LUKHRA SHPP

SVANETI-GEORGIA

2019-2020

ASSIGNMENT:

- Revision of the basic design
- Detailed design
- Technical specification
- Check of the correctness of the electromechanical design with reference to the specific hydraulic conditions of the site

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PROJECT DESCRIPTION

The HPP will be a run-of-river type.

The plant scheme includes intake works (fixed weir, fish pass, head pond, desilting gates and winter intake), ~2.3 km long penstock, powerhouse and tail race.

MAIN CHARACTERISTICS OF THE PLANT

Gross head:	428,90 m
Rated flow:	1.0 m3/s
Installed capacity:	3.460 kW

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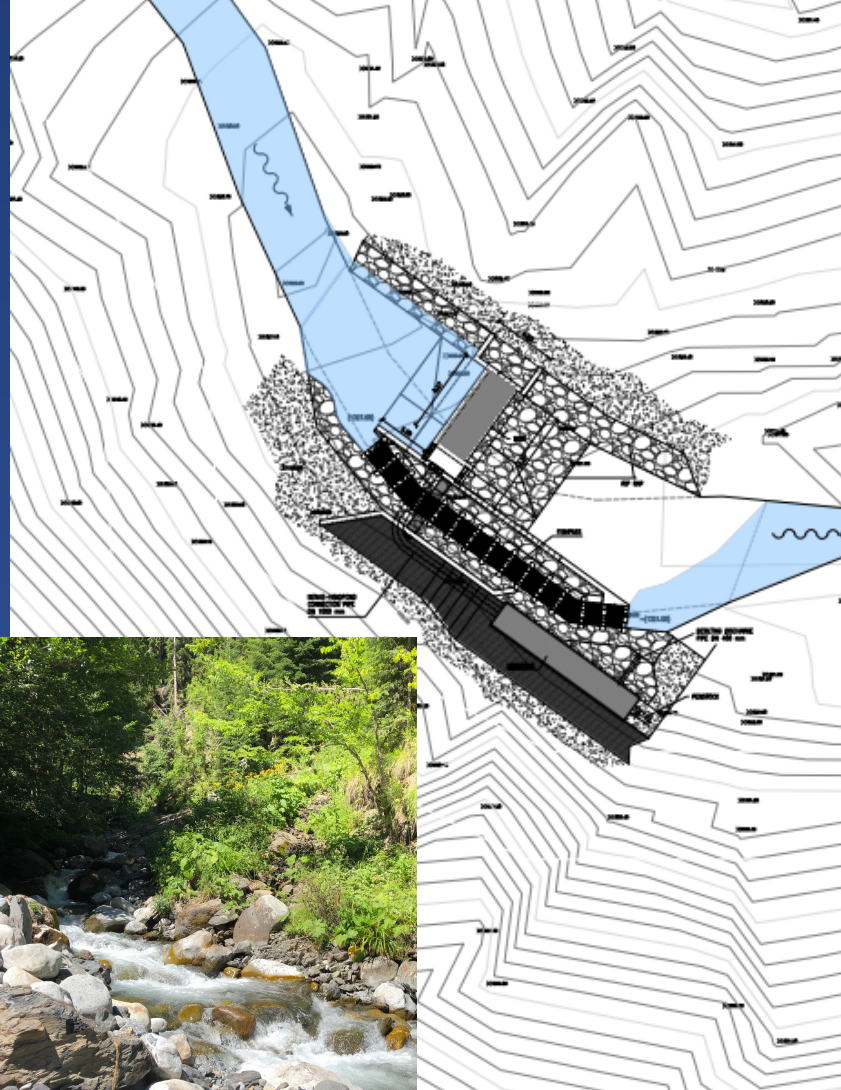
INTAKE

A fixed reinforced concrete weir has been selected for the plant.

The weir will be equipped with a Coanda screen protected by a steel rack. To allow the diversion of the water even during the winter period, a winter intake has been designed.

Fish pass will be constructed on the right side of the river and will permit fish to migrate downstream to upstream and vice-versa with respect the weir.

The diverted water will be transported from the Coanda trench to the head-pond which have also desilting function.



