

# Perspectives of USCRP Student Researchers on Potential Futures in the Coastal Workforce

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# Coastal needs poised to grow



Coastal regions within:

5 km 10 km 100 km 200 km



Expected to increase in

- Frequency
- Severity
- Unpredictability

Coastal areas (<10m above sea level) = 2% Earth's land area

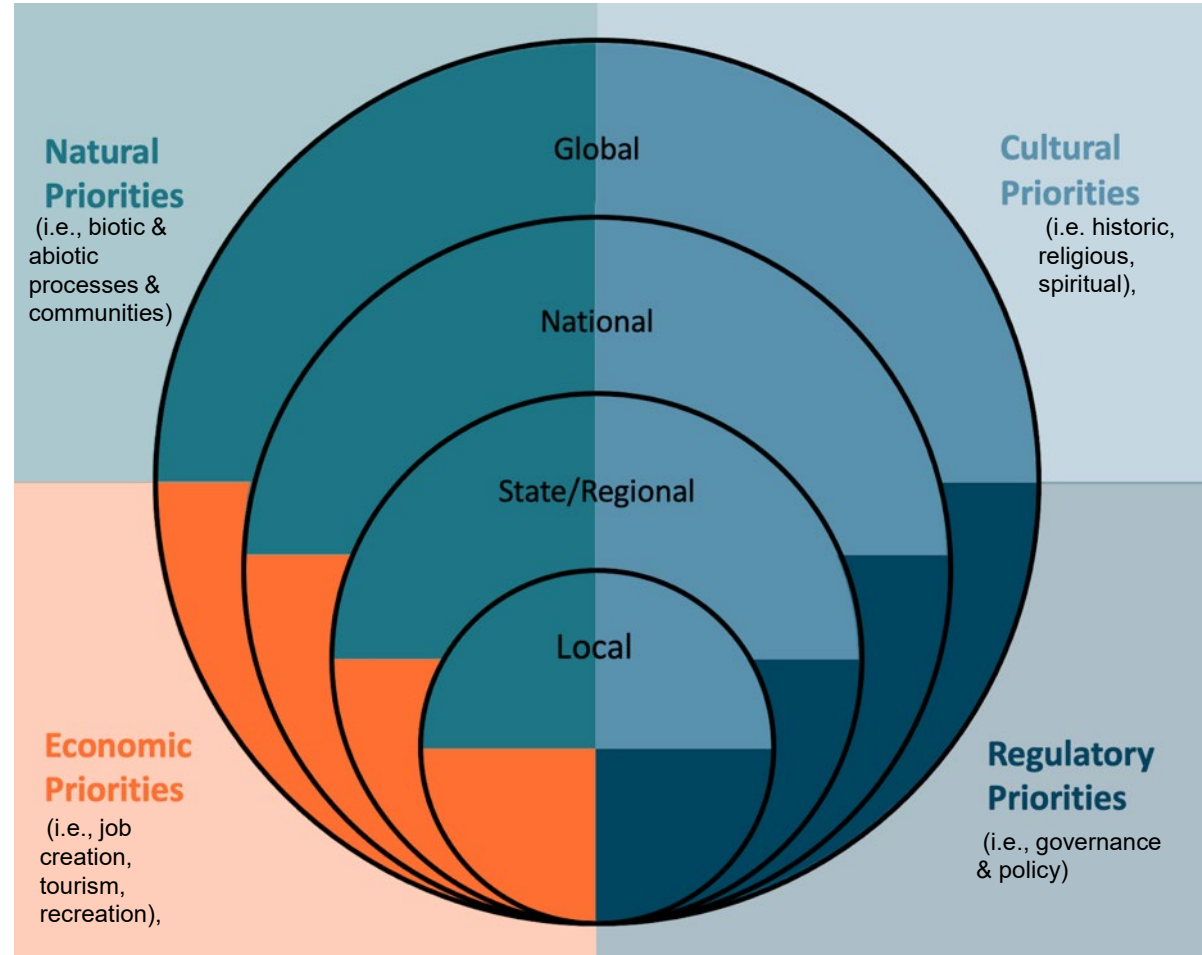
>10% of the world's population inhabits these areas

