



# Restoring our ocean's secret weapon; *a deeper view into seagrass restoration and population resilience*

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# Climate change threatens ecosystems





# Coastal ecosystems under threat





# Seagrasses – species under threat



Shetland Community Wildlife Group

- Foundation species in coastal ecosystems
- Key ecosystem services
  - Habitat for coastal organisms



*Video courtesy of Fiona Boardman*

# Seagrasses – species under threat

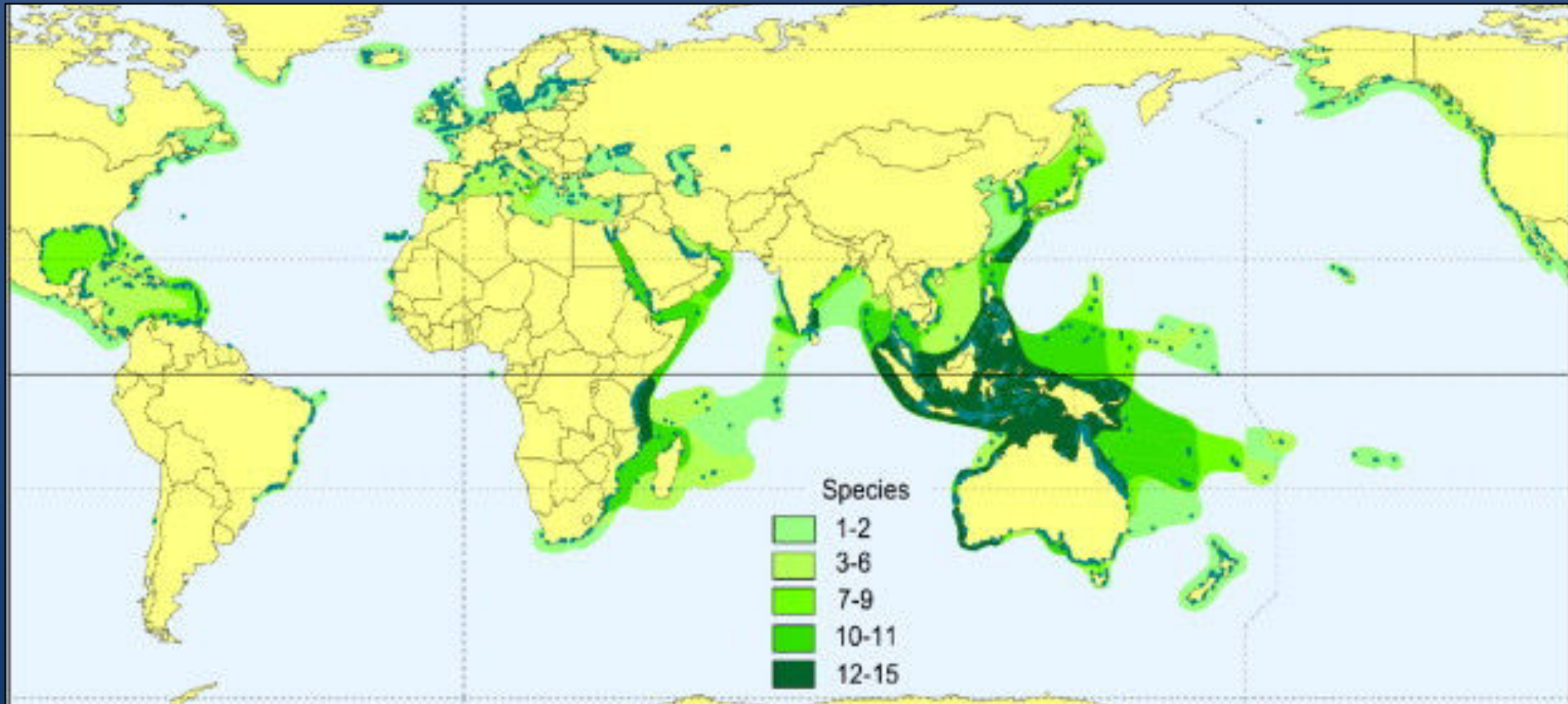


- Foundation species in coastal ecosystems
- Key ecosystem services
  - Habitat for coastal organisms
  - C-capturing from atmosphere
- Sensitive to human-driven pressures

