

FOMT 1.7: Management of Vegetation and Soil in Watersheds

Contents:

Roles of the forests in watersheds and in the water cycles, as well as their ecosystem services as related to soil properties, like water retention. Current and future challenges in watershed management. Relationship between water and food security, climate change, integrated land use planning and management. Trade-offs and synergies between forestry and water resources management, notably in regions with low/uneven precipitation and high evaporation. Concepts of site-adequate and adapted land-use like agroforestry.

Qualification goals:

The students are able to understand and analyse the major factors and processes in plant-soil systems in context with watersheds. Furthermore, they are able to analyse land-use conflicts referring to soil and water resources. They are capable of applying methods to simulate and assess scenarios (climate, spatial distribution of land-use) as a basis for interdisciplinary concepts for sustainable watershed management. Besides the ability to teamwork, they are able to properly communicate, present, argue, moderate and document the results.