Local floodplain restoration – experiences in the Lower Volga, Russia

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- *motivations:*

1. Volzhky HPP;

2. Local development initiatives;

3. At Lake Sotovo dikes and dams were constructed.

- *objectives:*

Main aim: re-install the natural flooding regime at the Sotovo lake

To reach the aim:

1. decommission an earthen dam;
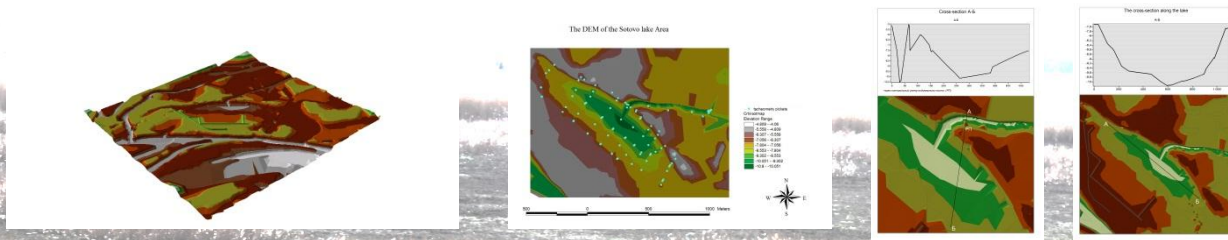
2. construct a water level regulation installation

- *main features of the experience:*

1. Digital Elevation Model;

2. Supply the lake with water;

- *main features of the experience:*

3. The restoration of hydro biotic flora and fauna;

4. Monitoring.

The Digital Elevation Model

The DEM of the Sotovo lake Area
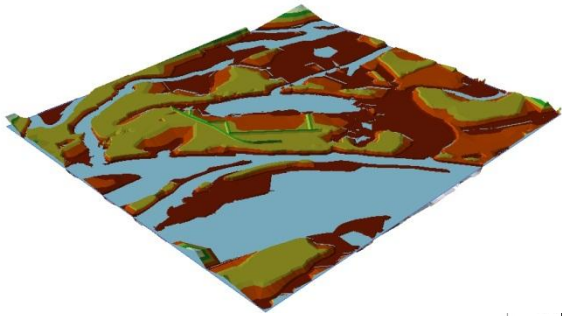
The cross-section along the lake

А-Б

Cross-section А-Б

А-Б

через контрольный репер водомерного поста (РП)

tacheometry pickets
Crtinsotmap
Elevation Range
-4.809 - -4.06
-5.558 - -4.809
-6.307 - -5.558
-7.056 - -6.307
-7.804 - -7.056
-8.553 - -7.804
-9.302 - -8.553
-10.051 - -9.302
-10.8 - -10.051

