

Thematic Workshop 2:

What kind of measures should be encouraged to ensure the sustainable operation and maintenance of equipment for water resources management?

“Development of Field Data Management by PJT II to Support and Improve the Accuracy of Decision Making Process Through DSS”

Delivered by:
Djoko Saputro
President Director

Jakarta, February 23rd, 2017



PJT II WORKING AREA

LEGENDA

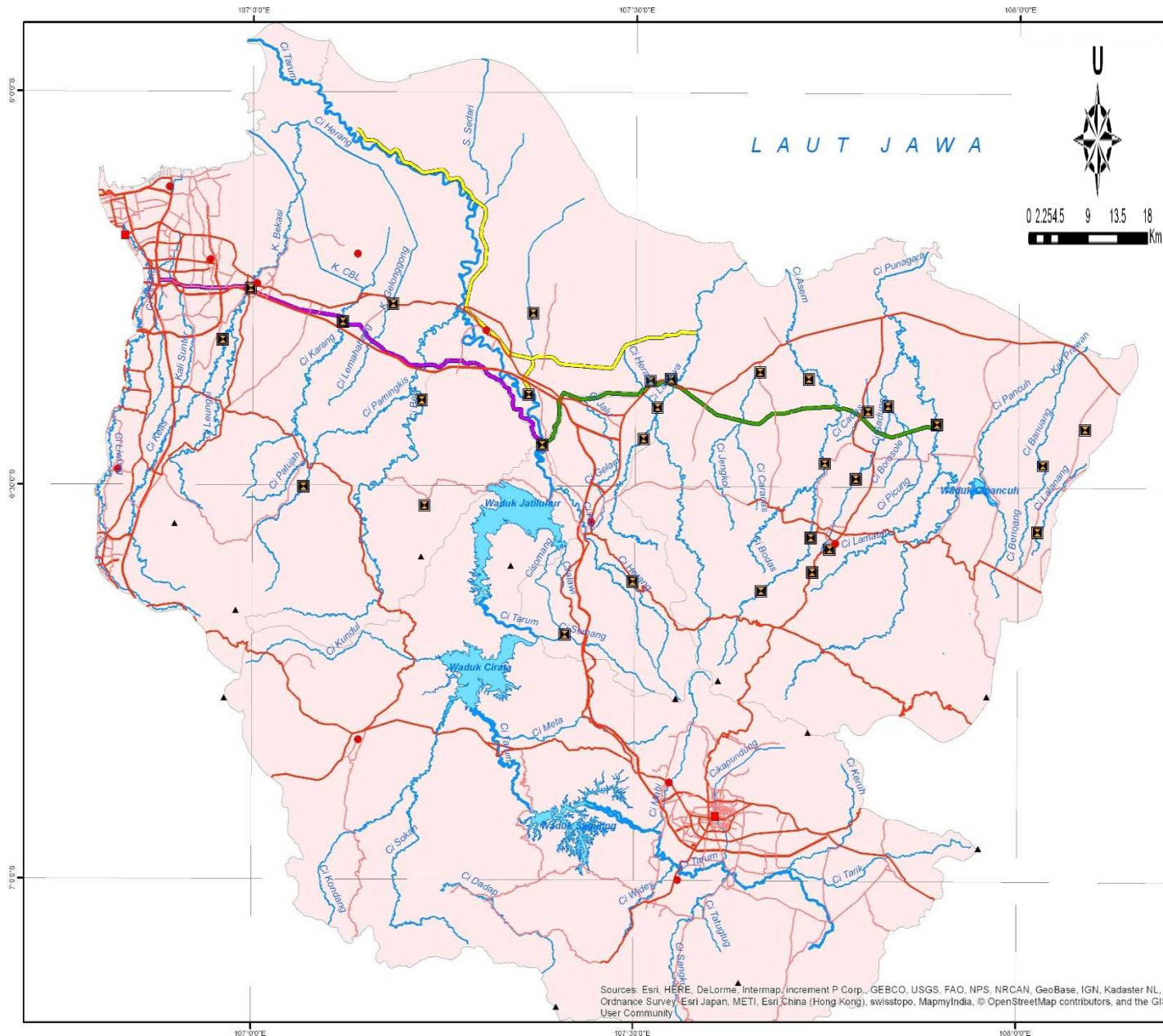
- ▲ Mountain
- City
- Regency
- District
- ⊠ Weir

