



WP7:  
International Dimension—CCS Regulation and  
Policy Related Issues in China  
*An Overview*

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- WP7 of STRACO<sub>2</sub> project explores international dimension of policy and regulatory issues of CCS with the incorporation of Chinese context and Chinese stakeholders.
- This work package reviews the current energy and climate change policy and CCS development in China, distributes questionnaire to relevant Chinese stakeholders for needs assessment, conducts techno-economic assessment and identifies gaps for the development of CCS in China.



# Key Findings

- China has recognized the strategic importance and potential of CCS technology for green house gas emission reduction, and has attached great importance to the development of CCS technology. CCS was highlighted as a frontier technology in the following policy documents:
  - *The Outline of the National Program for Medium- and Long-term Science and Technology Development (2006);*
  - *China's National Climate Change Programme (2007);*
  - *China's Scientific and Technological Actions on Climate Change (2007)*



## Key Findings

- Except for R&D policies mentioned above, CCS related policies and regulations, are still in blank in China. CCS is still very new for both decision-makers and general public in China, and policies on energy conservation/efficiency and promotion of renewable energy are the priority in China's energy policy.
  - Targets on Energy efficiency (20% less energy use per Unit GDP by 2010 comparing with 2005)
  - Target on Renewable Energy (10%-2010; 15%-2020 of the total energy consumption)



## Key Findings

- Policy and regulation are very important to the development of CCS in all countries including China. At current stage, China shall further strengthen R&D of CCS technology to cut costs, energy penalty and risks, and at the same time, start to explore the establishment of a systematic and favorable policy & regulation environment for CCS development.
- Learning from experiences of fore runner countries is very important for counties like China.



## Key Findings

- Barriers and issues to be addressed
  - High costs, energy penalty and long term safety of current CCS technologies;
  - To define the ownerships and accountabilities of CO<sub>2</sub> sequestration projects;
  - Lack of unified technical standard and norm on CCS
- Identified Gaps
  - higher environmental risk in China than in other regions when develop CCS;
  - Insufficient public awareness will prevent the widely promotion of CCS in China.



## Key Findings

- In developing countries like China, there is great demand on CCS capacity building for different target groups: government officials, enterprise decision makers, researchers, etc.



# Questionnaire & Analysis

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# Scope and Feedback

- 60 questionnaires disseminated, 35 feedbacks

| Type of Organizations | Environment | Energy | Research | Consultancy |
|-----------------------|-------------|--------|----------|-------------|
| No. of Organizations  | 6           | 8      | 16       | 5           |
| Percentage            | 17%         | 23%    | 46%      | 14%         |

