

Introduction of GWSP/EU-WATCH global water resources model intercomparison project

Based on

First Results from Intercomparison of Surface
Water Availability Modules

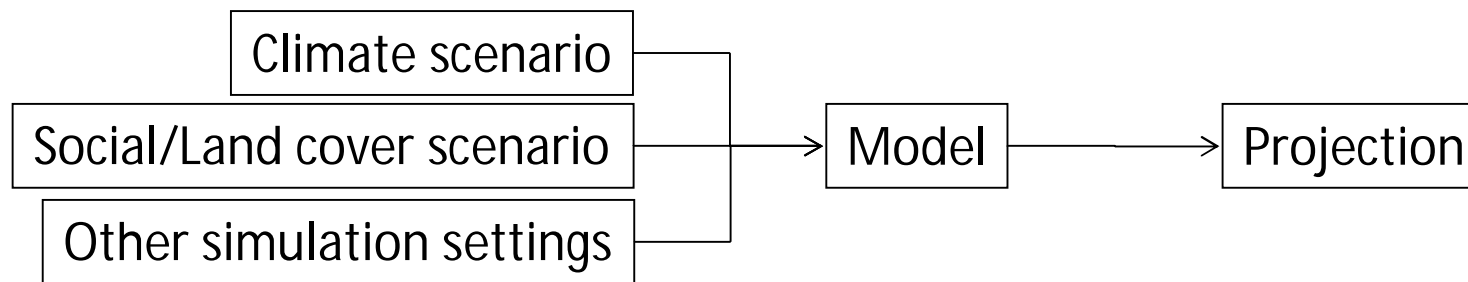
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WATCH Technical Report No. 1




Background

- Climate change impact projections have extensively compiled into the IPCC reports.
- Although, the simulation settings of them varies one by one, even in global studies.



- Global hydrological modeling community launched a model intercomparison program.
- H08 (NIES/UT) is participating this program.

Project History

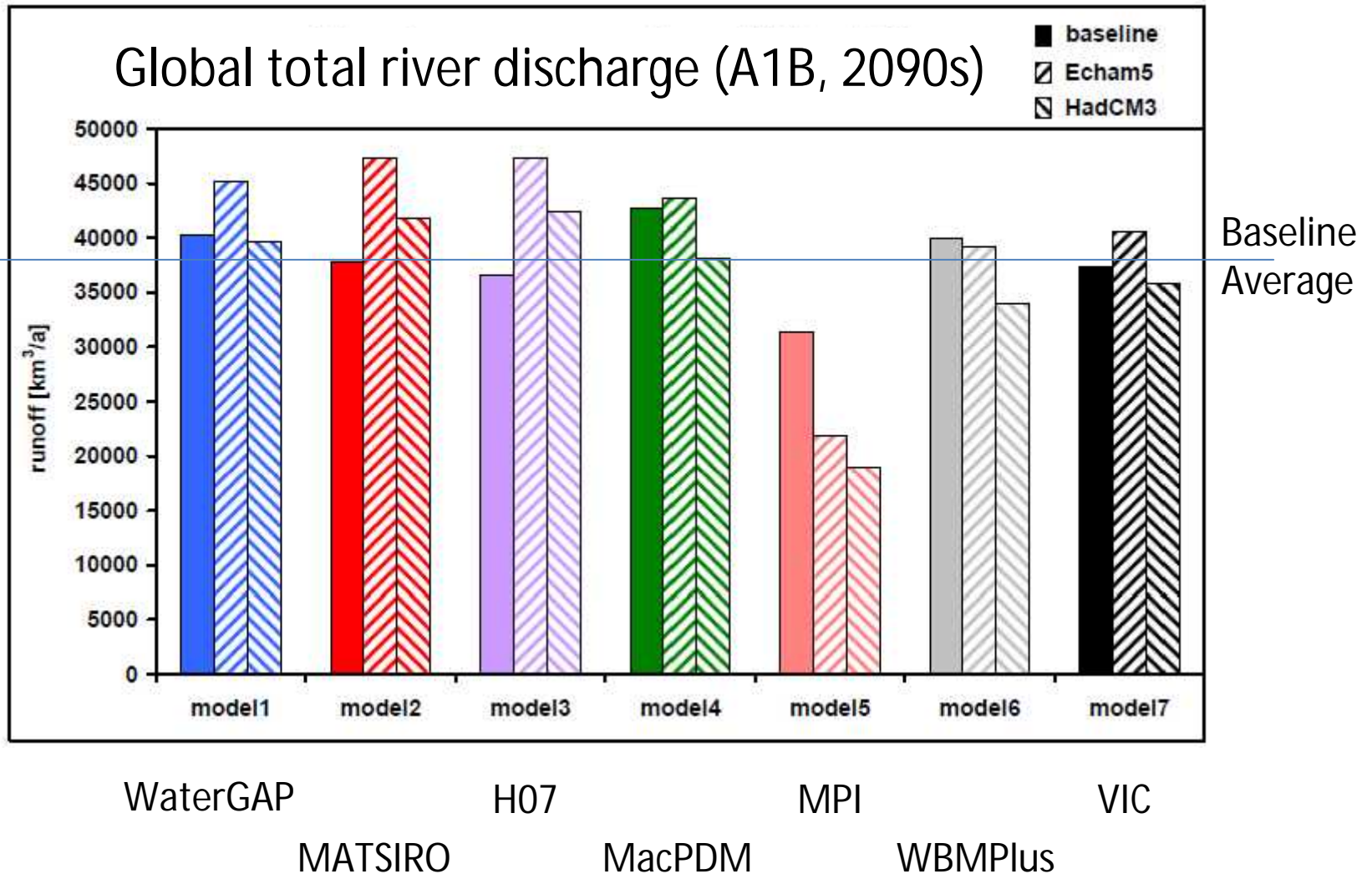
- 2006/4 Prof Joseph Alcamo proposed a model intercomparison program under GWSP (<http://www.gwsp.org/>)
- 2007/2 An academic research project EU-WATCH started (<http://www.eu-watch.org/>)
- 2007/4 Workshop in Kassel (Germany), 1st round started
- 2007/7 1st round submission deadline  Report available
- 2008/4 Workshop in Wageningen (The Netherlands), 2nd round started
- 2008/8 2nd round submission deadline
- 2008/11 Workshop in Bratislava (Slovakia), 3rd round started
- 2009/4 3rd round submission deadline

Who participated in the 1st round?

Model	Institute	Reference
1. WaterGAP	University of Kassel University of Frankfurt	Alcamo et al. 2003 Döll et al. 2003
2. MATSIRO	University of Tokyo	Takata et al. 2003
3. H07	NIES	<u>Hanasaki et al. 2007a</u> Hanasaki et al. 2007b
4. MacPDM	University of Reading	Arnell, 2003
5. SL scheme/HD model [MPI-HM]	Max Planck Institute for Meteorology MPI-M	Hagemann & Dmenil Gates 2003 Hagemann & Dmenil 1998
6. WBMplus	University of New Hampshire	Vorsmarty et al. 2000
7. VIC	VIC community	Nijssen et al. 2001

The number of participants doubled in the 2nd round (Nov, 2008).

Key results of the 1st round



Current status and Future direction

- Current status of the model intercomparison project
 - Simulation protocol (description of common simulation settings) is getting more strict.
 - Common baseline and future climate scenario are getting more sophisticated.
 - Participants are increasing
- Problems
 - Heavy load for both organizers and participants
 - Scientific goal?
- Implication
 - Multi-model ensemble impact assessment in AR5?