Case of upper Pripyat transboundary water allocation (Belarus-Ukraine)

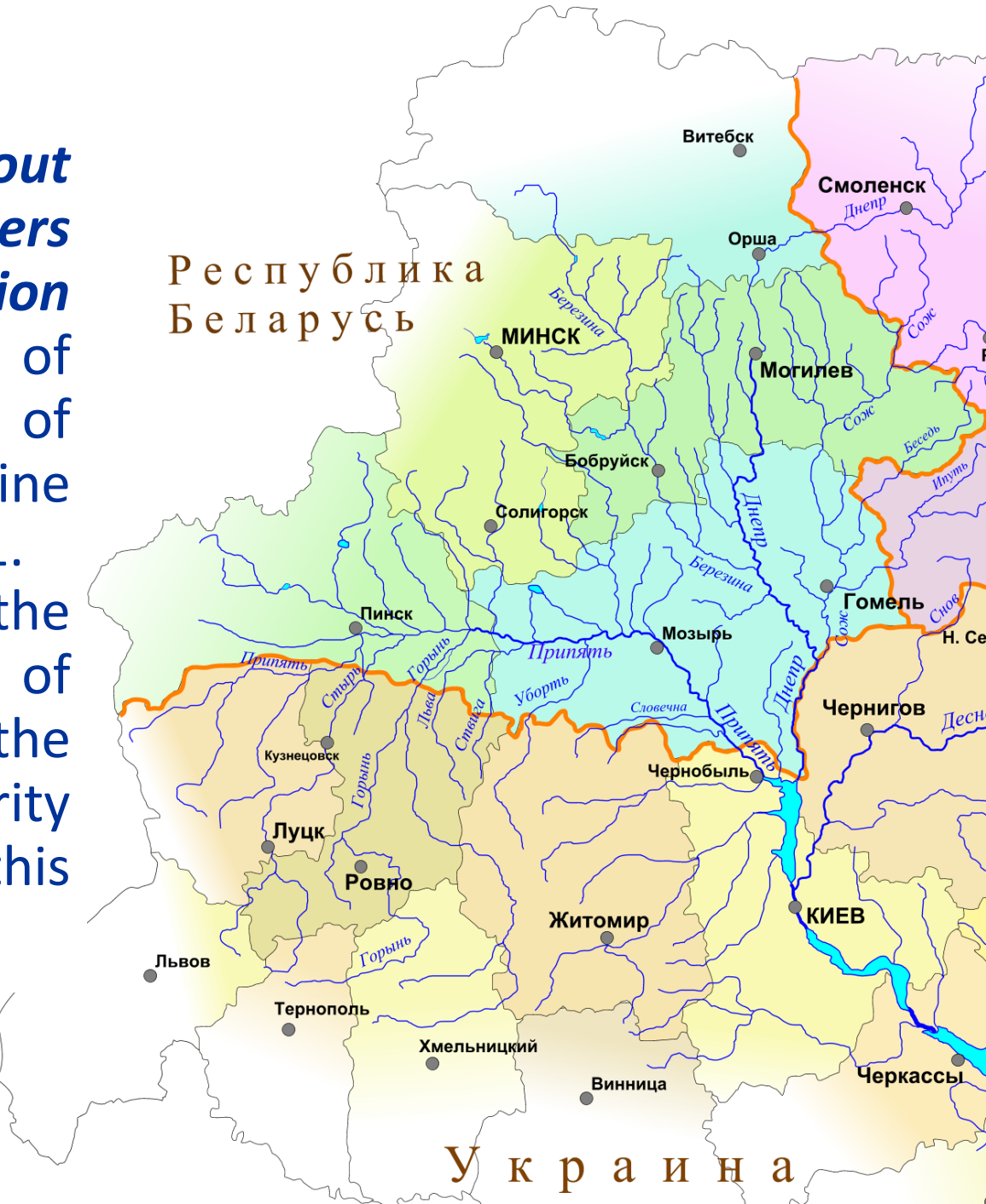
Vladimir Korneev

Central Research Institute for Complex Use of Water Resources
Minsk, Republic of Belarus, v_korn@rambler.ru

Global workshop on water allocation in transboundary basins and the fifth meeting of the Task Force on the Water-Food-Energy-Ecosystems Nexus
Geneva, 16-18 October, 2017

Agreement about transboundary waters common use and protection between Councils of Ministers of the Republic of Belarus and Ukraine operates since 16.10.2001.

The meeting of the Authorized governments of Ukraine and Belarus is the main management authority in the frame of this Agreement.



Upper part of the rive Pripyat from source of river to the Ukraine-Belarus border and further to the city of Pinsk is especially vulnerable part of the river basin.

It is connected also by that the river Pripyat is an additional source of water supply for Dnepro-Bug Canal (DBC) which is located on the territory of Belarus.

All main positions of Agreement about transboundary waters common use and protection concern to the Pripyat River Basin.

There was serious upper Pripyat water allocation problem between Pripyat runoff (keep in Ukraine) and DBC (flows in Belarus).

This problem needs additional common agreed solution between countries.

