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Sturgeon monitoring in Georgia: From Methods to Practice

Funded by: Shota Rustaveli National Science Foundation of Georgia, Fauna & Flora Caucasus programme, and WWF Caucasus

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Fauna & Flora Saving Nature Together

WWF

Brief overview of our research projects

Population studies

- PIT tagging
- Research fishing for juvenile studies
- Genetic studies
- Initiation of eDNA monitoring
- Initiation of Acoustic telemetry

Habitat analysis

- Side Scan Sonar Survey

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Project Goals

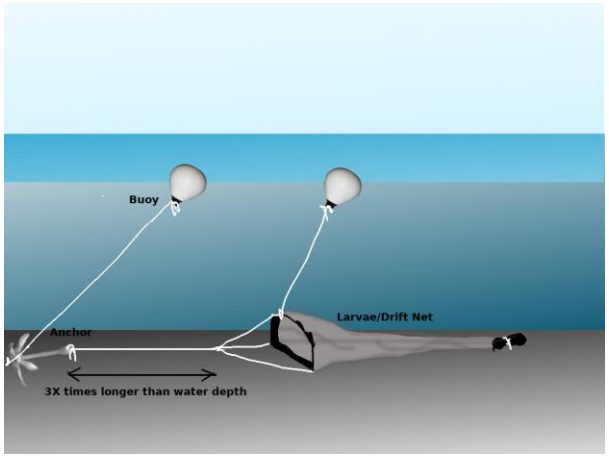
- Targeted & Innovative Monitoring
- Build a skilled, collaborative team
- Support young scientists
- Use cutting-edge tools to answer key questions and develop sustainable, long-term monitoring.
- Lead by **Ilia State University** as an independent research institution.

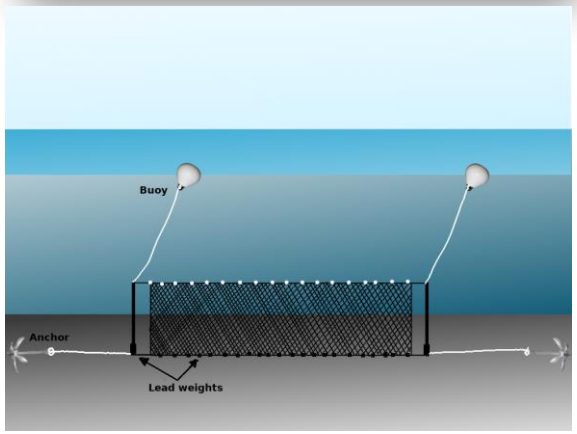
Research Methods

- Side Scan Sonar (SSS) to map river morphology and bottom sediment
- Traditional fishing - extend our genetic database for population studies
- Optimize eDNA metabarcoding method to determine occupancy and seasonality in sturgeon within Georgian waters (fish biodiversity monitoring).

Sturgeon habitat studies

- D-net
- Adult sturgeon fishing





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SMITH-ROOT eDNA Sampler backpack

Expected Outcomes

- Develop long-term sturgeon monitoring methods;
- Harmonization of the methods with national and international biodiversity obligations;
- Develop a monitoring system that can be replicated (other water systems and species);
- Build the foundation **sturgeon research group** in-country that collaborates with national and international institutions and organizations, and government.

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Sturgeon Monitoring in Georgia

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Research fishing

- Juvenile fishing
- Different times during the season
- Data collection protocols

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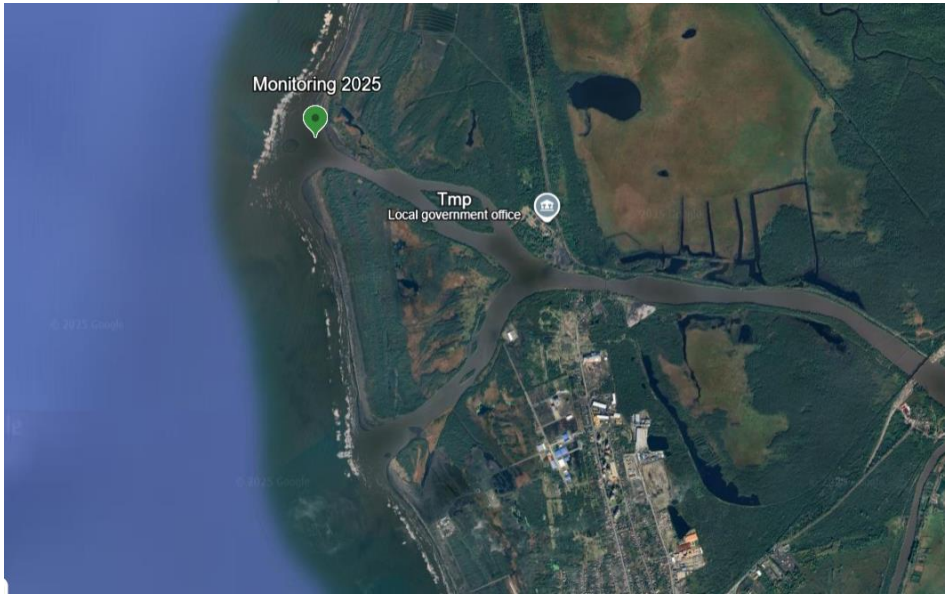
Methodology

Sampling Method

- **Gear:** Trammel nets (3 × 100 m, parallel to current)
- **Mesh size:** Outer 100 mm, Inner 18 mm
- Focus: YOY sturgeon
- Nets set/retrieved by motorboat, regularly checked



Data Collection

- Morphometrics: total & fork length, girth, weight
- Species ID: morphology
- Genetics: anal fin clips
- Photos for documentation
- Water temperature recorded
- Fish released immediately

Fishing Schedule

- Overnight: late night & early morning
- Adapted to weather & river conditions

Fieldwork

Our Team

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Thank You!

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