

# **Hydrological Modelling under URAdapt**

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# Outline

- ❖ Introduction
- ❖ Objectives of the hydrological modelling
- ❖ The hydrological modelling framework
- ❖ Hydrological and basin water allocation simulations

# **Introduction**

**Computer modelling will feature prominently in URAdapt.**

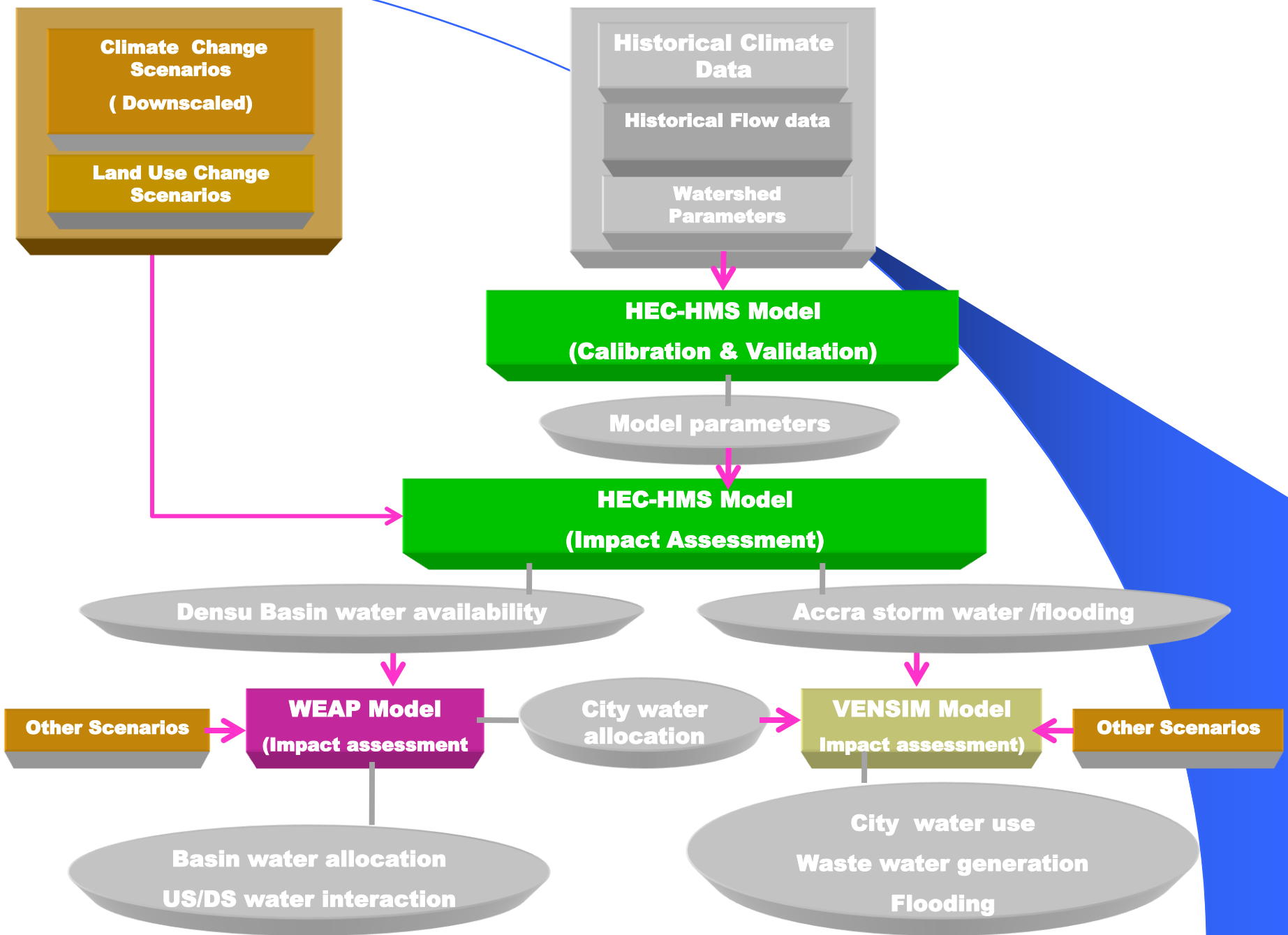
**The following modelling activities will be undertaken:**

- **Hydrological modelling**
- **Climate change scenarios downscaling.**
- **Urban water management modelling.**

