

Eeyou Coastal Habitat Comprehensive Research Project

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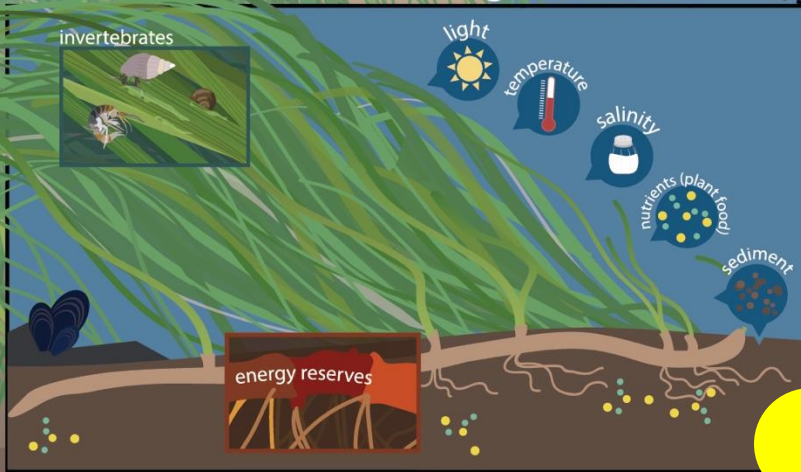
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3 Historical context

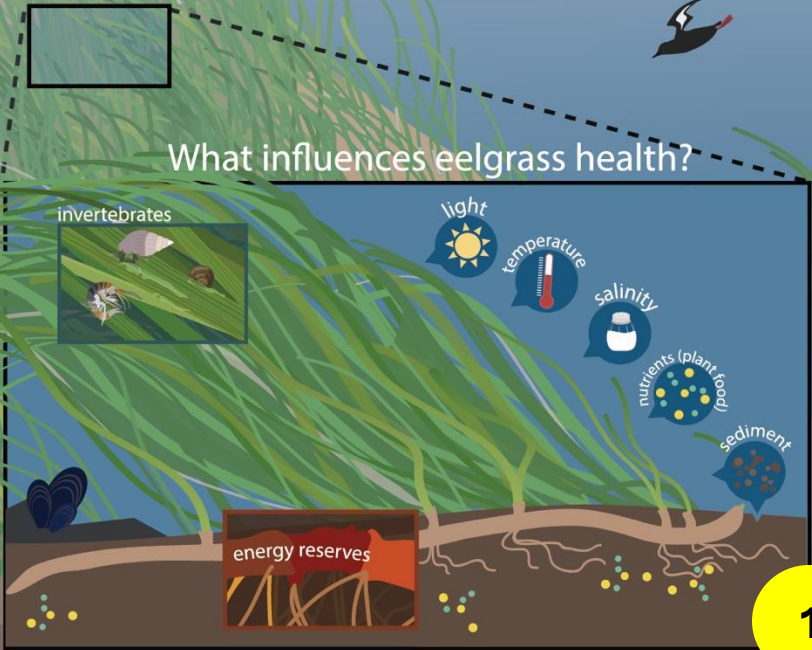
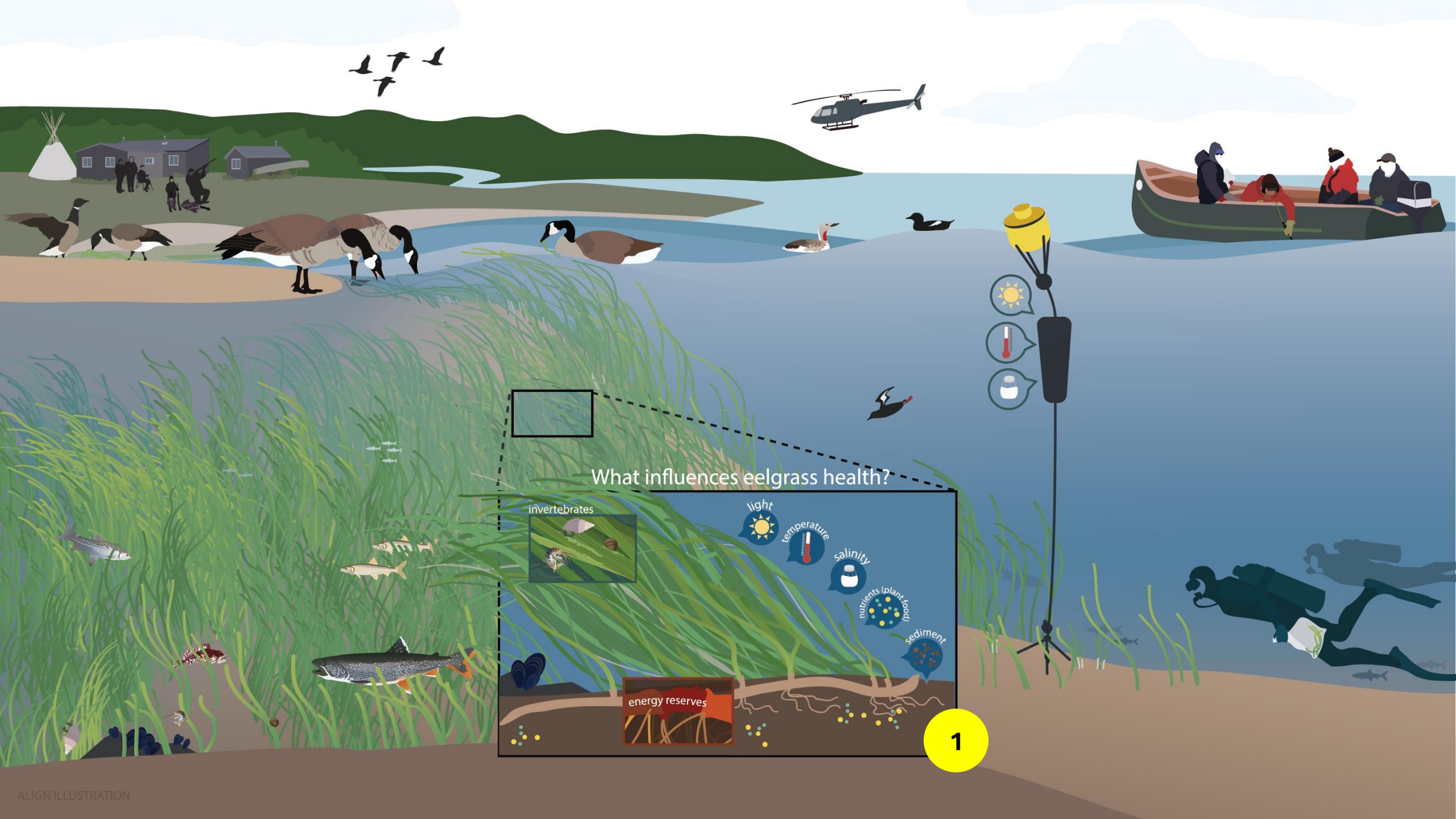
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Coastal Habitat Comprehensive Research Project

What influences eelgrass health?