14% global GDP

# A skill workforce is needed to tackle complex issues

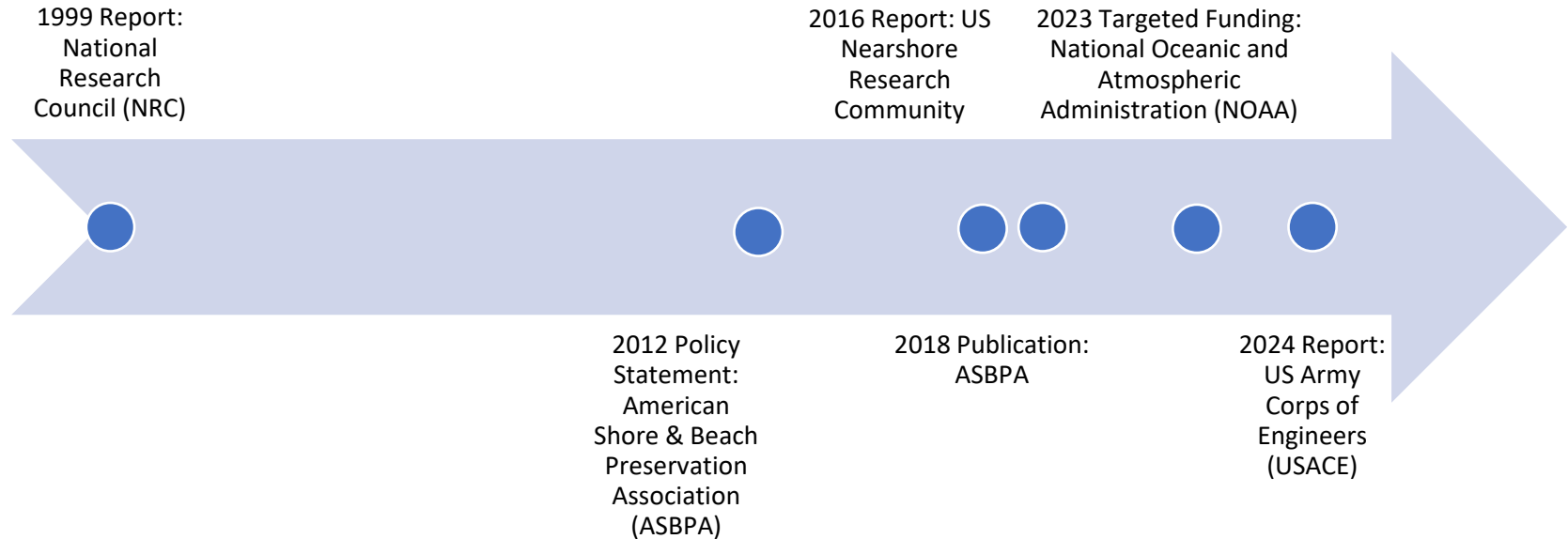
## Coastal sector workforce needs:

- Novice to subject matter expert
- Diversity
- Large size to meet demand
- STEM skills-based training
  - BA/BS or more



# Workforce Development Calls to Action

U.S. organizations that have explicitly produced a formal call (public-facing directive, official release, or peer-reviewed literature) for developing the coastal workforce.

