Evaluating Alaska NSF EPSCoR: Year 2
Fire and Ice: Navigating Variability in Boreal Wildfire Regimes and Subarctic Coastal Ecosystems

All Hands Meeting: November 5, 2020

CONSULTANTS
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The purpose of the external evaluation is to support the development and to assess outcomes of the Alaska EPSCoR FIRE & ICE project through formative and summative input across the five years of cooperative agreement. The focus addresses the different stages of the project, including project and team development, capacity development, and research/other outcomes.
The purpose of the external evaluation is to support the development and to assess outcomes of the Alaska EPSCoR *Fire & Ice* project through formative and summative input across the five years of cooperative agreement.
What are the effects of the Alaska budget downfalls and the subsequent COVID-19 crisis impact on F&I?

Point: Alaska’s budget crisis preceded the COVID-19 crisis, compounding challenges for the team and AK institutions.
Based on what you know now, what level of risk does COVID-19 pose for significantly reducing your ability to conduct the following?

- Field work including data collection: 45% Very high risk, 45% High risk, 10% Moderate risk
- Student engagement: 65% Very high risk, 35% High risk
- Collaboration with colleagues: 65% Very high risk, 35% High risk
- Lab work: 65% Very high risk, 35% High risk
- Accomplish strategic plan objectives: 50% Very high risk, 50% High risk
- Data analysis and modeling: 50% Very high risk, 50% High risk

Based on what you know now, how will COVID-19 affect your EPSCoR research plans?

- It will require significant adjustments to research plans: 15% (n=29)
- It will require moderate adjustments to research plans: 30% (n=29)
- It will require minor adjustments to research plans: 5% (n=29)
- Don't know at this time: 60% (n=29)
Students also report COVID-19 disruptions

Based on what you know now, how does/will COVID-19 affect your work on the Fire & Ice project?

- Don’t know at this time
- Not applicable to me
- No adjustments to research plans will be required
- It will require minor adjustments to my work
- It will require moderate adjustments to my work
- It will require significant adjustments to my work

Based on what you know now, what level of risk does COVID-19 pose for significantly reducing your ability to conduct the following.

- Graduate on time
- Get the courses you need
- Collaboration with other students
- Collaboration with faculty
- Data analysis and modeling
- Lab work
- Field work including data collection

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

(n=21)
How are F&I and its components functioning?
Fire and Ice teams are generally positive about how their component is functioning

- Research in my component is well planned and coordinated.
- Production of journal articles in my component is on track.
- My component is on track to complete our research objectives for this year.
- We have not held enough component meetings.
- Researchers in my component work well together.

(n=29)
How well is collaboration developing on the Fire & Ice team and what are you producing?
With which of the following individuals have you collaborated on the Alaska Fire and Ice project in the last academic year?  
(Collaboration defined as: Actively working on research together and any other teamwork designed to produce intellectual products, including a research grant proposal, working paper, academic conference paper or journal article.)

Color key:
- Coastal = Orange
- Boreal = Blue
- Gold = DEW
- Red rim = Early Career
- Both Coastal and Boreal = Green
- Blue thick lines = reciprocal ties

Network n=30
For the researchers that you named, have you \textbf{collaborated} on any of the following during the last year? (Submissions of articles and grants)

\begin{itemize}
  \item Journal Article Submitted
  \item Grant Proposal Submitted
\end{itemize}

\textbf{Color key:}
- Coastal = Orange
- Boreal = Blue
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What did the Fire & Ice team produce in 2019-20: total and on EPSCoR?

<table>
<thead>
<tr>
<th></th>
<th>2019-20</th>
<th>2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attributed to F&amp;I</td>
<td>Attributed to F&amp;I</td>
</tr>
<tr>
<td>Peer-reviewed journal articles (accepted or published)</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Reviewed conference proceedings</td>
<td>6</td>
<td>3</td>
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<tr>
<td>Conference presentations</td>
<td>39</td>
<td>11</td>
</tr>
<tr>
<td>PI grants submitted, still pending</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>PI grants awarded</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>CoPI grants submitted, still pending</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>CoPI grants awarded</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
What about data?
Which of the following individuals has produced data that you have already accessed/received to conduct your Fire and Ice research?