1

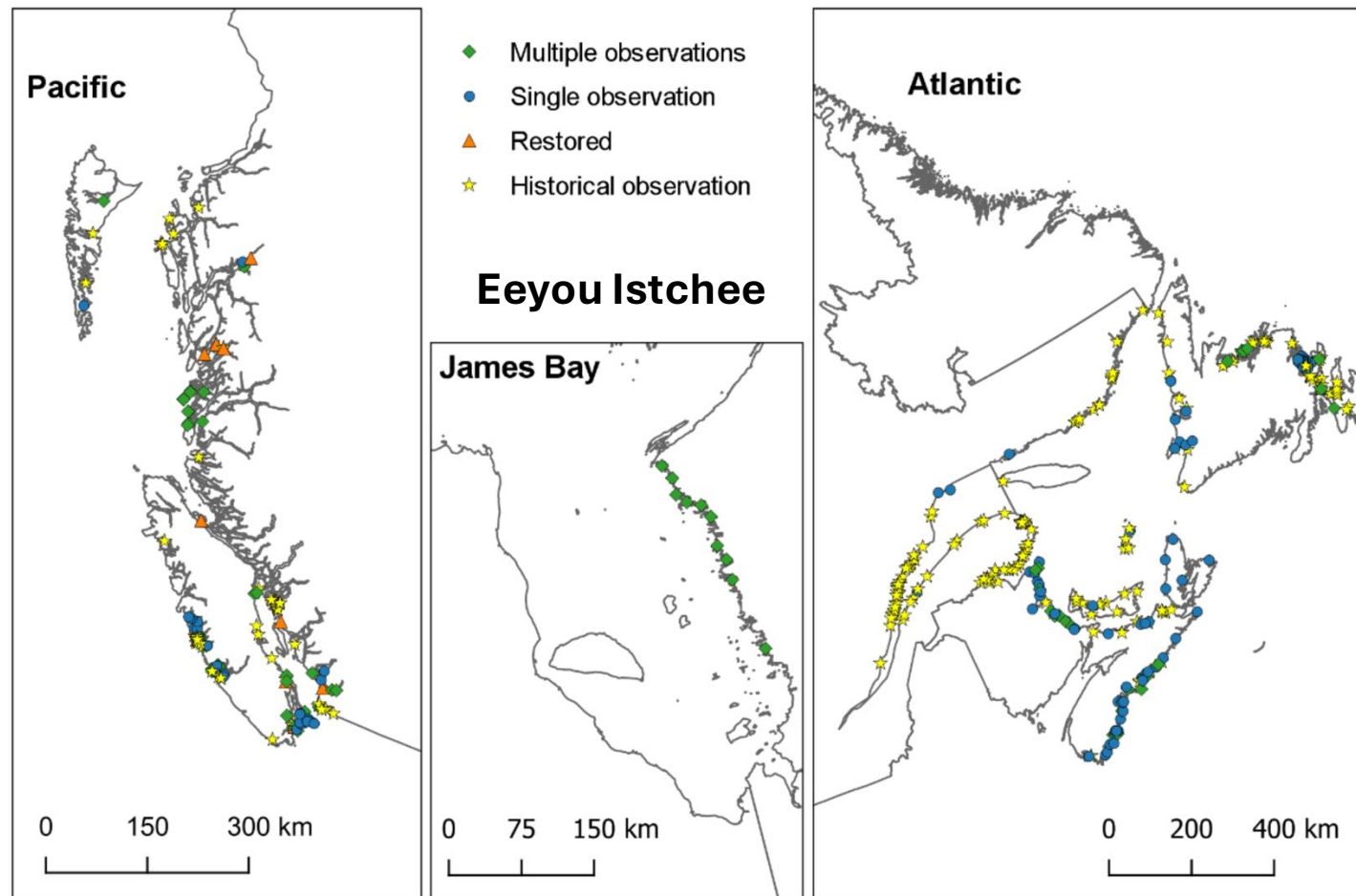


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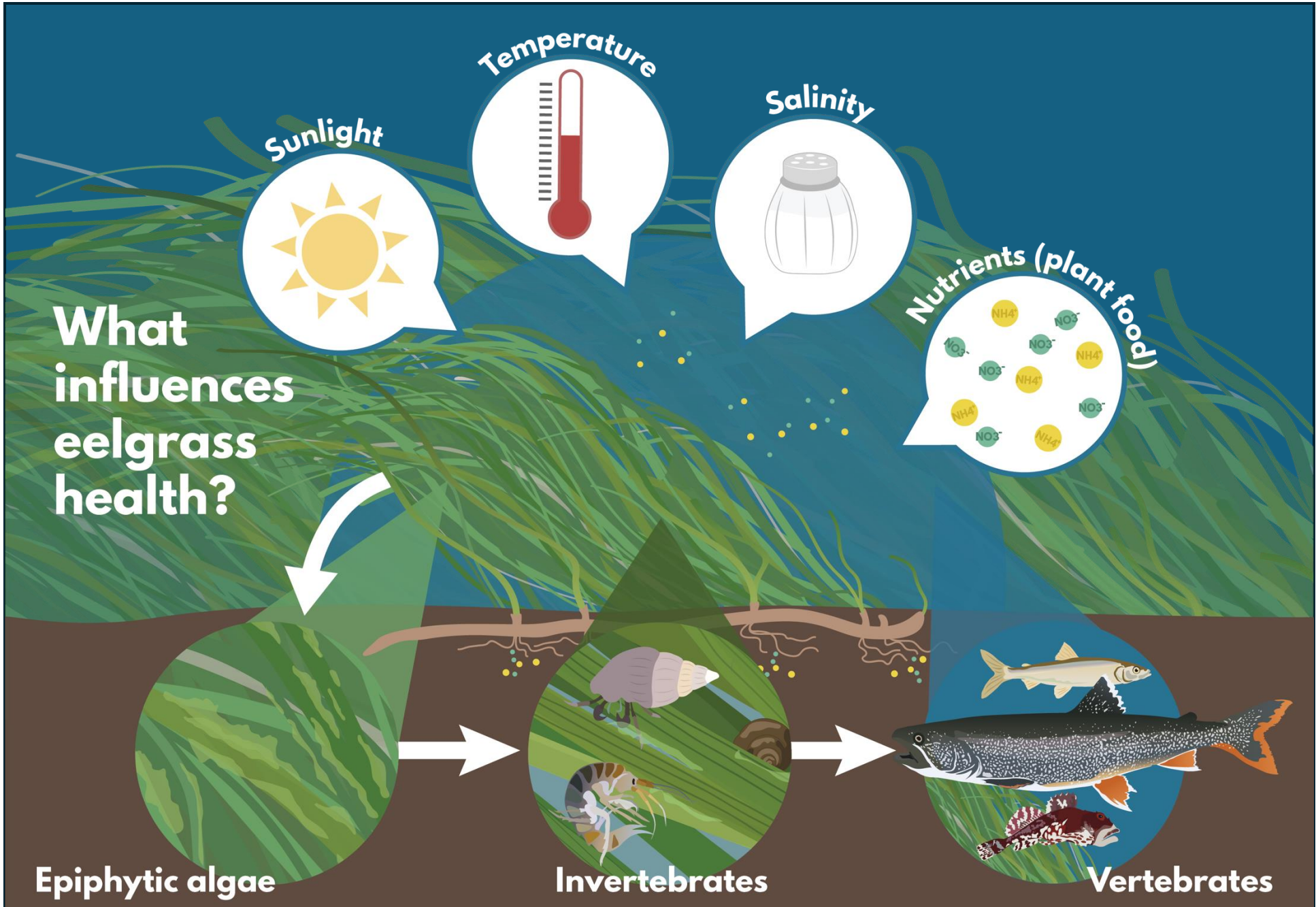
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Eelgrass
(*Zostera marina*)

