### Objective/Outcome

**Objective**

The engineer or researcher who is involved in appropriate management and effective use of land and water resources working for central and local government will gain necessary knowledge and technology, and then will disseminate those in their own organizations or target areas.

**Outcome**

To achieve the above mentioned objective, participants will acquire sufficient knowledge and skills in the following fields:

1. Understand the system of land and water management in Japan in comparison with participants' countries.
2. Learn monitoring and analysis method to evaluate and manage land and water resources and irrigation facilities for sustainable agriculture in arid land.
3. Acquire knowledge and techniques for appropriate utilization of water resources to make plans for water use and irrigation facilities management.
4. Acquire knowledge and techniques to make plans of land use and land management for appropriate land use.
5. Acquire knowledge and techniques to make plans and implement wholesome agriculture and rural development.
6. Application of remote sensing for geological information management.
7. Preparation of extension / action plan after returning home.
8. Conduct workshops based on the plans and materials made during the training.

### Target Organization / Group

**Target Organization**

Organizations or research institute with sections of land and water resources management in central and local governments

**Target Group**

1. Engineers or researchers who will be key person in the division of the land and water resources management.
2. University graduates or equivalent in agriculture or engineering and more than 3 years’ experience in the relevant field.
3. Under 40 years old.

### Contents

**Preliminary Phase**

Formulation and submission of Country Report

**Core Training in Japan**

Through the following lectures, exercises and observations, participants will acquire comprehensive knowledge and skills:

1. Land and Water Management Acts in Japan
2. Groundwater resource Management
3. River System Management
4. Management of Irrigation and Drainage Facilities
5. Field Water Management
6. Soil Management
7. Crop Management
8. Rural Management
9. Energy Management
10. Environmental Impact Assessment
11. Management of Geographic Information

**Complementary training in Egypt**

Participants will apply and practice the knowledge and skills acquired in Japan.

**Finalization phase in home country**

Participants will disseminate what have acquired in Japan and Egypt to their respective organizations and submit the progress report to JICA.