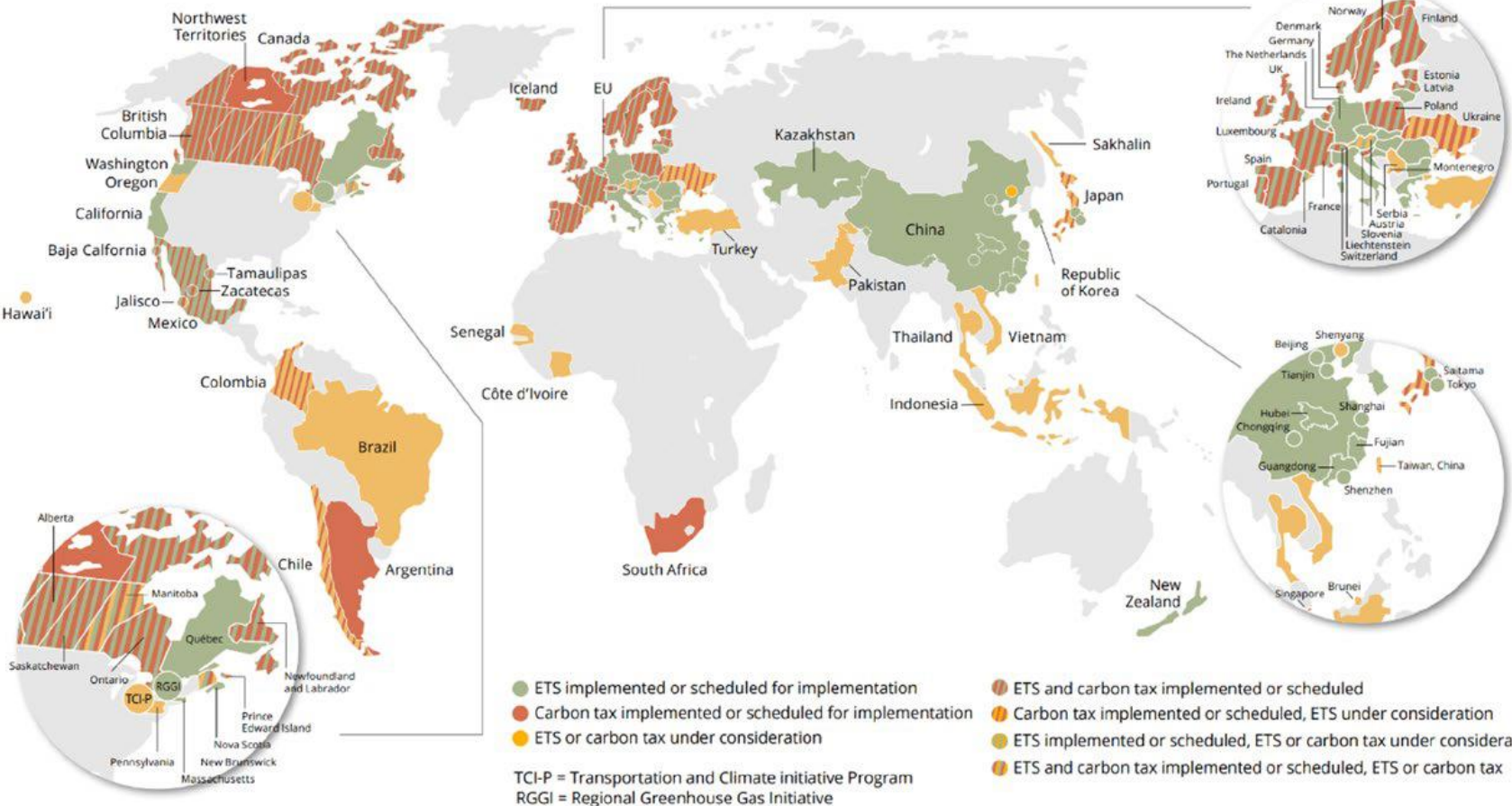


Climate Change – The Challenge

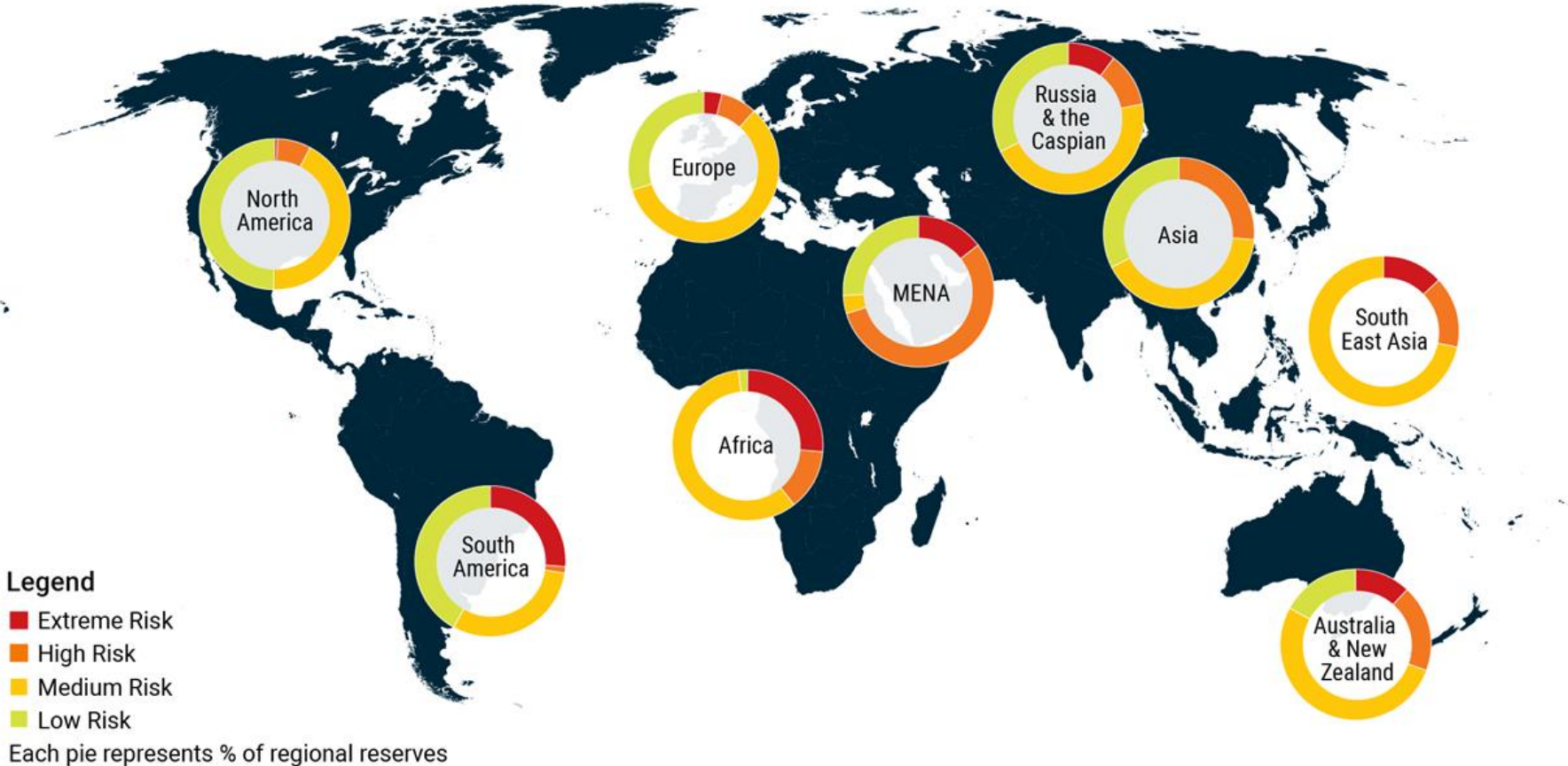


- ⚠ Natural Disasters: \$210 billion in 2020
- ⚠ Sea-level impact: \$100s trillion by 2050 (up to \$106 billion US alone)
- ⚠ Air pollution: \$5 trillion annually
- ⚠ Agricultural sector losses: \$500 billion annually
- ⚠ Overall GDP impact: \$1.2 trillion per year