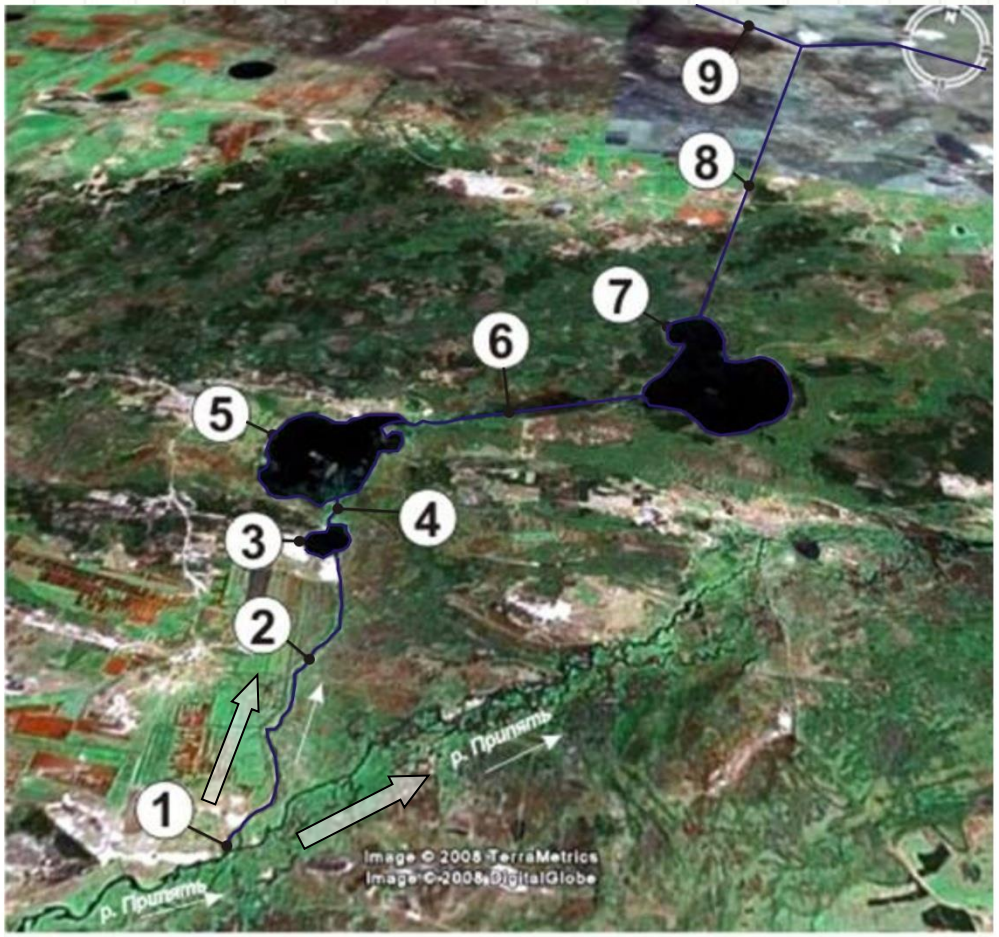
Working groups are function on implementation of the Agreement about transboundary waters common use and protection in different activities including:

- Beloozerskaya water-feed system of the Dniepro-Bug Canal water management;
- common water use, design, building and operation of waterworks facilities;
- water quality protection and control;
- hydrometeorology.

It can be not enough of water resources during low-water seasons in upper Pripyat because of water export in DBC. On the another hand the pass of flood water of Upper Pripyat thought Verchnepripyatsky Waterworks Facility (Vyzhevsky floodgate) for reducing flood areas at the territory of Ukraine, have a negative influence upon technical state of Dniepro-Bug constructions, environment in the Republic of Belarus by way of flooding.

Therefore the problem of upper Pripyat water allocation for various hydrological conditions is transboundary problem.

Beloozerskaya water-feed system of the Dniepro-Bug Canal



1- Vyzhevsky floodgate;
2- Vyzhevsky canal;
3- Svyatoe lake;
4- Korotky canal;
5- Volyanskoe lake;
6- Khabarishensky canal;
7- Beloe lake;
8- Beloozersky canal;
9- Dniepro-Bug canal.

The countries (Belarus and Ukraine) have been unable to find a mutually acceptable solution to the existing problems of water allocation on their own, whereas the existing mechanisms of cooperation failed to fully address it as well.

Rule of the upper Pripyat water allocation between Belarus and Ukraine (Operation Rules of Beloozerskaya water-feed system of the Dniepro-Bug Canal) is developed with support of the international project “Improved management of shared water resources in the upper Pripyat basin (ENVSEC 000 62859)”.

