

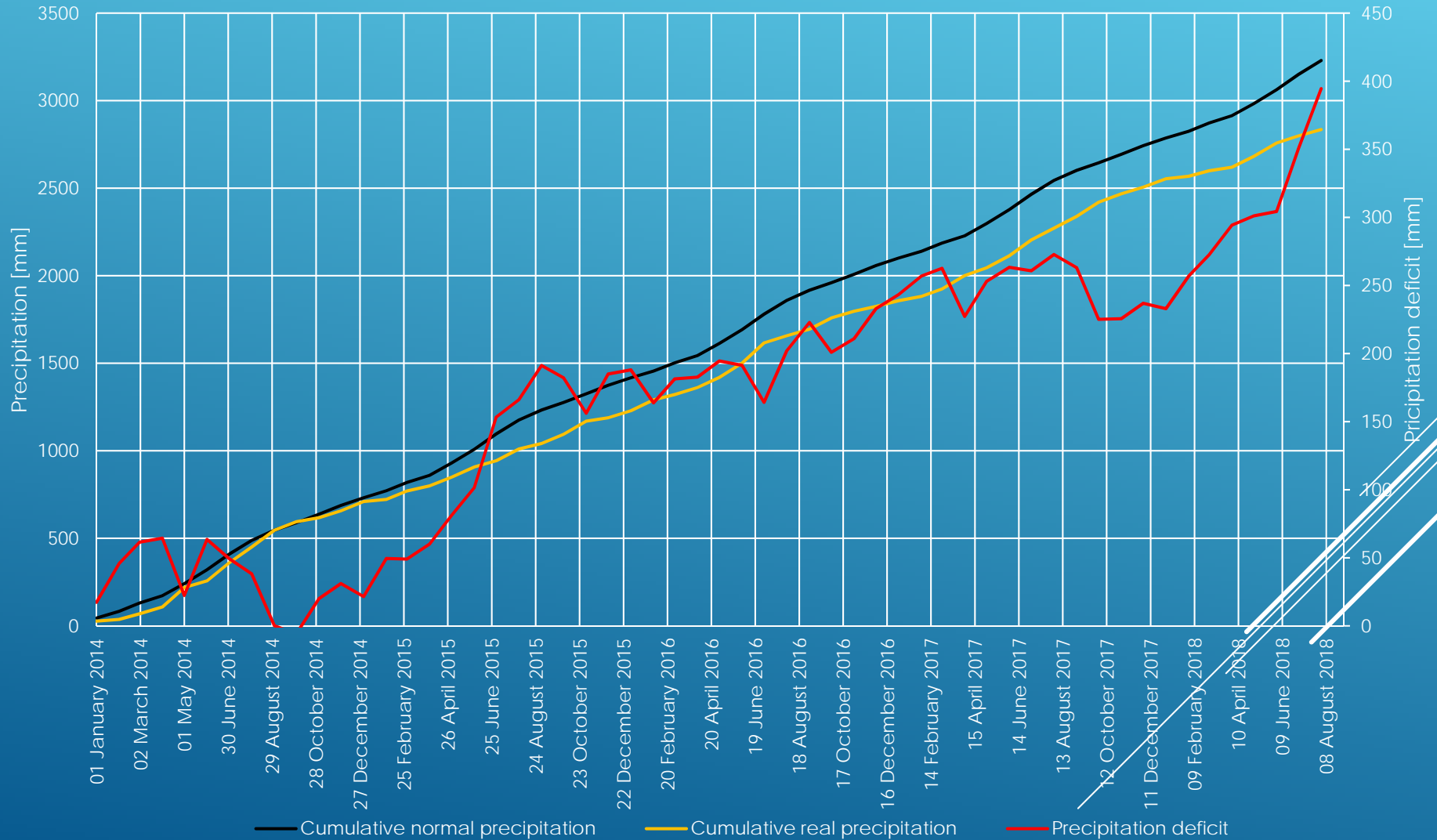
THE INFLUENCE OF DAM RESERVOIRS OPERATED BY POVODÍ LABE, STATE ENTERPRISE ON THE RIVER DISCHARGES IN EPISODES OF DROUGHT

