

Key Issues in CO₂ Storage

- **CO₂ Source and Sink Matching**
 - **Challenges in Current Technology**
- **Purposes of CO₂ Monitoring**
 - **Ensure Effective Injection Control**
 - **Assess environmental, health & Safety impacts of leakage** (Benson,2004)
- **Cost-effective methods for monitoring CO₂ stored in reservoirs** (4D seismic?)
- **More Demonstrations are Needed!**

CO₂ Monitoring

- **Purposes of CO₂ monitoring in geological storage**
- **Ensure Effective Injection Control**
- **Assess environmental, health & Safety impacts of leakage (Benson,2004)**

- **Cost-effective methods for monitoring CO₂ stored in reservoirs (4D seismic?)**

Purposes for Monitoring

- Establish baseline conditions to assess CO₂ storage impacts
- Ensure effective injection controls
- Detect plume location and leakage from storage formation
- Assess the integrity of shut-in, plugged or abandoned wells
- Identify and confirm storage efficiency and processes
- Model calibration and performance confirmation
- Detect and quantify surface seepage
- Assess environmental, health and safety impacts of leakage

Benson, 2004