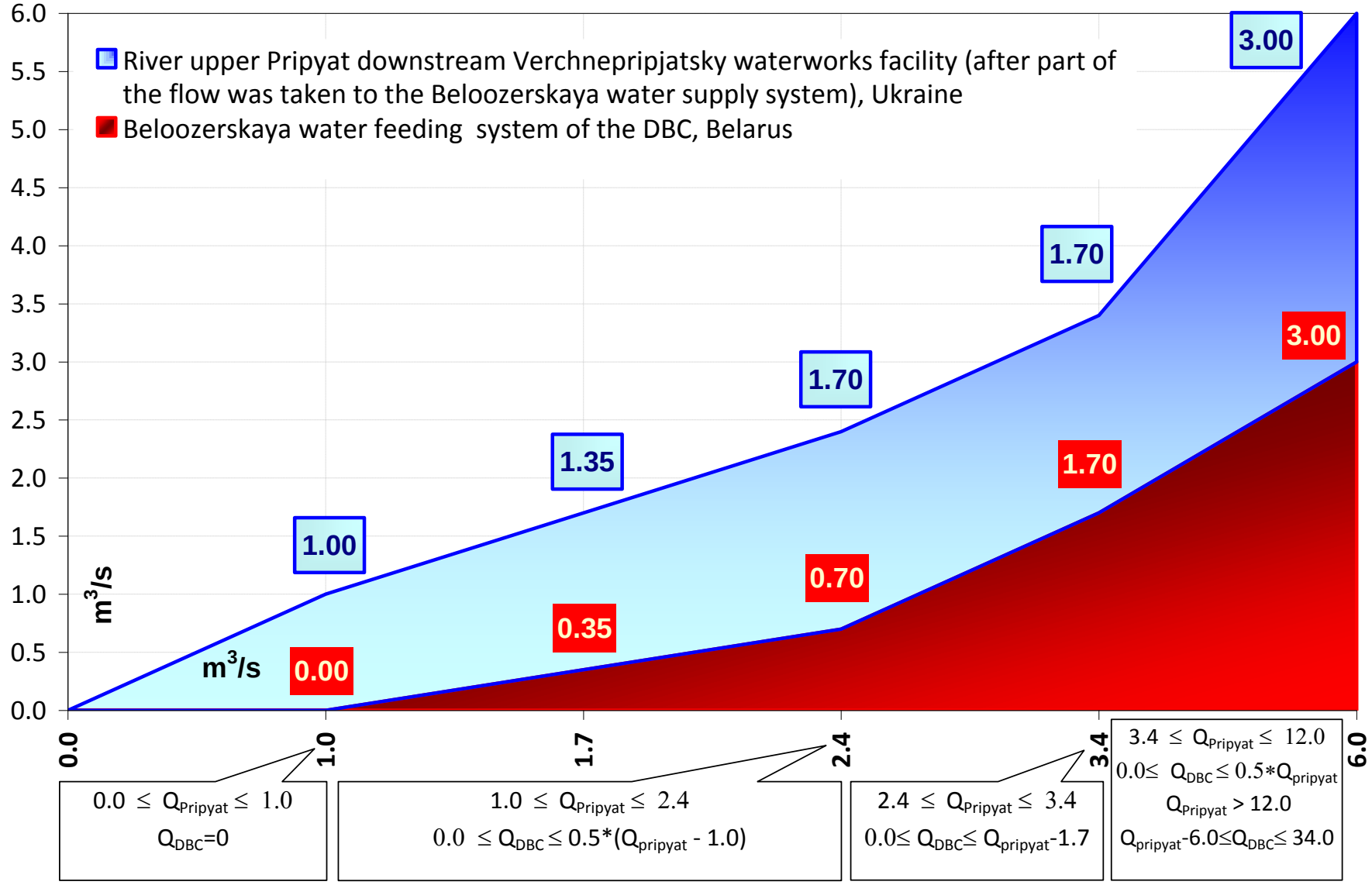
The project looked for a practical solution for cross-border management water flow in the upper Pripyat between Ukraine and Belarus. This solution based on hydrological, hydraulic and hydro-ecological research organized during realization of the project with determination of ecological flow and calibration of the Vyzhevsky floodgate.

A successful solution both eliminated a source of potential disagreement over the use of water resources of the Pripyat basin, and strengthened the culture of a cross-border dialogue over similar cases between the involved countries.

Rule of the upper Pripyat water allocation is based on optimization by management of water allocation with ecological flow conservation in the upper Pripyat which was determined with using of ecological, hydrological and hydraulic criteria (1.0-1.7 $м^3/с$).

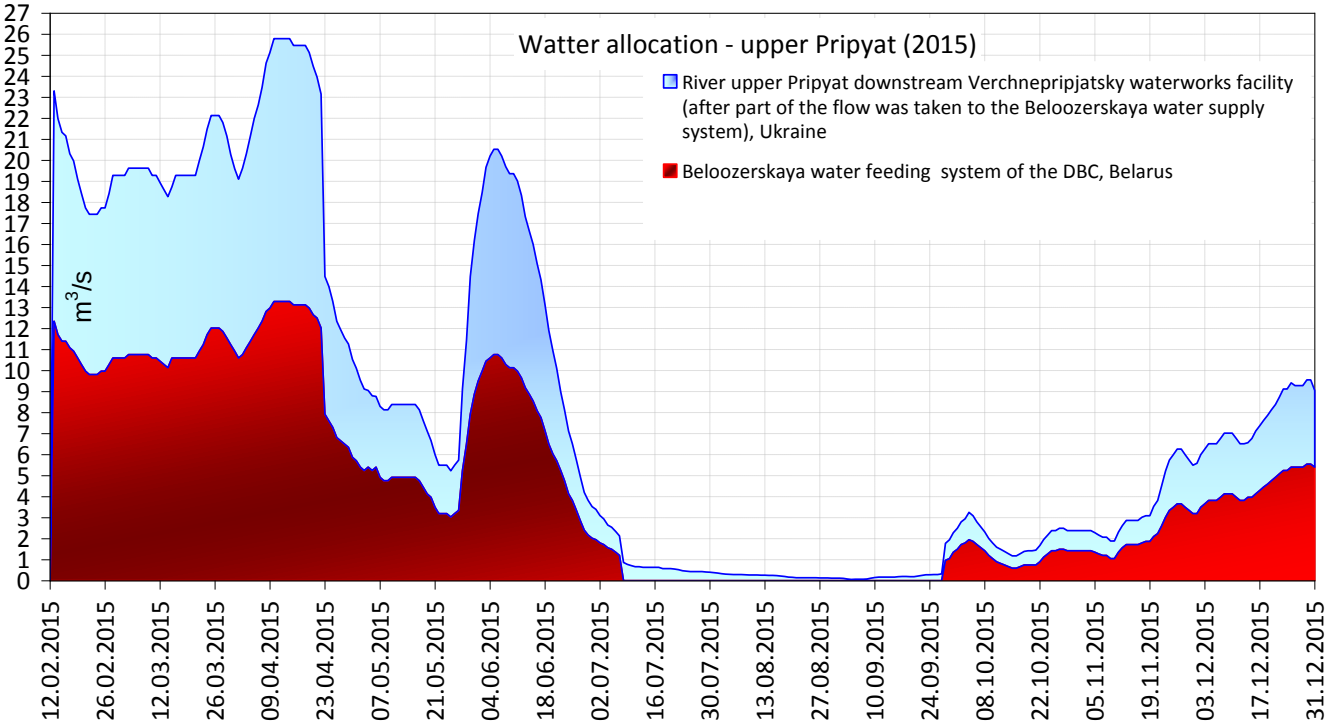
This Rule was signed by the Authorized Representatives of the Councils of Ministers of the Republic of Belarus and Ukraine and came into force in December 2010.