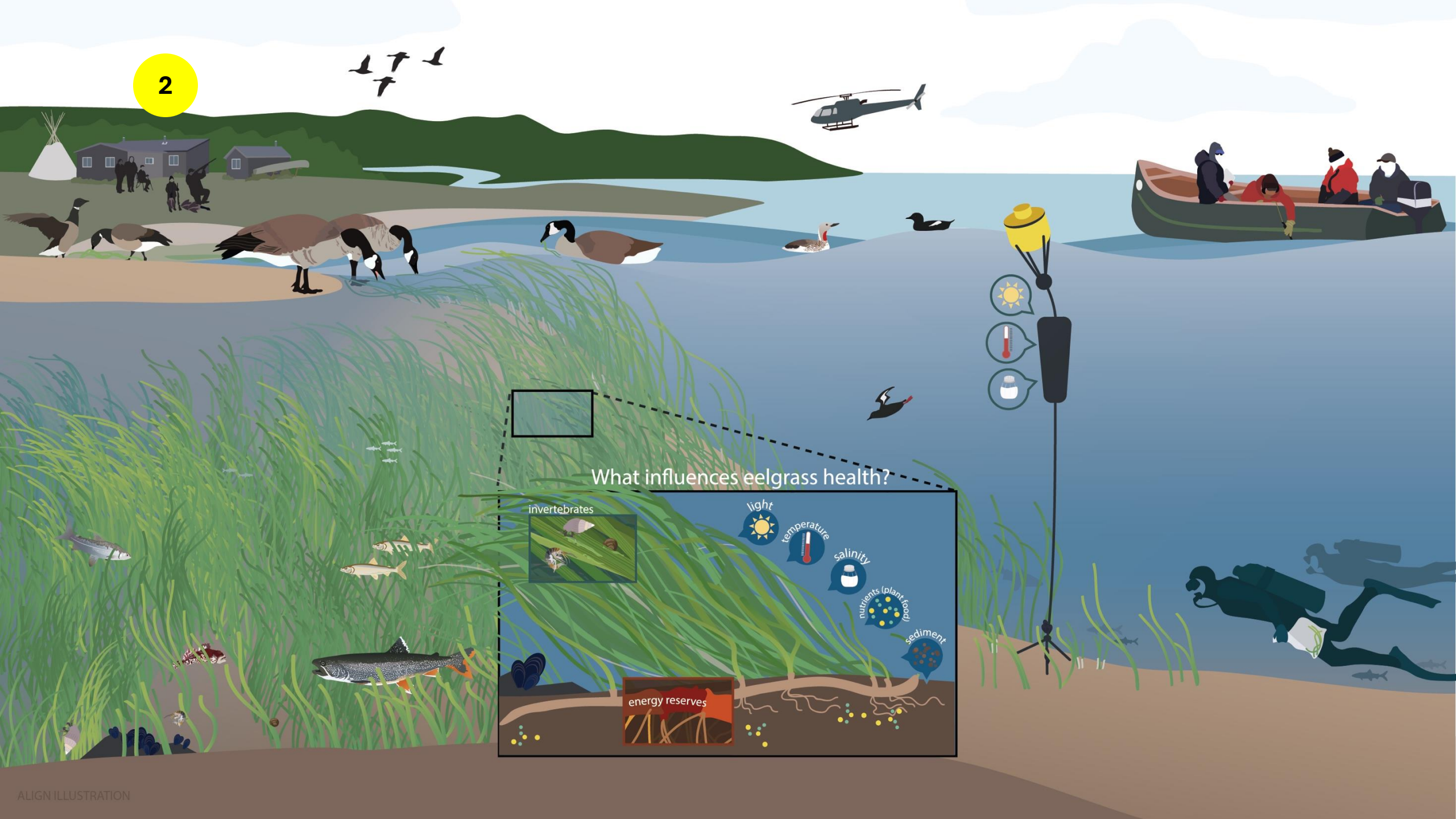
Eelgrass sites in Canada, 2020



Environment and Climate Change Canada (2020) Canadian Environmental Sustainability Indicators: Eelgrass in Canada. Consulted on 02, 21, 2025.







What influences eelgrass health?

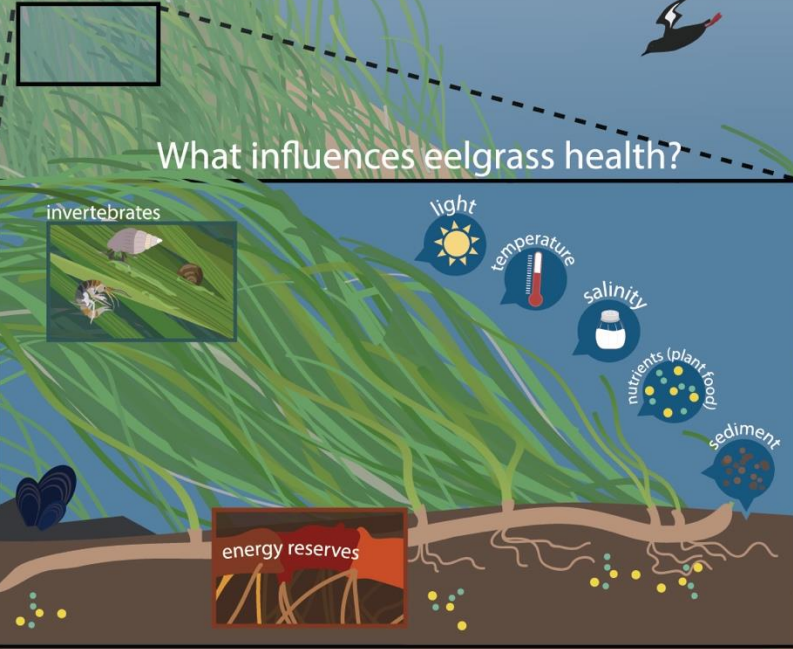
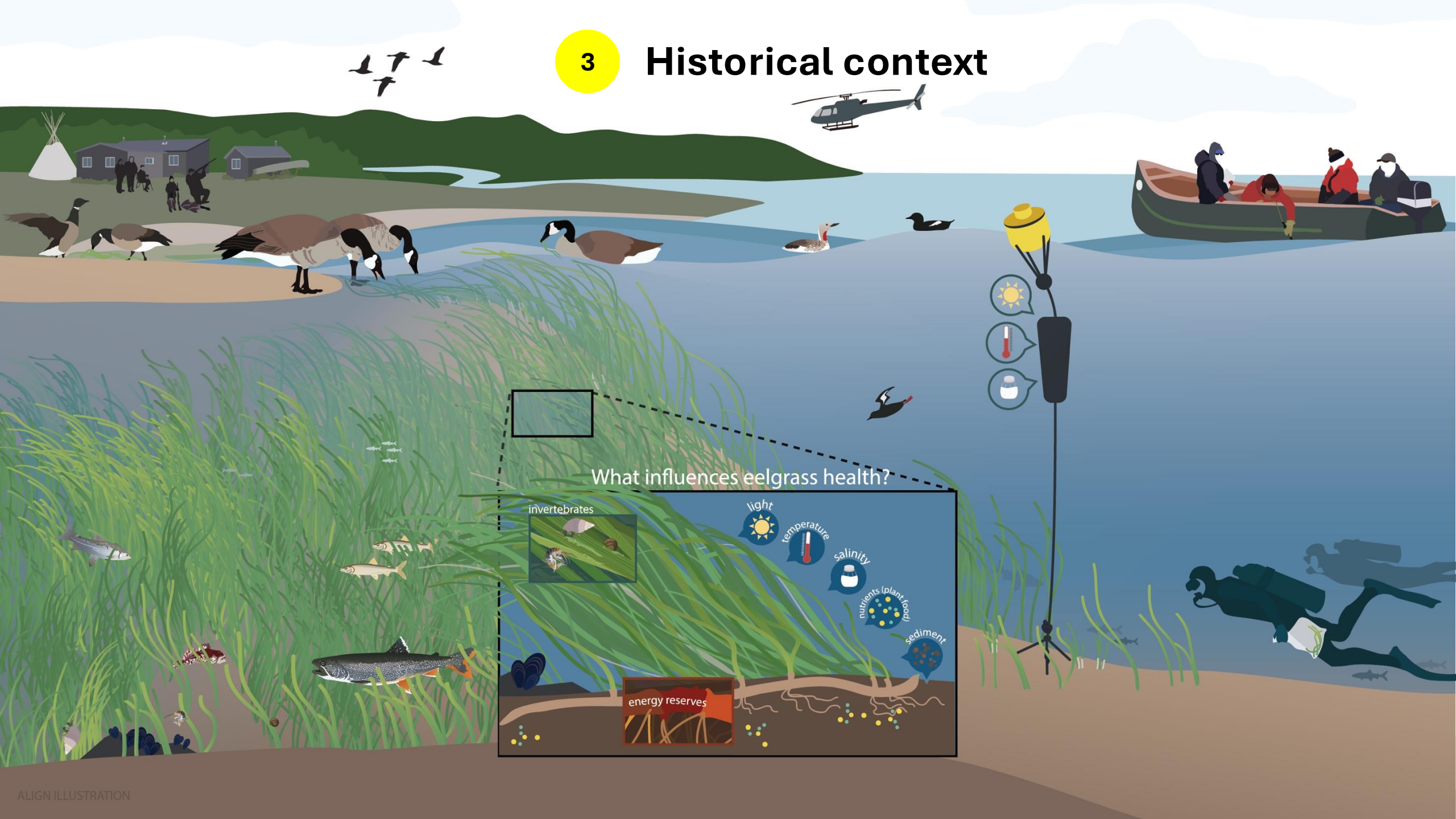
- light
- temperature
- salinity
- nutrients (plant food)
- sediment
- energy reserves
- invertebrates