Ing. Jiří Petr, Ing. Tomáš Kacálek
Povodí Labe, státní podnik



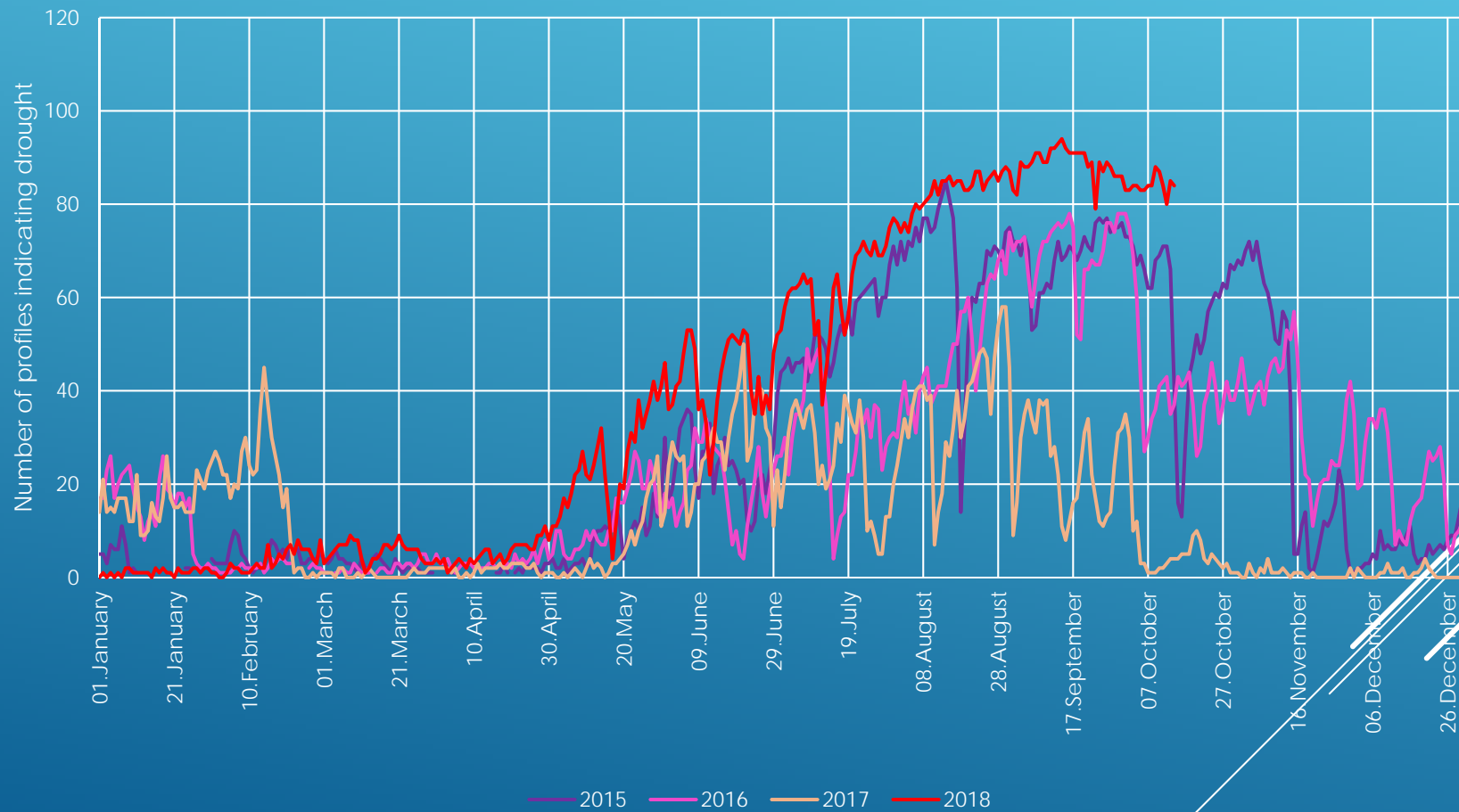
Magdeburský seminář o ochraně vod 2018
Magdeburger Gewässerschutzseminar 2018

PRECIPITATION DEFICIT DEVELOPMENT



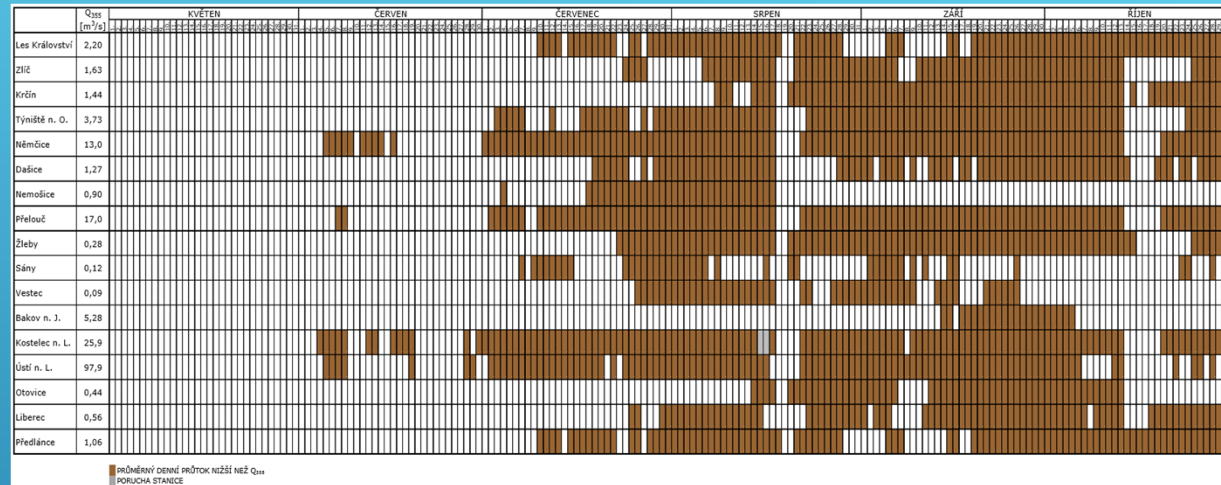
INDICATOR FOR DROUGHT Q_{355}

Number of drought indicators at water gauges 2014 – 2018
(120 water gauges)