Graphic presentation of the upper Pripyat water allocation rule (Belarus-Ukraine)

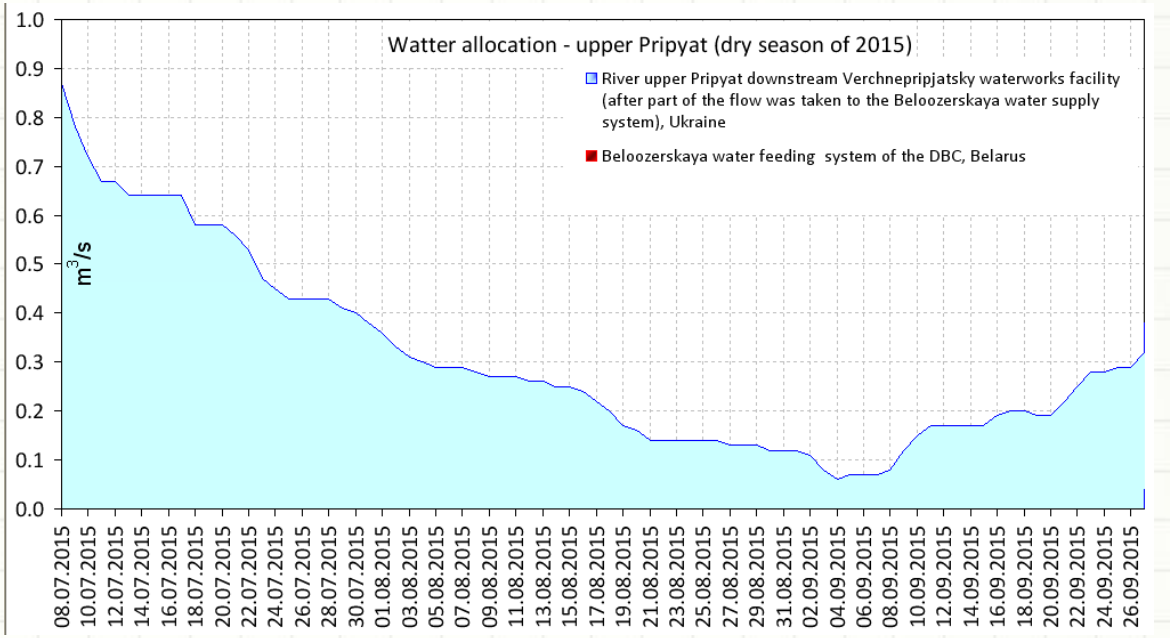


Examples of the upper Pripyat water allocation rule practical implementation

Data of the Volyn Regional Board of Water Management (Lutsk, Ukraine)



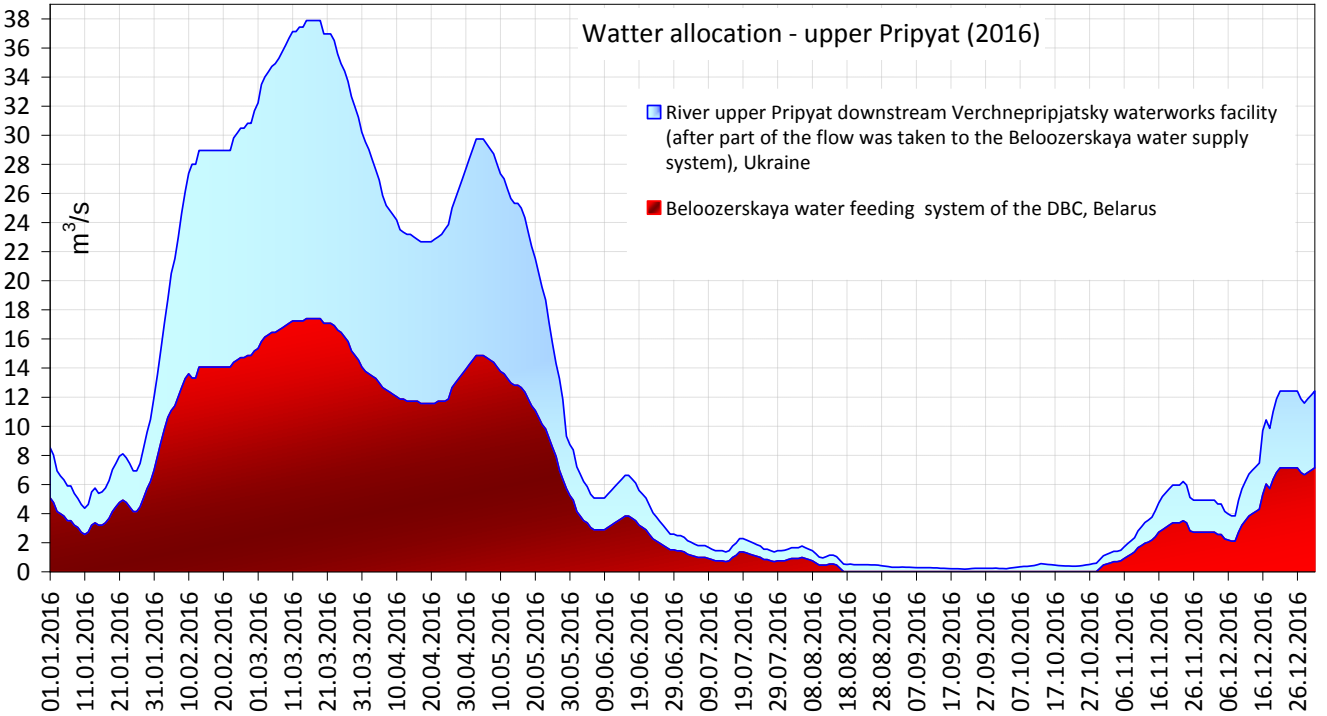
Water intake from the river Pripyat to DBC not took place during some low-water seasons of the last dry years for maintenance of ecological functioning of the upper Pripyat on the base of this Rule (July-September, 2015).