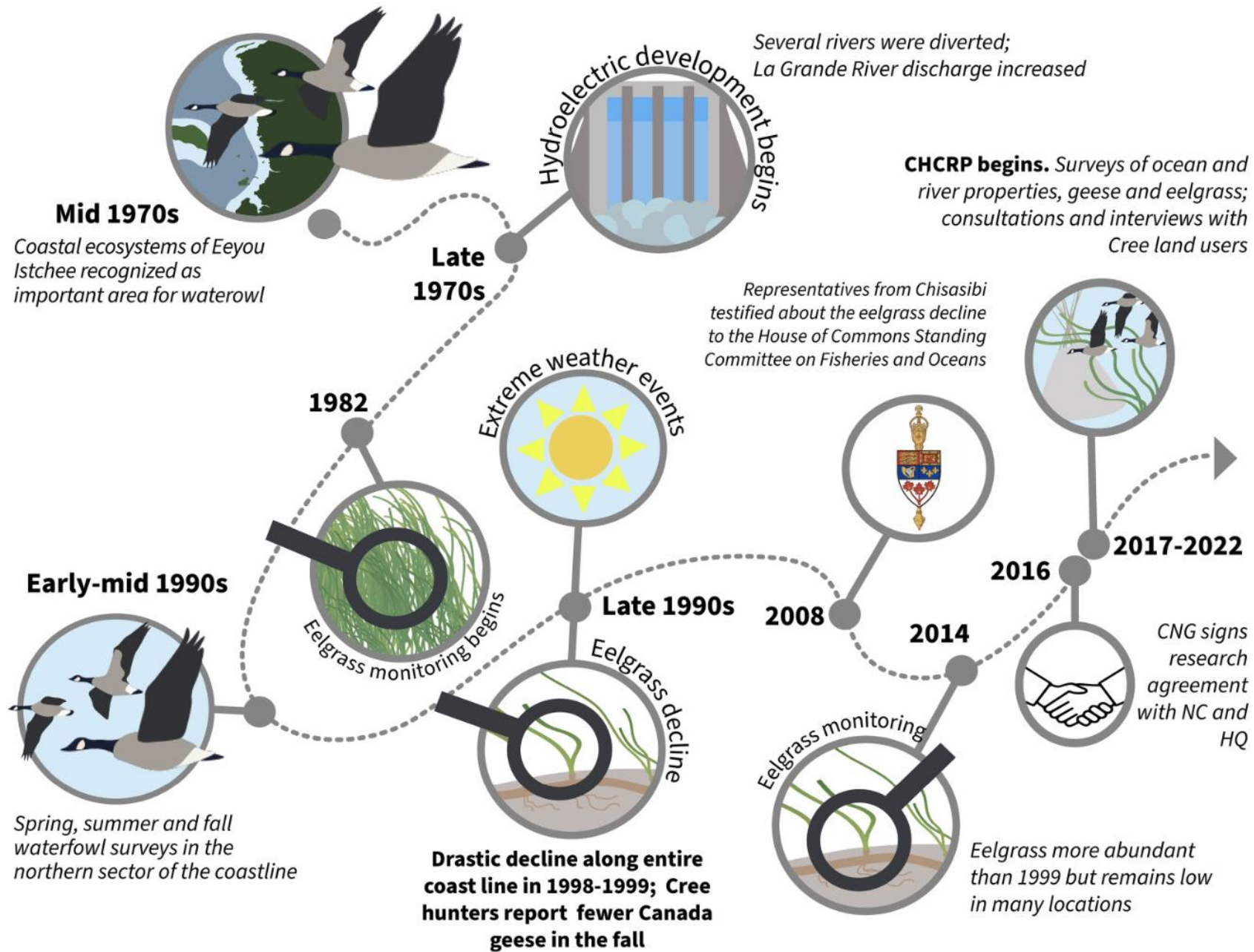


Idrobo et al. 2024

3

Historical context



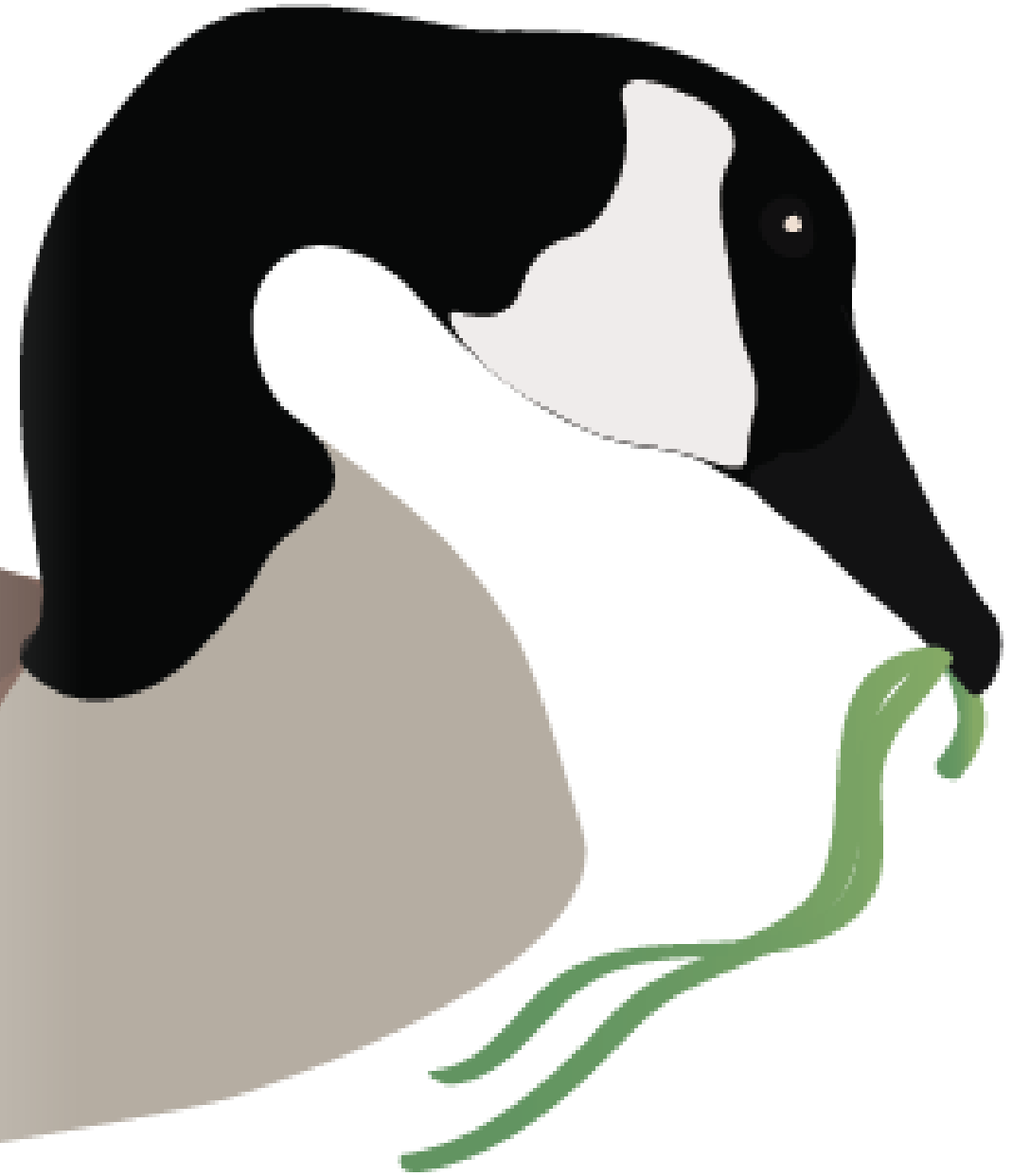


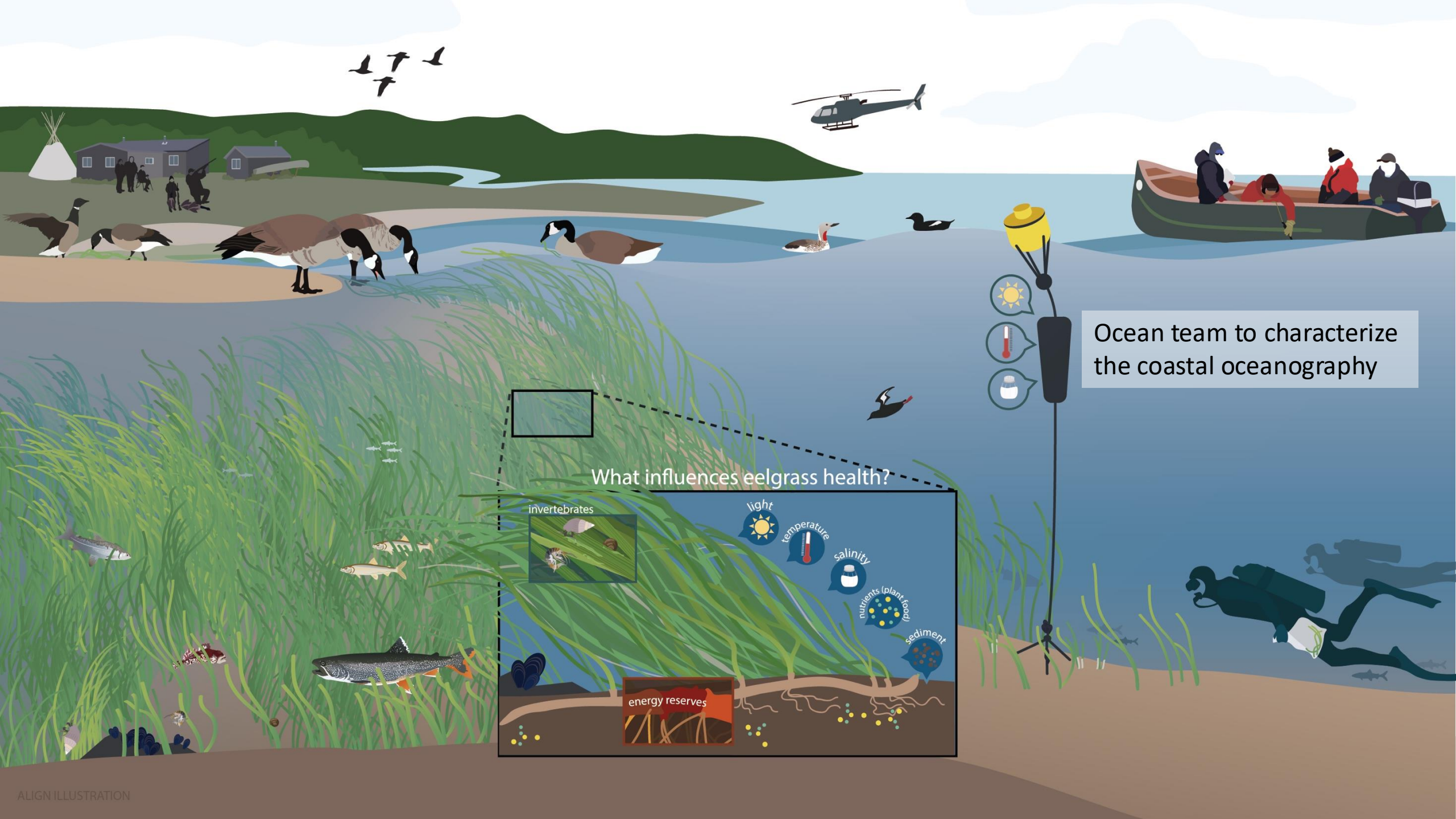
Eeyou Coastal Habitat
Comprehensive
Research Project is
Cree driven project



From 2017 to 2022, the project was governed by the following overarching questions:

- What are the main factors affecting the current growth of eelgrass along the eastern coast of James Bay?
- What is the impact of the current state of eelgrass beds on waterfowl presence along the coast of James Bay and, subsequently, Cree hunting activities?



