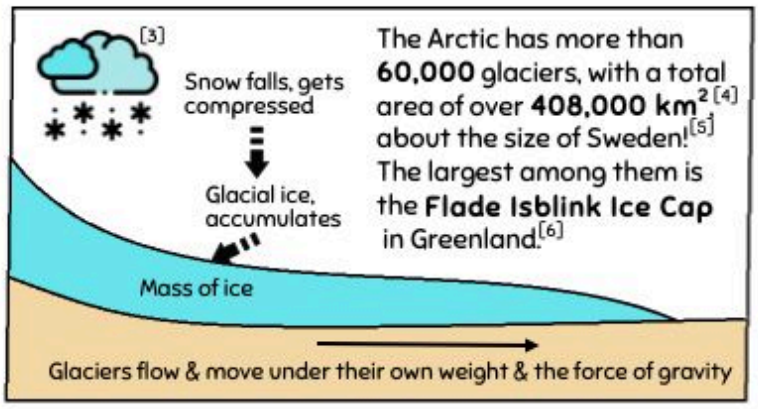
MELTING GLACIERS IN THE ARCTIC

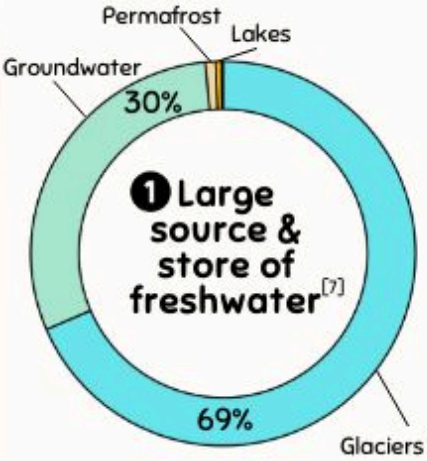
WHAT ARE GLACIERS?

A glacier is a mass of ice that forms on land and that is moving slowly[2]



The Arctic has more than **60,000** glaciers, with a total area of over **408,000 km²**[4] about the size of Sweden![5] The largest among them is the **Flade Isblink Ice Cap** in Greenland.[6]

WHY ARE GLACIERS IMPORTANT?



2 Shape & sculpt landscapes:

Glacier retreat	Glacier advance
Deposits	Erosion

HOW ARE GLACIERS RESPONDING TO CLIMATE CHANGE?

Rising temperatures are causing glaciers to **melt rapidly**

By **2100**, based on **intermediate** and **high** emission scenarios...

in the Arctic...

Glaciers will lose **30%** to **43%** of their volume

which is equivalent to...

104 mm – **147 mm** of sea level rise

& in the Canadian Arctic...

Glaciers will lose **26%** to **35%** of their volume

41 mm – **57 mm** of sea level rise

...making the Arctic, and the Canadian Arctic specifically, the **largest contributor** to sea level rise through glacier melting[4]

HOW ARE MELTING GLACIERS AFFECTING CANADIAN COMMUNITIES?

Glaciers used as landmarks for orientation are disappearing and changing shape and size.[8] Two ice caps in St. Patrick's Bay on Ellesmere Island have already disappeared.[9]

Glacial lakes – a source of freshwater and hydropower – will diminish once the glaciers disappear. Water levels in Kluane Lake have already declined by two meters.[11]

Glacier tourism will decline as glaciers become smaller and less striking. Tourism is an important source of income for locals; in Nunavut, it contributes $300 million to the economy and creates 2,500 jobs every year.[13]

Hazards caused by flooding and erosion will increase as glaciers melt more rapidly.[14] Glacier floods have already been recorded in 30 different sites across Canada.[15]

References & Icon Sources:
https://utoronto-my.sharepoint.com/:b:/g/personal/hana_fahim_mail_utoronto_ca/EUJVi2V9mhJInCSR7cDCI88BPmKlVReGvU_QH8WVdaG7ww?e=bj1eGD

Infographic by Hana Fahim