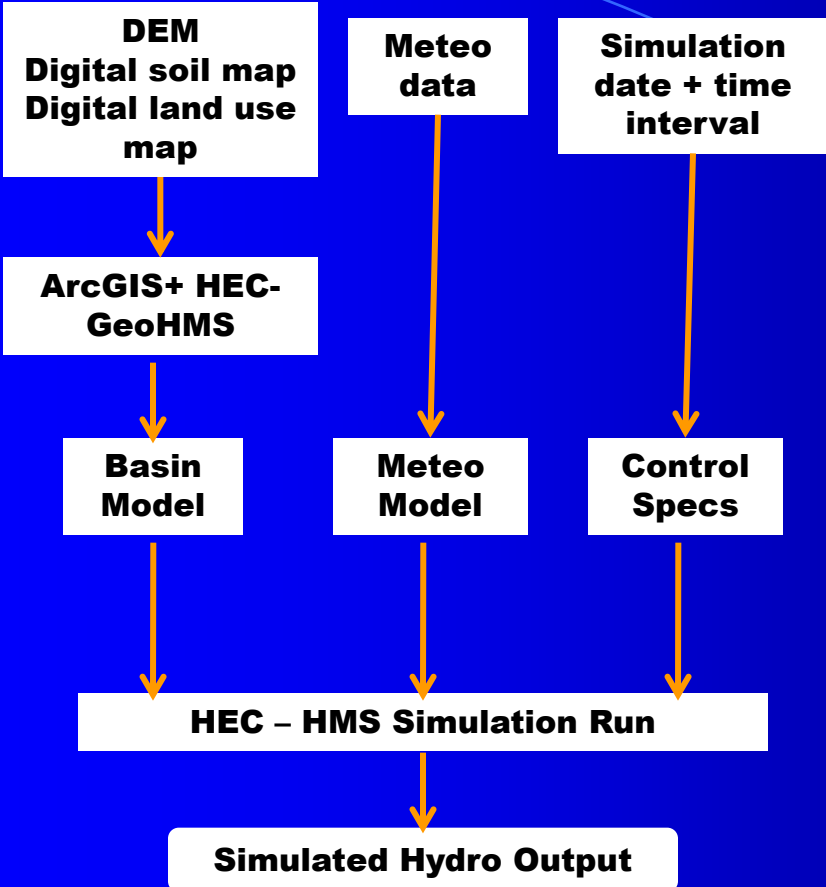
# **Objectives of the hydrological modelling**

- 1. Assess the impact of various climate change and other scenarios on flooding in the city of Accra.**
- 2. Assess the impact of various climate change and other scenarios on water availability in the Densu Basin.**
- 3. Simulate the impact of various water demand and allocation scenarios on water use in the Densu Basin.**