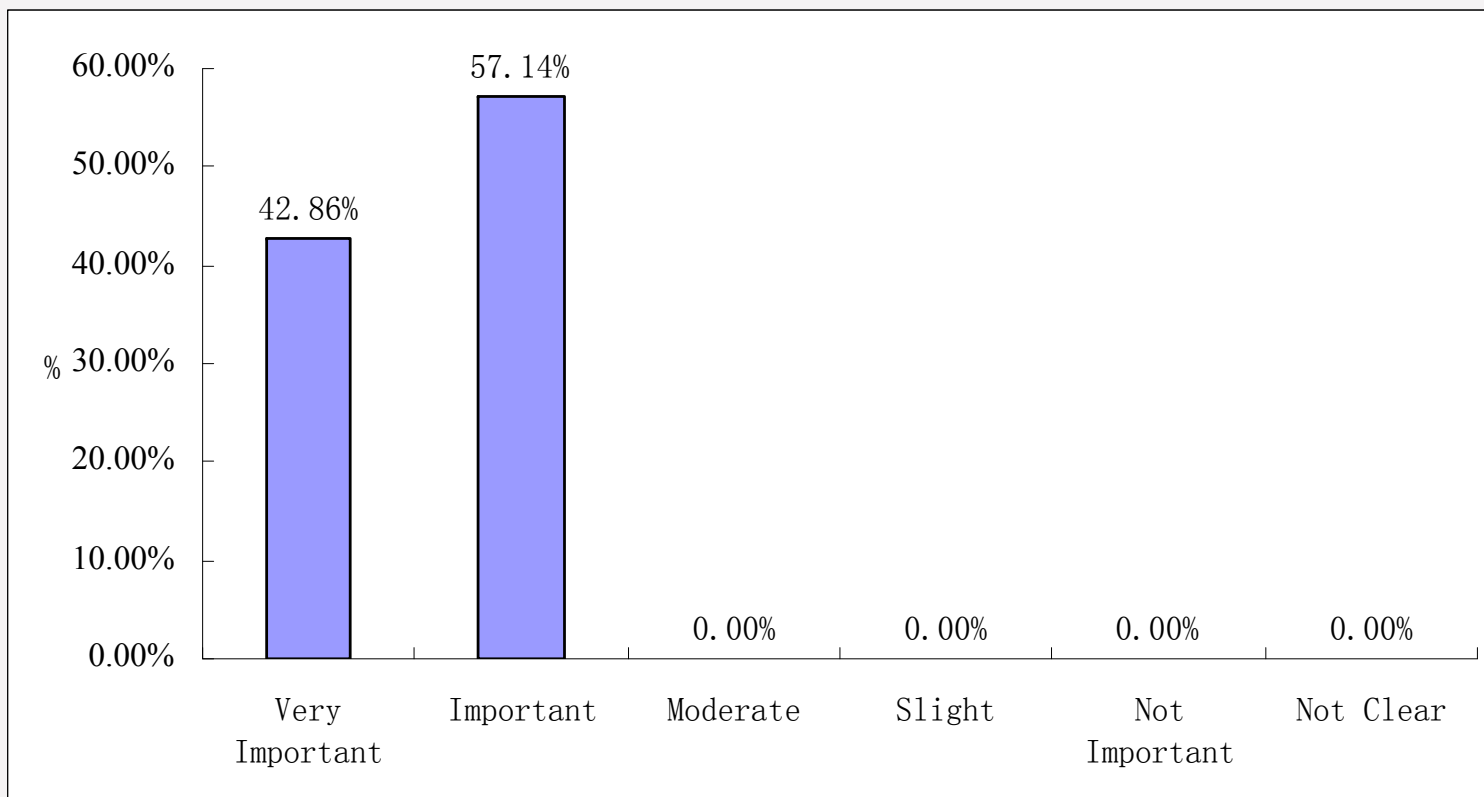


# Questionnaires

- 21 Questions
  - CCS Technology outlook
  - Capture technology
  - Storage technology and site selection
  - Transportation
  - Policy & finance