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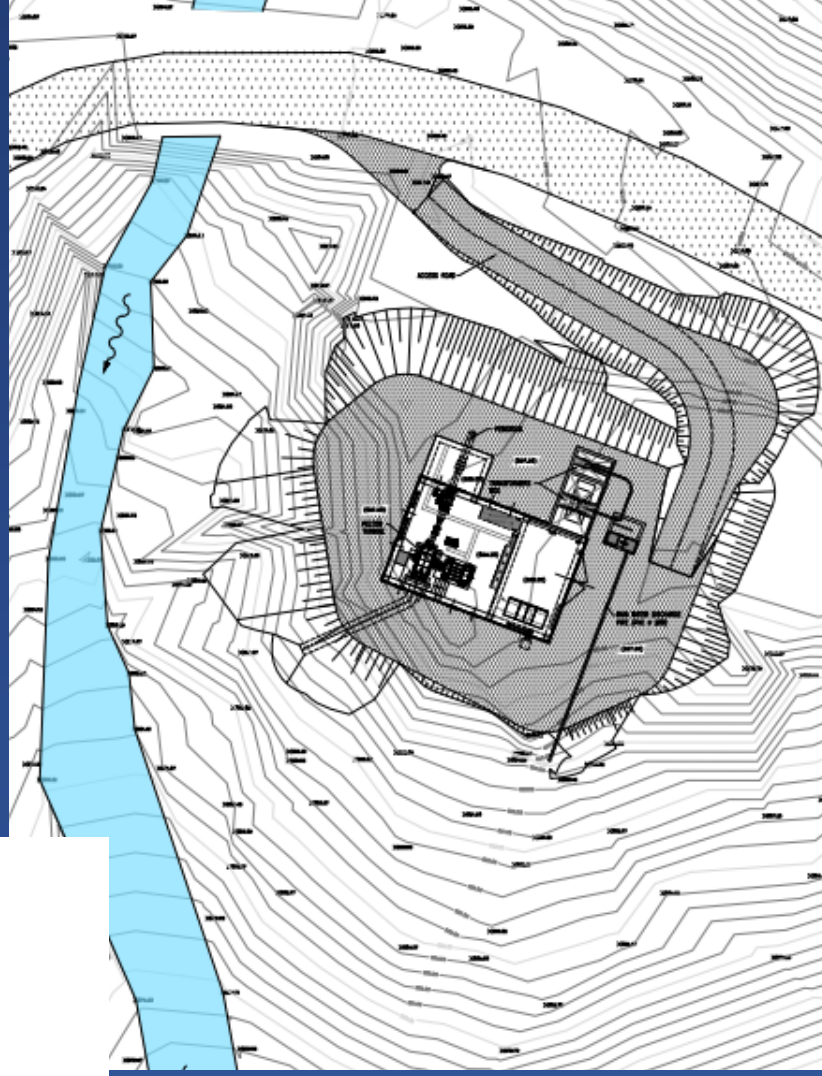
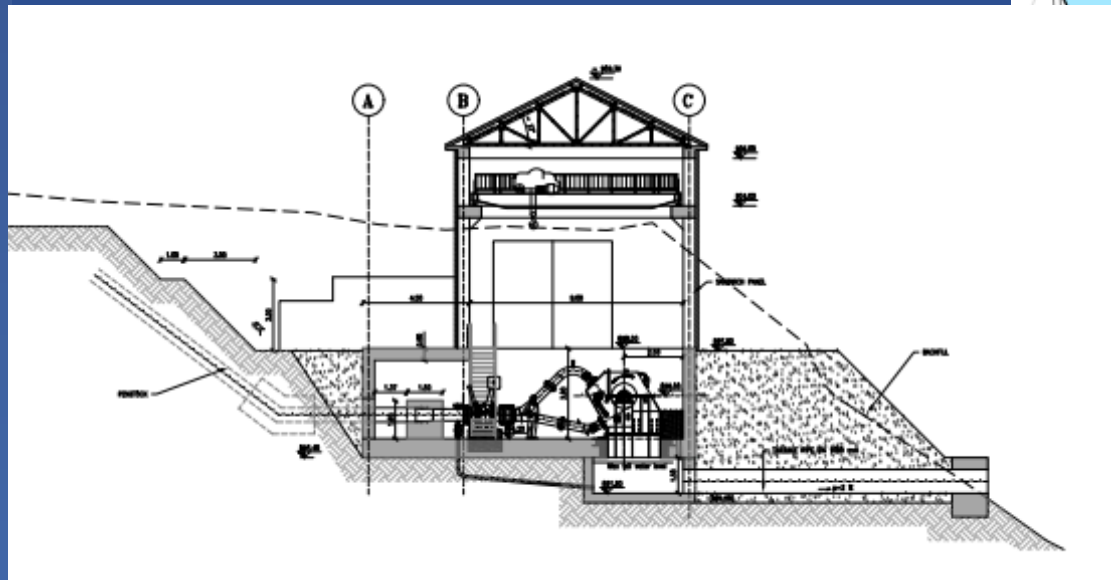
POWERHOUSE

The powerhouse will mainly contain the turbine, the generator and the regulation equipment.

A single production unit will be installed equipped with a two-jet horizontal axis Pelton turbine.





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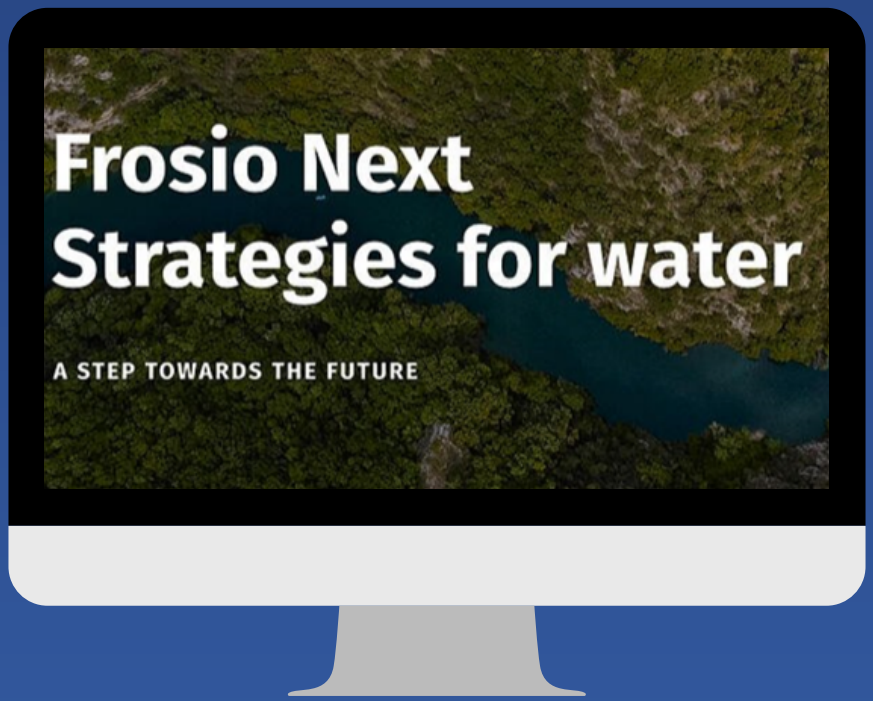

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