# Hydrological Modelling Framework



# Hydrological Simulations

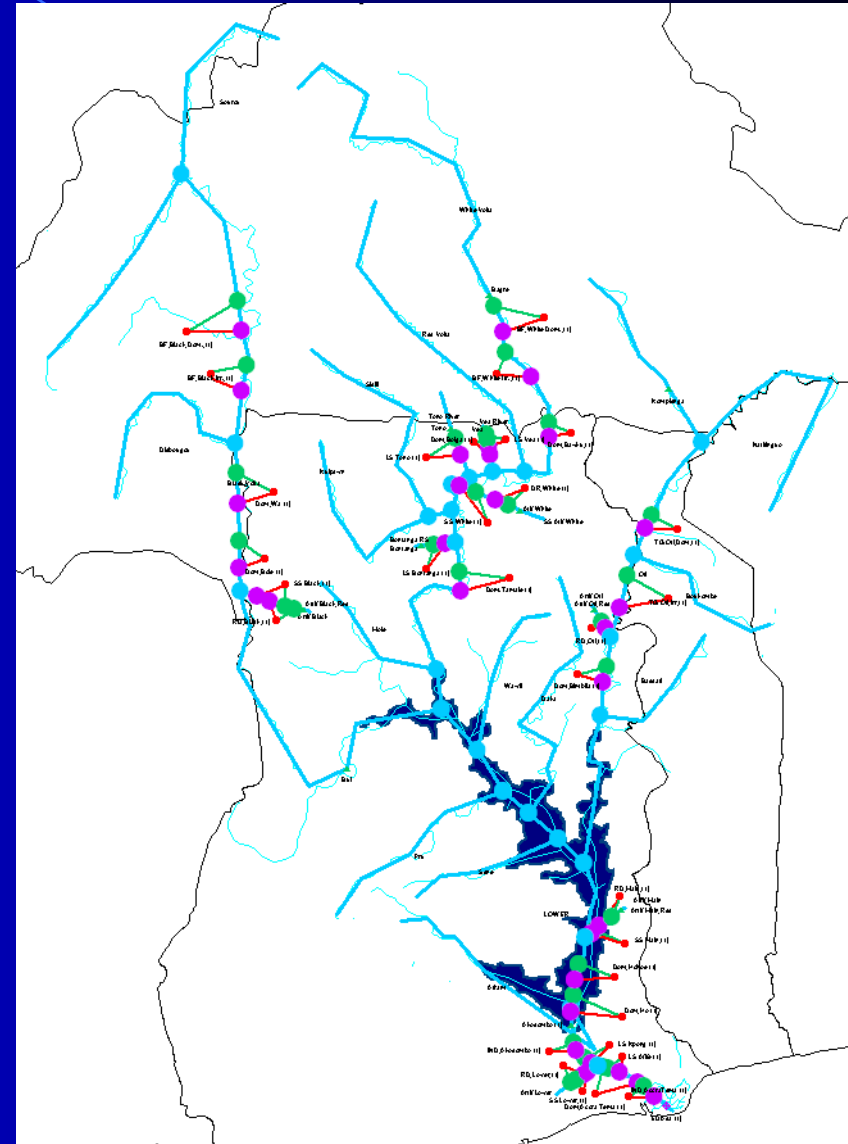
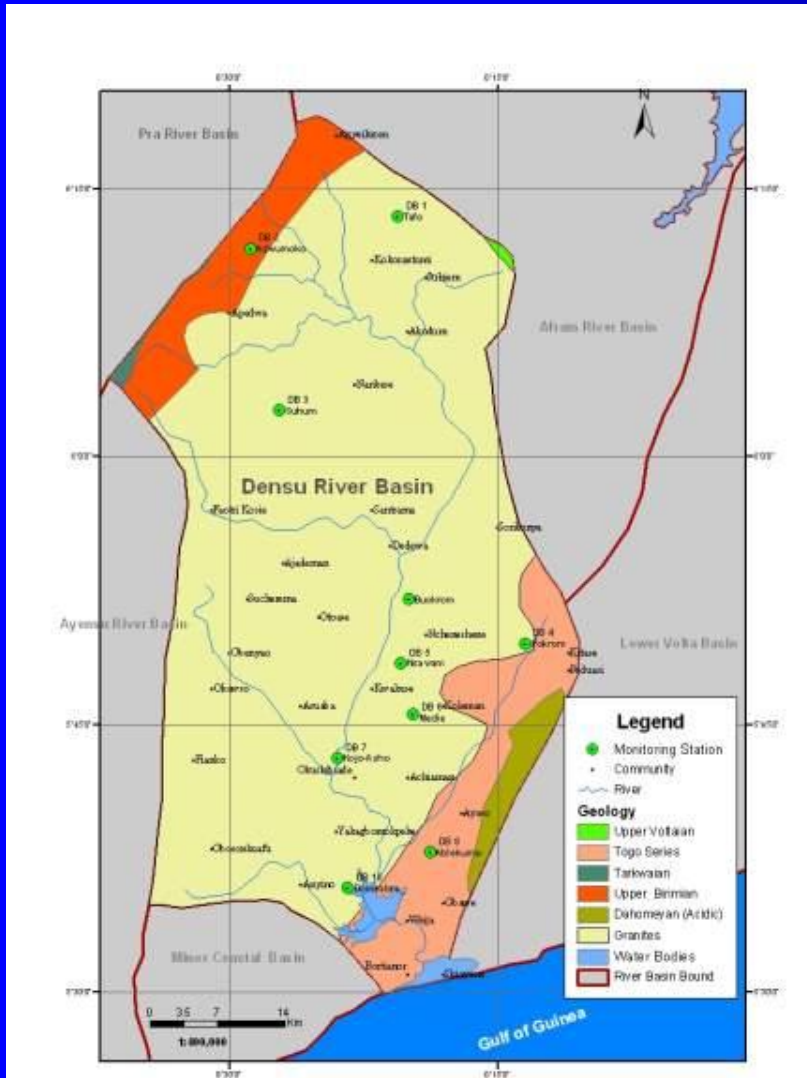


**C. D. Ludlow (2009)**



# Water Allocation Simulations

Use WEAP to evaluate Densu Basin water use from various water demand scenarios and allocation criteria



# SRES Scenarios



**THANK YOU, for your attention**





# Climate change

## Mitigation and adaptation

### Mitigation

- **Reducing CC intensity by adoption of appropriate technology**
  - Decreasing frequency of shocks

### Adaptation

- **Strengthening capacity of people and systems to better cope with the impacts of CC – preparing towards the unforeseen.**
  - Responding effectively to shocks