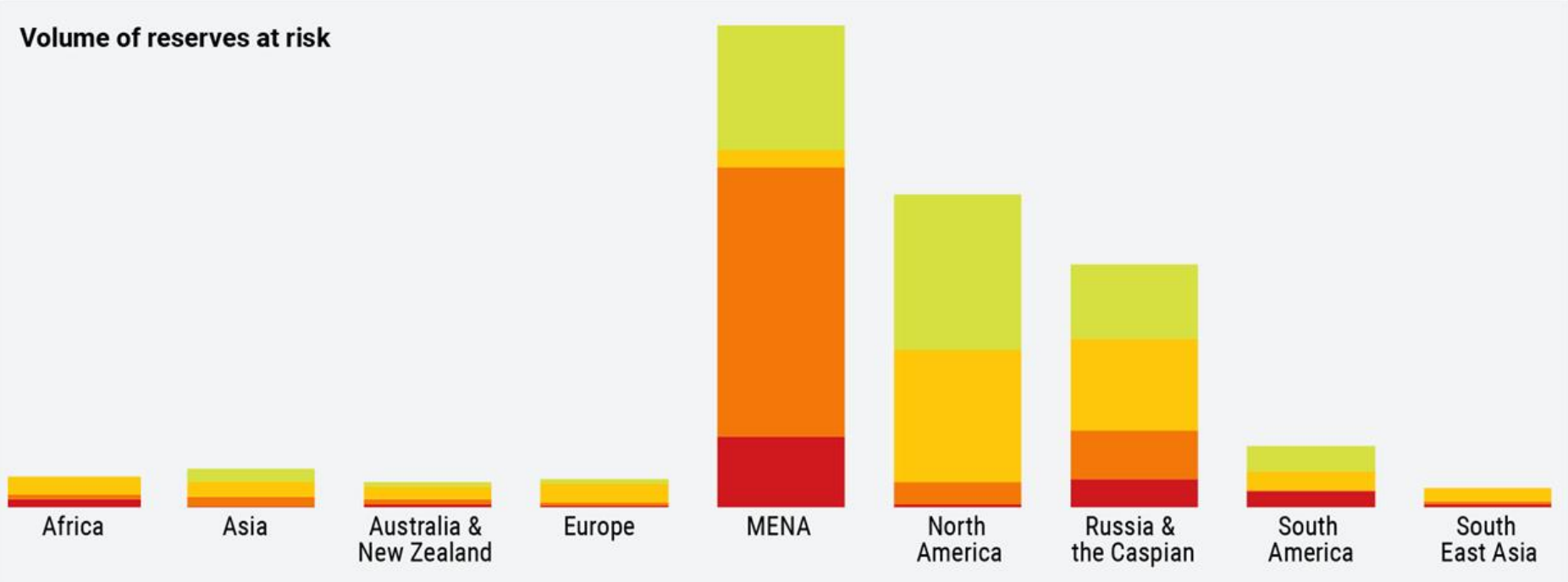
Climate Change – The Challenge



Climate Change – The Challenge



Climate Change – The Challenge



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Climate Change – The Challenge

CLIMATE HAZARDS



EXTREME
TEMPERATURE



SEA LEVEL
RISE



SNOW, ICE
AND FROZEN
GROUND



STORMS



FLOODS



WAVE
HEIGHT



WILDFIRES

POTENTIAL RISKS

EXPLORATION

- Physical damage from wave height and high winds

DEVELOPMENT

- Physical damages due to flooding
- Physical damages due to extreme wind and waves

PRODUCTION

- Physical damage from wave height and high winds

TRANSPORT AND PIPELINES

- Physical damage from flooding, storm surges, high winds and wave heights
- Physical damage on shore pipelines

REFINING AND PROCESSING

- Physical damage from flooding, storm surges, high winds
- Loss of access to water

Climate change risks along the oil and gas industry value change.

Climate Change – The Solutions



Climate Change – The Solutions

“Steve Jobs didn't set out to create the iPhone, he was creating a closed box computer. And Amazon was a digital bookstore.”

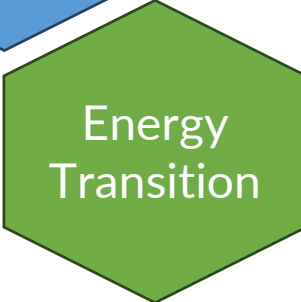


Climate Change – The Solutions



Advocating Policy

Engage government agencies and the wider community to advocate for just and realistic policies for transition



Energy Transition

Partake as a key player in the energy transition, you are an energy industry, not limited to Oil & Gas!



