

BASIC KNOWLEDGE WATER RETAINING STRUCTURES

Information

<i>Target group:</i>	Experienced technicians, operation & maintenance of water retaining structures
<i>Entry level:</i>	Vocational level
<i>Vakgebied:</i>	Flood protection
<i>Participants:</i>	16
<i>Coördinator:</i>	Dutch experts or local professional trainers, certified by World Water Academy
<i>Duration:</i>	5 days

Learning targets

Water retaining structures are crucial to prevent the land for flood events and its negative consequences. Due to climate change, more high water situations and flood events occur recently. In the last years several flood event happened in various countries all over the world: USA, China, Pakistan, Germany, Romania, Austria, Belgium, and Brazil. This led to economic damage, damage to cultural and natural resources and people (affected / casualties).

Operation and maintenance has an important role in the functioning of the water retaining constructions. The water retaining structures must function well during extreme (high water) event. So on a day-to-day basis, weak links must be recognized and adequate measures should be taken in case of a threatening failure. The course water retaining structures deals with the basic knowledge for the operation and maintenance of water retaining structures. The participants learn about the various kinds of water retaining structures and its interaction with the water system (in normal and extreme conditions) and surroundings. Technical aspects of water retaining structures are taught as well. Special attention is paid to the aspects on operation and maintenance concerning assessments, monitoring, tendering, planning and social & environmental issues.

Content

The course exists of the following topics:

- Introduction of water management and water retaining structures
- Function of water retaining structures
- Types of water retaining structures
- Technical aspects of dikes and dams
- Basics in hydraulics and soil mechanics
- Height, strength and stability
- Failure mechanisms
- Operation & Maintenance
- Costs analysis, tendering, monitoring and permitting
- Environment & surroundings

Hand-outs of the presentations, exercises and background information.

Specials

The Netherlands