

European Green Crab in Washington's Salish Sea




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THE BACKGROUND:


The European green crab is globally recognized as one of the most successful and damaging aquatic invasive species. First introduced to the outer coasts of the western United States in the late 1980s and 1990s, it wasn't until 2012 when green crab were documented in the Salish Sea with a population discovered near Victoria, B.C. The discovery prompted increased concern over the potential for ecological, economic and cultural impacts as a result of green crab becoming established in Washington's Salish Sea.


In 2015, Washington Sea Grant launched a volunteer-based monitoring program to assess the status and impacts of a potential European green crab invasion. Since 2015, Crab Team has captured 108 green crab at 5 locations in Washington's Salish Sea, and all evidence indicates that green crab are relatively rare, newly arrived, and isolated at just these few sites. Recent research also suggests that these green crab are coming from the larval dispersals of populations on the outer coast of Washington and Vancouver Island.


POLICY ISSUE:


 Given what we now know about European green crab in WA's Salish Sea, what should be done to manage this invasive species moving forward?

STAKEHOLDERS:

 Washington state government and agencies (Governor's office, WDFW, Washington Sea Grant, etc.)


 U.S. Federal Government (wildlife refuges, estuarine research reserves, etc.)


 Canadian government (Department of Fisheries & Oceans)

 Shellfish and aquaculture: commercial, tribal, and recreational harvesters

CHARACTERISTICS:

 Scale: regional (Salish Sea) but stakeholders and policy implications are international

 Stakeholders: many groups and diverse interests, but multiple groups are already in collaboration

 Uncertainty: unsure of potential impacts, invasive species can almost never be 100% eradicated

Moderately Structured Problem
Secondary Issue
Operational Policy

HIERARCHY ANALYSIS

Possible, Plausible, and Actionable Causes of a Green Crab Invasion

- **Possible:** transportation, shipping, increased global connectivity, climate change, weather events, natural cycles (El Niño)
- **Plausible:** Larval dispersal from nearby populations
- **Actionable:** Recruitment of individuals in WA Salish Sea Ecosystems, larval dispersal from nearby populations (?)

SYNECTICS

Direct Analogies - Similar Relationships Among Problem Situations

Invasive species are a worldwide problem, and though no one invasion is the same as any other invasion, it would be possible to compare similarities and differences in order to gain new perspective on the issue at hand.

PROCEDURAL MODEL

