



# WATERSHED MANAGEMENT (3 ECTS)

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## Summary

The module equips students with the basics of climate, natural disasters and climate change, and scenarios of change in climate change research., Impacts of natural disasters and climate change aspects of life, production, identification of impact and adaptation mitigation measures and disaster management.

## Aims and objectives

- Students have a general knowledge of watershed management
- Analyze the causes of problems in watershed management
- Skills of analyzing suitable methods, which are popular in the world today.
- Knowledge of strategic environmental management including key issues and concerns, assessment steps and recommendations

## Authentic Tasks:

### Desired learning outcomes:

By the end of the course, successful students will:

#### Knowledge

Module is conceptualized to provide recommendations for application of watershed planning and management. In addition, in watershed management, the module introduces a multidisciplinary approach related to the fields of environmental science, public policy, urban / rural and regional planning and Assessment. strategic environment.

#### Comprehensive

Help participants grasp the basics of targeting and targeting to address watershed water resource issues.

#### Application

Find social-physical and interdependent relationships, especially between water systems and the environment, and socio-economic development.

#### Analysis

Strategic environmental assessment as a planning tool for developing sustainable river basin development and management plans

#### Synthesis

Various technical, institutional, governance, legal and financial frameworks required for successful implementation of a watershed management plan

## Overview of sessions and teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations.





## Learning methods

- Video presentations
- Group work, write articles / essays
- Project Based Learning
- Literature review
- Stakeholder analysis / customer consultation

## Literature

- Compulsory

[1] Hosea M. Mwangi et. al (2015). Introduction to watershed management. Tropical Forestry Handbook. Springer-Verlag Berlin Heidelberg

[2] Kenneth N. Brooks et. al (2012). Hydrology and the Management of Watersheds. Wiley Blackwell. Fourth edition

[3] Kevin Drake and Michael Hogan (2013). Watershed management guidebook. Integrated Environmental Restoration Services, Inc

[4] Isobel W Heathcote (2009). Integrated watershed management: principles and practice. John Wiley & Sons. Second edition

[5] ICEM, 2010. Strategic environmental assessment of hydropower on the mekong mainstream. Final report. MRC.

- Literature

Technical reports, articles and articles on websites of Universities, Research Institutes, and Journal of Specialized Science.