INTAROS Joint Assessment of Scientific and Community-Based Observation Programs

European Geosciences Union - 2020
INTAROS* Joint Assessment of Scientific and Community-Based Observation Programs

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*Integrated Arctic Observation System project
Why are observations needed?

Observations in the Arctic are needed
- to **understand** geophysical & socio-ecological changes
- to **plan** adaptation strategies, and
- to sustainably **manage** the environment
What did we do?

Different language and methodology by scientific and non-scientific communities often hamper exchange and usability of observations.

We collected metadata on community-based and scientific observing programs using a common questionnaire in order to assess gaps and strengths in the observing systems.
What did we find?

Community-based observations rarely belong to long-term sustained programs
RESULTS 1

Current access to funding

<table>
<thead>
<tr>
<th></th>
<th>Scientist-executed (N=44)</th>
<th>Community-based (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Number of programs</td>
<td></td>
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</tbody>
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Increasing current access to funding

Level definition: [https://docs.google.com/forms/d/e/1FAIpQLScIggyNg53zX3A9iwxvKN6Qh7oo7SHv47dw9u1Me80tmrg/viewform](https://docs.google.com/forms/d/e/1FAIpQLScIggyNg53zX3A9iwxvKN6Qh7oo7SHv47dw9u1Me80tmrg/viewform)
What did we find?

Community-based observations suffer from lack of long-term preservation strategies more severely than science-based observing systems.
RESULTS 2

Long-term data preservation

![Bar chart showing the number of programs over increasing data archival.]

- Scientist-executed programs (N=41)
- Community-based programs (N=28)

Level definition: [https://docs.google.com/forms/d/e/1FAIpQLScggyNg53zX3A9ikx8vKN6Qhj7oo7SHvj47dw9u1Me80tmrg/viewform](https://docs.google.com/forms/d/e/1FAIpQLScggyNg53zX3A9ikx8vKN6Qhj7oo7SHvj47dw9u1Me80tmrg/viewform)
What did we find?

Many science-based marine observations are collected only during the summer season. Community-based observations are less prone to temporal gaps.

Community-based monitoring efforts can help increase observational coverage in space and time with often low-cost approaches, while also adding value through the introduction of holistic perspectives – such as Indigenous knowledge-based – into the observing process.
Conclusions

Despite the differences in method and language between community- and science-based programs, our assessment methodology:
- enabled the **comparison**, and
- the **integration** of the metadata
Comments and suggestions are welcome!

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Financial support from European Union through the INTAROS project (grant 727890)