

Climate Change Adaptation in Asian River Basin

The Case of the Citarum River Basin in Indonesia

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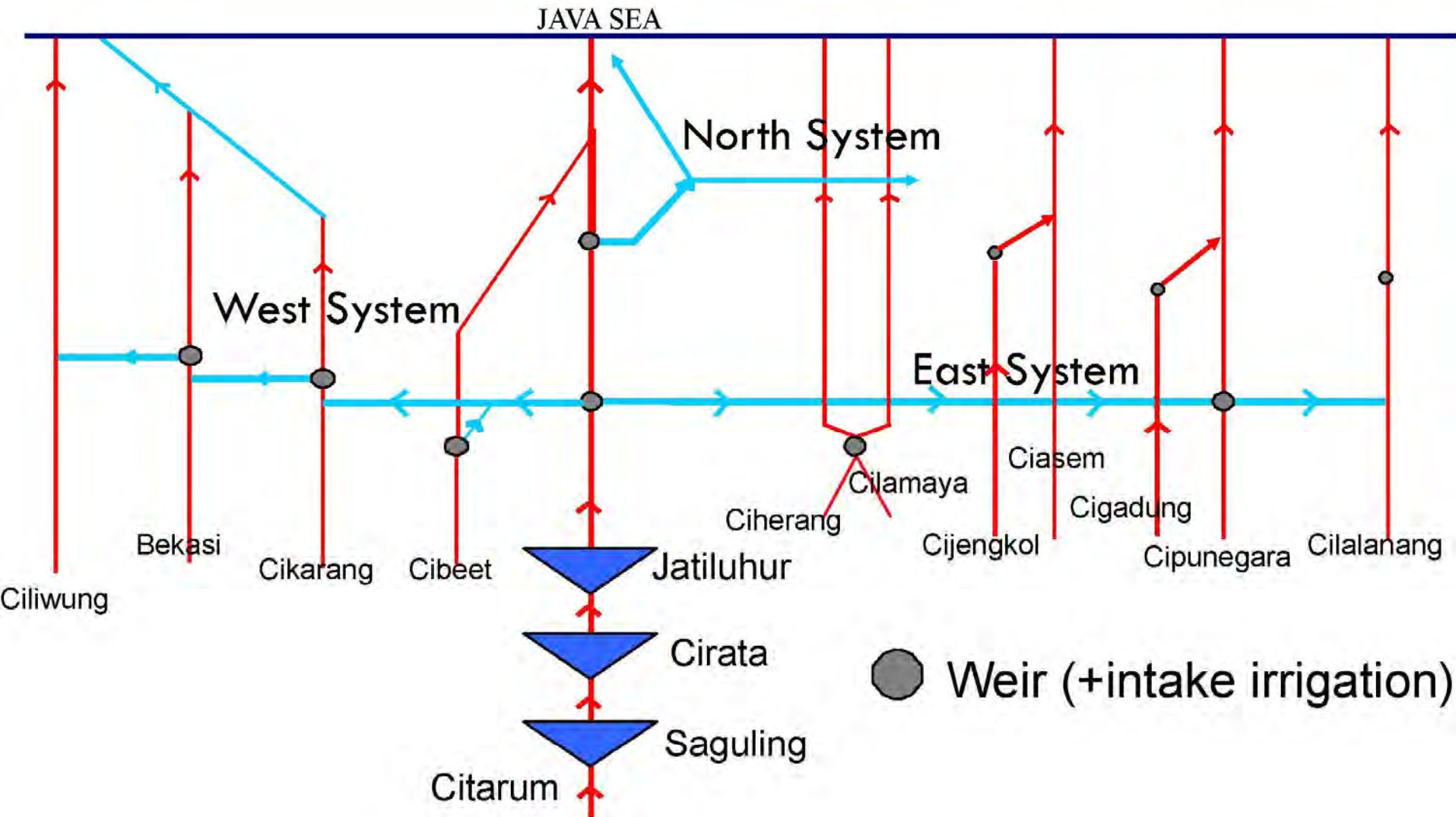
Introduction

PJT 2 was established in 1967 based on Government Regulation as a water resources organizer in Citarum River Basin.