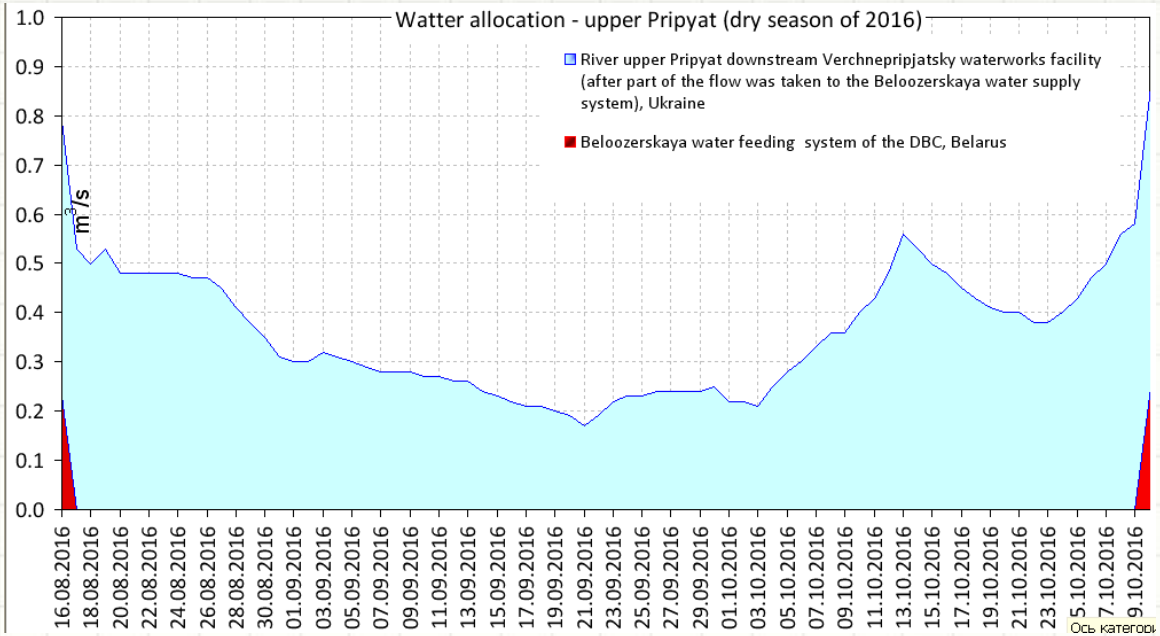
Examples of the upper Pripyat water allocation rule practical implementation

Data of the Volyn Regional Board of Water Management

(Lutsk, Ukraine)