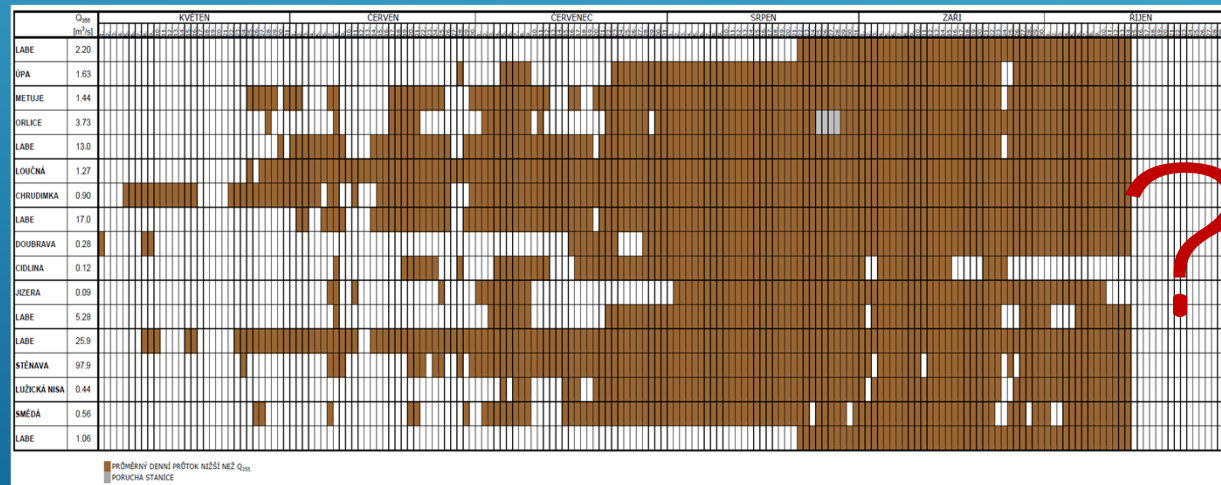


INDICATOR FOR DROUGHT Q_{355}

2015



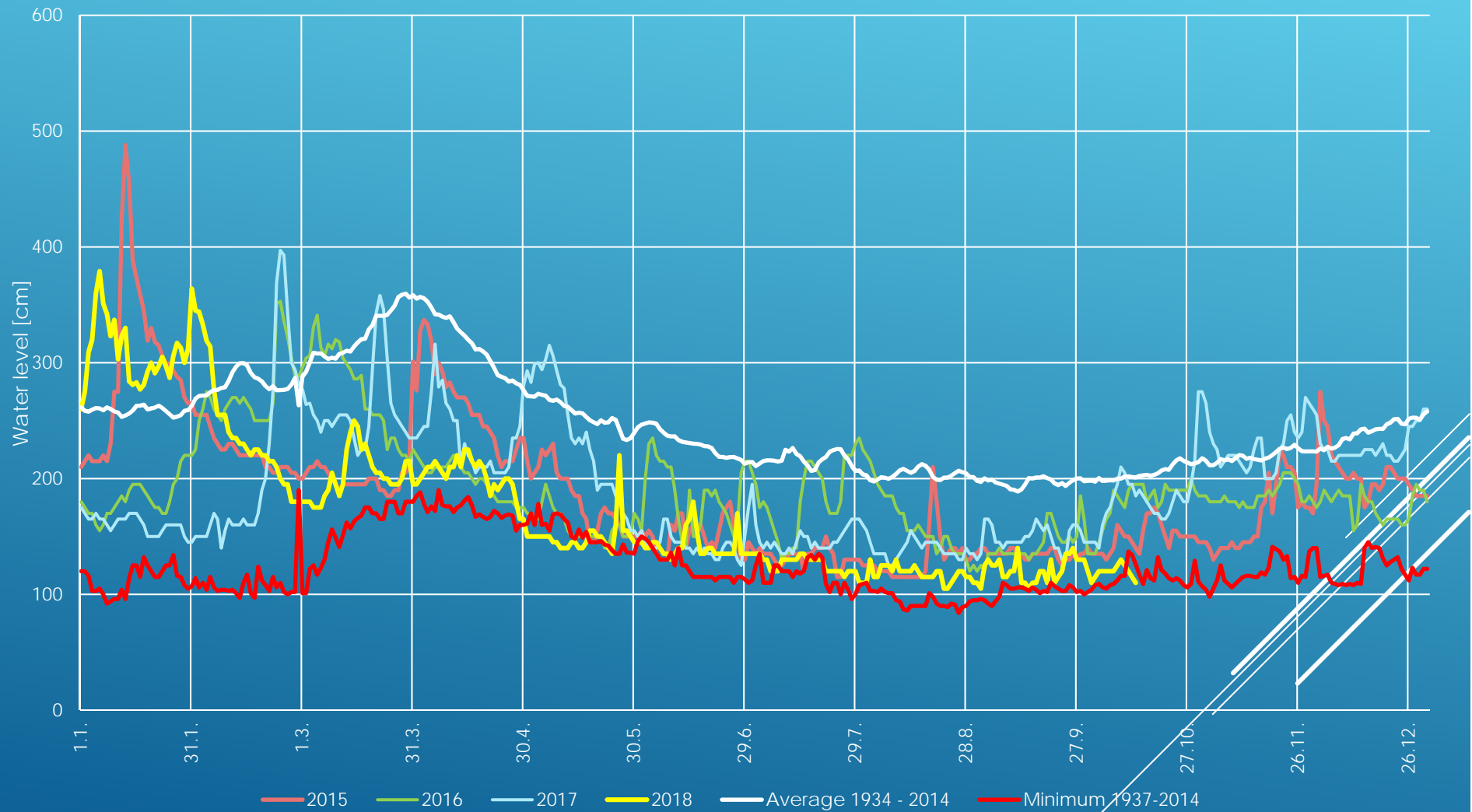
2018