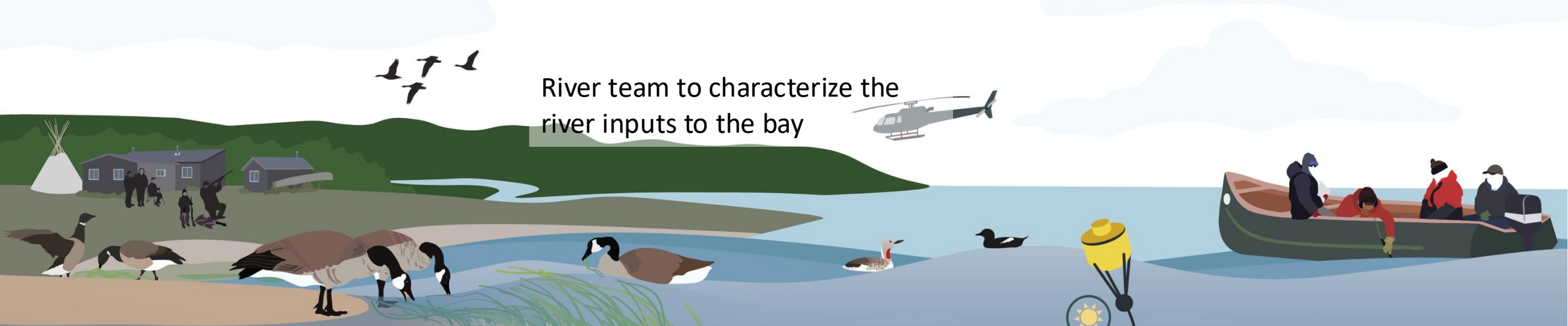


Ocean team to characterize the coastal oceanography

What influences eelgrass health?

- light
- temperature
- salinity
- nutrients (plant food)
- sediment
- invertebrates
- energy reserves

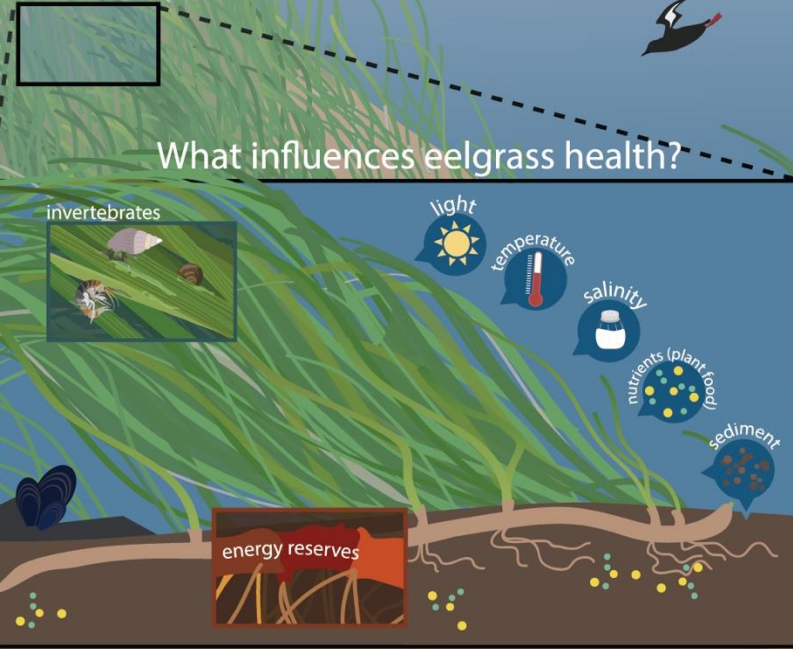
River team to characterize the river inputs to the bay



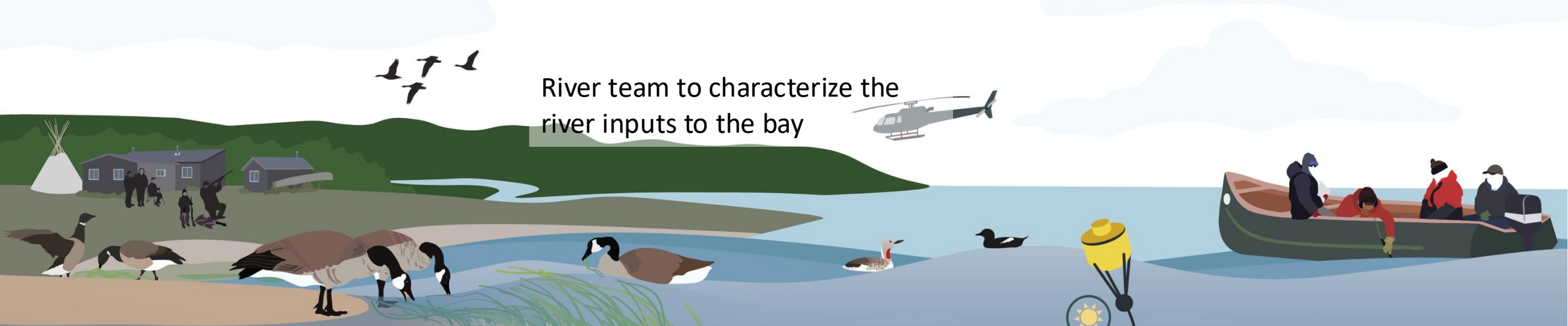
Ocean team to characterize the coastal oceanography



What influences eelgrass health?



