

Kingdom of Saudi Arabia Ministry of Petroleum and Mineral Resources

Saudi Arabia's Efforts in Carbon Management

International Energy Forum
Symposium on Carbon Capture and Storage
31 May – 01 June 2010,
Algiers, Algeria

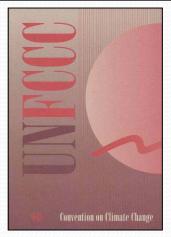
Dr. Ali A. Al-Meshari Ministry of Petroleum and Mineral Resources Saudi Arabia

INTERNATIONAL MARITIME ORGANIZATION











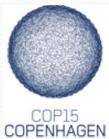
Mitigation efforts sought to:

Be driven by technology

Minimize the impact on world economy







Research Centers





Research Centers



مدينة الملك عبدالعزيز للعلوم والتقنية
King Abdulaziz City For Science and Technology

Universities







Companies

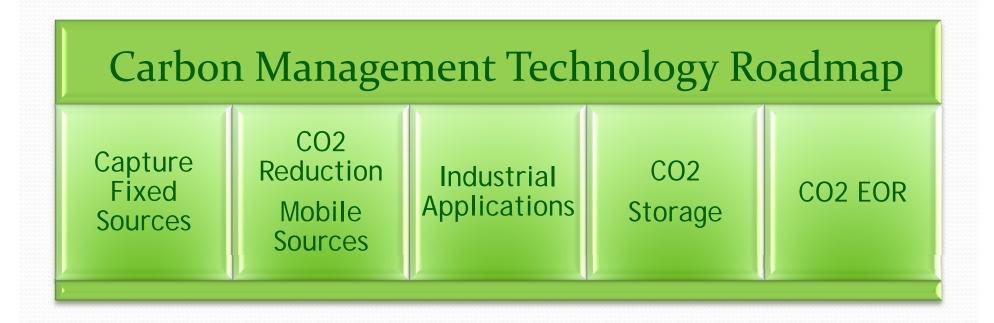


Saudi Arabia's Activities on Climate Change Four Kingdoms CCS Initiative Held the first Regional 2008 - Rome **CM Symposium** Actively participated in UNFCCC - COPs May 2006 - Dammam Kyoto Protocol Poznan and refilited Hosted the 3rd CSLF Copenhagen May 2005 Jan 2008 - AlKhobar 2006 2008 2005 2009 2010 2007 Instrumental in **CDM** workshop Joined CSLF reaching the "Bali **Held regional CDM** Sep 2005 January 2010 - Riyadh Roadmap" conference Dec 2007 Sep 2006 - Riyadh Conducted CCS **National workshop** March 2009 - Riyadh

Saudi Arabia's Activities on Climate Change

- A strong history on environmental awareness and protection
 - Energy conservation
 - Energy Efficiency
 - Flare reduction (master gas system)
 - Carbon management