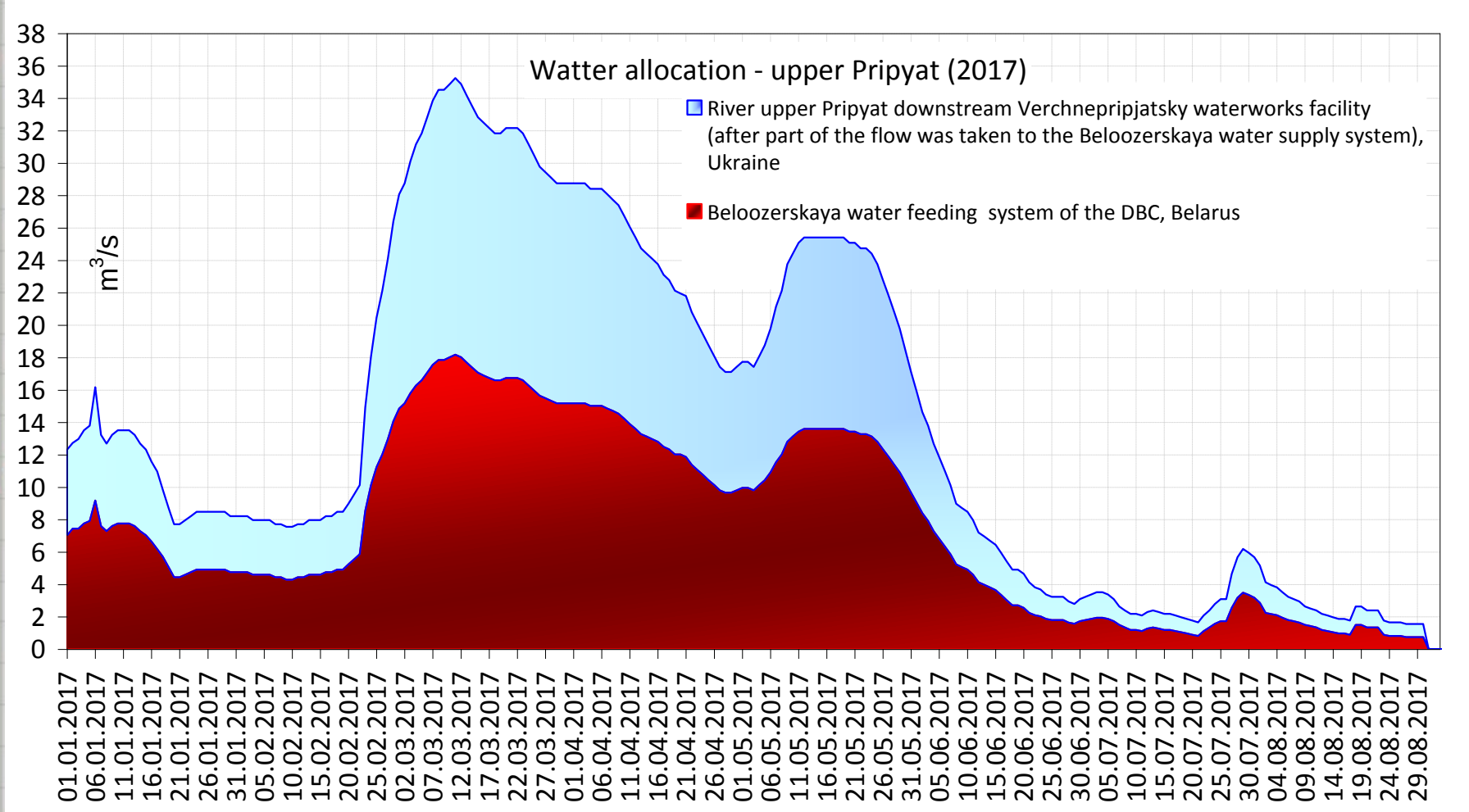


Water intake from the river Pripyat to DBC not took place during some low-water seasons of the last dry years for maintenance of ecological functioning of the upper Pripyat on the base of this Rule (August-October, 2016).

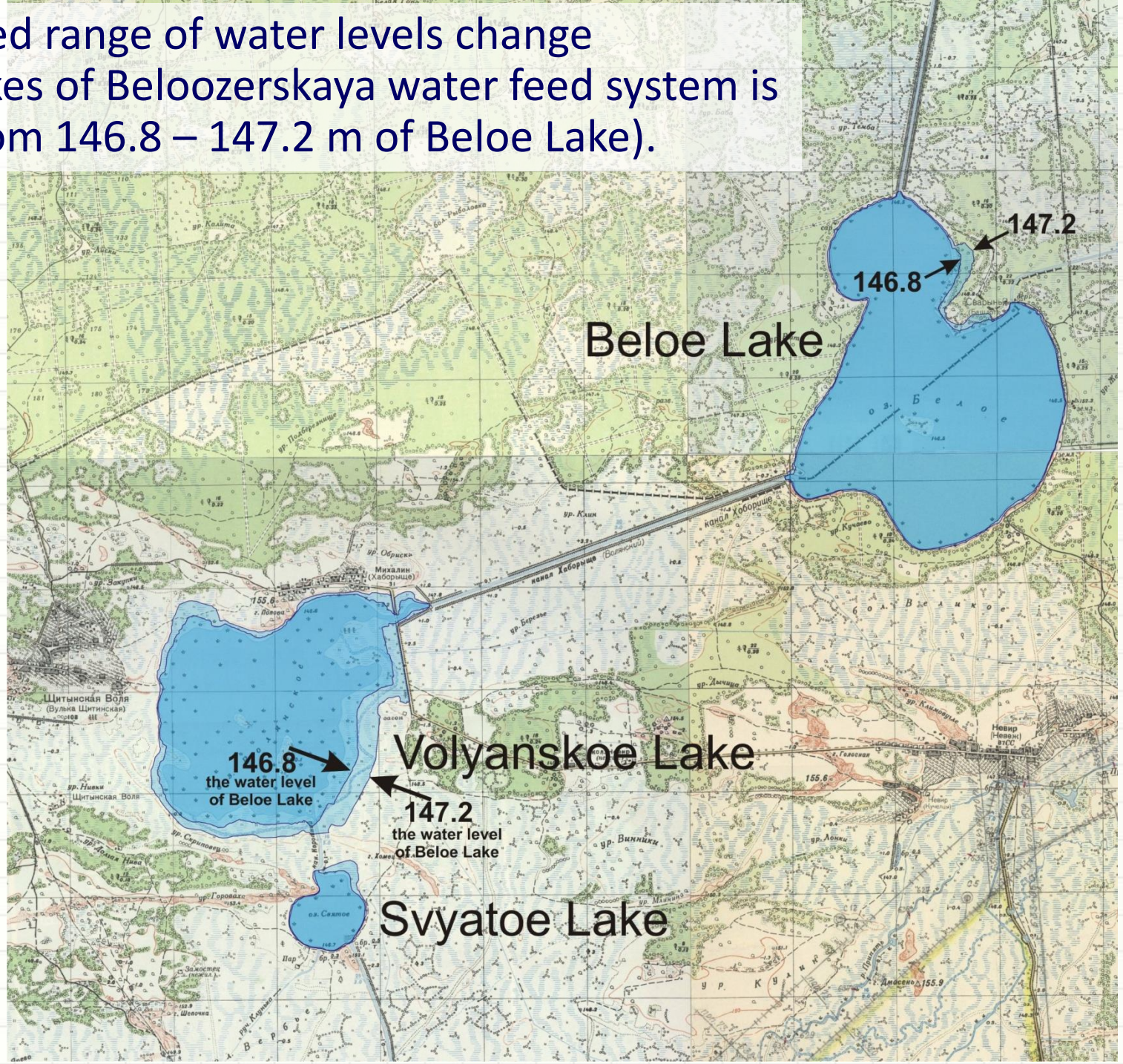


Examples of the upper Pripyat water allocation rule practical implementation

Data of the Volyn Regional Board of Water Management (Lutsk, Ukraine)