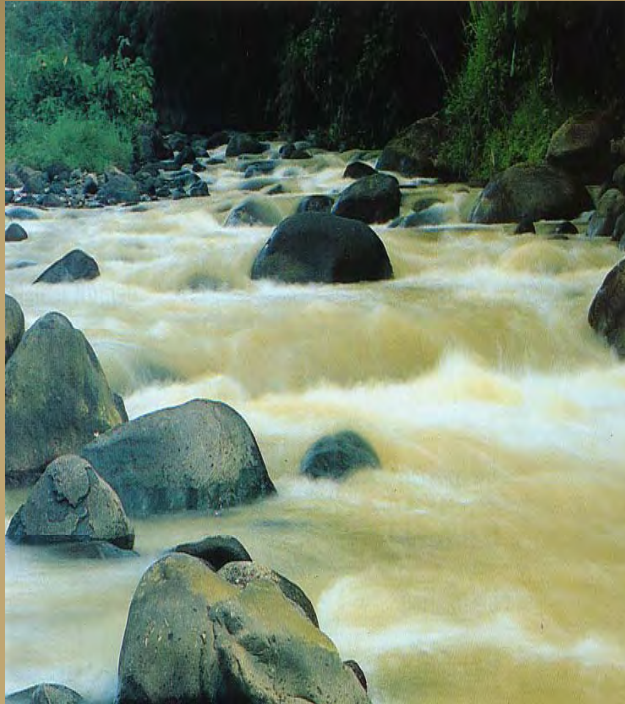
Vision / Mision :

- to become a recognized and a qualified company in water resources management and supplying water for wide range of requirements and contribute to national food security.
- Raw water supply for drinking water, electricity generation, agriculture, industry, harbor, flushing and other needs.

SCHEME OF JATILUHUR WATER RESOURCES SYSTEM



Introduction (2)



Citarum River

- In recent years, average annual flow of Citarum river has been decreasing.
- In term of operation, even though Citarum River Basin is not classified as a shortage river basin, management of water resources should be adjusted to cope with conditions in order to fullfill various demands.
- In larger extent, it is a collective assignment to manage the river basin. Therefore, coordination and collaboration with other related institutions has been arranged.

Main Issues on Water and Climate Change Adaptation in the Citarum River Basin

- Increased Rainfall during wet season → more flood occurrences and higher peak flood
- Decreased Rainfall during dry season → more drought intensity
- Shifting of Seasons → change in Crops pattern
- Decreased average annual flow → decreasing of water availability

Ongoing/Planned Water and Climate Change Adaptation Initiatives in the Citarum River Basin

To cope with the main issues in the Citarum River Basin, the strategies plan and activities are conducted through the coordination among the institutions as the following:

- Upgrading of water sources
- Productive reforestation
- Setting up of a programmatic environmental impact assessment approach for the basin.
- Introduction of sistem of rice intensification

Ongoing/Planned Water and Climate Change Adaptation Initiatives in the Citarum River Basin

To cope with the main issues in the Citarum River Basin, the strategies plan and activities are particularly conducted by PJT II in the following:

- Adjustment of Citarum cascade reservoir operation to adapt the recent condition.
- Water monitoring improvements to enhance the efficiency of water used and flood control.
- Improvements to water quality monitoring in rivers and reservoirs.
- Institutional strengthening for IWRM including capacity building for river basin organizations.

Expectations from the Regional Knowledge Hub (NAHRIM) and its Network

- Climate Change Projections
 - Information regarding climate change on freshwater resources and their management
 - Models transferred of knowledge
- Impact assessments
 - Experience sharing to provide the guidelines of the assessments.
 - Experience sharing about the impact information

Expectations from the Regional Knowledge Hub (NAHRIM) and its Network

Adaptation strategies

- Capacity building through the several options among the typical countries, such as; training, exchange of personals, cooperation on pilot and demonstration activities, etc.
- Proper guidelines provided including their counseling in order to implement the strategies.