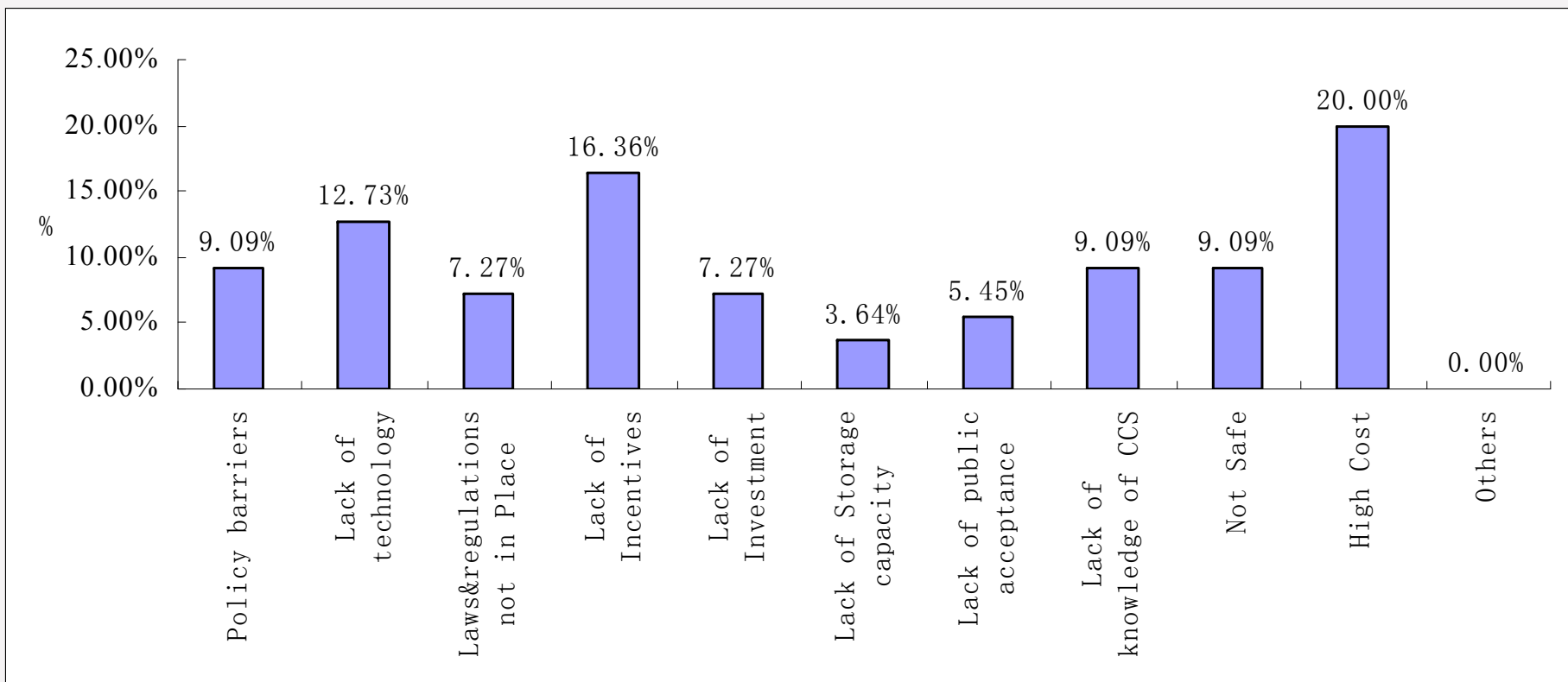


### Q1: What Role of CCS can play in combating CC



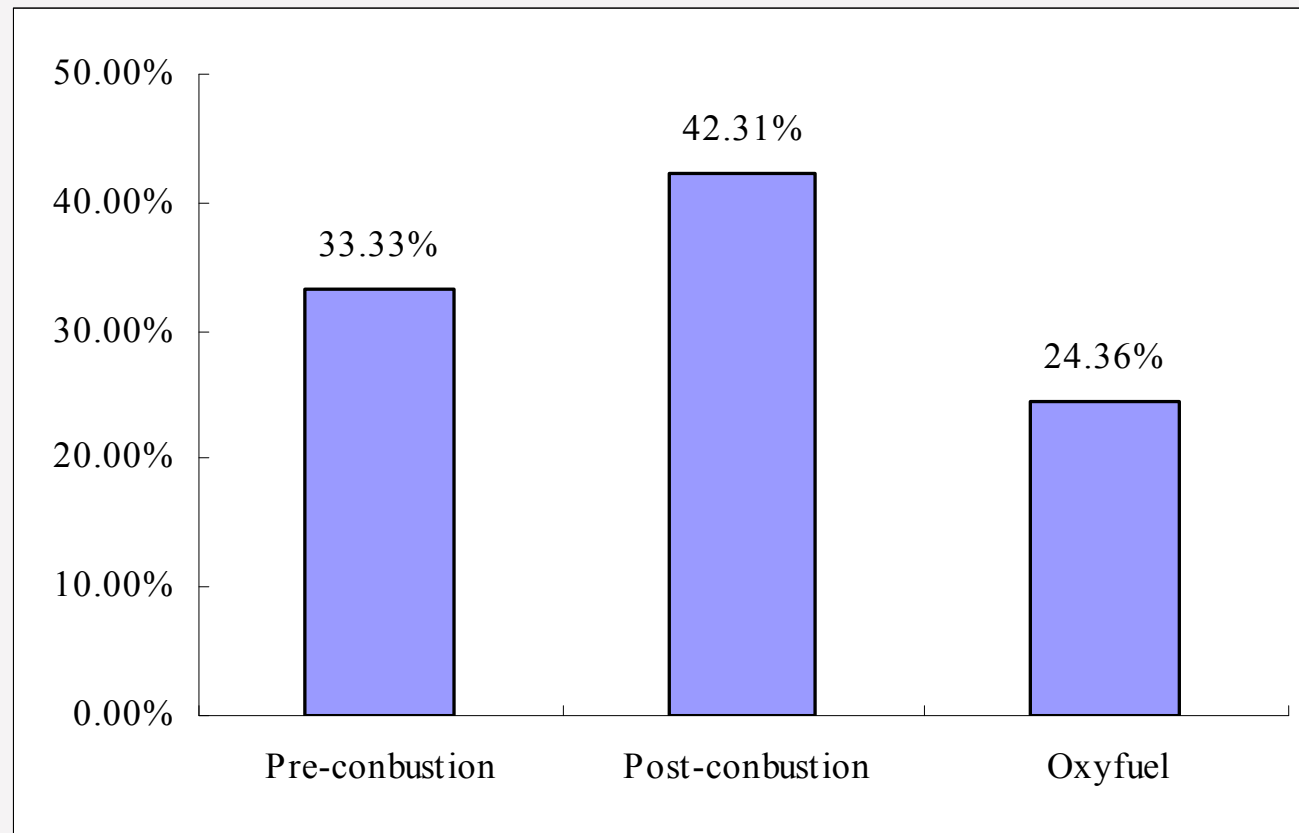


### Q2: Barriers for CCS commercialization



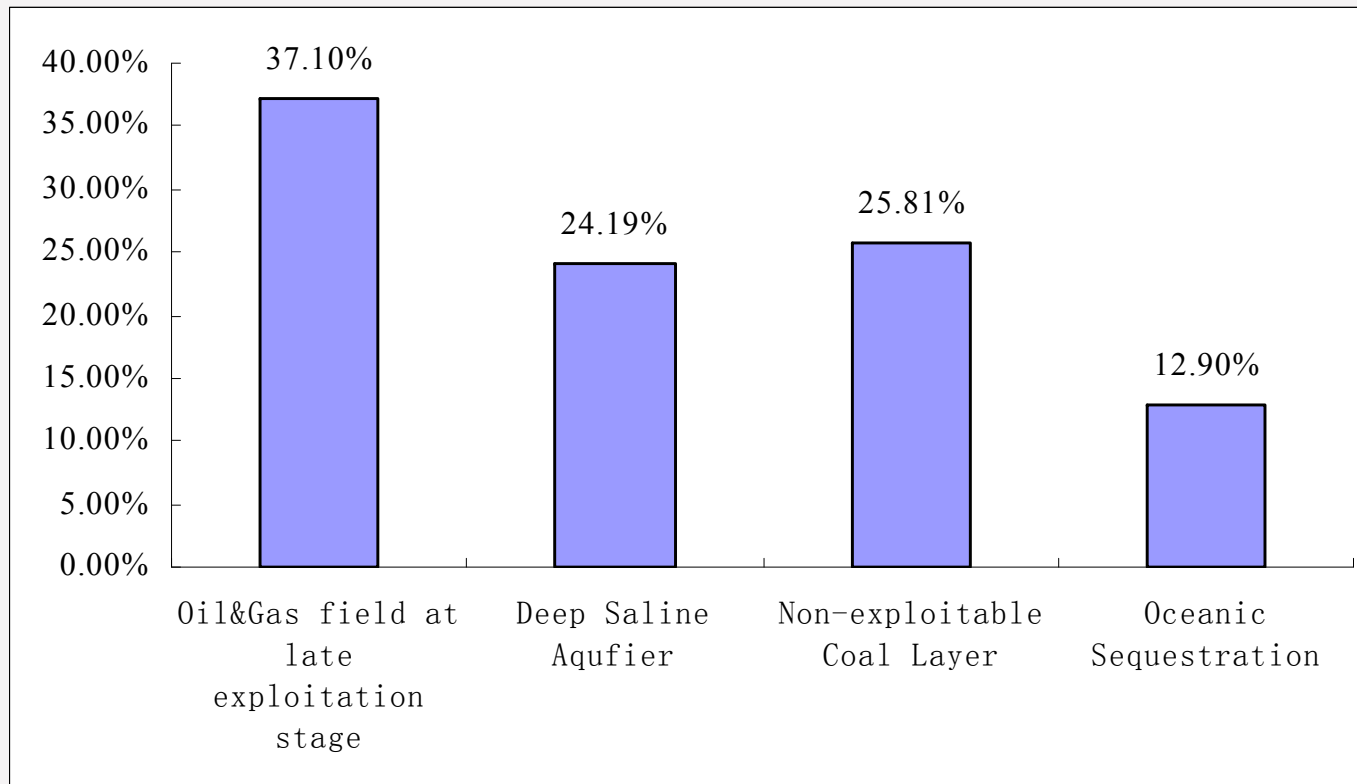