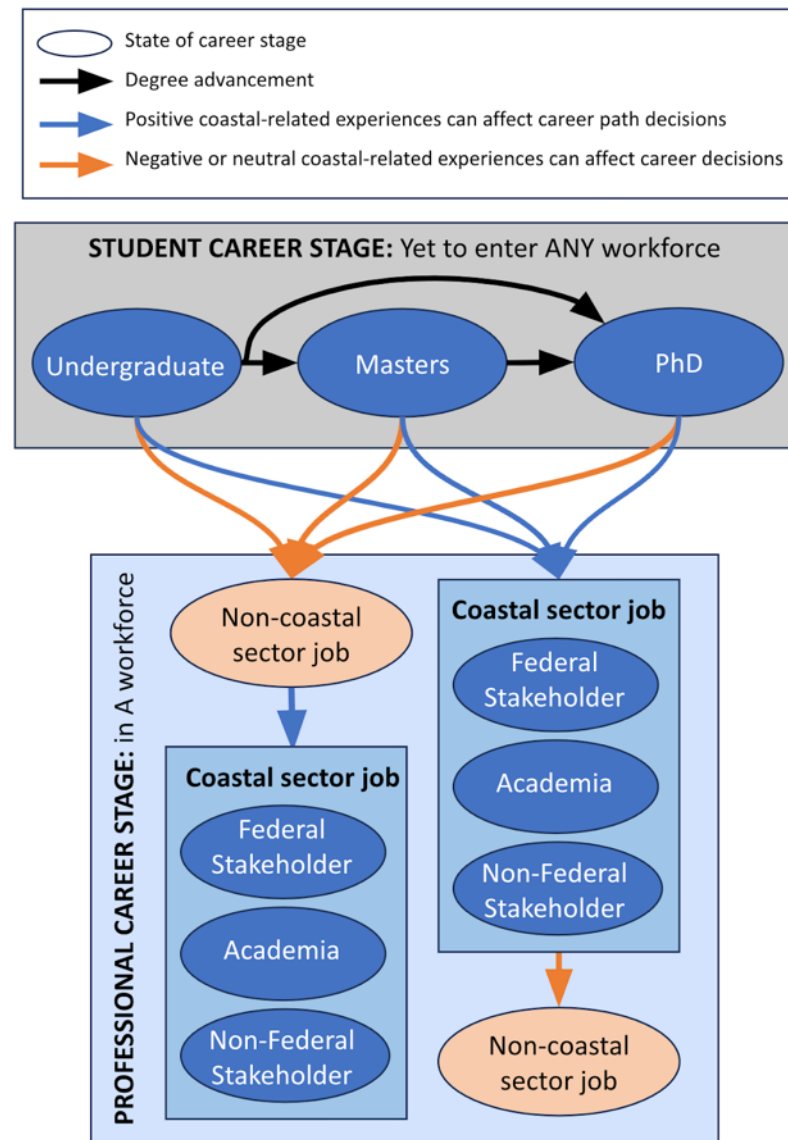


# Student Recruitment to Coastal Workforce

Coastal sector - all organizations, positions, or projects relying on or located within the coastal zone exclusively or temporarily

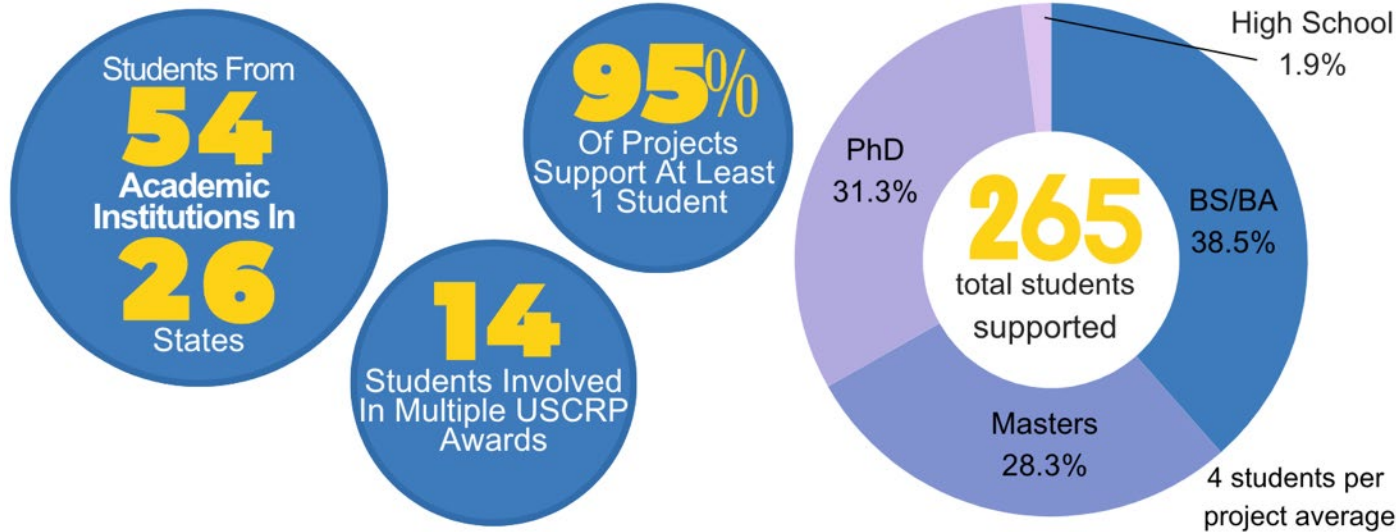
Students represent the trained pool from which recruitment to the coastal workforce can occur

