

A wide-angle photograph of an Arctic landscape. The foreground is a vast, flat, snow-covered plain. In the middle ground, a small cluster of simple, rectangular houses with dark roofs is scattered across the snow. To the right, a snowmobile is parked on the snow. In the background, there are low, rounded hills or mountains, also covered in snow. The sky is a pale, clear blue, suggesting a bright day. The overall scene is desolate and cold.

# Climate Change Impacts on Arctic Char and the Implications for Inuit Subsistence

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1000 km



Greenland

Inuvialuit  
Settlement  
Region

Beaufort Sea

Ulukhaktok

Amundsen  
Gulf

Victoria  
Island

Arctic Circle

USA

YK

NT

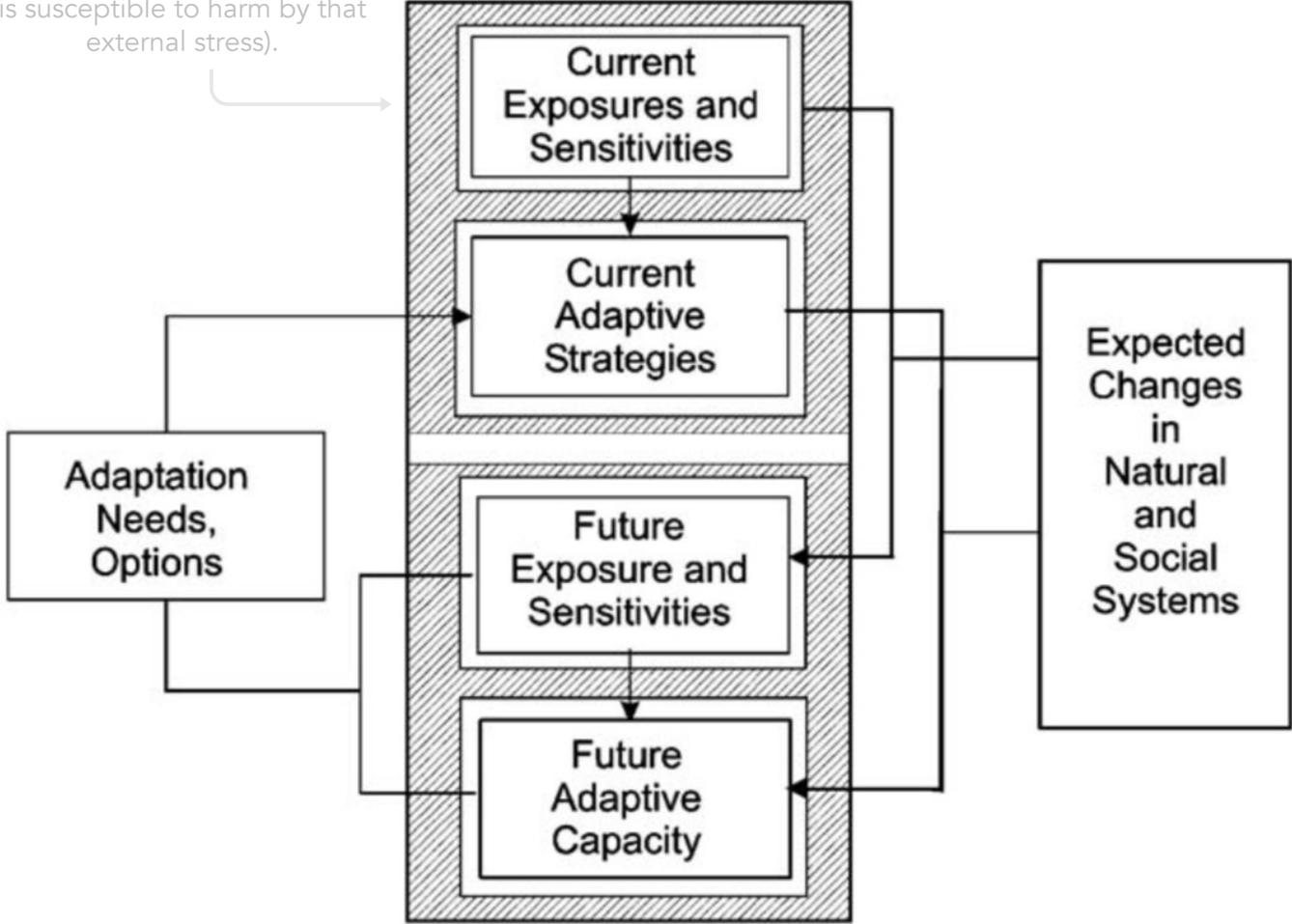
# Objectives

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1. Document Inuit knowledge and observations of Arctic char.
2. Identify current exposure-sensitivities affecting Inuit-Arctic char interactions.
3. Characterize the adaptive strategies employed to manage these conditions.