0   500   1000 Meters
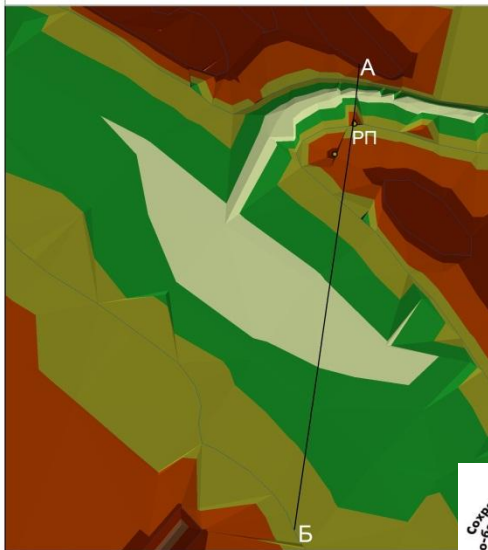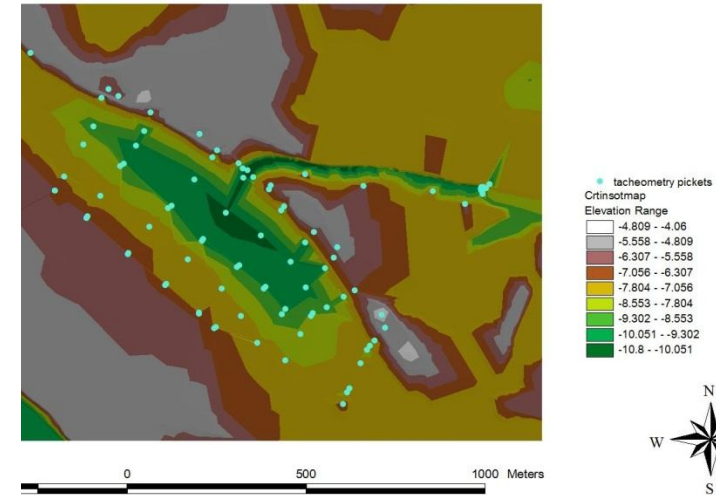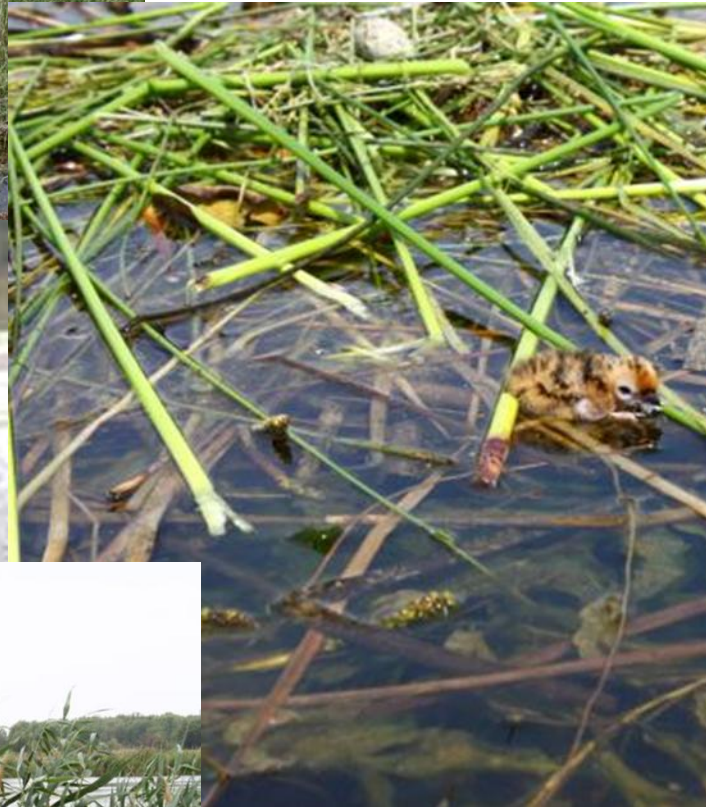
Main outputs/outcomes