- Each graduation represents an inflection point for a student to become a professional or continue their education
- Both the odds of a positive or negative experience occurring & pushing a student towards or away from the coastal sector increases with the number of degrees





# USCRP Student Survey: 2016-2021 Projects



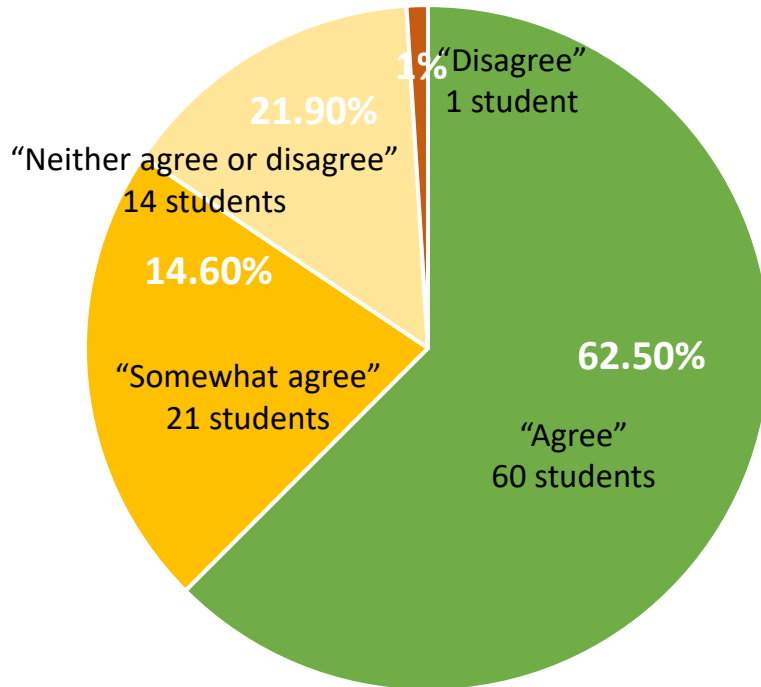
**Survey goal:** to help us understand what decision factors or experiences might influence a student to consider a career in the coastal sector.

- 38% respondent rate
  - 96 students
- 12 multiple choice, 3 free-response
- Survey open March 3, 2024 to April 16, 2024
- Sent to USCRP PIs funded 2016-2021 (62 projects) to pass on the students associated with their projects (265 students)
- All questions required except demographic information

