

## CONTEXT

### A natural economical source

**Boreal Forest = 2<sup>nd</sup> largest terrestrial biome (14 million km<sup>2</sup>)**

Two thirds is managed for timber production = 37% of the world's timber

### The Log Drive

Forestry is a major economic force in Canada

The logs extracted by the forest industry were initially transported by waterways (log driving).



## FRAMEWORK

### Wood accumulation

A significant number of the logs transported ended up on the bottom of the lakes used by the drive



### Special conditions

The water layer on the bottom of lakes has a constant temperature of 4 degrees, as well as anoxic conditions

### Woody debris

#### Positive aspects

Provides valuable river habitat  
Protection from predation

#### Negative aspects

Anoxic and mercury producing zones

### The Objective

#### Main Objective

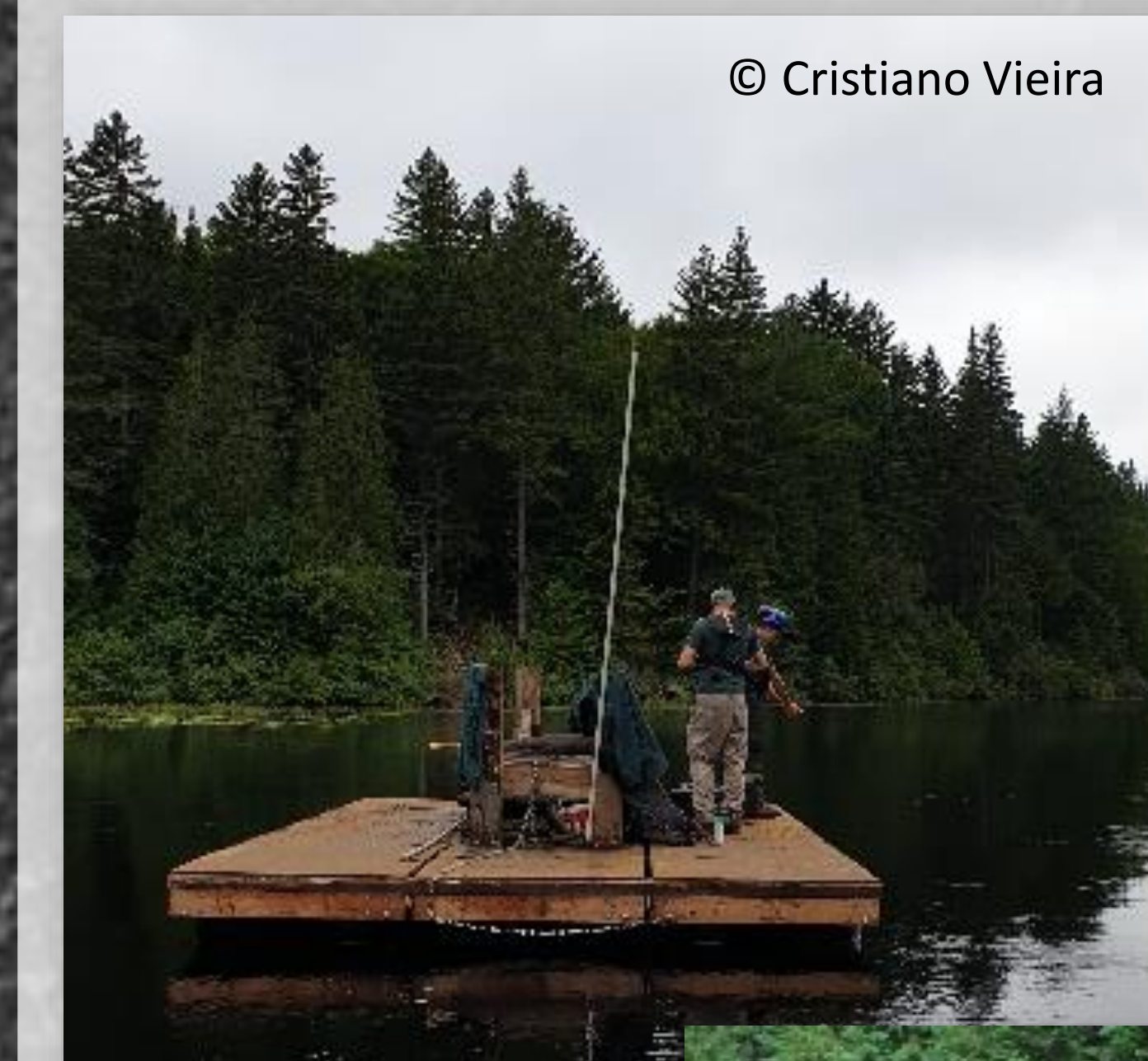
Evaluate the impacts of **log driving on aquatic ecosystems** in regions that have been heavily affected by this disturbance

