

3.4.4 Analysis of the Consequences of Climate Change for Hydrology and Water Resources Management

Detailed basin and aquifer oriented studies of the consequences of projected climate change impacts on hydrology and water resources management need to be carried out. The appropriate modelling tools could either be forced hydrological models or regional coupled model systems. Assessing general trends in groundwater recharge and runoff, as well as future variability including extreme events are the primary foci. Different aspects of water management will be considered, including groundwater abstraction to water supply and irrigation, storage in reservoirs for hydropower and water supply, adequacy of reservoir spillways, protection of lowlands by levees, lakes and rivers as recipients for treated waste water, drainage by storm sewers, and others. Reliable estimates of, among others, the load of nutrients to lakes and coastal areas are important for the water quality studies described in Chapter 4. Basin and aquifer studies at different scales are needed, and linkages to stakeholders would be particularly important in this project.