INDICATOR FOR DROUGHT Q_{355}



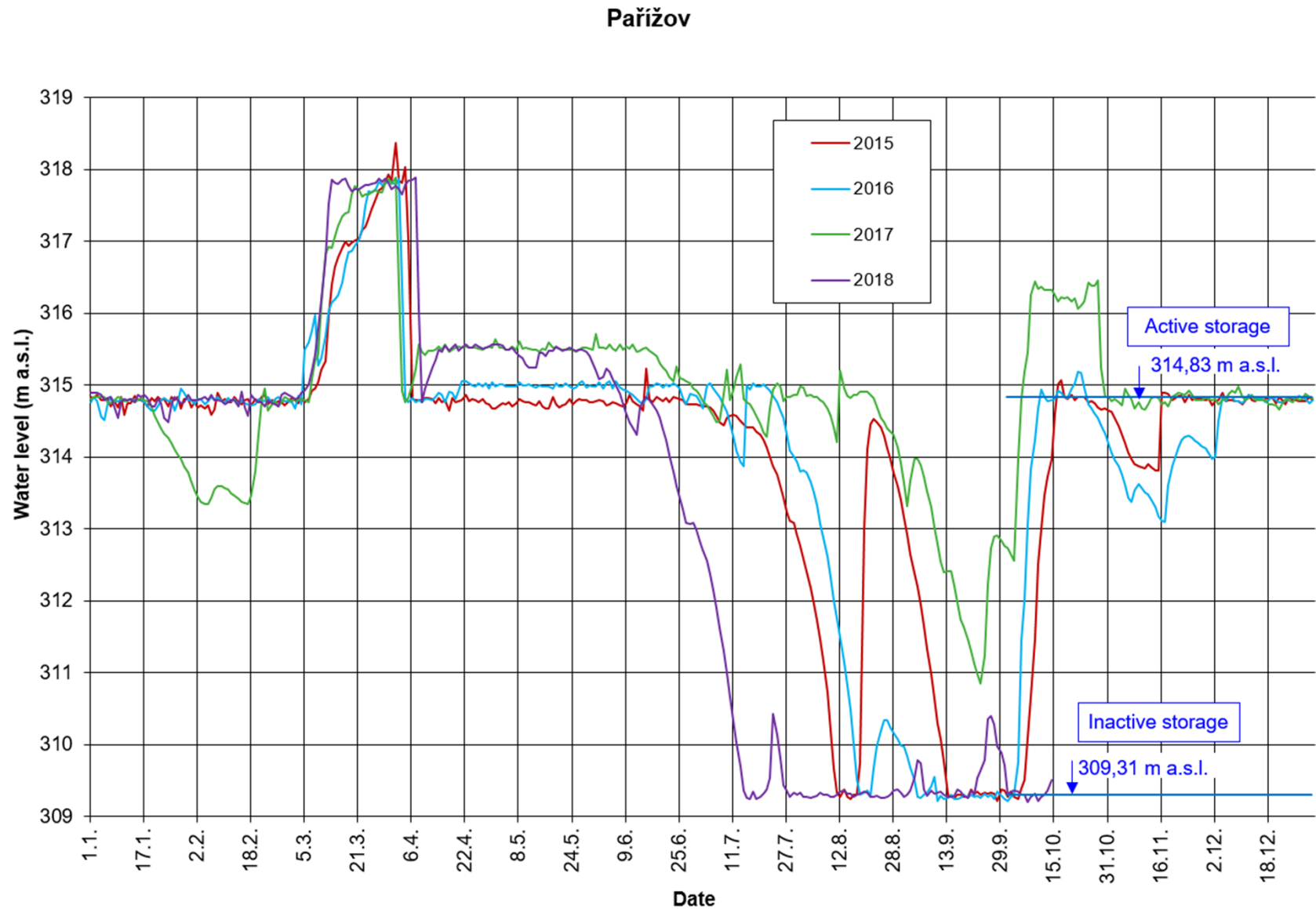
WATER LEVEL AT WATER GAUGE ELBE - ÚSTÍ NAD LABEM 2015 - 2018