Supply the lake with water

Dam with regulation mechanism

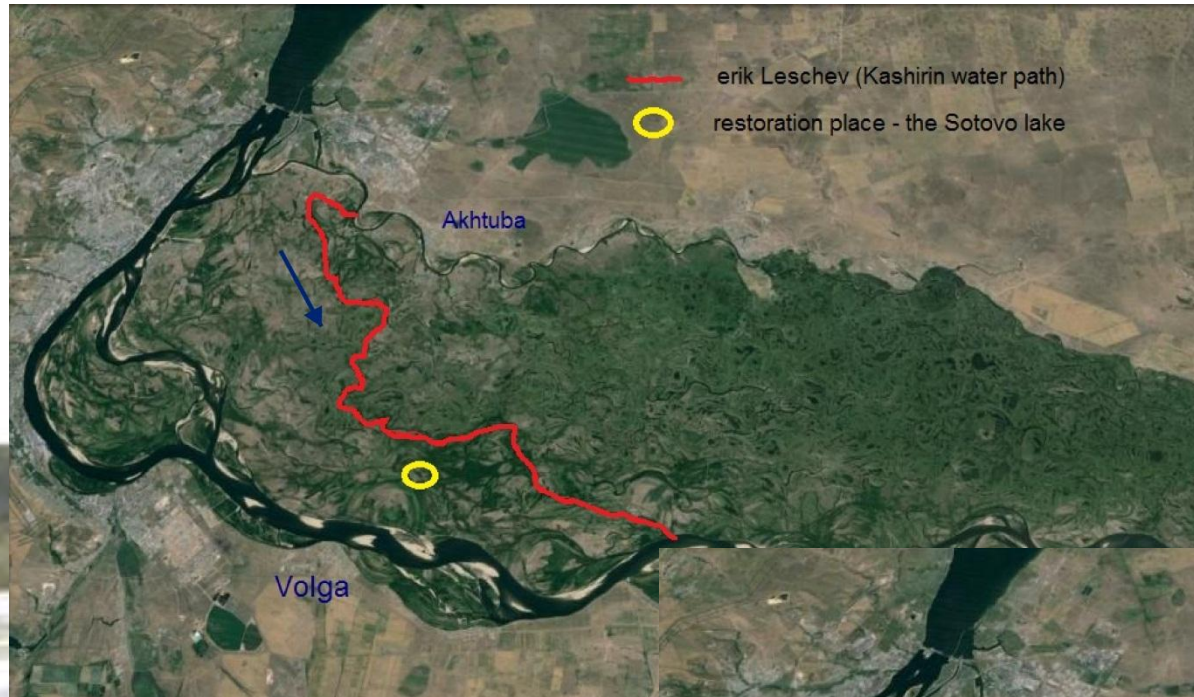# Main outputs/outcomes
