

Executive Summary

Installation of groundwater purification facilities project – to provide drinking water for public schools

A. Basic Information

(1) **Audit Entities** : Department of Groundwater Resources, Ministry of Natural Resources and Environment

(2) **Audit Objectives** : In order to enhance efficiency and sustainability of the project, the audit objectives have been set as follows:

1. To assess achievement of the project objectives. That is, schools in the rural area, which are in need of water resources, could consume and sell good quality drinking water
2. To examine efficiency of participating schools in managing the groundwater system and purification facilities
3. To examine operation limitations, and provide recommendations for improvement

(3) **Audit Methods** :

1. Study on related information and documents such as project details, implementation plan, budget plan, manual of purification devices, annual reports, past audit reports, and etc.
2. Interview related staffs such as project manager, director of the Provincial Groundwater Resources Department, Secretary General of the Basic Education Commission, school principals, and etc.
3. Observe the environments around the groundwater system and participating schools
4. Determine sample size and random sampling
5. Analyze data

B. Audit Findings

1. Some schools were not literally in need of water resources. There are 23% of the total examined schools that already got services from the provincial waterworks authority, but still joined the project in order to save water expenses.

2. Groundwater purification facilities were not properly used as planned. There are 24% of the total examined schools that did not use the devices because of some limitations including being unable to pump out groundwater, malfunction of the devices, low water quality, inefficient management, and school consolidations.

3. Most schools did not engage in drinking water business as expected in the project objectives. Only 35.46% of total examined schools that produced and sold drinking water as a product of the purification facilities. The rest only produced for utilizing in the community.

4. Management of the groundwater system and purification facilities was inefficient. Most schools did not set budget for management and maintenance expenses. Also, they did not have a plan for water quality examination in order to maintain the World Health Organization standard.

C. Audit Recommendations

To Director General of the Department of Groundwater Resources

1. Clearly define the selection criteria in order to choose only troubled schools.
2. Coordinate with Office of the Basic Education Commission in order to review roles and mandates of each organization.
3. Review size of the potential target groups.
4. Coordinate with Office of the Basic Education Commission in order to select appropriate schools into the project.
5. Review the project objectives especially on drinking water business.
6. Consider proper approaches for using the groundwater system and purification facilities of consolidated schools.
7. Provide training courses on water quality examination guidelines and groundwater system and purification facility manuals to designated staff.
8. Comprehensively study and review the past audit reports especially on limitations and obstacles of managing other groundwater projects.

To Secretary General of the Basic Education Commission

OAG encourages the Office of Basic Education Commission to coordinate with the Department of Groundwater Resources on issues described above.