### Q5: Capture Technology Outlook



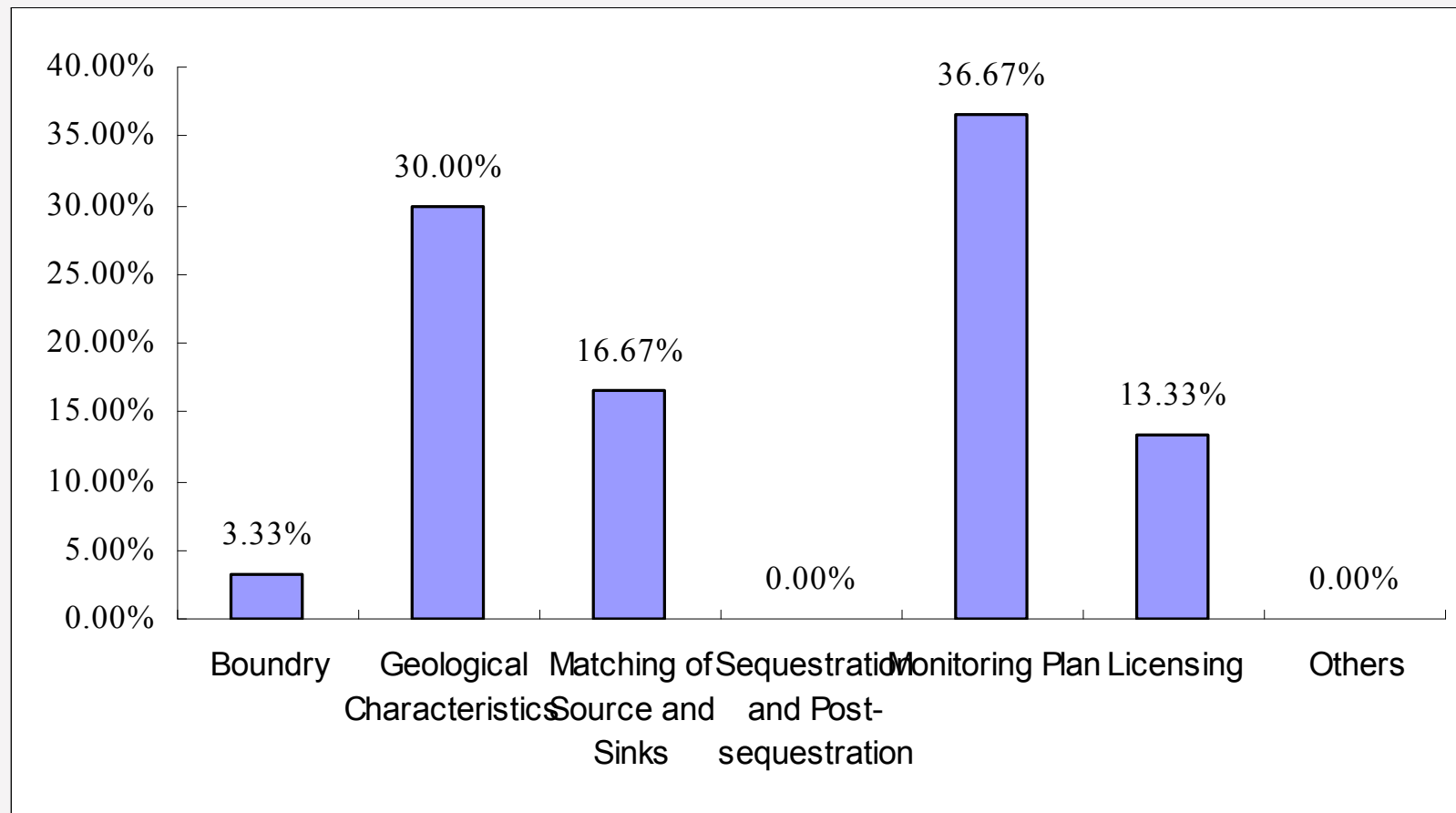


### Q7: Storage Options Outlook



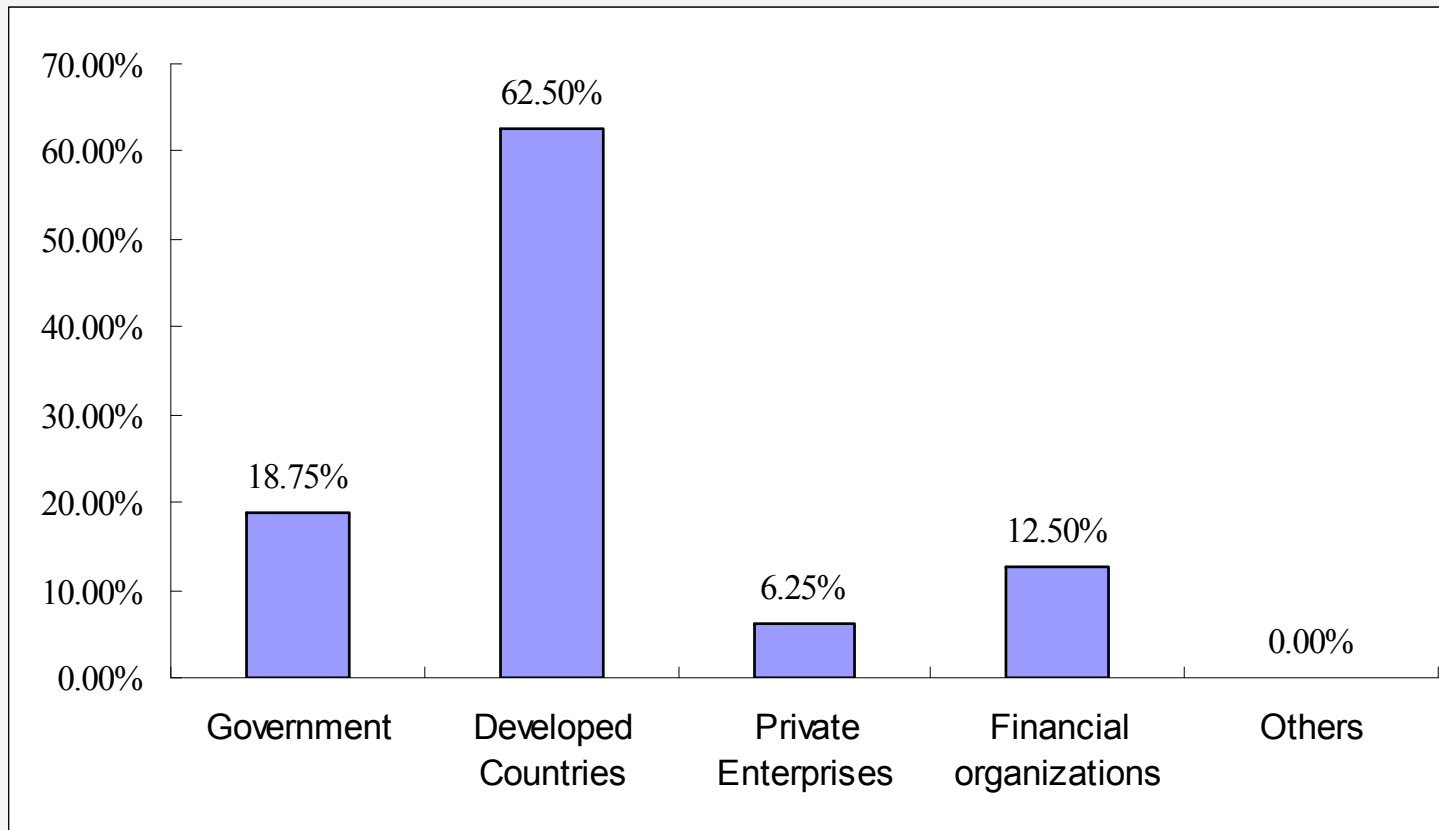


### Q13: Major concerns about storage



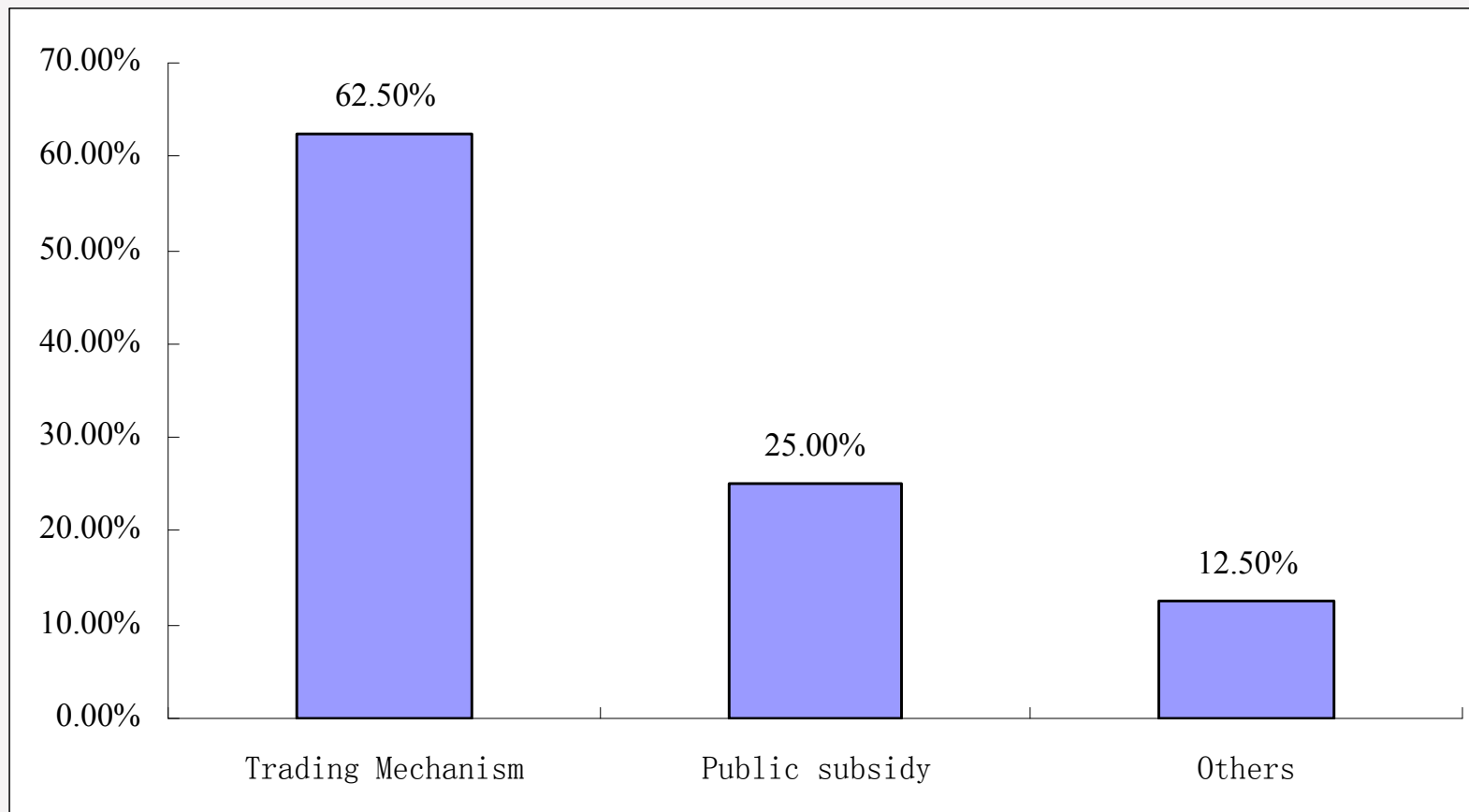