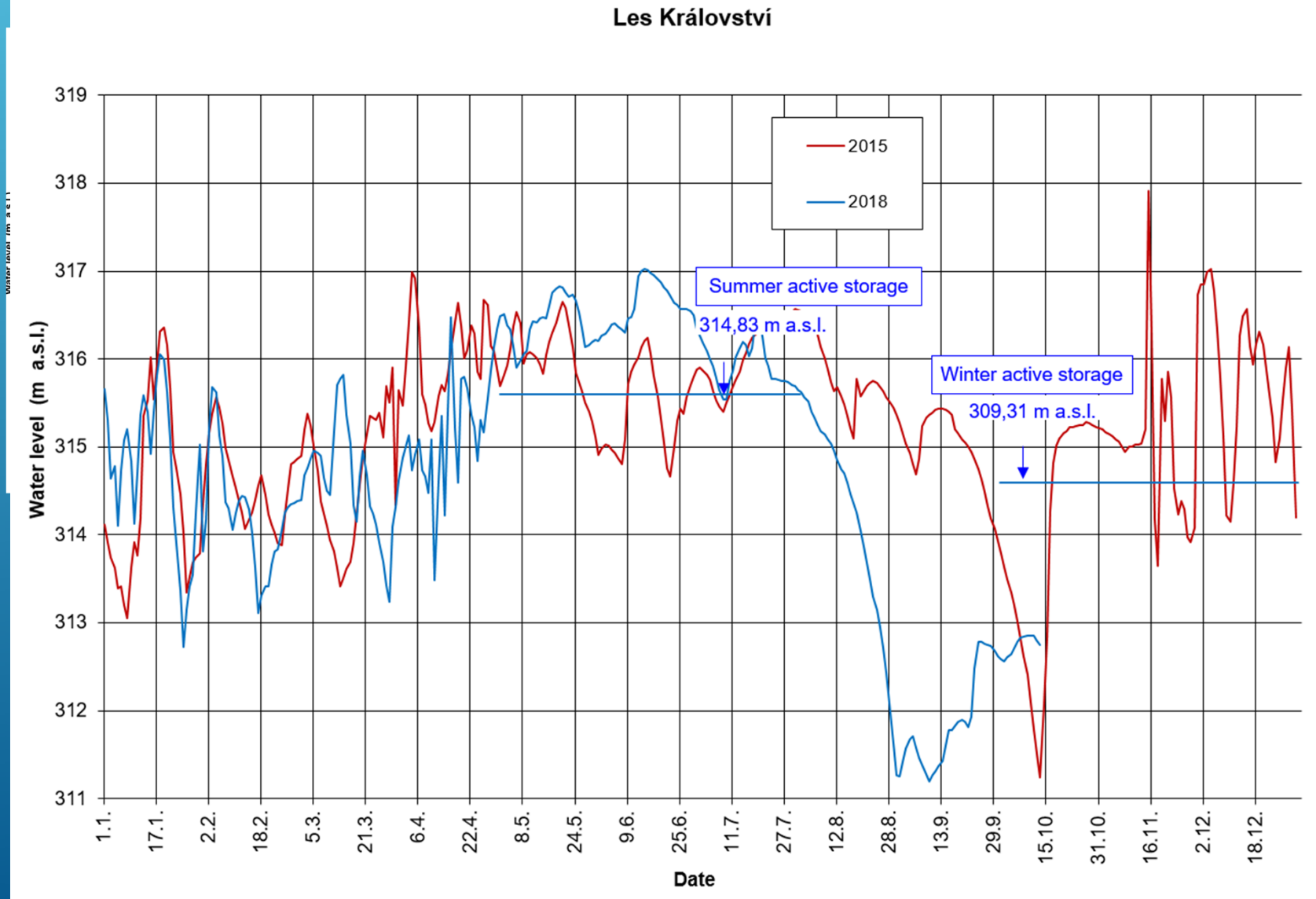
CONSEQUENCES OF DROUGHT



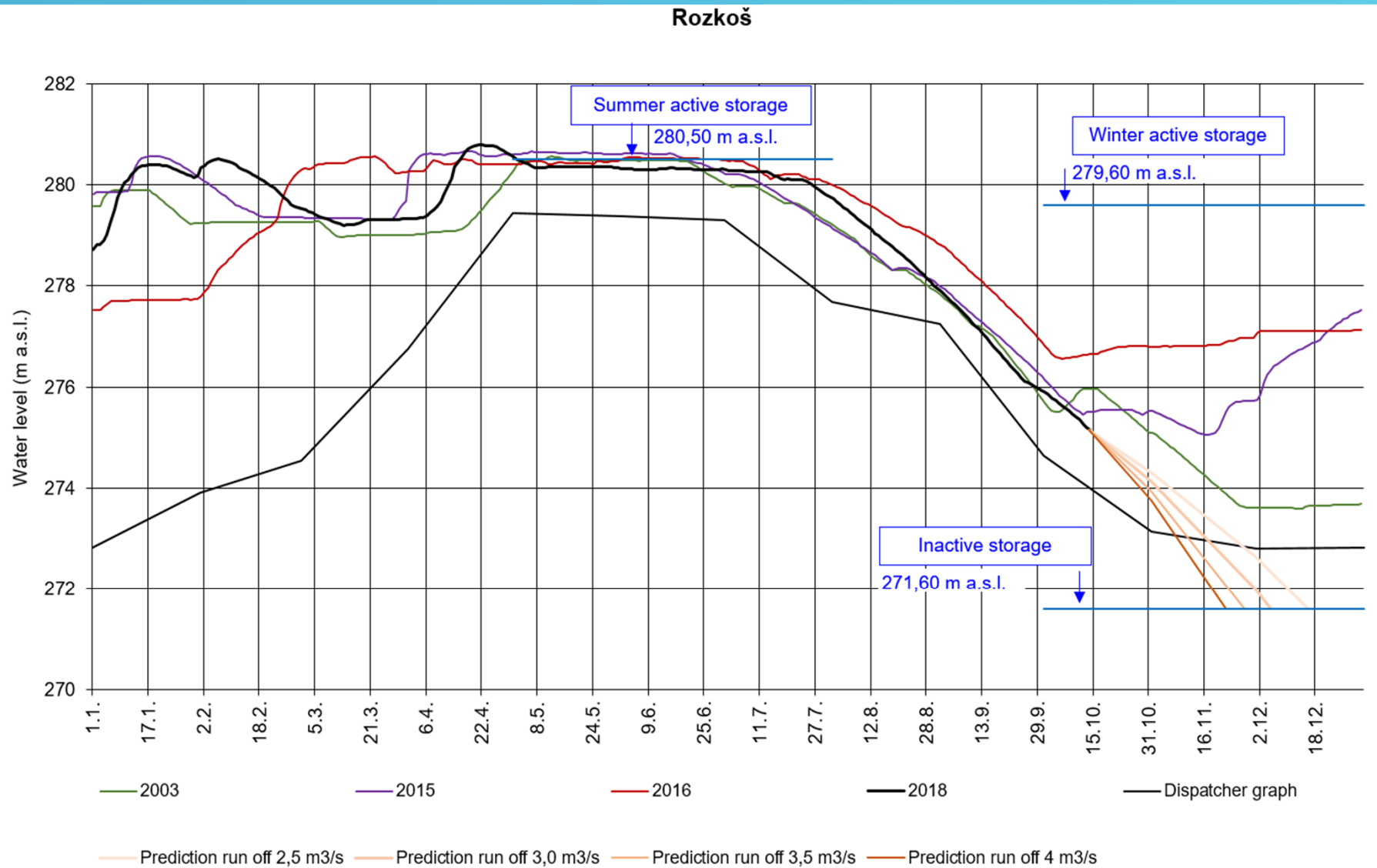
EMPTY ACTIVE STORAGE OF PAŘÍŽOV DAM



EMPTY ACTIVE STORAGE OF LES KRÁLOVSTVÍ DAM



EMPTY ACTIVE STORAGE OF ROZKOŠ DAM – 48 DAYS LEFT ???