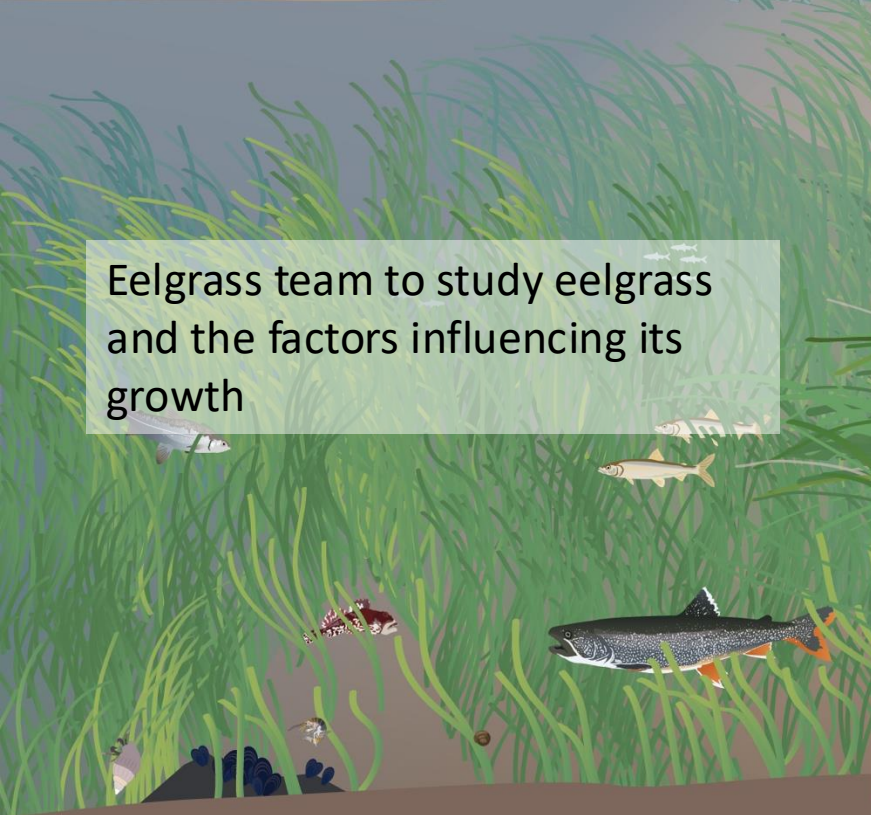
River team to characterize the river inputs to the bay



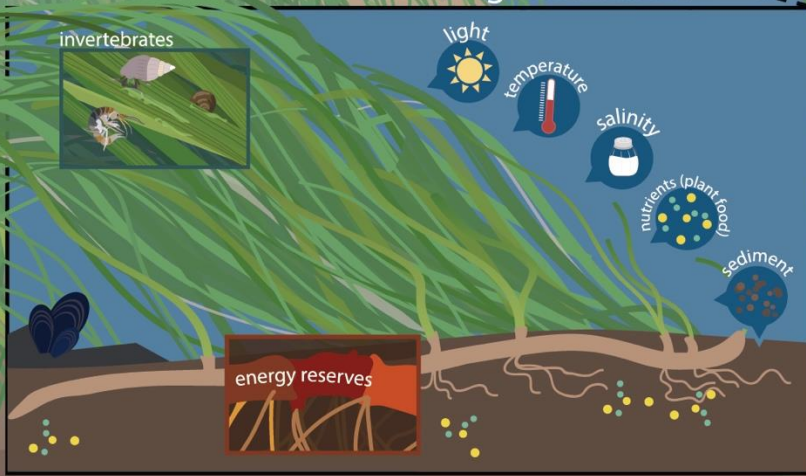
Ocean team to characterize the coastal oceanography



Eelgrass team to study eelgrass and the factors influencing its growth



What influences eelgrass health?



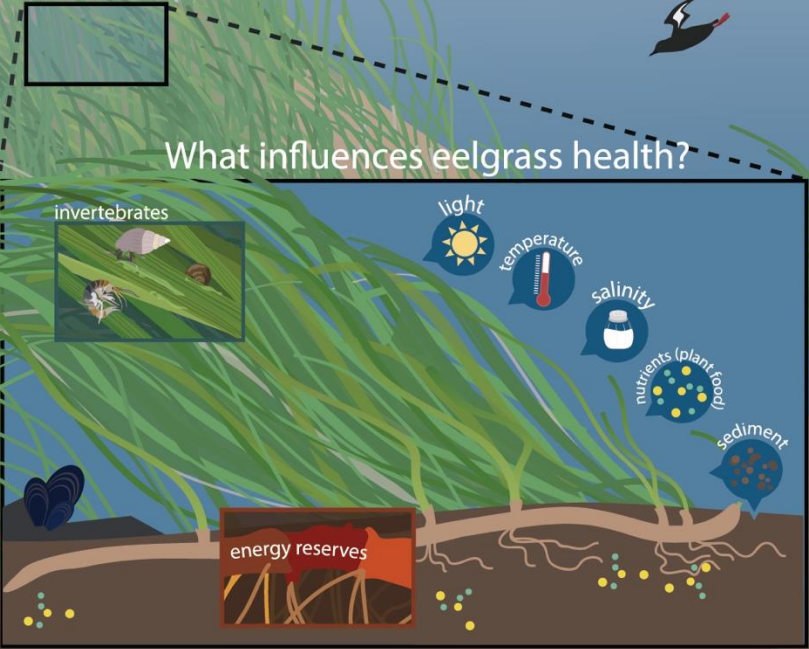
River team to characterize the river inputs to the bay

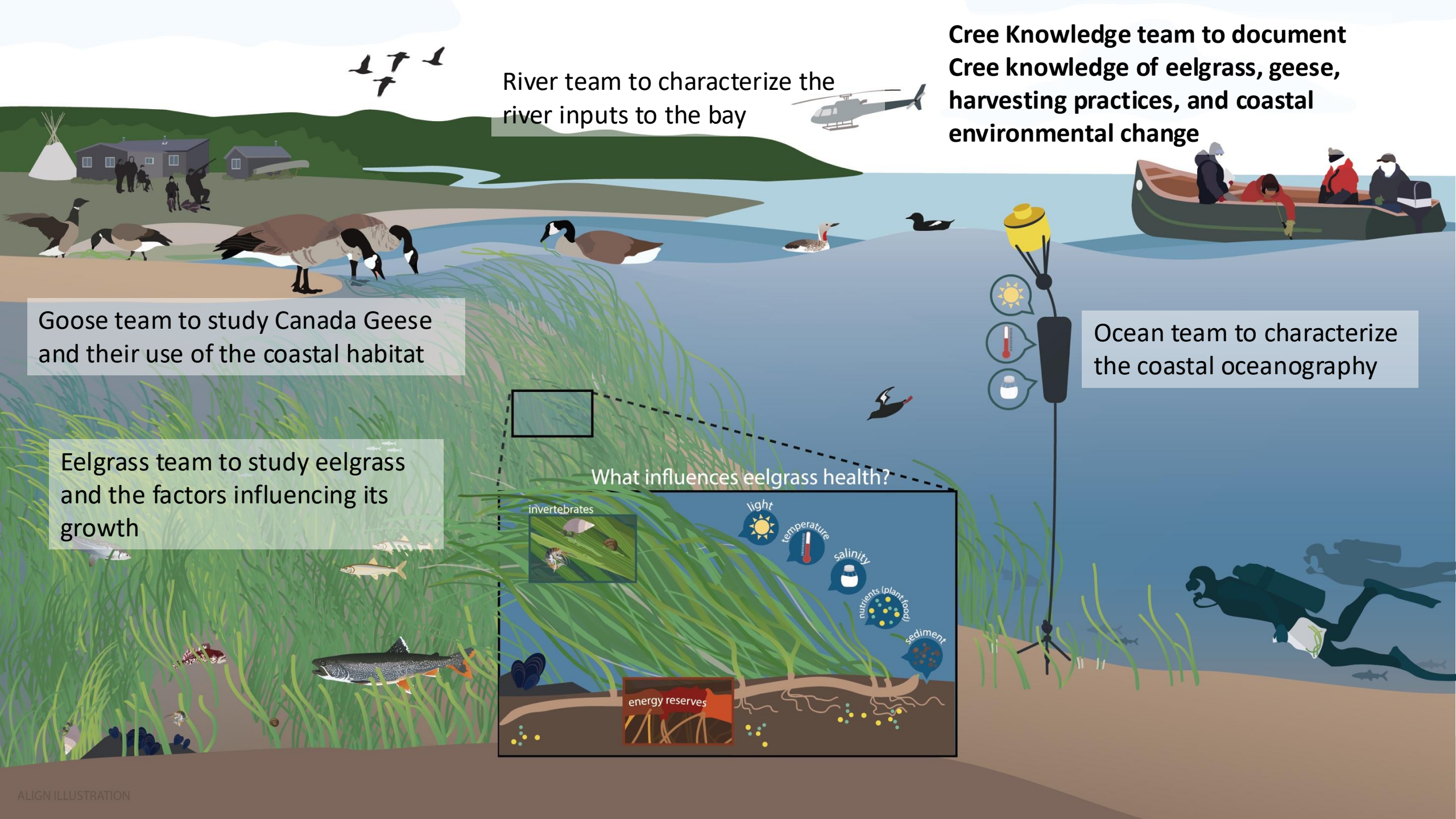
Goose team to study Canada Geese and their use of the coastal habitat

Ocean team to characterize the coastal oceanography

Eelgrass team to study eelgrass and the factors influencing its growth

What influences eelgrass health?