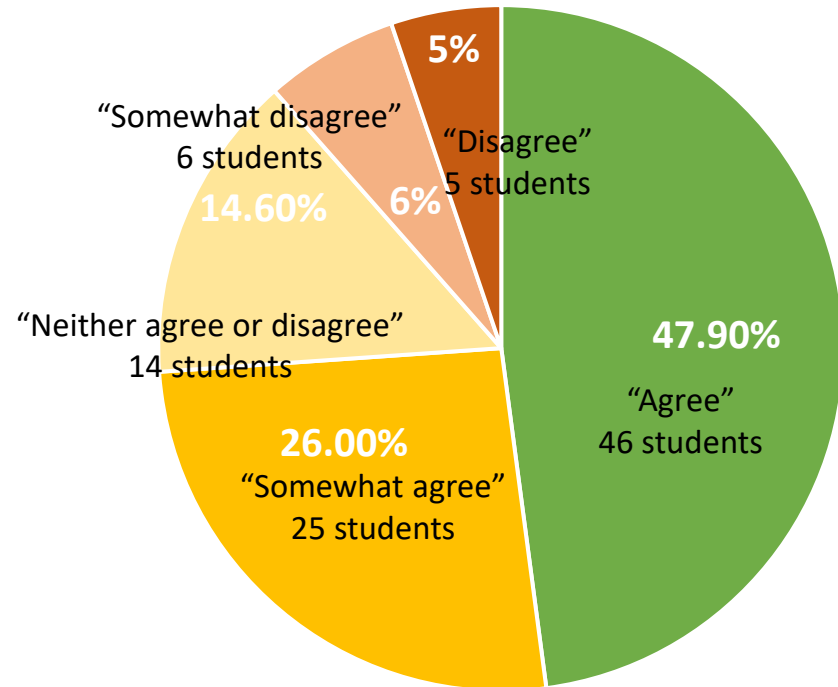
# Positive experiences in coastal realm



My experience working on a USCRP research team  
positively affected my decision to pursue a coastal career



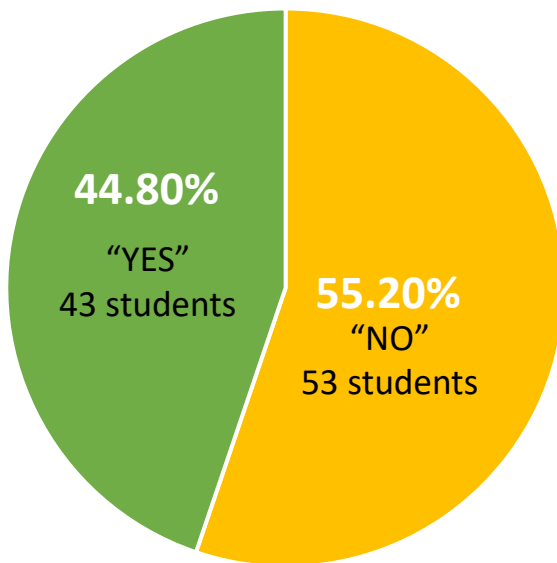
Exposure to coastal topics in an academic setting  
positively affected my decision to pursue a coastal career.



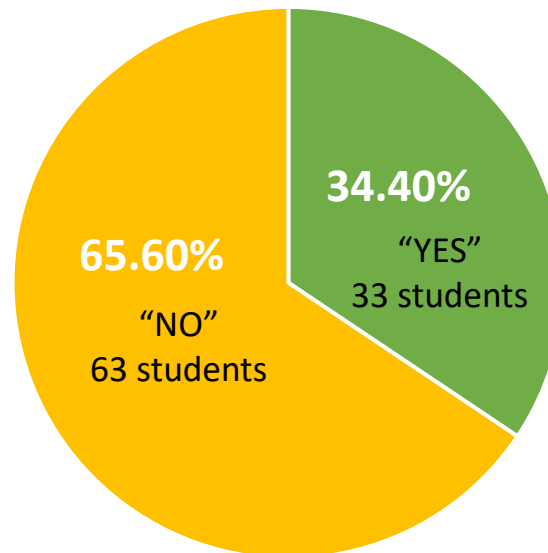


# USCRP & formative first time experiences

Prior to engaging in USCRP funded research, had you previously performed coastal research?