Jalan

- Toll Road
- Arterial Road
- Collector Road
- Railways

Saluran

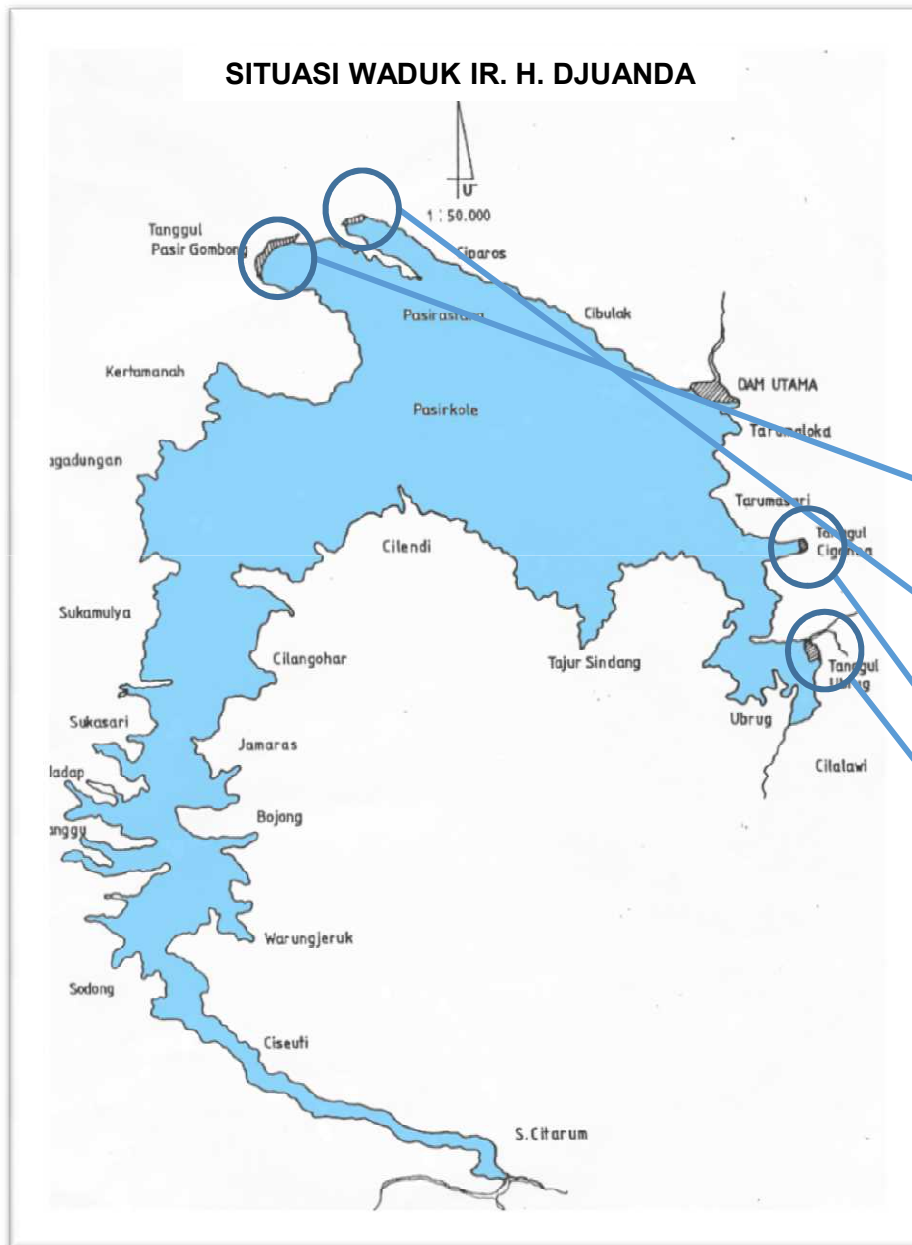
- West Tarum Canal
- East Tarum Canal
- North Tarum Canal
- Citarum
- Waduk/Situ/Rawa
- Batas Wilayah Kerja



