

## Introduction

In this report, we will explore the various factors that influence *fluid dynamics* in glaciers and how they contribute to the formation and behavior of these natural structures.

1. The climate
  - Temperature
  - Precipitation
2. The topography
3. The geology

Glaciers as the one shown in Figure 1 will cease to exist if we don't take action soon!



Figure 1: *Glaciers* form an important Precipitation of the earch's climate system.

## Methods

We follow the glacier melting models established in [1].

The equation  $Q = \rho Av + C$  defines the glacier flow rate.

The flow rate of a glacier is defined by the following equation:

$$Q = \rho Av + C$$

The flow rate of a glacier is given by the following equation:

$$Q = \rho Av + \text{time offset}$$

Total displaced soil by glacier flow:

$$7.32\beta + \sum_{i=0}^{\nabla} \frac{Q_i}{2}$$

Total displaced soil by glacier flow:

$$7.32\beta + \sum_{i=0}^{\nabla} \frac{Q_i(a_i - \varepsilon)}{2}$$

$$v := \begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix}$$

$$a \rightsquigarrow b$$

## Bibliography

- [1] R. Hock, “Glacier melt: a review of processes and their modelling,” *Progress in Physical Geography: Earth and Environment*, vol. 29, no. 3, pp. 362–391, 2005, doi: 10.1191/0309133305pp453ra.