# LIFE ON THIN ICE

# Impact of Melting Arctic Sea Ice on Northern Communities



Multi-year ice: 3 - 4 m thick; lasts for more than two years; formed from older ice [4]

> Fast ice: sea ice that is attached to land (i.e. the shore or bottom of the ocean)<sup>[2]</sup> It fo

Sea ice is an important part of the Arctic.

It affects the global

climate.

It forms, grows, and melts in the ocean.[1]

Drift ice: sea ice that is not attached to land<sup>[3]</sup>

**First-year ice:** 0.3 – 2 m thick; last for one year; formed from younger ice<sup>[4]</sup>

# WHAT IS CURRENTLY HAPPENING TO SEA ICE?



95%

of the thickest Arctic sea ice has melted[6]

YEAR

#### Sea ice is declining by 13% per decade<sup>[5]</sup>

# WHY IS SEA ICE SO IMPORTANT?

Sea ice helps to maintain Earth's energy balance.[7] Sea ice provides a habitat for many animals. It also contains nutrients that benefit polar ecosystems.<sup>[8]</sup>



Since sea ice is cold and salty, it sinks towards the ocean floor, near the equator, promoting oceanic circulation.<sup>[1]</sup> Sea ice has a high albedo, which allows it to reflect incoming solar radiation.[7]

# **IMPACTS ON CANADIAN COMMUNITIES**



Lifesyle changes<sup>[9]</sup>



Activities, like skating, become dangerous<sup>[9]</sup> Transportation becomes more dangerous<sup>[9]</sup> تربی کرک Changes in tourism<sup>[9]</sup>

### WHAT CAN BE DONE TO PROTECT SEA ICE?



Support organizations that take actions to protect the sea ice.

Sarmitha Sivakumaran

Reduce your own carbon footprint.

More research needs to be done on ways to protect sea ice. We can then learn how to effectively help communities living in the Arctic.