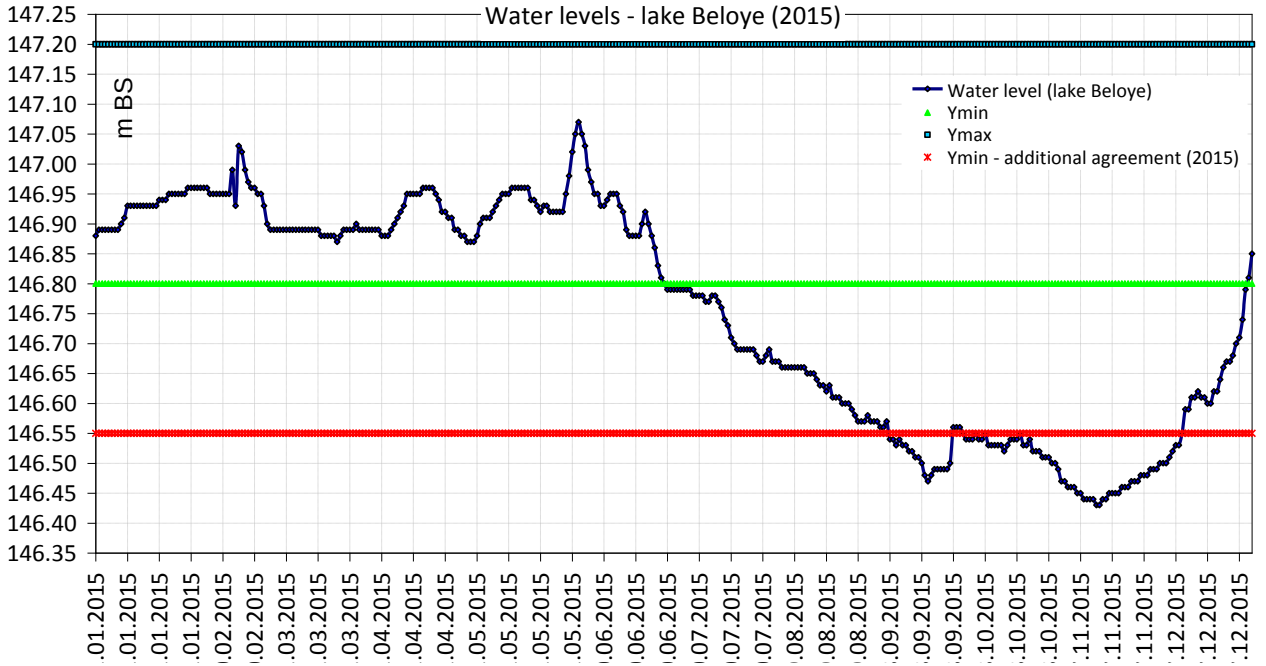


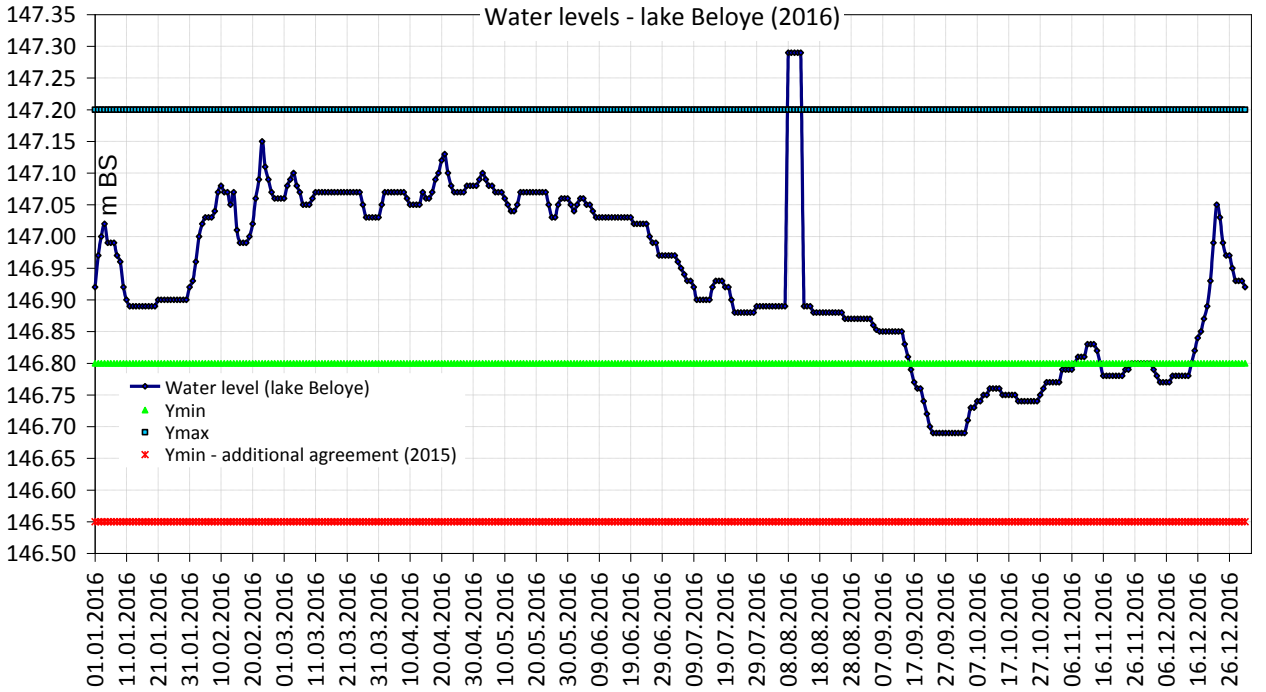
The agreed range of water levels change in the Lakes of Beloozerskaya water feed system is 0.4 m (from 146.8 – 147.2 m of Beloe Lake).