### Q19: Who should provide funds for CCS projects before commercialization (pilot and early stage implementation)?



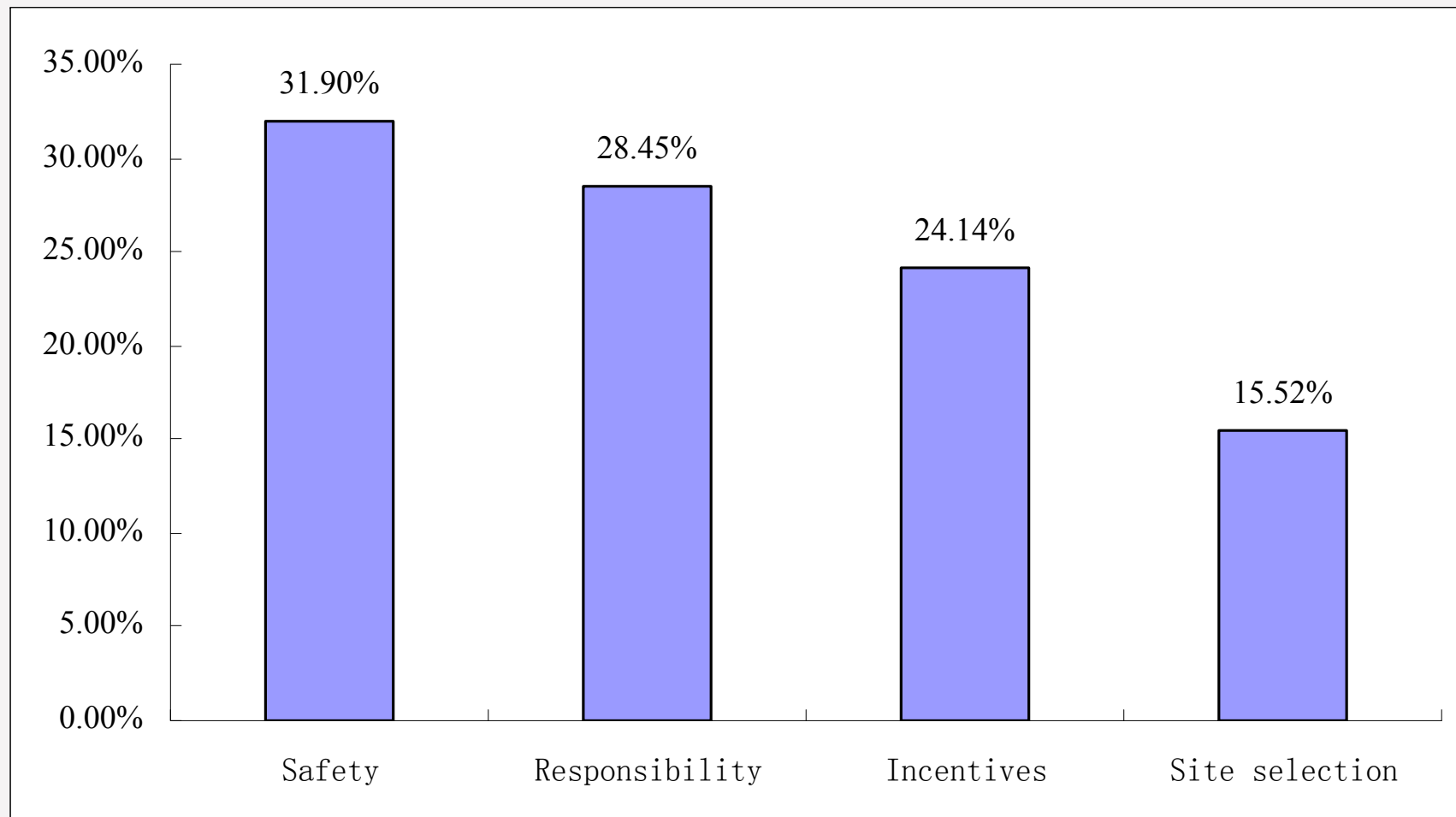


### Q20: Long term financial Scheme





### Q21: Major elements in policy designing





## Major Findings from Questionnaires

- High costs of CCS is the most important obstacle for CCS commercialization
- Chinese stakeholders have very limited knowledge in storage safety issues, making it one of the major concerns
- Capture technology roadmap is open, without dominant opinion for now



## Major Findings from Questionnaires (cont.)

- For storage, EOR is the most promising option in China
- Developed countries should provide fund for CCS projects before commercialization
- Emission trading mechanism shall play a critical role in the long-term financial arrangement
- In CCS policy and regulation designing, safety & responsibility are the 2 most important aspects



Thanks for you attention!

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