Circular Economy

Implement circularity principles throughout the life cycle of energy production



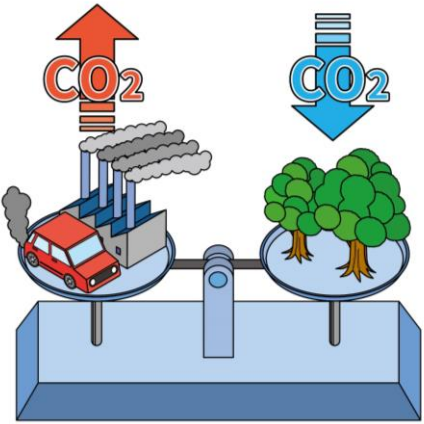
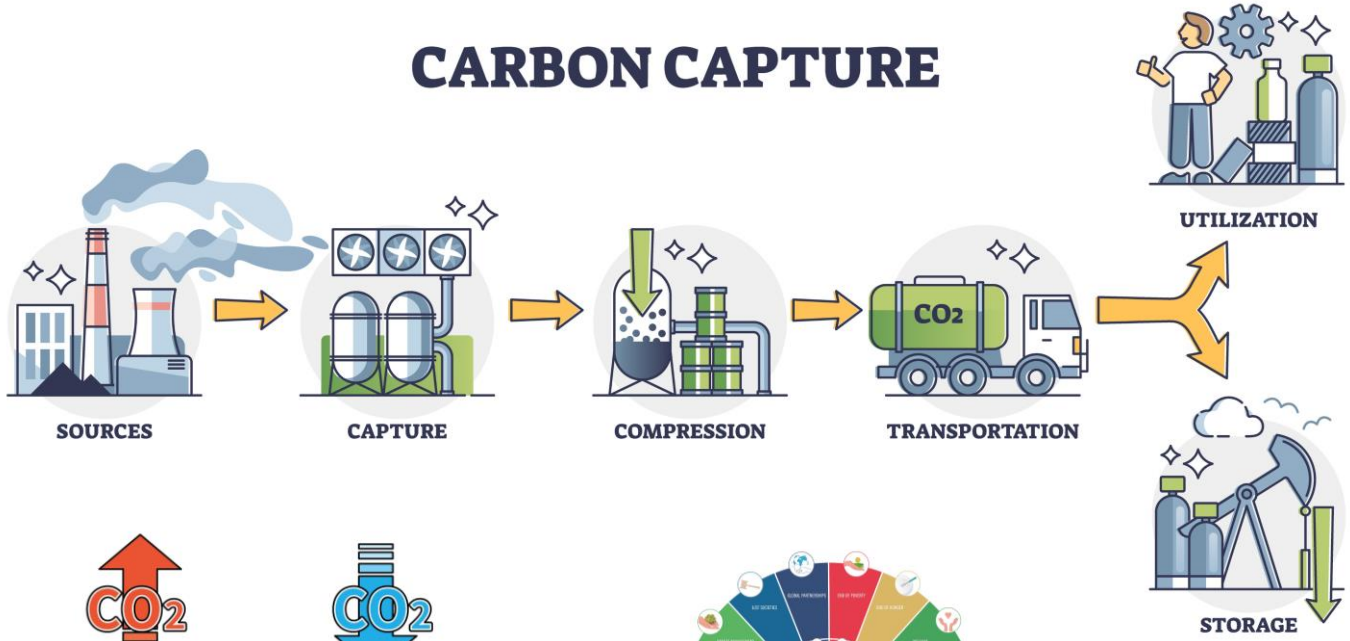
Cross-Sector Partnerships

Tackling climate change requires collaboration across industries, governments, and civil society

Climate Change – The Solutions



CARBON CAPTURE





THANK YOU

Q&A



Q&A



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10 YEARS

ENABLING SUSTAINABLE COMMUNITIES FOR ALL

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THOUGHT LEADERSHIP FOR THE BUILT ENVIRONMENT

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