The restoration of hydro biotic flora and fauna
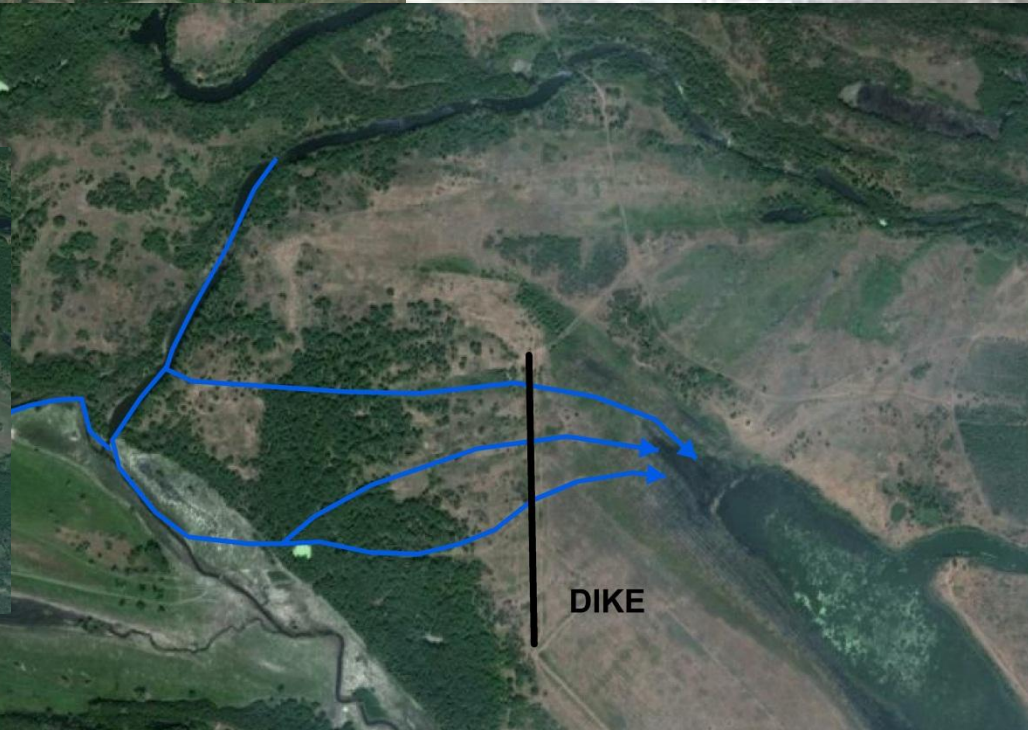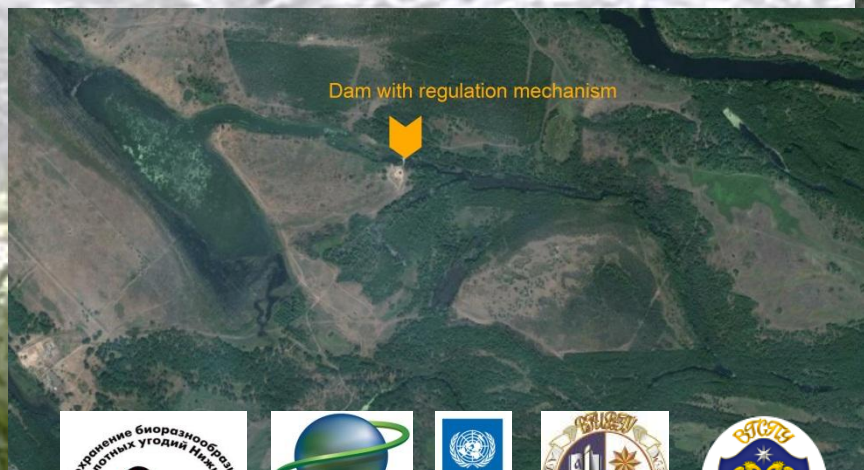
Main outputs/outcomes
Monitoring