#### Specific Objective

Quantify the **biomass of logs**;  
Evaluate the impacts of logs on **aquatic communities**;  
Assess the potential of log extraction to **restore aquatic ecosystems**

## METHODOLOGY

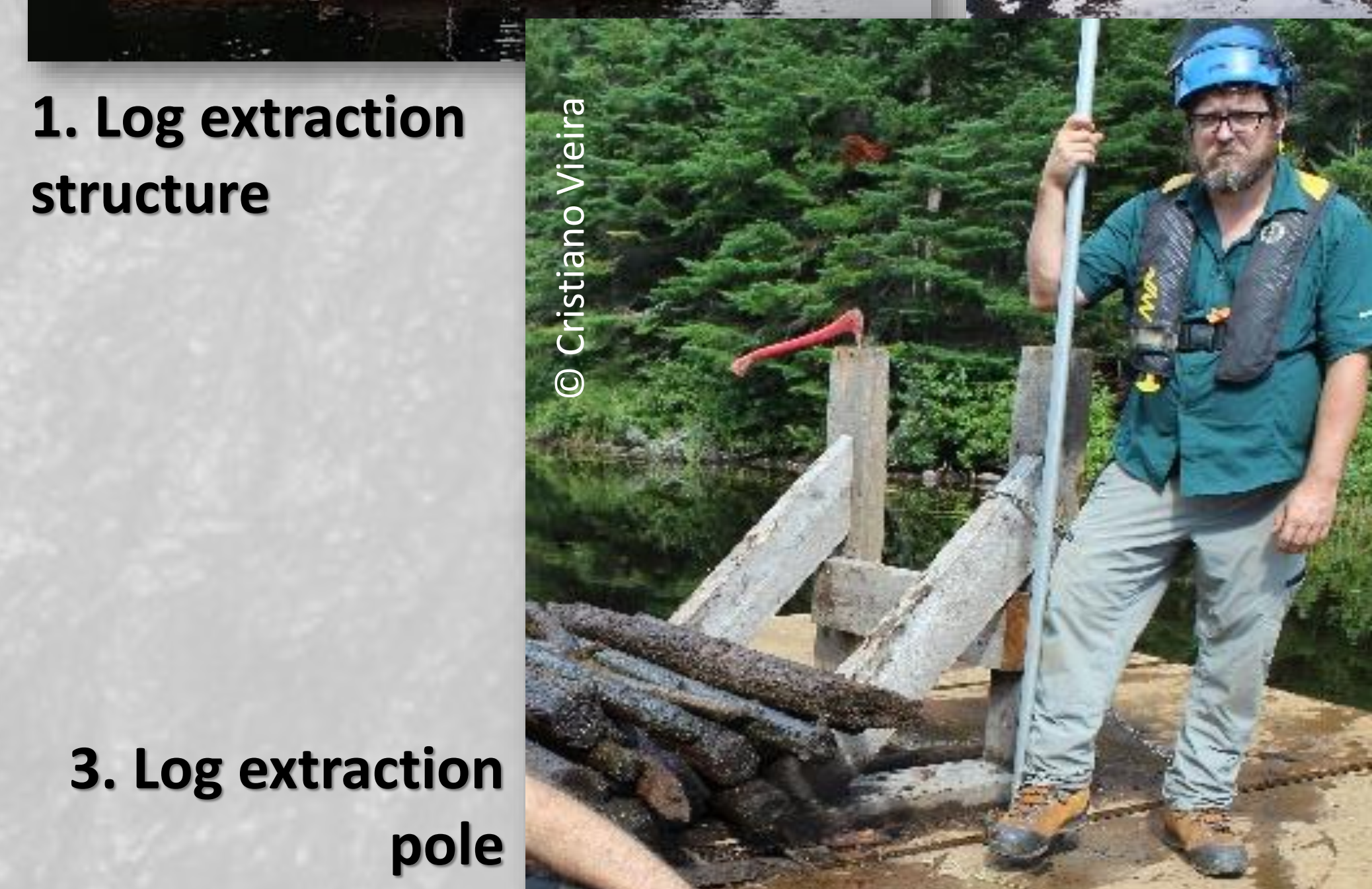
- Usage of an **echo sounder** (DT-X Extreme - Biosonics) to map the log cover in lakes;
- Identification and characterization of **aquatic communities**;
- Sampling of suspended particulate matter (seston);
- Development of **methyl-mercury** analyses.



1. Log extraction structure



2. Log extraction procedure



3. Log extraction pole



#### Outcome of the project

Understanding the impact of **past human disturbances** on aquatic organisms and doing recommendations for a **potential restoration of these aquatic ecosystems**