Examples of the upper Pripyat water allocation rule practical implementation – impact on lake levels

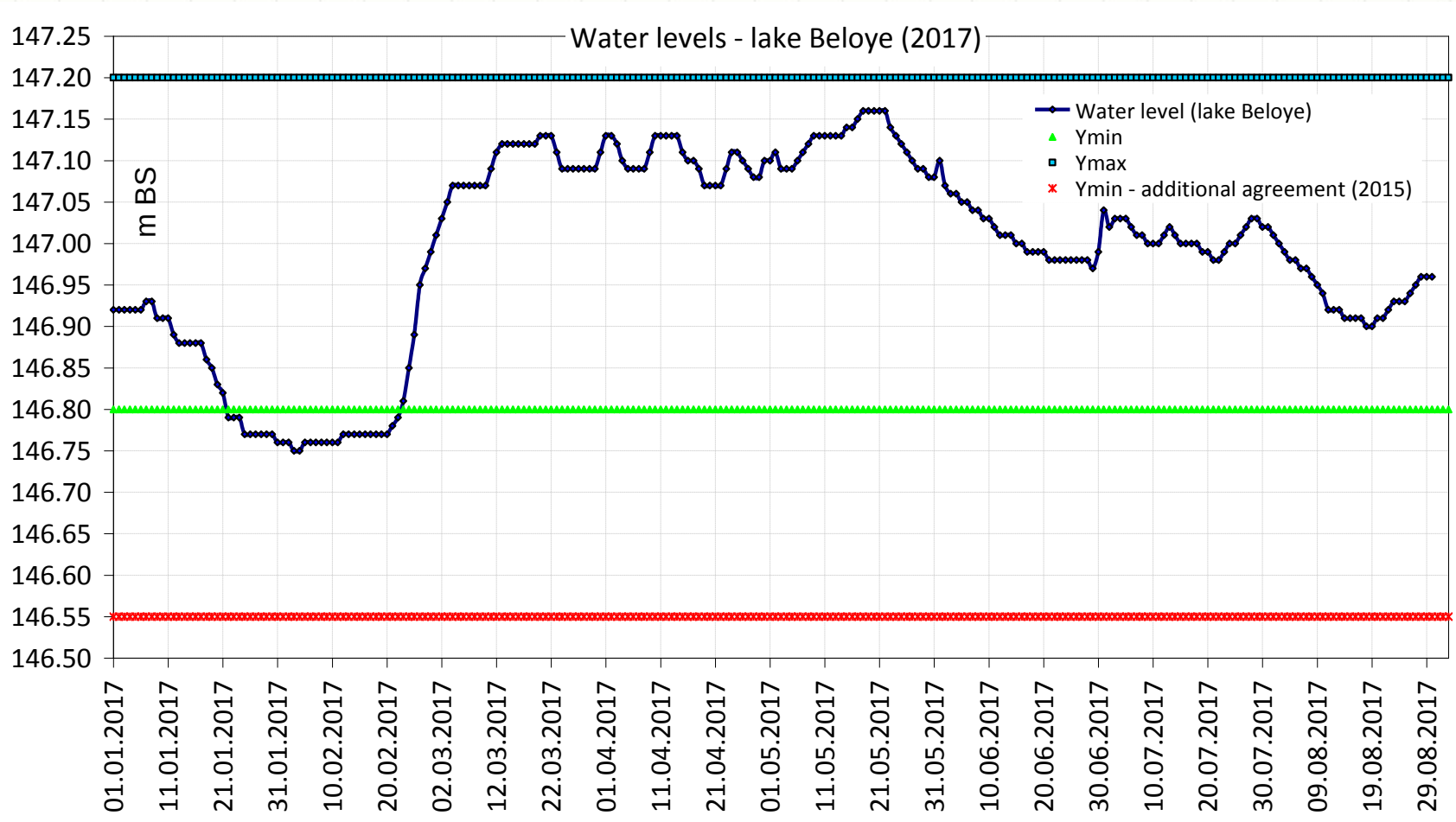
Data of the Volyn Regional Board of Water Management (Lutsk, Ukraine)





Examples of the upper Pripyat water allocation rule practical implementation – impact on lake levels

Data of the Volyn Regional Board of Water Management (Lutsk, Ukraine)



Response organization for the implementation of the upper Pripyat water allocation Rule:

- ✓ Volyn Regional Board of Water Management (Lutsk, Ukraine) of the State Committee of Ukraine for Water Management;
- ✓ Dnieper-Bug Waterway enterprise (Pinsk) of the Ministry of Transport and Communication of the Republic of Belarus;
- ✓ Working group on Beloozerskaya water-feed system of the Dniepro-Bug Canal water management.

Practical implementation of the upper Pripyat water allocation Rule is important especially taking into account adaptation to climate change as well as dangerous hydrometeorological phenomena increase of risk, including droughts and floods.

Lessons learned

- common research expedition with participation of Belarusian, Ukrainian and International experts – hydrology, hydrochemistry, hydrobiology;
- common agreement of the problematic and vulnerable transboundary river district water allocation based on agreed ecological flow.

Possible recommendation to other countries:

- to looking for optimal solution for water allocation based on agreed ecological flow;
- to share methodology of the ecological flow determination based on combination of hydroecologic, hydrologic and hydraulic approaches.


Thank you for attention
Upper Pripyat