Color key
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Boreal = Blue
Both Coastal and Boreal = Green
Gold = DEW
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Team views about data collection and use for F&I research

The flow of data from images to readiness for analysis is going well:
- 31% Strongly agree
- 28% Agree
- 24% Disagree
- 0% Strongly disagree
- 24% Not Applicable

There are significant barriers to successful gathering remote sensing data on the project:
- 28% Strongly agree
- 24% Agree
- 28% Disagree
- 0% Strongly disagree
- 24% Not Applicable

I will need to use remote sensing data produced by others for my research:
- 24% Strongly agree
- 28% Agree
- 24% Disagree
- 0% Strongly disagree
- 28% Not Applicable

N=29
Which of the following people are collecting data that you will need to conduct your Fire and Ice research in the next year?

Coastal

DEW

Boreal

Both
Workforce Development: Students

Point: Students have the potential to gain unique and robust experiences in a large team research environment.
Faculty Reports: Students

% Faculty report engaging undergrads in:

- Poster presentation
- Participate in component meetings
- Participate in sensor planning/placement
- Literature review
- Research design
- Other
- Writing/submitting journal article
- Oral presentation at academic conference

% Faculty report engaging graduate students in:

- Research design
- Data analysis
- Literature review
- Field work to collect data
- Poster presentation
- Academic conference presentation
- Writing/submitting journal article
- Sensor design and development
- Research presentation to stakeholders
- Interviews of stakeholders to inform research...
Student understanding about Fire and Ice

Please indicate the extent to which you understand the following:

- The drivers of ecological change in Alaska
- The consequences of ecological change in Alaska
- How the specific research that you are working on fits in with the overall project.
- What your specific role and tasks are on the Fire & Ice team.
- The overall goals of the Fire & Ice project.
- Research aims on other parts of the Fire & Ice project on your campus.
- Research aims on other parts of the Fire & Ice project on other campuses.

(n=21)

FIRE & ICE EXTERNAL EVALUATION REPORT: YEAR TWO
How confident are students in their own ability to conduct various aspects of their F&I work?

![Bar chart showing confidence levels in various skills](chart.png)

- **Time management skills**
  - Very confident: 40%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 10%
  - N/A: 10%

- **Interpersonal/team skills**
  - Very confident: 50%
  - Confident: 20%
  - Somewhat confident: 15%
  - Not confident: 15%
  - N/A: 0%

- **Writing skills**
  - Very confident: 30%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 20%
  - N/A: 0%

- **Communication skills**
  - Very confident: 40%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 10%
  - N/A: 0%

- **Cleaning and preparing the data for this project**
  - Very confident: 40%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 10%
  - N/A: 0%

- **Collecting the type of data used in this project**
  - Very confident: 30%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 15%
  - N/A: 5%

- **Modeling skills**
  - Very confident: 35%
  - Confident: 30%
  - Somewhat confident: 20%
  - Not confident: 15%
  - N/A: 0%

- **Analysis of the data**
  - Very confident: 40%
  - Confident: 35%
  - Somewhat confident: 20%
  - Not confident: 5%
  - N/A: 0%

(n=21)
F&I students report high levels of encouragement by their faculty supervisors

Please indicate the extent to which you are encouraged, or discouraged, by your Fire & Ice faculty supervisor to engage in the following:

- To be actively involved in conducting research
- Provide research ideas
- Help to address or solve challenges or problems in the research
- Write papers for publication
- Collaborate with researchers from other Alaska campuses
- Connect with other students on the Fire & Ice project
- Develop ideas for applied use of Fire & Ice research by non-academic organizations
- Interact with non-academic stakeholders regarding project research
- Engage in STEM education outreach

I feel that there is a strong focus on grant and publication writing, but less of a focus/reward for outreach and community building.

“My advisor has been incredibly encouraging and supportive throughout my involvement in the Fire and Ice program.”

(n=21)
Future interests
Now, looking forward, with whom do you hope to collaborate in the coming year, but have not yet had the chance?
Thank you!