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Salient Features of the Working Areas

- Total managed areas : 12,000 km²
- Climate : wet and dry seasons, with average annual rainfall 2,353 mm, 80% falls in Nov – May
- Integrated Management of Citarum River Basin
 - Area of basin : 6,600 km²
 - River length : 270 km
 - Cascaded reservoirs : Saguling - 47 km², Cirata - 62 km² (managed by PLN) and Ir. H. Djuanda – 82 km² (managed by PJT II)
- Management of combined river concept as tributaries of Citarum River Basin consisting of :
Cibeet, Cikarang, Bekasi, Ciherang, Cilamaya, Cijengkol, Ciasem, Cigadung and Cipunagara Rivers (1,278 km, 5,430 km²)

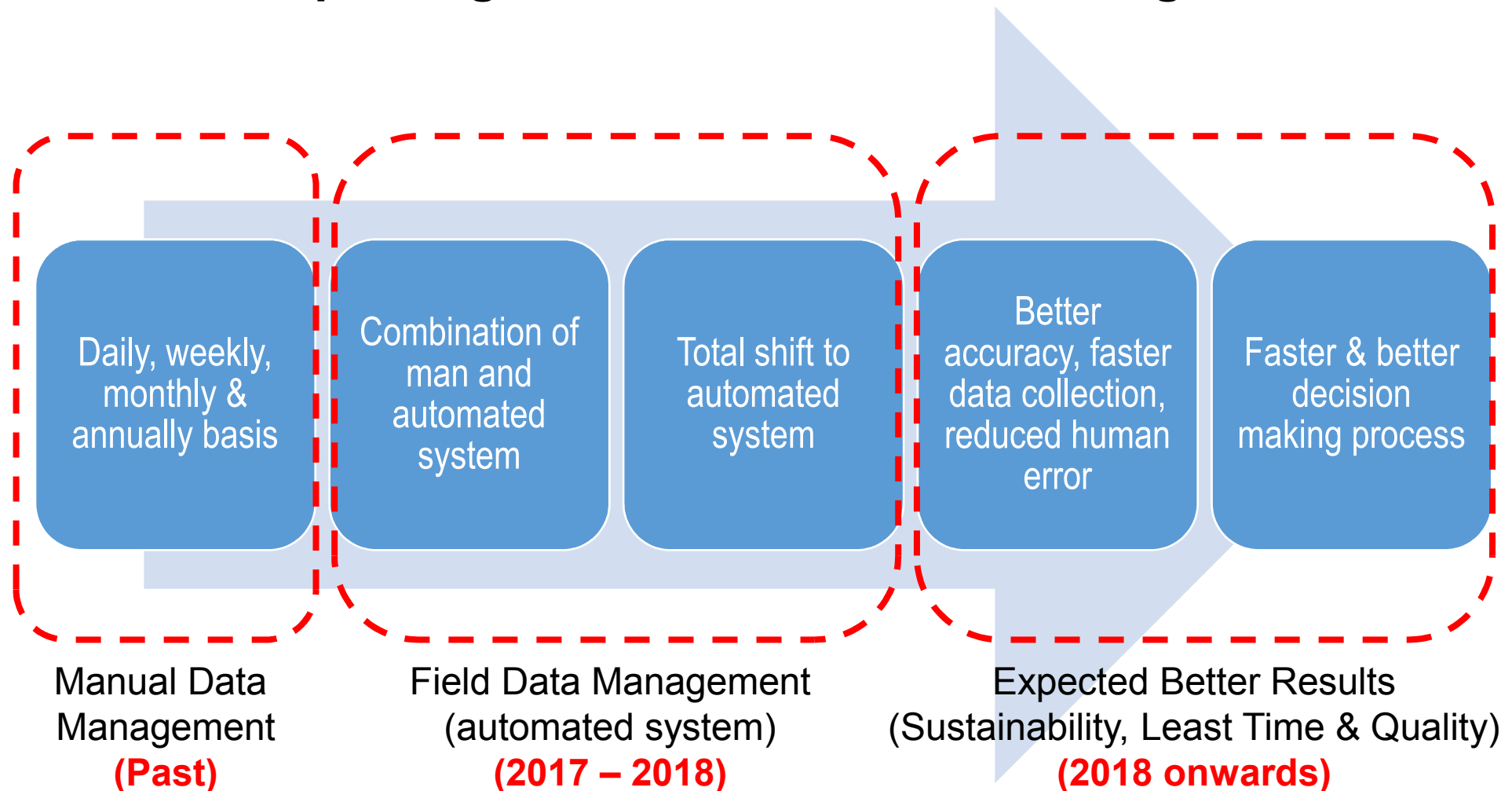


Ir. H. Djuanda Dam

- Capacity \pm 2,55 billion m³
- Inundation \pm 82 km² (at water level + 107 msl)
- Saddle dams:
 - West Pasir Gombong (1,950 meter)
 - East Pasir Gombong (400 meter)
 - Ciganea (330 meter)
 - Ubrug (550 meter) and auxilliary spillway (capacity = 2,000 m³/s)



Roadmap to Adoption of Field Data Management in the Operation & Maintenance for Improving the Water Resources Management



Stages of Development in the Field Data Management

1. a. Installation of telemetering system at certain points of the river basins :

- Automatic Water Level Recorder (AWLR) 41 units
- Automatic Rainfall Recorder (ARR) 13 units
- Automatic Weather Sensor (AWS) 8 units
- Water Quality Sensor (WQS) 2 units

1. b. Current Challenges :

- Still insufficient number of Recorders and Sensors to effectively cover the total area of basin managed by PJT II. There are 75 points of observation which are not fully equipped with those Recorders and Sensors
- Integration of various application installed from different brands to comply with the Corporate application software in the Data Room / Decision Support System (DSS)
- Security issues of the field equipment from being damaged or stolen
- Capacity building of the man power to operate the telemetering system

1. c. Target of full running for the telemetering system by early of 2018

Stages of Development in the Field Data Management (2)

2. a. Development of Control & Instrumentation System to enhance the role of Decision Support System (DSS) :