Saudi Arabia's Carbon Management Technology Roadmap



Capture from Fixed Sources

CO2

Reduction

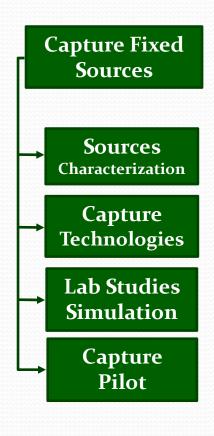
Mobile

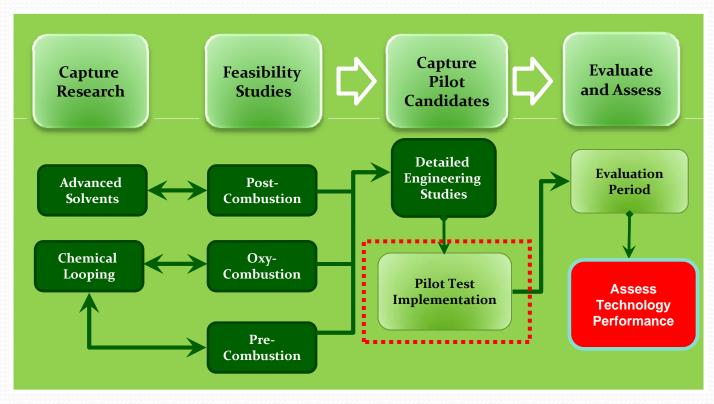
Sources

Capture

Fixed

Sources





CO2

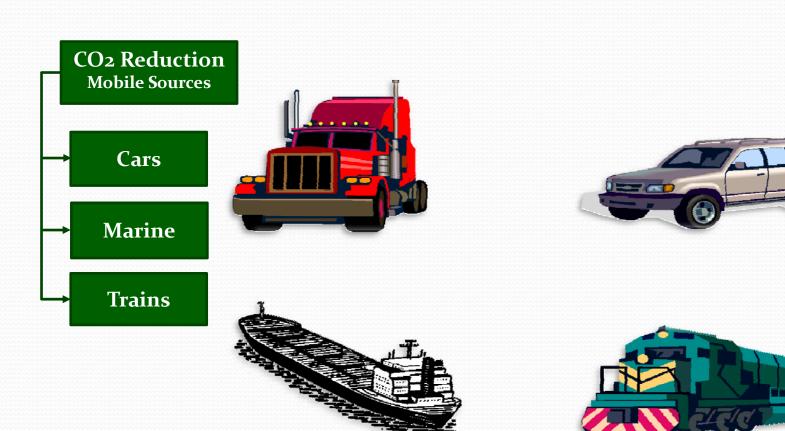
Storage

CO2 EOR

Industrial

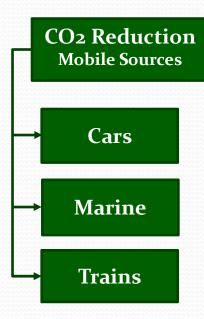
Applications

CO₂ Reduction from Mobile Sources





CO₂ Reduction from Mobile Sources







Industrial Application

Industrial Application

Polymer

Carbon Fiber

Construction Material

Chemicals





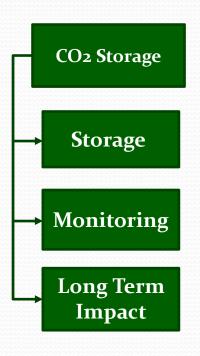


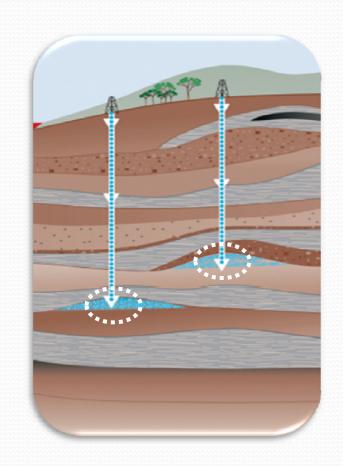
Capture Fixed Sources CO2 Reduction Mobile Sources

Industrial Applications CO2 Storage

CO2 EOR

CO₂ Storage







CO2-Enhanced Oil Recovery

CO₂ EOR

Lab Studies

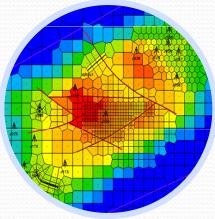
Reservoir Simulation

Field
Experimentation

CO₂-EOR Demo







CO2-EOR Simulation





Capture Fixed Sources CO2 Reduction Mobile Sources

Industrial Applications

CO2 Storage

CO2 EOR

Summary

Actively engaged internally and externally on climate change mitigation

Approach focuses on developing win-win technologies

Comprehensive technology roadmap on CO₂ capture, sequestration and utilization

Research program combines in-kingdom development and international collaboration

CO2 Enhanced Oil Recovery demonstration plant to be implemented in Saudi Arabia by 2013



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