



Sustainable Water  
Integrated Management (SWIM) -  
Support Mechanism



Project funded by  
the European Union

Water is too precious to waste

**The EU funded SWIM-SM: developing capacity for Sustainable and Integrated Wastewater Treatment and Reuse**

*Online Course on Natural Treatment Systems: Introduction to Constructed Wetlands*

# **Introduction On-Line Course**

## **Constructed Wetlands for Wastewater treatment**

By

Hans van Bruggen



**UNESCO-IHE**  
Institute for Water Education



# Postgraduate Education, Training and Capacity Building in Water, Environment and Infrastructure



# Objectives of the course

- **The objective of the course is to familiarize you with the concept of waste water treatment by constructed wetlands.**



**After completion of this online course you will be able to:**

- **Understand the basic principles of wastewater treatment**
- **Distinguish the functions of the different compartments in the constructed wetland**
- **Apply the concept of constructed wetlands to wastewater treatment**
- **Evaluate the importance of operation and maintenance**
- **Design a constructed wetland treatment system.**



# Contents of the Course (1)

- **Introduction to the course and the use of the moodle platform**
- **Basic treatment principles**
- **Types of constructed wetlands**
- **Types of wastewater to be treated**



# Contents of the Module (2)

## ■ Design of constructed wetlands

- Technology selection
- Model framework
- Sizing
- Practical design aspects

## ■ Operation and maintenance

- Starting up the wetland
- Operation and maintenance
- Economics and reuse



# Contents of the Module (3)

## ■ Case studies

- **Various case studies in The Netherlands, Brasil, arid climates etc.**



# Tools in the course

- **Lectures with sound**
- **Lectures with video**
- **Video**
- **Design work**



# Support material/people

- **Guidelines**
- **Course material**
- **Internet**
- **Your co-participants**
- **UNESCO-IHE staff**
- **Chat sessions**



GOOD LUCK