# Research Approach

(The external stress placed on a system (e.g., a community) and the degree to which the system is susceptible to harm by that external stress).



(The necessary adjustments in a system's behaviour required to manage external stress).

(Ford & Smit, 2004; Smit & Wandel, 2006)

# Methods: Data Collection

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Characteristics	Demographics	Sample
Gender	Male	12
	Female	12
Age	Young Adult (18-34)	0
	Adult (35-49)	7
	Elder (50-74)	14
	Oldest Elder (75+)	3
Occupation	Casual Worker	5
	Full Time Harvester	5
	Full Time Worker	4
	Retired	10

- February 16<sup>th</sup> – March 11<sup>th</sup>, 2021
- 19 semi-structured interviews over the phone
- Participants identified by local Hunters & Trappers Committee
  - Key knowledge holders
  - Avid fishers
  - Equal gender representation

Trip 2  
Feb 18/19  
Ross,

# Results



A vertical stack of dried Arctic char fish hanging against a wooden wall. The fish are arranged in a neat, vertical line, showing their characteristic reddish-orange color and textured, slightly wrinkled skin. The background consists of vertical wooden planks, some of which are weathered and greyed. A white pipe or rod is visible on the right side of the frame.

# Objective 1

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Document Inuit knowledge and observations of Arctic char.

# Knowledge & Observations

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- Arctic char and fishing

“I grew up with it. I grew up with Arctic char all the time.” - JH



# Knowledge & Observations

- Arctic char and fishing

“I grew up with it. I grew up with Arctic char all the time.” - JH
- Uses of Arctic Char