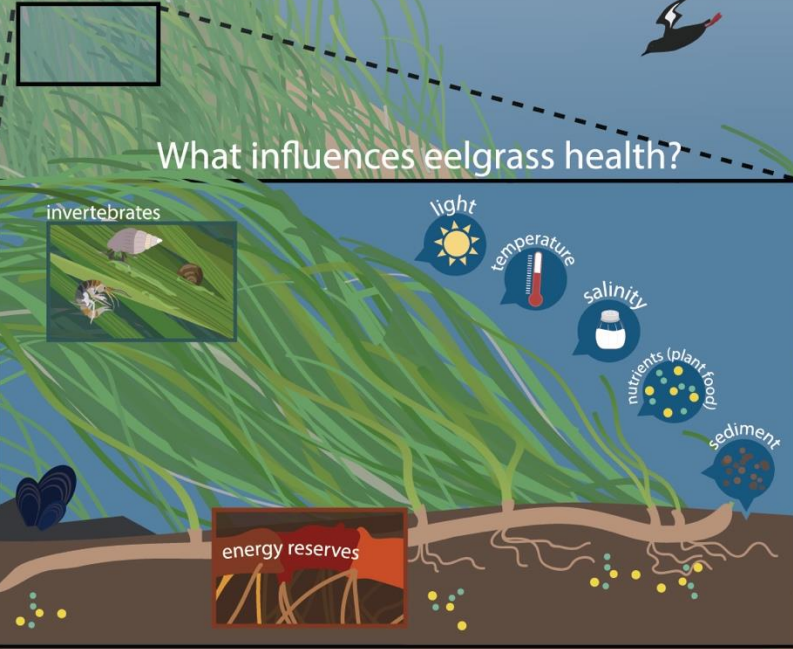
River team to characterize the river inputs to the bay

Cree Knowledge team to document Cree knowledge of eelgrass, geese, harvesting practices, and coastal environmental change

Goose team to study Canada Geese and their use of the coastal habitat

Ocean team to characterize the coastal oceanography

Eelgrass team to study eelgrass and the factors influencing its growth



North

Cree partners keep large-scale eelgrass research track during pandemic

All-Cree team retrieves 'priceless' data from the bottom of James Bay

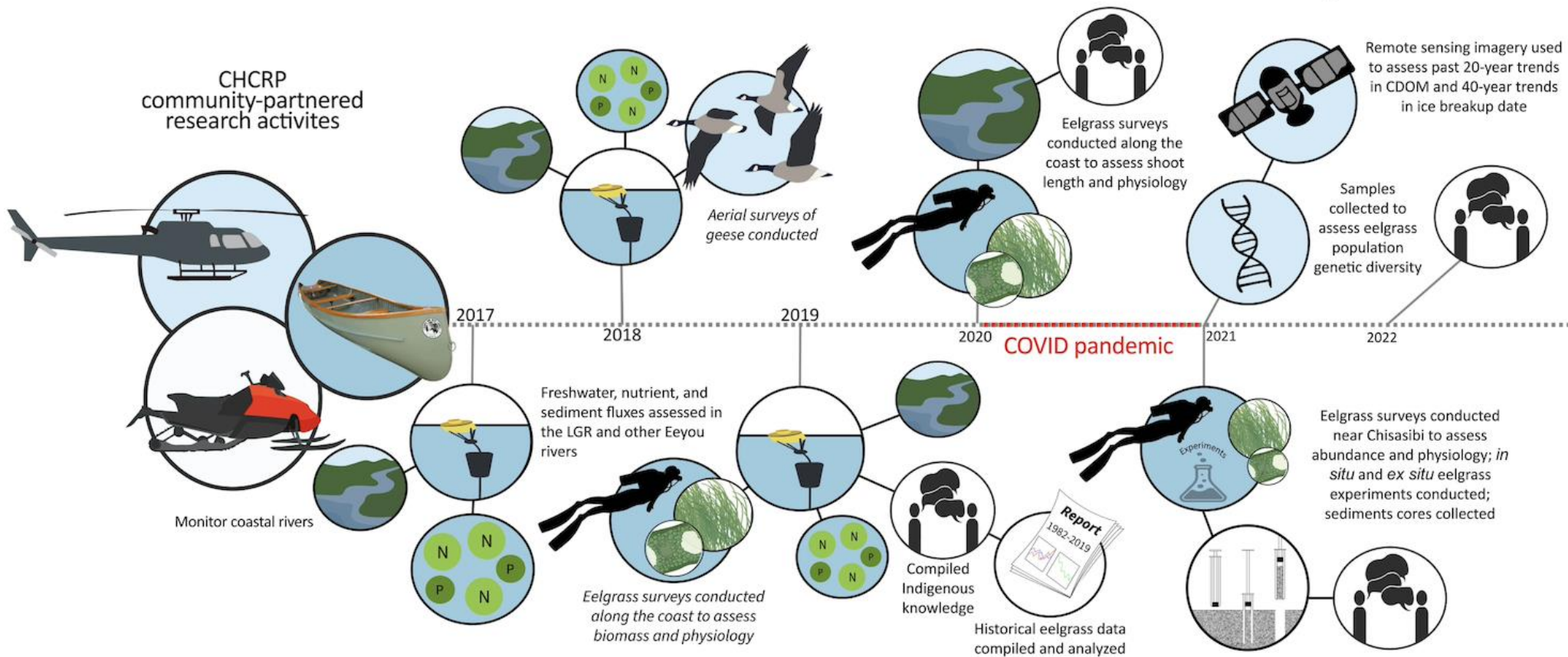
Bell, Susan · CBC News · Posted: Sep 23, 2020 7:00 AM ADT | Last Updated: September 23, 2020



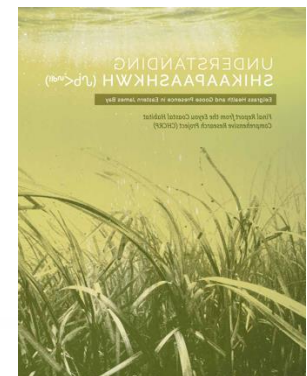
Wemindji diver Henry Stewart was a key member of an all-Cree team that stepped in when COVID-19 travel restrictions kept southern researchers away. (Submitted by Henry Stewart)