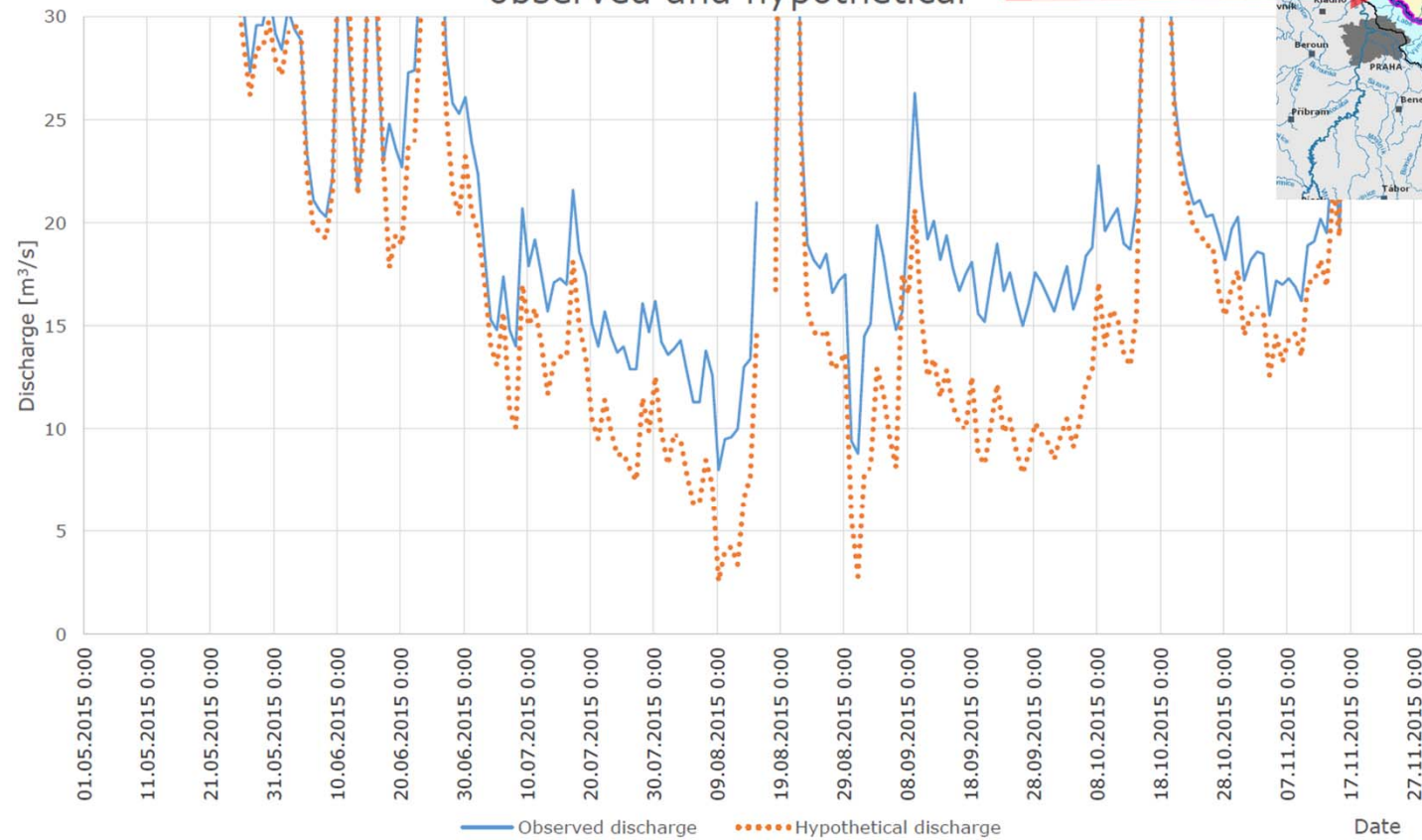


THE CONTRIBUTION OF RESERVOIRS TO WATER SUPPLY

- ▶ Reservoir fulfill their basic purposes
 - ensuring minimum residual discharge
 - accumulation of water for water supply
 - support of water abstractions downstream reservoir
- ▶ In 2015 – 2018 higher volumes used to fulfill purposes than in previous years
- ▶ In 2015 – 2018 total volume of water for ensuring minimum discharges was 250 mil. m³, this is equivalent to 230 % of all active storages of reservoirs operated by Elbe river basin , state enterprise
- ▶ The largest part (204 mil. m³) was used to ensure coal powerplant offtake in node Opatovice – important producer of electric energy (stability of power grid) and heat for agglomeration of Hradec Králové, Pardubice and Chrudim (app. 230 000 inhabitants)
- ▶ 63,1 mil. m³ of water for water supply was taken from reservoirs in Czech upper and middle Elbe in 2015 – 2018