***Annual global loss rate  
of 7% and rising***



# Seagrasses are worldwide



Short et al. 2007, *J. Exp. Mar. Biol. Ecol.*

# Eelgrass restoration in WA



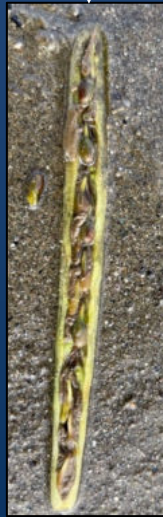
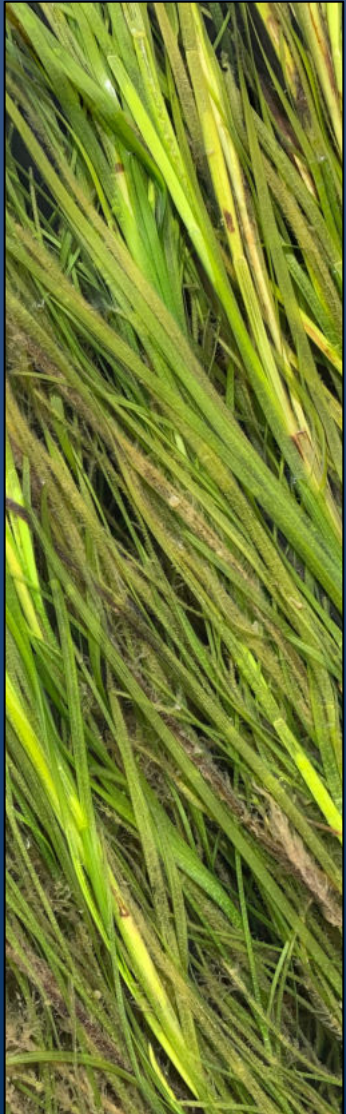
## Bill SB5619:

Kelp Forest and Eelgrass Meadow  
Health and Conservation

*Conserving and restoring at least **10,000 acres** of kelp forests and eelgrass meadows **by 2040**.*



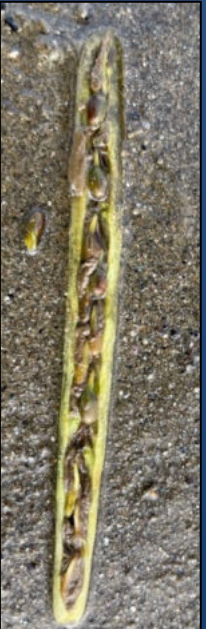
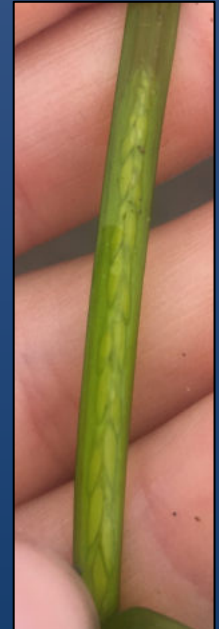
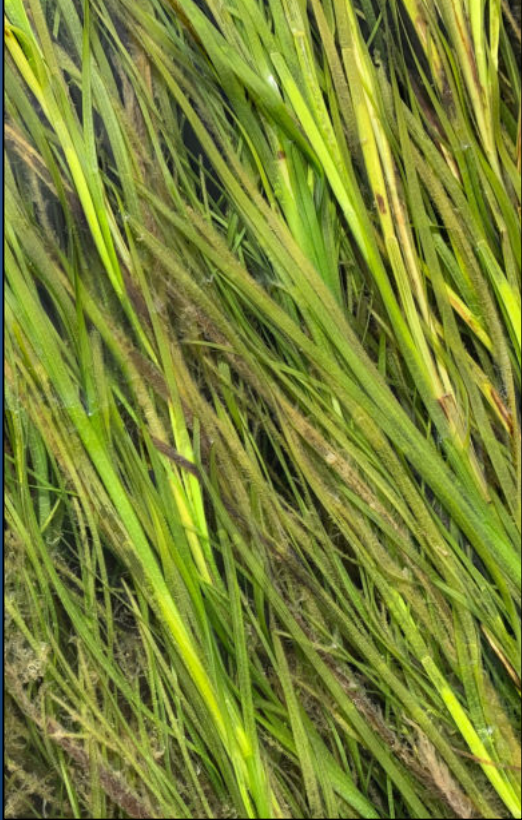
# Seeds as a tool for restoration



*Seeds are important for  
resilience!*



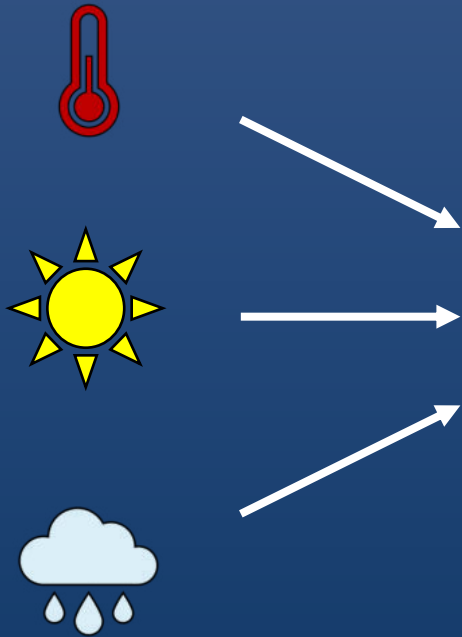
# What causes eelgrass to flower/produce seeds?