CHCRP
community-partnered
research activities

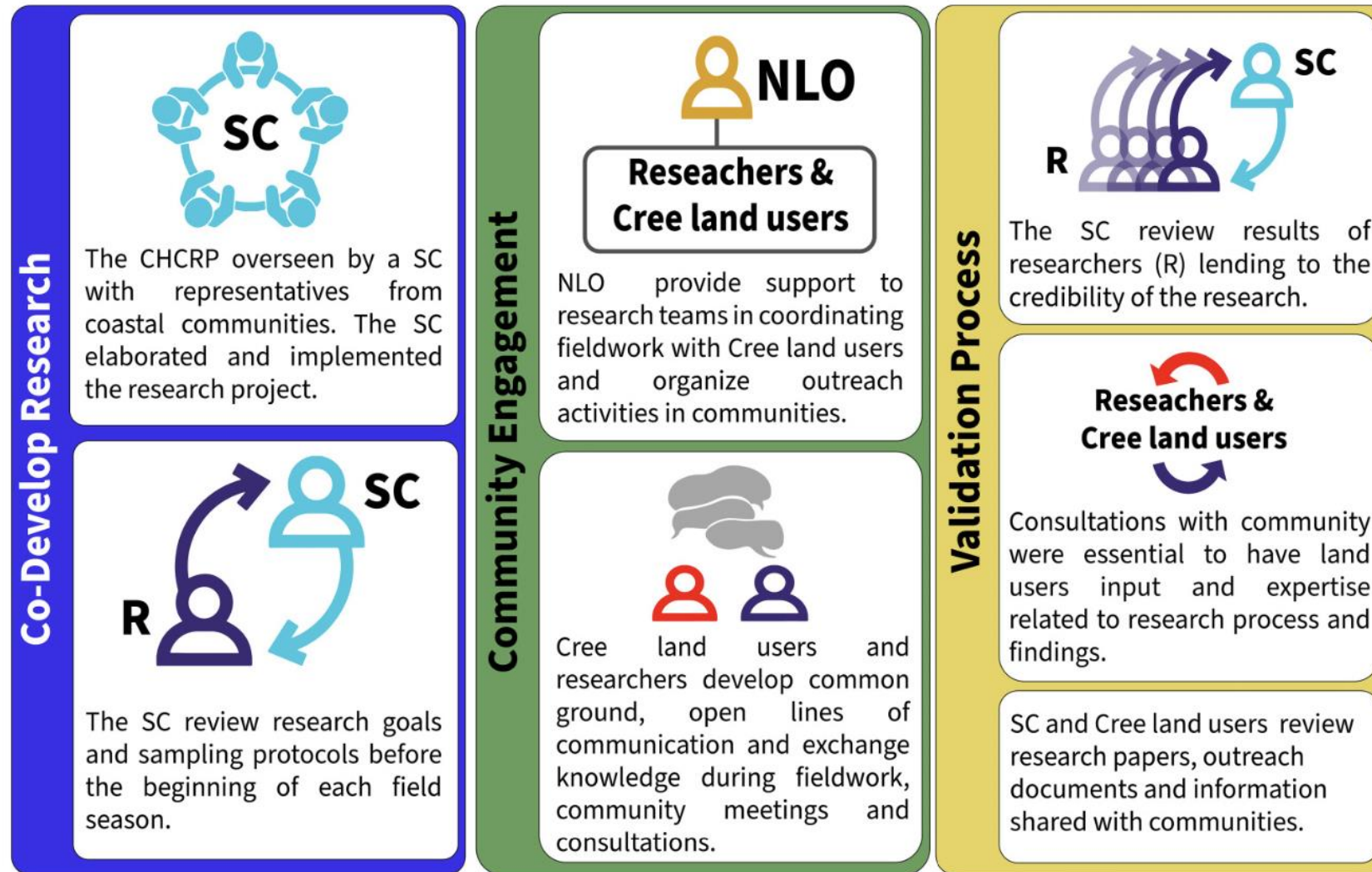


CHCRP FINAL
SYMPOSIUM
2022

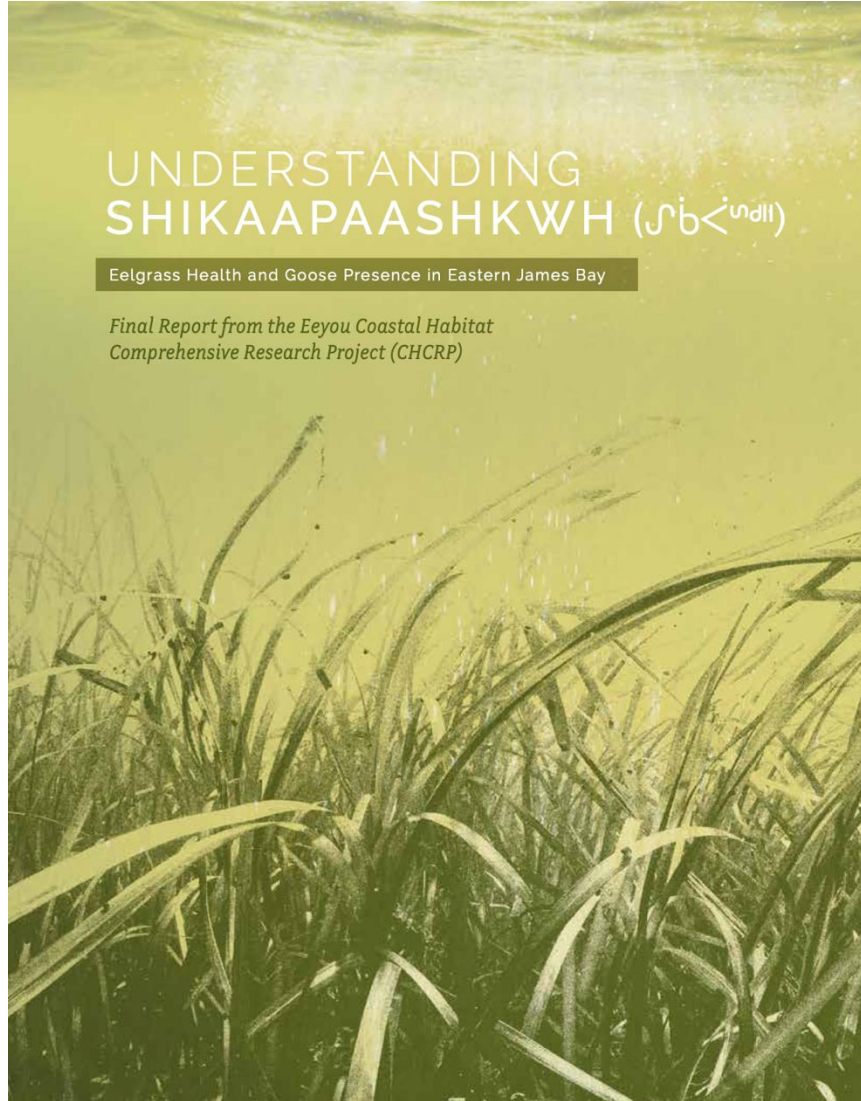


Final report

Fig. 4. Workflow towards co-developing research, promoting community engagement and validation process in the Coastal Habitat Comprehensive Research Project. The feedback loops between researchers (R), CHCRP-Steering Committee (SC), and Cree land users indicate an iterative process. NLO: Niskamoon local officer.



CHCRP Phase I 2017-2022



**LAND USERS
&
LOCAL GOV.
FEEDBACK**



CHCRP Phase II 2024-2029



Cree-driven community-partnered research on coastal ecosystem change in subarctic Canada: a multiple knowledge approach

Caroline Fink-Mercier ^a, Melanie L. Leblanc ^b, Fanny Noisette ^a, Mary O'Connor ^b, Julián Idrobo ^b, Simon Bélanger ^c, Paul A. del Giorgio ^d, Michaela de Melo ^d, Jens K. Ehn ^e, Jean-François Giroux ^d, Michel Gosselin ^a, Brigitte Leblon^f, Urs Neumeier ^a, Manon Sorais ^d, Murray M. Humphries^g, Christopher Peck^e, Kaleigh E. Davis ^b, Alessia Guzzi ^e, Virginie Galindo^a, Armand LaRocque ^f, Marc Dunn^h, Réal Courcellesⁱ, Carine Durocher^d, Jean-Philippe Gilbertⁱ, Robbie Tapiatic^h, Ernie Rabbitskin^h, and Zou Zou A. Kuzyk ^j

Describes the
co-development
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Describes the
co-development
process



Losing Shikaapaashkw: hydropower development and climate change caused eelgrass ecosystem collapse and social-ecological regime shift

Authors: Kuzyk, Zou Zou A.¹, Leblanc, Mélanie^{2,3}, Ehn, Jens¹, Crawford, Alex¹, Peck, Chris¹, Guzzi, Alessia¹, Stocking, Madelyn¹, Idrobo, Julián², Knight, Nicole², Davis, Kaleigh², Dunn, Marc³, Rabbitskin, Ernie³, Bélanger, Simon⁴, Noisette, Fanny⁴, Gosselin, Michel⁴, Fink-Mercier, Caroline⁴, Neumeier, Urs⁴, Walch, Daniela⁴, de Melo, Michaela⁵, del Giorgio, Paul⁵, Humphries, Murray⁶, O'Connor, Mary I.^{2,7}

Using the multiple
knowledge approach
to determine what
factors are affecting
eelgrass

Meegwetch! Thank you!

www.eeyoucoastalhabitat.ca



EeyouCoastalHabitats



Eastmain 2024 - Marcel Mosses, Mary O'Connor,
Cassandra Weapenicappo

Thank you to ALIGNILLUSTRATION