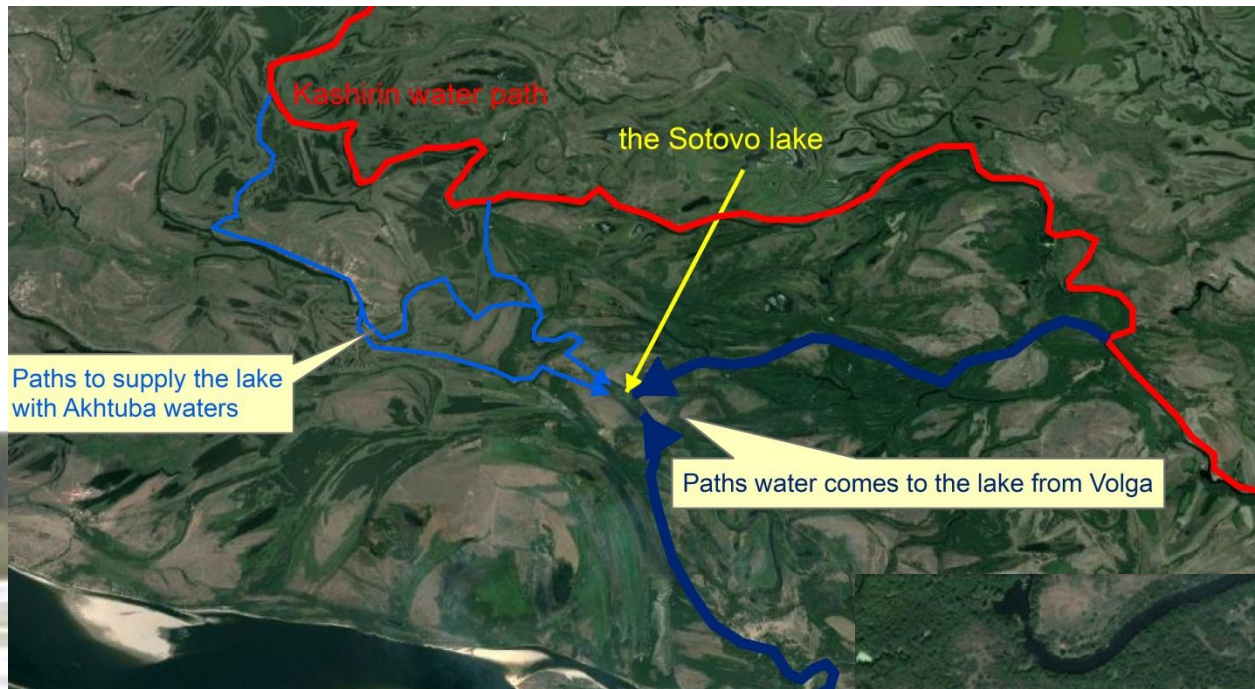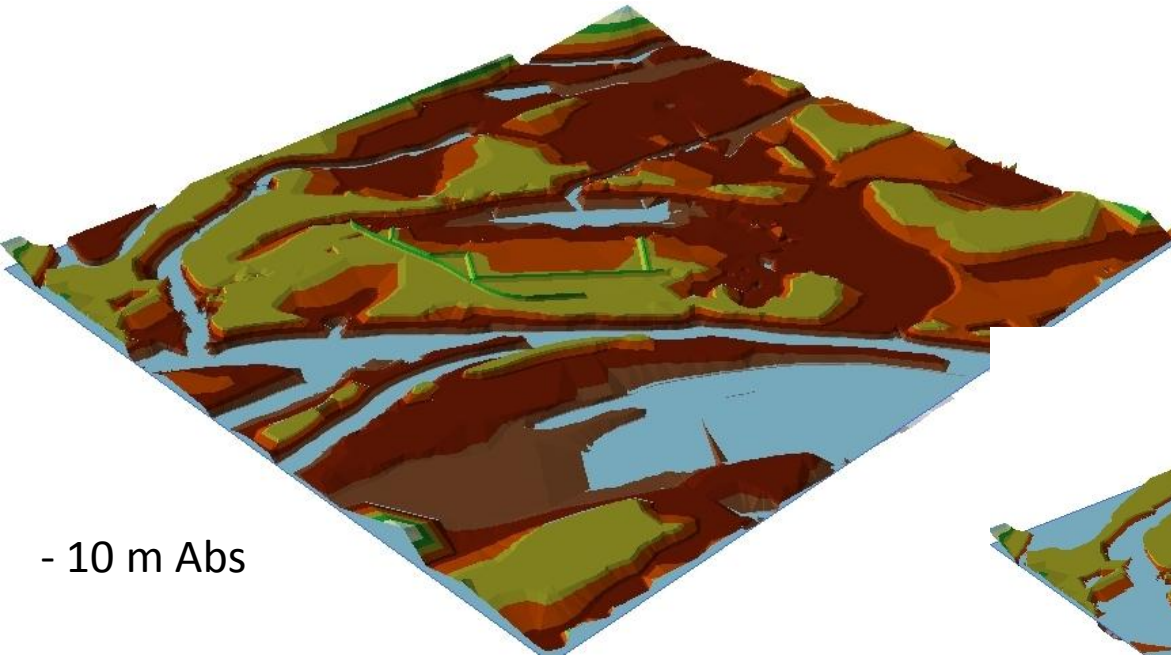# Lessons learned and final remarks