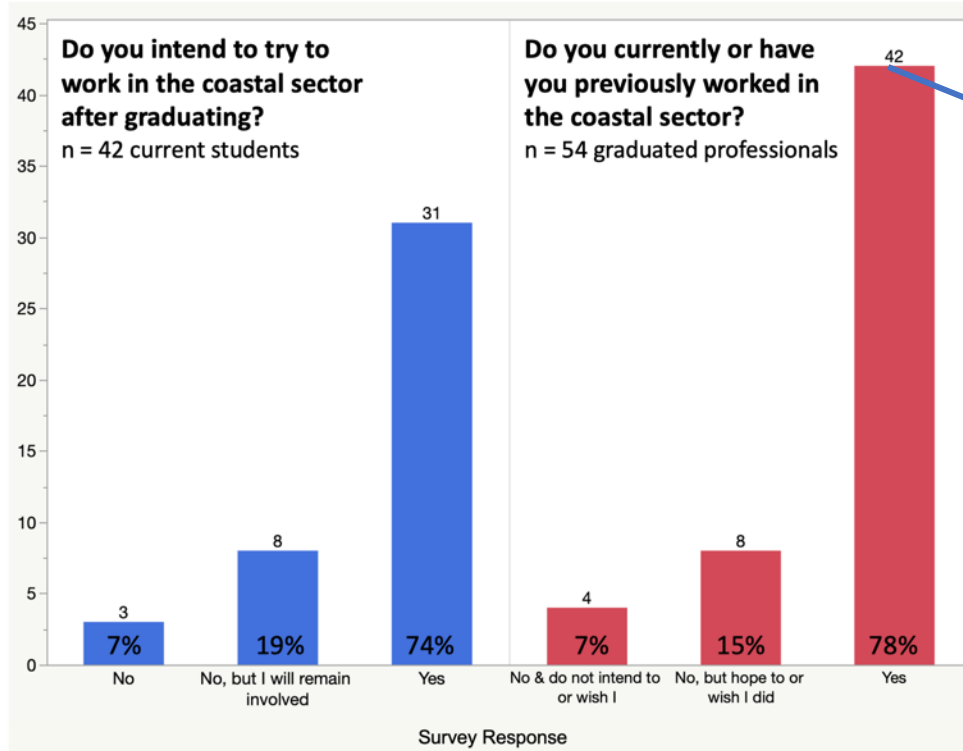
Prior to your USCRP research experience, had you previously been involved in coastal education, advocacy, management, or engagement activities?



25% of students stated that USCRP was their only option for research funding/support/professional development in the coastal realm



# Matching desire & action to join coastal workforce



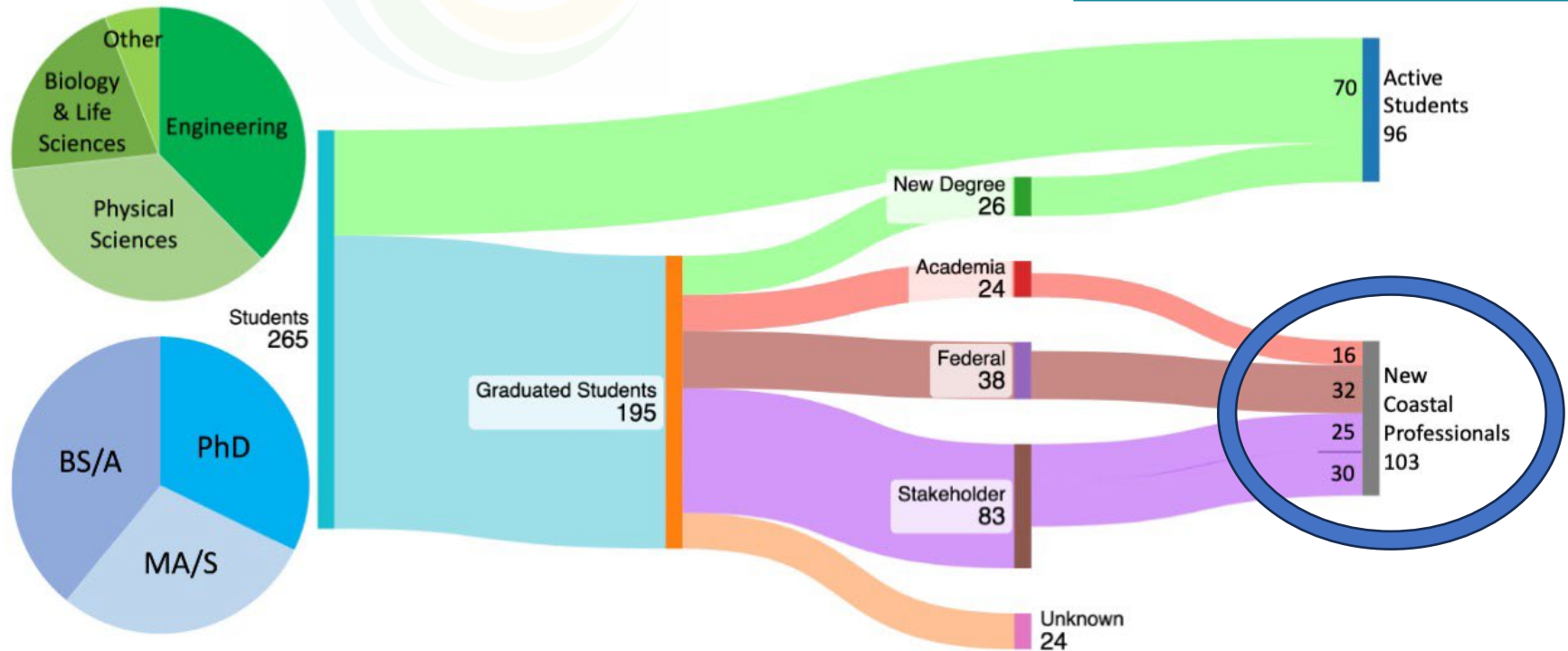
32 graduated respondents provided their name, of them:

