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On the Geological Storage Study at the AIST 3rd research phase

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The middle term study plan of AIST which is set for every five years enters the third term in 2010 fiscal year. In the third project plan, the CO₂geological storage study sets the objects and the targets as follows. In this presentation, we will discuss the CO₂geological storage researches at the AIST third term.

In the CO₂geological storage, the technology to guarantee safety of CO₂storage for a long term will be developed, and it contributes to early practical use. At the 3rdterm, several technologies will be developed which are the technology that evaluates the stability of CO₂in the saline aquifer, technology that supports the construction of the geological model for the long term prediction of the CO₂behaviour, technology which upgrades the geological model, technology which combines two or more geophysical exploration methods to develop the efficient monitoring. These technologies will support the demonstration plant of the CO₂geological storage. The underground modelling technology corresponding to the geological structure such as faults that should be important in practical use and the cost effective monitoring technology for a long term monitoring after the complete of the CO₂injection are also being developed. The common and basic technologies, which contain the quantitative analysis of the storage mechanism, storage potential evaluation in various places, and so on, are plan to be developed. In addition, the safety evaluation technology for the confidence building for the geological storage and the storage technology for the exhaust from the small and medium-sized scale emission source are executed, and the possibility of the development is examined as an option of long-term climate change.

Keywords: CCS, CO₂, Geological Storage, Modeling, Monitoring