 - Integration of various application software, such as finance, human resources, procurement, water information system, electric power production, and others.
 - Management of Corporate Information System, that is selection of published and non published information
 - Supplementary of software tools to support decision making

2. b. Current challenges :
 - The Corporate IT Strategic Plan being prepared. The IT Roadmap has not been finalized thus IT system settlement still progressing
 - Corporate man power with good background and experience in the ICT system need to be improved

2. c. Target of full running for the telemetering system by early of 2018

Stages of Development in the Field Data Management (3)

3. a. Massive installation of water meter equipment in particular to big

Customers :

- To comply with the regulation that the measuring equipment should belong to the party who owns the commodity
- Formal custody to the buyer
- Water meter reading should be subsequently presented as water invoice to customers

3. b. Current challenges :

- Installation of water meter equipment should also be parallely performed by the development of Corporate ICT System
- Standard procedures and information to the customers on new procedures should be established to prevent any reluctance from the customers

3. c. Target of full running for the meter equipment system by the end of 2017

Ultimate Benefits for the Water Resources Management

Development of Field Data Management being progressed by PJT II, which includes among others water information system and the way the Corporate manages the water resources will be significantly improved due to :

- a. least of data error since human involvement is less
- b. data can be managed in an integrated manner and can be forwarded for decision making or public information purposes depending on the needs
- c. real time data can be presented with no delay and good accuracy
- d. as a whole Integrated Water Resources Management can be run properly which subsequently gives benefit to the surrounding people and society
- e. excellent Corporate Information System will definitely raise the performance of the Corporate to meet the expectation of the shareholders

Thank you very much ...