- 26 responded "Yes"
- All 26 of those students are still in the coastal sector
  - Non-Federal stakeholder (n = 14)
  - Federal stakeholder (n = 4)
  - Academia (n = 8)

# Funding coastal academic research can ultimately bolster the coastal workforce

In 2018, the *entire* USACE coastal technical staff totaled 201!

- Elko et al. (2018)



43.0% to 61.0% of USCRP graduates (new professionals, did not seek a new degree) have joined the coastal workforce

# What motivate to join the coastal workforce?

List/state factors important for deciding to enter the coastal employment sector as opposed to another employment sector (Open-ended, no limit/length) → 90 responses

- Grounded theory approach
- 14 factors provided
  - 10 provided independently by at least 10 individuals
- Ten consistent decision factors emerged

## Pragmatic Theme

Use knowledge/skills (18)

Location (26)

Salary (23)

Job/opportunity availability (23)

Combo

49 students

Solo

15 students

## Passion Theme

Contribute to positive change (25)

Sense of community (11)

Field of interest or passion (30)

59 students

20 students

## Perceived Work Theme

Ability to conduct research (13)

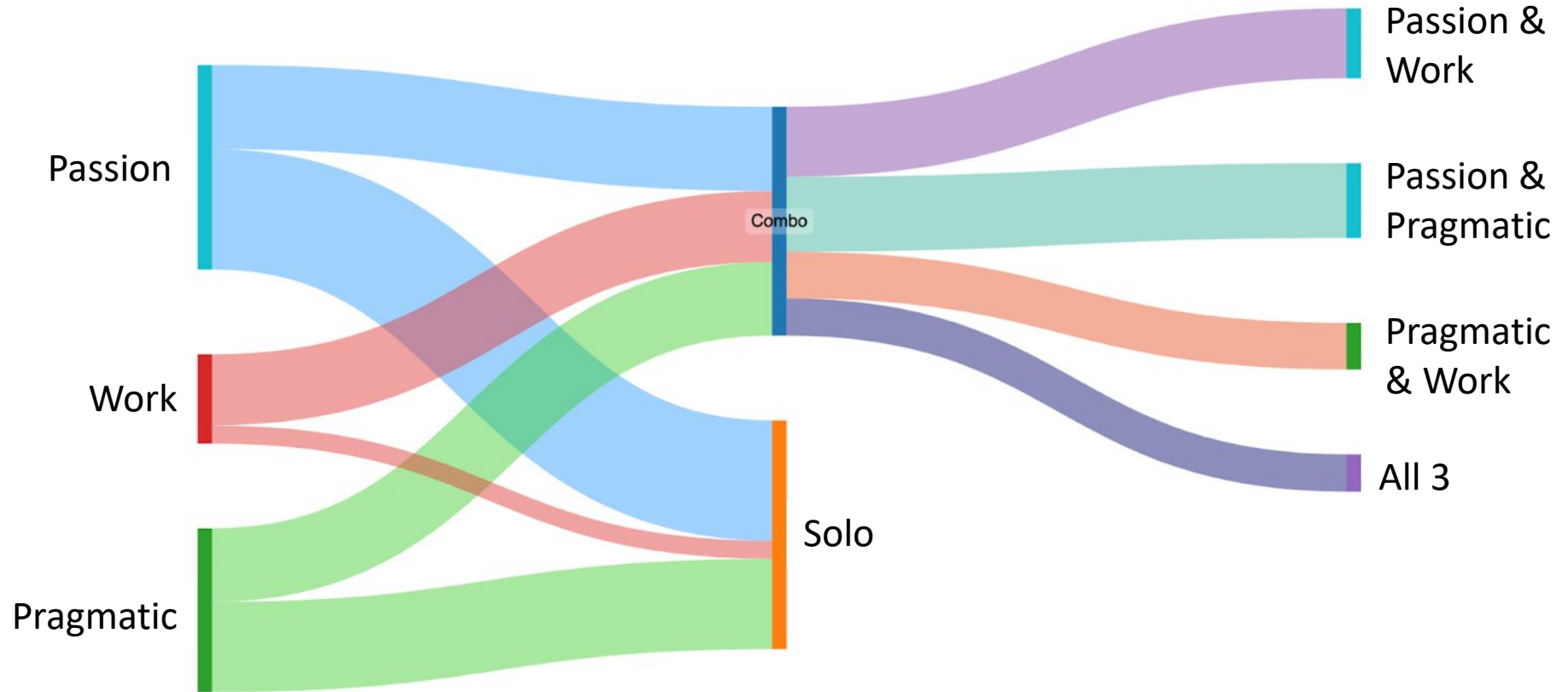
Resource availability/access (funding, mentorship, networking, data) (11)