# Flowering in other plants?

## ENVIRONMENT



*Arabidopsis th.*



DNA



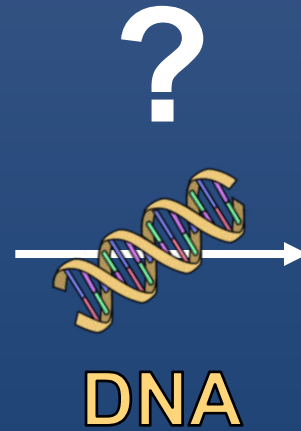
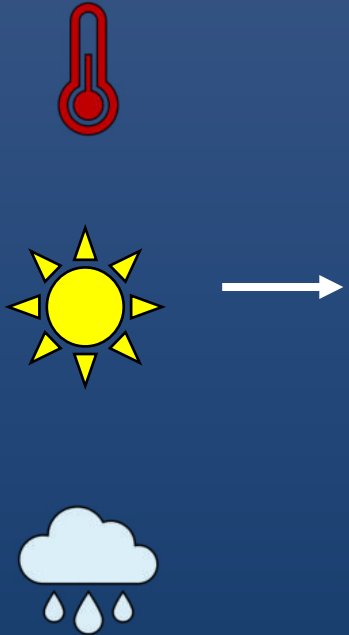
## RESPONSE

- Growth
- Flowering
- Seed production



# What causes eelgrass to flower?

## ENVIRONMENT



## RESPONSE



**My research at UW:**

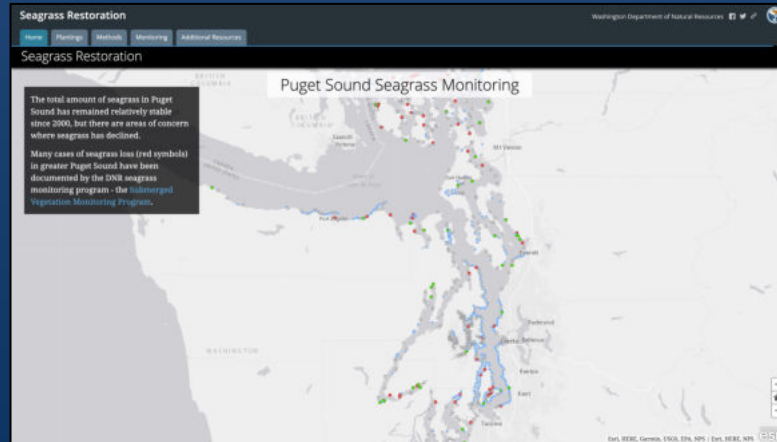
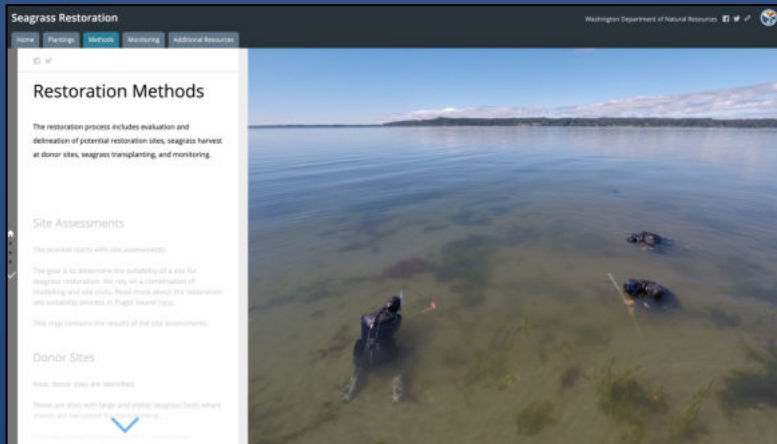
- *What genes are involved?*
- *How do genes help sense the environment?*
- *Can we predict response in changing climate?*



