Supplementary Information: Differential incorporation of scientific advances impedes

coastal habitat restoration practice

Appendix 1: Online survey questions analyzed in this study.

Which of these habitats have you restored? Select all that apply.

- □ Oysters
- $\hfill\square$ Marsh plants
- □ Mangroves
- □ Seagrasses
- □ Corals

What is the typical purpose of restoration projects you have participated in? Select all that apply.

- **Research**
- **D** Remediation for damage
- □ Habitat enhancement
- □ Fisheries enhancement
- □ Water quality enhancement
- □ Protection of coastal people or property
- $\hfill\square$ Carbon sequestration
- Erosion control
- □ Promotion of biodiversity
- □ Ecotourism
- **Community engagement**

What determines where you conduct your restoration?

- **O** Where restoration is most likely to be ecologically successful
- **O** Where restoration is most needed ecologically
- **O** Where restoration is most needed to benefit society
- **O** Where restoration is most likely to be permitted or funded
- O Other _____

Which is more challenging?

- **O** Picking an appropriate site to restore a given habitat
- **O** Picking an appropriate habitat to restore a given site

How important are the following characteristics for selecting restoration sites?

| | Extremely important | Very important | Moderately important | Slightly important | Not at all important |
|--|---------------------|-------------------|-------------------------|-----------------------|----------------------|
| Access and logistical feasibility | О | O | Ο | 0 | О |
| Permitting or regulations | О | 0 | О | О | O |
| Appropriate environmental conditions | О | O | О | Ο | о |
| Available funding | О | • | • | О | O |
| Geographic proximity | О | • | • | 0 | O |

Is there one factor that you consider most important for selecting restoration sites? Least important? If so, drag one to each box. If not, you may skip this question.

| Most important | Least important | | |
|--------------------------------------|--------------------------------------|--|--|
| Access and logistical feasibility | Access and logistical feasibility | | |
| Permitting or regulations | Permitting or regulations | | |
| Appropriate environmental conditions | Appropriate environmental conditions | | |
| Available funding | Available funding | | |
| Geographic proximity | Geographic proximity | | |

What do you monitor to determine restoration success? Select all that apply.

- □ Social metrics
- **D** Ecological metrics
- Geophysical metrics
- **D** Economic metrics
- **Community outreach metrics**
- Other _____

| | Major Challenge | Moderate Challenge | Mild Challenge | Not a Challenge |
|-----------------------------------|-----------------|-----------------------|----------------|-----------------|
| Poor water quality | 0 | 0 | 0 | О |
| Disease | Ο | Ο | 0 | Ο |
| Coastal development | 0 | О | 0 | О |
| Permitting and regulations | 0 | О | 0 | О |
| Public awareness or support | O | Ο | O | О |
| Site availability | O | Ο | O | Ο |
| Storms | 0 | Ο | O | Ο |

How would you characterize the following potential challenges to successful restoration?

How would you characterize the following potential challenges to successful restoration?

| | Major Challenge | Moderate Challenge | Mild Challenge | Not a Challenge |
|----------------------------------|--------------------|-----------------------|----------------|-----------------|
| Herbivory/predation | Ο | Ο | О | Ο |
| Competition with other species | О | 0 | 0 | О |
| Invasive species | 0 | O | 0 | Ο |
| Climate change | 0 | O | 0 | Ο |
| Boating | 0 | 0 | 0 | Ο |
| Dredge and fill | 0 | 0 | 0 | Ο |
| Insufficient financial resources | О | Ο | 0 | О |
| Other | 0 | 0 | 0 | 0 |

How do you source restoration material? Select all that apply.

- Natural recruitment
- □ Commercial stocks from hatchery/nursery
- □ Broodstock from natural populations
- □ Harvesting and relay from natural populations

| | Agree a great deal | Agree a lot | Agree a moderate amount | Agree a little | Do not agree at all | Don't know |
|--|-----------------------|-------------|-------------------------------|-------------------|------------------------|---------------|
| Including adequate genetic diversity is an important restoration strategy. | 0 | 0 | 0 | 0 | 0 | • |
| Maintenance of genetic diversity is an important restoration goal. | O | О | О | О | О | о |

How much do you agree with the following statements?

How important is genetic diversity for each of the following restoration target groups?

| | Extremely important | Very important | Moderately important | Slightly important | Not at all important | Don't know |
|-----------------|---------------------|-------------------|----------------------|-----------------------|----------------------|---------------|
| Oysters | О | О | Ο | Ο | Ο | О |
| Marsh plants | О | О | 0 | О | 0 | О |
| Mangroves | О | Ο | Ο | Ο | Ο | О |
| Seagrasses | О | Ο | 0 | Ο | Ο | О |
| Corals | 0 | Ο | 0 | 0 | 0 | Ο |

In which country do you currently reside?

In which state do you currently reside?

In what year were you born?

What is your highest degree?

- High school diploma or GED
- **O** Bachelors
- **O** Masters
- O PhD

Which of the following best describes your employer?

- O National government
- **O** State or provincial government
- **O** Academic institution
- **O** Non-governmental organization (NGO)
- **O** Private for-profit organization
- **O** Local municipality (city or town)
- Other

Which of the following societies are you affiliated with?

- □ Restore America's Estuaries (RAE)
- □ Coastal & Estuarine Research Federation (CERF)
- □ International Society for Reef Studies (ISRS)

What is your gender?

- O Male
- **O** Female
- Other
- **O** Prefer not to answer

How many years have you worked in restoration?