Nature of work (specific projects, interdisciplinary, or complex) (19)

17 students

3 students

# Draws to the coastal sector





# Taking a Federal coastal position



## Unattractive to students

- 18 factors provided, 7 provided by 10 or more students
  1. Location (issues with by coast, no telework option, location) → n = 28
  2. Salary compared to private industry → n = 26
  3. Perceived availability of jobs → n = 17
  4. Perceived nature of work (projects, fieldwork vs office balance, confidentiality restrictions) → n = 17

## Attractive to students

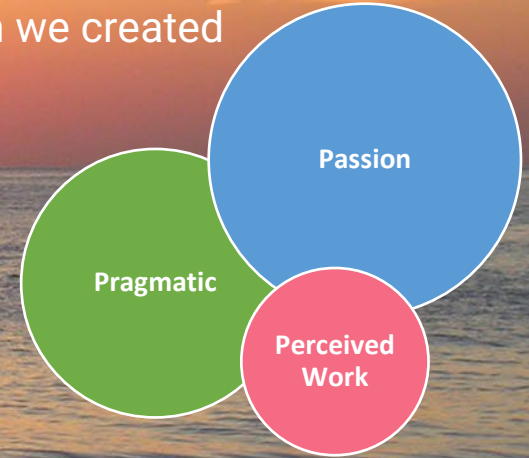
- 16 factors provided, 7 provided by 10 or more students
  1. Perceived nature of work (projects, cutting edge tech, applied work, topics, impact scale) → n = 30
  2. Contribute to positive change interest - specifically applied research → n = 29
  3. Job security/stability → n = 26
  4. Benefits → n = 24

# There is hope

"The only source of knowledge is experience."

"We cannot solve our problems with the same thinking we used when we created them."

-Einstein



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# Survey respondents

- 38% respondent rate: 96 students
- 55 students provided demographics