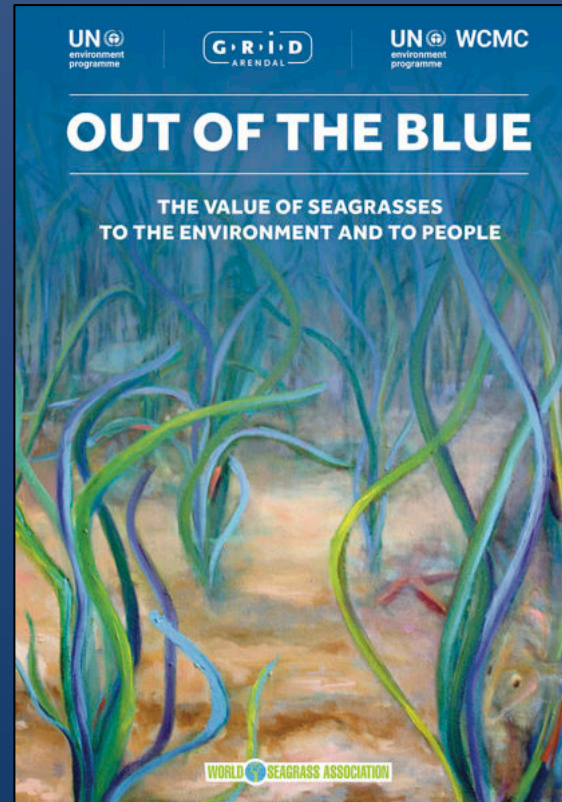
# Ways to learn more & to get involved!



## WA-DNR Seagrass Restoration Story Map



## Out of the Blue (UN)



## Project Seagrass



### Our Research Projects



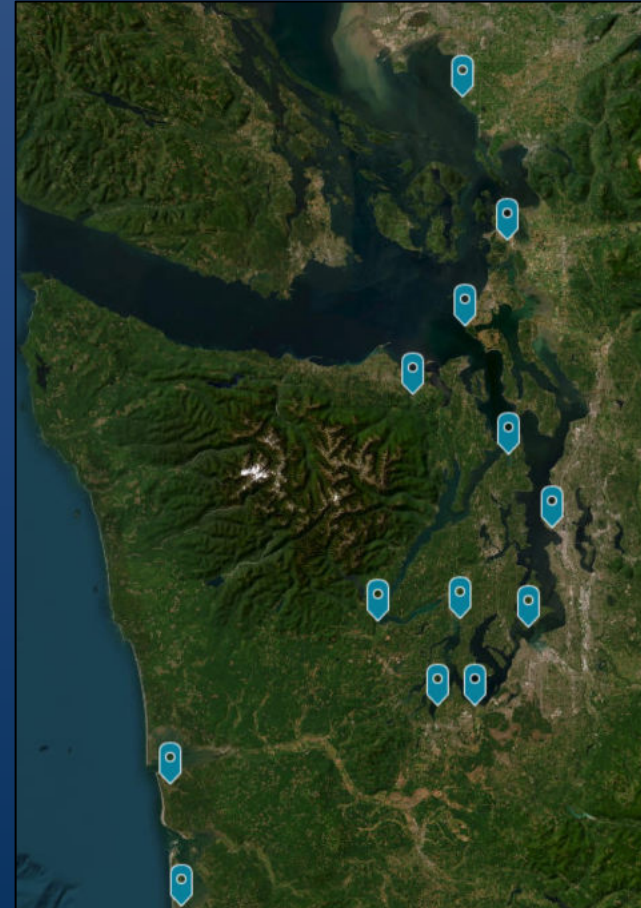
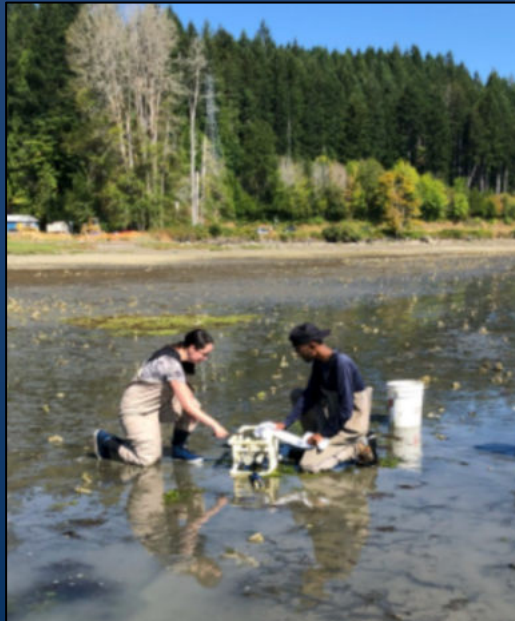
**United Nations**

**World Seagrass Day  
1 March**



# Ways to learn more & to get involved!

Volunteer with the **Aquatic Assessment and Monitoring Team!**





# Acknowledgements

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