

# ***Carbon Sequestration Leadership Forum***



**Development of a Technology Roadmap**

**Technical Group  
CSLF Working Group Meeting  
Rome, Italy**

**January 21, 2004**

# Roadmap Overview

- ❖ Attempts to answer the question, “What does the CSLF Technical Group hope to accomplish by 2013, and how do we get there?”
- ❖ Incorporates vision and goals of the CSLF and the Technology Group.
- ❖ Integrates roles and responsibilities of CSLF Technical Group.
- ❖ Outlines key technical obstacles identified by various countries at the CSLF inaugural meeting, and potential projects in carbon sequestration.



# Technical Group: Goals

- ❖ Facilitate the development of new technologies for CO<sub>2</sub> separation, capture, transportation and storage by:
  - Achieving cost reduction for sequestration technologies;
  - Developing an understanding of global geologic storage potential;
  - Matching CO<sub>2</sub> sources with potential sinks;
  - Demonstrating the effectiveness of geologic CO<sub>2</sub> storage; and
  - Building technical competence and confidence through multiple demonstrations.



# *Technical Group: Roles and Responsibilities*

- ❖ Identify key technical, economic, and environmental obstacles to achieving improvements in sequestration technology.
- ❖ Establish inventory of potential areas of needed research.
- ❖ Identify areas of multilateral collaboration on carbon capture and storage technologies.
- ❖ Foster collaborative research, development and demonstration projects reflecting consensus priorities of CSLF Members.



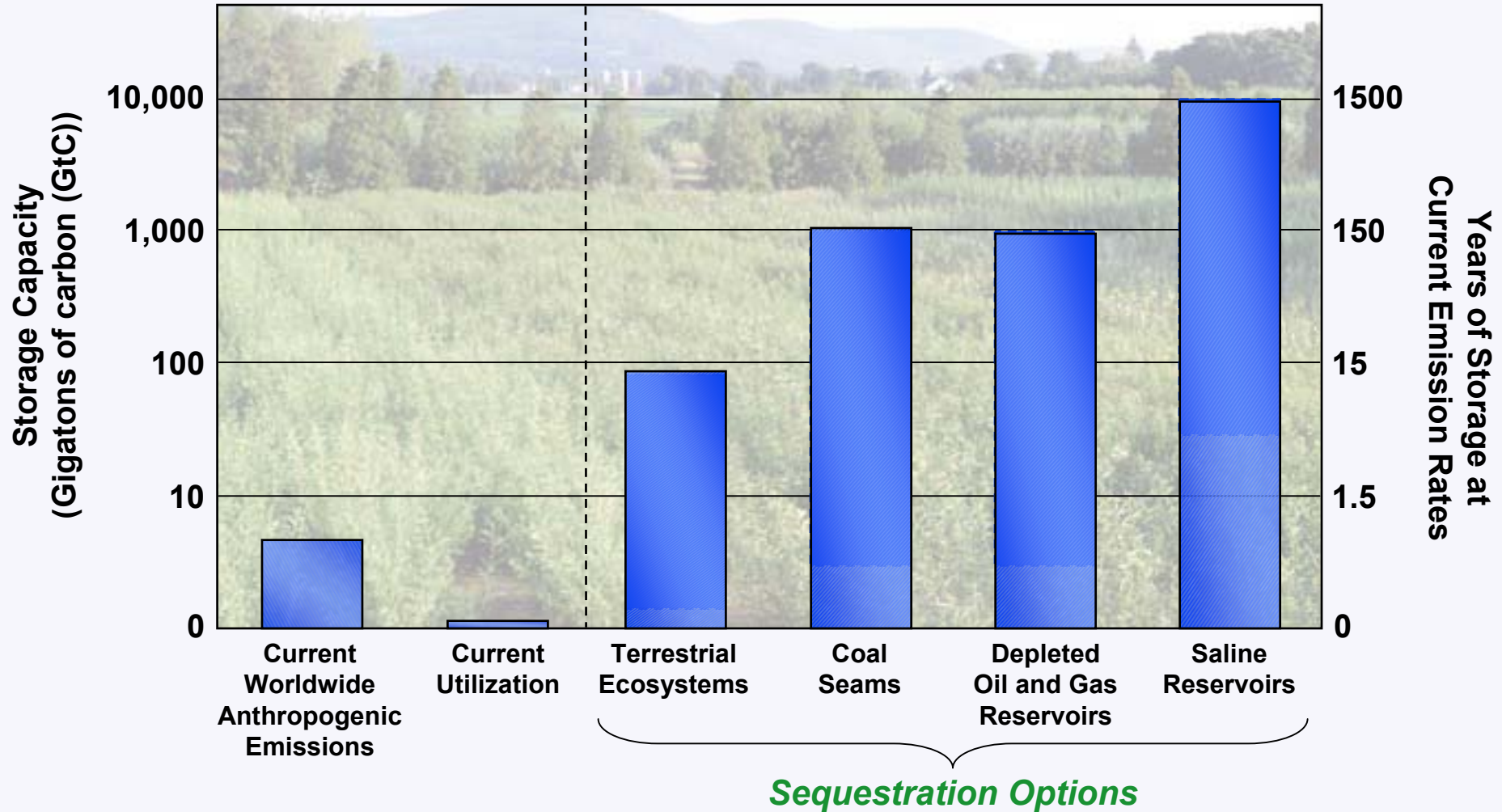
# *Assumptions for CSLF Technology Roadmap*

- ❖ Demonstrations or major project milestones to be completed in many different regions of the world by 2013.
- ❖ Anticipate announcement of initial projects, Fall 2004, with additional projects over next several years.
- ❖ Projects will be coal-based, but will readily transfer to oil- and gas-based power and non-power systems.
- ❖ Emphasize developmental projects (pilot and demonstration scale) vs. basic research projects.
- ❖ Focus is on geologic sequestration projects.





# Large Potential Worldwide Storage Capacity



Source: International Energy Agency, *Solutions for the 21st Century – Zero Emissions Technologies for Fossil Fuels*, 2002.



# *Areas of Research, Development and Demonstration*

- ❖ CO<sub>2</sub> Separation and Capture
- ❖ CO<sub>2</sub> Transport Systems
- ❖ CO<sub>2</sub> Storage
- ❖ Monitoring and Verification of Sequestration

## ***Roadmap Document Outlines:***

*State-of-the-Science*

*Prospective Approaches and Illustrative Projects*



# Draft Roadmap

**Figure 1. Draft CSLF Technical Roadmap**