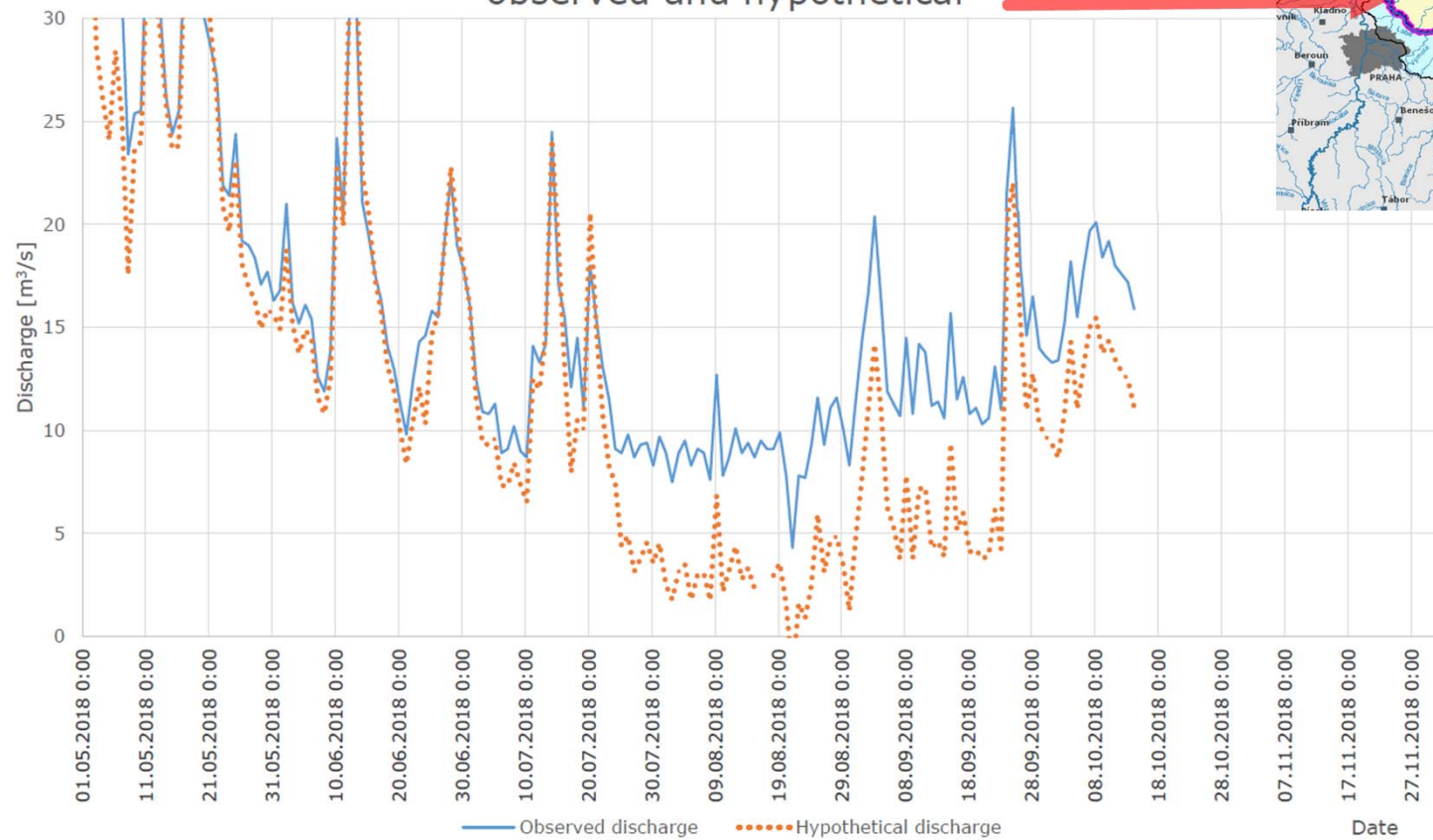
OBSERVED AND HYPOTHETICAL DISCHARGES ELBE – KOSTELEC NAD LABEM

Low discharges in Kostelec nad Labem in 2015
observed and hypothetical

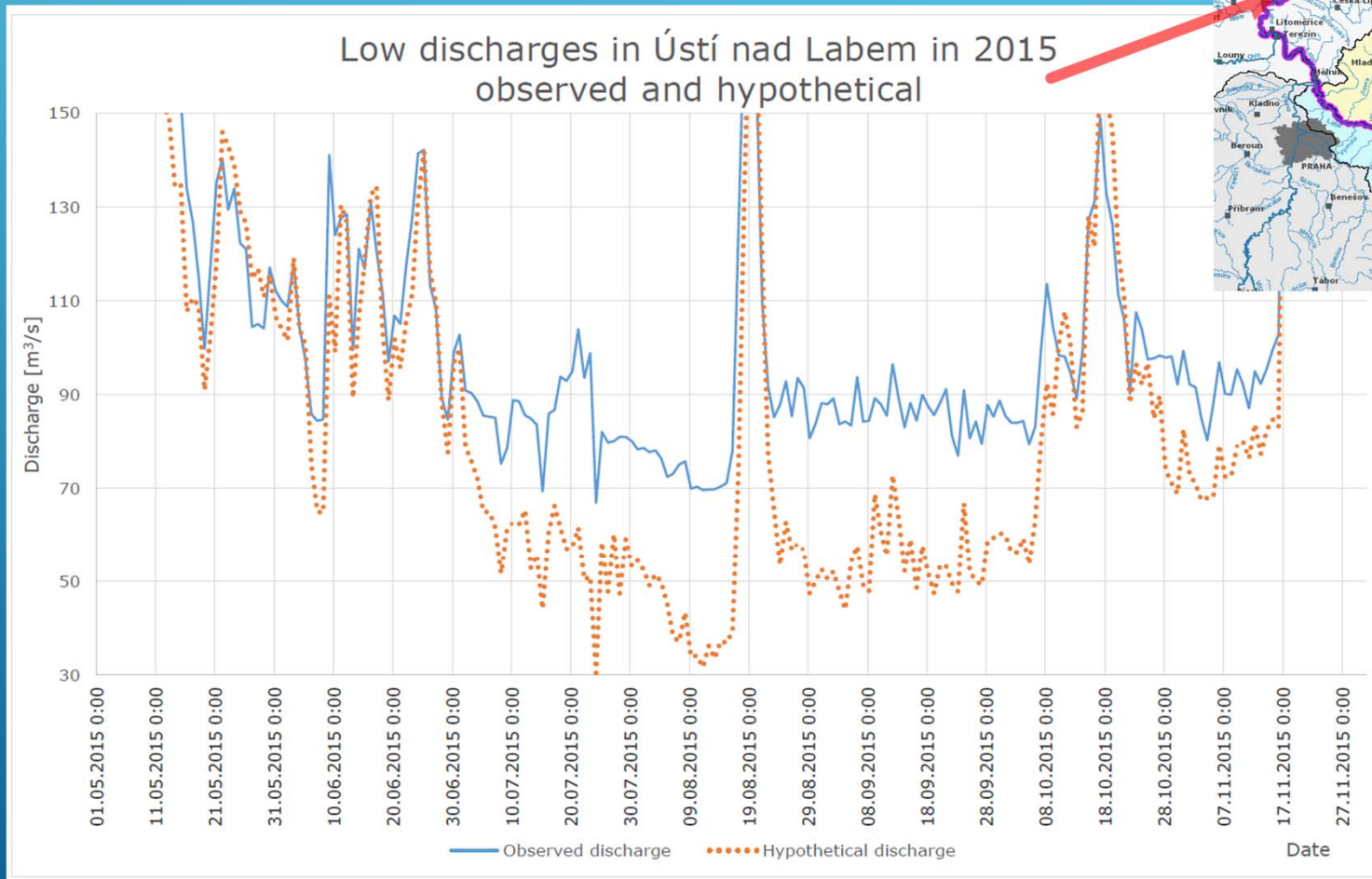


OBSERVED AND HYPOTHETICAL DISCHARGES ELBE – KOSTELEC NAD LABEM

Low discharges in Kostelec nad Labem in 2018
observed and hypothetical



OBSERVED AND HYPOTHETICAL DISCHARGES ELBE – ÚSTÍ NAD LABEM



**WATER RESERVOIRS THAT ENABLE WATER
MANAGEMENT ARE THE ONLY OPERATIVE
TOOL FOR SOLVING OR AT LEAST
MITIGATING THE IMPACTS OF EXTREME
DROUGHT (AND FLOODS)**



CHANGES IN LANDSCAPE MANAGEMENT,
PONDS AND WETLANDS
WILL **NOT** RESOLVE
EXTREME DROUGHTS (AND FLOODS)



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THANK YOU FOR YOUR ATTENTION

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