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Kashirin water path

the Sotovo lake

Paths to supply the lake with Akhtuba waters

Paths water comes to the lake from Volga
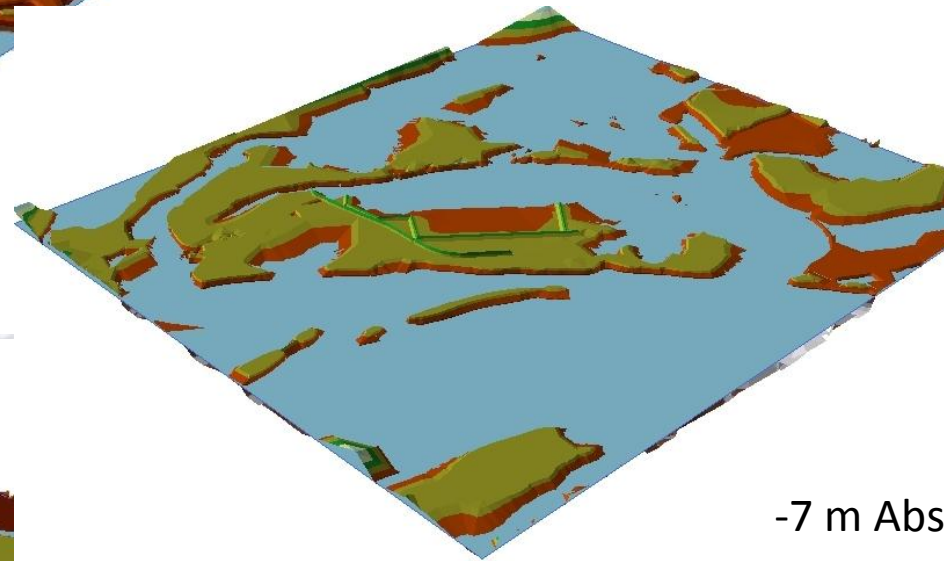
Dam with regulation mechanism

DIKE

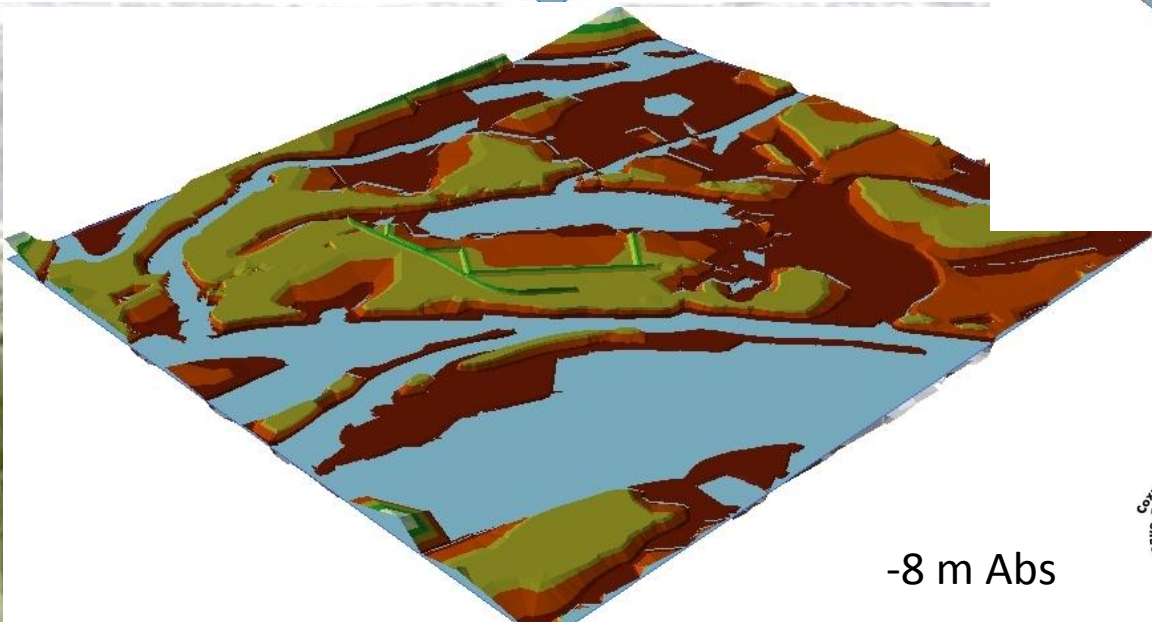# Lessons learned and final remarks

- 10 m Abs

-7 m Abs

-8 m Abs

To restore an aquatic ecosystem successfully:

1. Study the previous experience of colleagues around the World;
2. Intensively study the territory up flow the place you want to restore;
3. After the initial works on the restoration organize monitoring and provide resources for correction.

It is quite a new experience for all the authors.

Everyone who has an incentive to help is very welcome.

Thank you for your attention!!!