TOPIC 5

Impacts of Climate Change on Water Resources Management in Islamic Countries

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Background

Green house gases emissions, ozone depletion, CFCs, PCBs, global warming are all indicative of an area where climate changes will have an impact on all dimensions of development. Sustainability of natural resources management and use will need to be revised within the prevailing conditions of high uncertainty. Water resources are on top of natural resources which should be thoroughly assessed

Objectives

Establish a framework for integrated water management in Islamic countries which incorporates climate changes impacts and optimizes the outputs from the water sector within the expected constrains.

Methodology

- Global climate models results are neither consistent nor conclusion. Thus there is a need to develop local climate models. (This is a long term research). Alternatively, we may deal right away with different postulated scenarios for example: scenario (1) Increase of 10% in rainfall, 20%, 30%,….70%, scenario (2) Decrease of x_i %, scenario (3) Sea level rise of …..%, scenario (4) Increase in snow melt of …%,
- Impacts associated with each scenario will be addressed separately; (i) Rainfall, (ii) Runoff, (iii) Soil moisture, (iv) GW, (v) Surface Reservoirs (Impacts on supply),
- Associated problems of specific nature will be addresses; for example (i) Salt water intension, (ii) low land indulation, (iii) Soil salinization,
- Multi sectoral impacts: (i) Agriculture production and food security, (ii) fishery and ecosystems, (iii) socio economic impacts, (iv)…….

Way forward

- Ass. of current conditions - food security – scenarios – adaptive measures
- Integrated Management – vulnerability mapping …..