

Basin-Scale Events & Coastal Impacts (BECI) Project

Making Climate and Ocean Science Work for You

The Challenge

The North Pacific Ocean (NPO), one of the world's most productive marine ecosystems, is facing unprecedented challenges due to climate change. This vast body of water, crucial for global food security and the economies of bordering nations, is experiencing rapid transformations that demand urgent, coordinated responses at numerous geographical and jurisdictional scales. As temperatures rise and ocean chemistry shifts, the NPO's fundamental characteristics are undergoing profound changes. These transformations are triggering widespread ecological disruptions, from shifting species distributions to altered marine food webs, which threaten the region's commercially vital fisheries.

The observed effects extend beyond national boundaries, with marine resources moving across political borders and into international waters. The transboundary nature of climate change impacts challenges traditional management approaches. These complex challenges require a coordinated, science-based response that bridges national boundaries and transforms scientific understanding into practical action. The Basin-scale Events and Coastal Impacts (BECI) project was established to address these needs through a structured approach to climate-informed decision making.

Who We Are

BECI is a collaboration between the North Pacific Marine Science Organization (PICES) and North Pacific Anadromous Fish Commission (NPAFC). These organizations have long histories of working with countries across the North Pacific (Japan, South Korea, China, Russia, Canada, and USA) to advance marine science and conservation.

Our work focuses on the North Pacific Ocean and its marginal seas, especially areas where fisheries operate on the high seas or cross-national boundaries. BECI is currently funded by the British Columbia Salmon Restoration and Innovation Fund and is endorsed by the United Nations Decade of Ocean Science for Sustainable Development.

What We Aim to Do

BECI aims to help organizations across the North Pacific use climate and ocean science in their decision-making. Our plan is to:

1. Connect you with environmental data you can use
2. Provide tools to help make climate-informed decisions
3. Create ways for everyone to share what works

How We Plan to Do It

- Link existing monitoring networks and databases
- Build and / or enhance practical analysis tools
- Explore artificial intelligence applications to support analysis and prediction
- Share best practices that work
- Support collaboration across organizations

What We've Heard You May Need

Through our conversations with RFMOs and other organizations, we've heard clear needs:

- Better access to environmental data that can be used in stock assessments and analyses
- Help finding and sharing survey data and catch information across countries
- Clear summaries of what's happening in the environment across different regions
- Support in figuring out what climate change means for fish populations
- Tools to explore different future climate scenarios for planning purposes
- Ways to strengthen communication between organizations
- Help connecting existing scientific surveys and monitoring efforts

Tell Us What You Need

We want to develop resources that truly serve your needs. To help us create the most useful tools and support, we'd like your input on these areas:

Finding & Using Data

- What environmental data would help your work?
- Where do you currently get stuck when trying to use climate data?
- What would make it easier to share data with other organizations?

Making Decisions

- How do you currently factor climate change into your planning?
- What kind of tools would help you explore future scenarios?
- What information would make you more confident in climate-related decisions?

Working Together

- How could we make it easier to work with other organizations?
- What kind of information would you like to share more easily?
- What would help you stay up to date on environmental changes?

Please tell us what we're missing or what else would help. We're building this to serve organizations across the North Pacific, so your input matters.

Want to get involved or learn more?

Contact: Jaid Conn, BECI Program Coordinator – Jaid.Conn@pices.int

For more information visit our **website:** beci.info