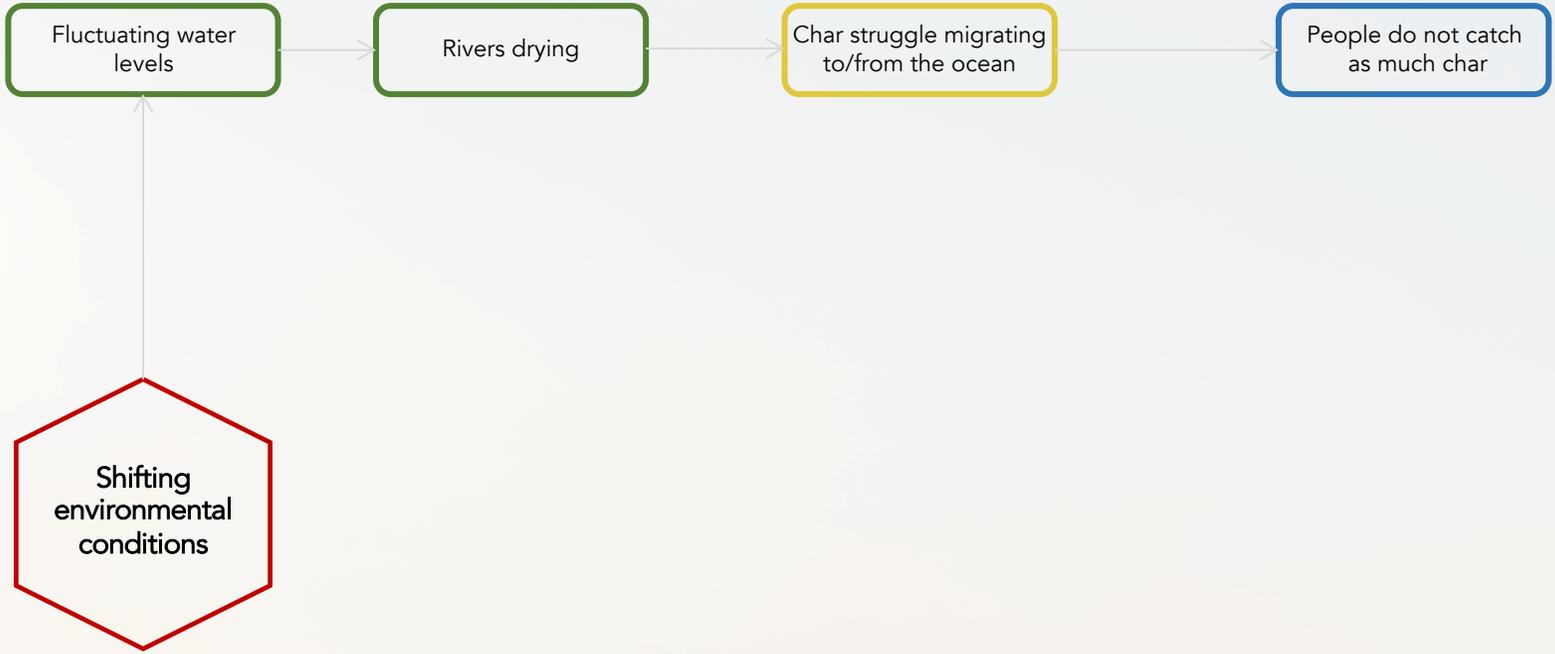


# Objective 2

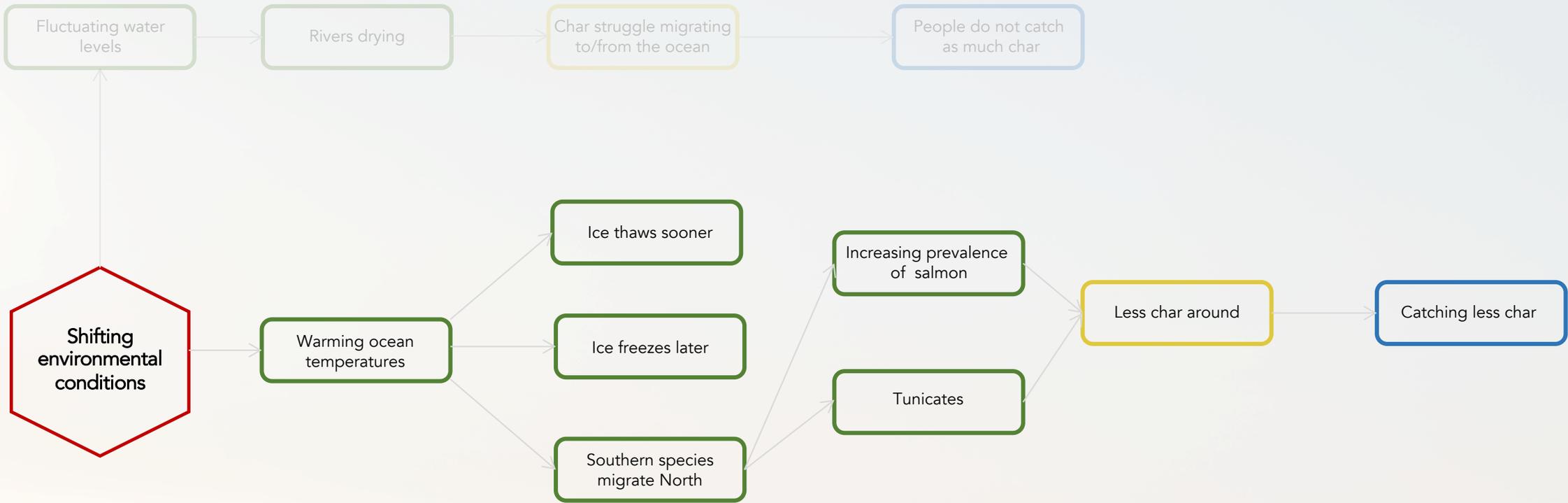
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Identify current exposure-sensitivities affecting  
Inuit-Arctic char interactions.





-  Environmental Change
-  Impact on Arctic Char
-  Impact on Residents



- Environmental Change
- Impact on Arctic Char
- Impact on Residents



- Abundance
- Movement patterns
- Health
- Taste
- Size
- Appearance

Environmental Change  
Impact on Arctic Char  
Impact on Residents

A wide-angle photograph of a snowy, flat landscape. In the foreground, a large, dead fish lies on the snow, its body covered in a layer of snow. In the middle ground, a person is sitting on the snow, hunched over. In the background, several other people are standing, and a snow machine is visible. The scene is brightly lit, suggesting a sunny day.

# Objective 3

Characterize the adaptive strategies employed to manage these conditions.

# Responding to Change

## Individual Level Responses:

Fishing behaviour

- Travel further away
- More frequent trips, stay out longer
- Harvest other species

## Community Level Responses:

Adaptive co-management

- Ulukhaktok Char Working Group



A dark, atmospheric landscape at sunset or sunrise. The sky is a gradient of dark blue and black, with a thin layer of orange and yellow light near the horizon. Silhouettes of mountains and a body of water are visible in the foreground. The word "Conclusion" is written in white, sans-serif font, centered horizontally and partially overlaid by a vertical white line on the left side.

# Conclusion

# References

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- Ford, J. D., & Smit, B. (2004). A Framework for Assessing the Vulnerability of Communities in the Canadian Arctic to Risks Associated with Climate Change. *Arctic*, 57(4), 389–400.
- Pettitt-Wade, H., Pearce, T., Kuptana, D., Gallagher, C., Scharffenberg, K., Lea, E., Hussey, N. ., & Loseto, L. . (2020). Inuit observations of a Tunicata bloom unusual for the Amundsen Gulf, western Canadian Arctic. *Arctic Science*, 6(3), 340–351.
- Smit, B., & Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Global Environmental Change*, 16(3), 282–292.  
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