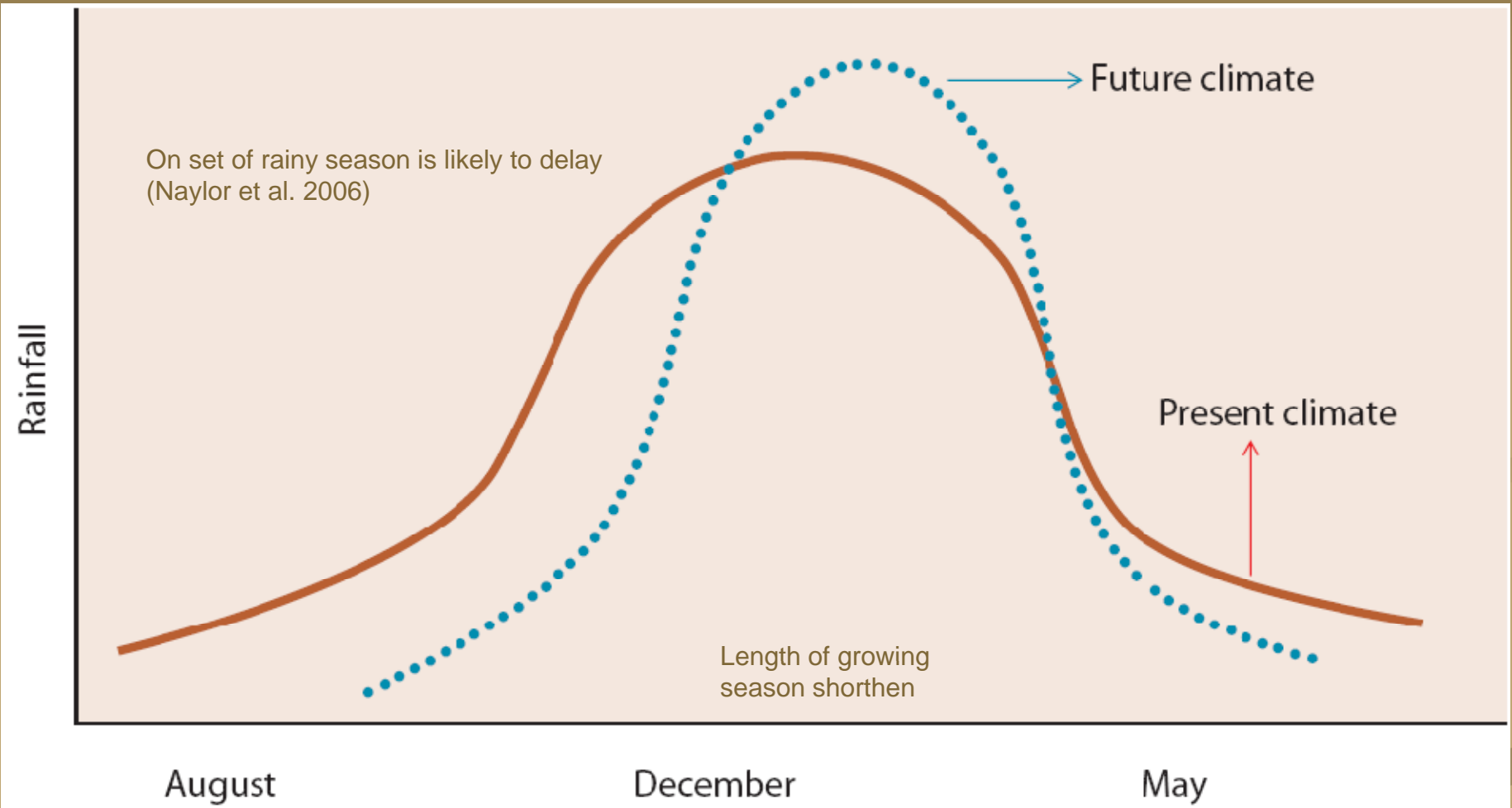
Proposed collaboration with NAHRIM

- Provision of hydrologic & hydraulic models/approaches to determine the proper guidelines.
- Agreements between PJTII and NAHRIM regarding to capacity building activities and counseling.
- Pilot and demonstration activity on projecting the impact of climate change in Citarum Cascade reservoirs operation.
- Pilot and demonstration activity on shifting crops pattern in Jatiluhur Irrigation System to adapt the climate variability

THANK YOU



Likely future rainfall pattern in Java and Bali



Source : Naylor et al., 2007



Decreased Average Annual Flow in Citarum River (1963 – 2007)

