

Effective (and Ineffective) Engagement

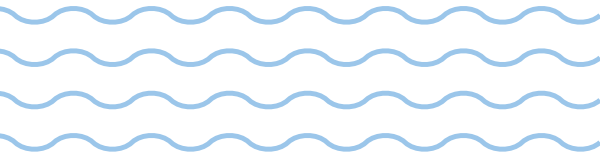
Lessons Learned from
Exhibitions & Programs with
a Conservation Message

Julie Packard



The Monterey Bay Aquarium sits on the shores of the Monterey Bay National Marine Sanctuary. Its architecture resembles the sardine cannery that once occupied the site on Cannery Row in Monterey, California.





For more than 20 years, we at the Monterey Bay Aquarium have shared ocean conservation issues with our two million annual visitors through exhibitions and public programs, consistent with our mission to inspire conservation of the ocean.

Audience research tells us that our identity is as an attraction with a conservation mission – and that we are more appealing as a visitor destination because of our conservation work. It’s a message that should encourage cultural institutions to become bolder voices for action on issues relevant to their missions, whether that’s an environmental conservation topic or a social inequity.

Ocean conservation issues – sustainable seafood, climate change (fig. 1), and plastic pollution among them – are not as inherently engaging as watching a diver feed the fishes in our living *Kelp Forest* exhibit, strolling among displays of drifting jellies, or spotting sea otters and whales swimming past our ocean-view decks. But building public understanding of human impacts on marine life – and pointing



Fig. 1. In 2010, *Hot Pink Flamingos: Stories of Hope in a Changing Sea* used live-animal exhibits and interactive experiences to tell the climate-change story in a 7,000-square-foot special exhibition.

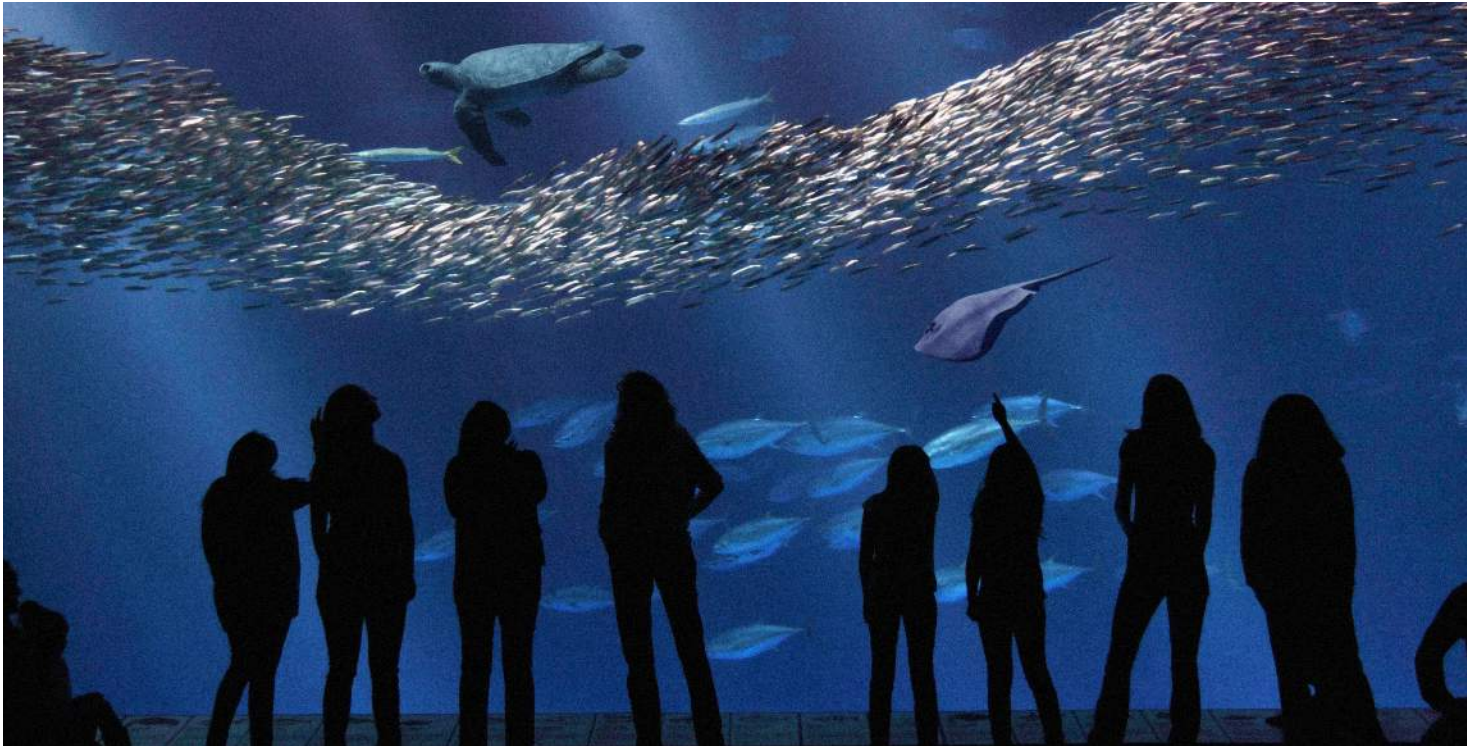


Fig 2. The “Open Sea” exhibit at Monterey Bay Aquarium contains 1.2 million gallons (4.5 million liters) of seawater. The aquarium incorporates conservation messaging to reach visitors who are entranced by yellowfin tuna, sea turtles, hammerhead sharks, sardines, mahi mahi, ocean sunfish, and pelagic stingrays.

the way to take meaningful action – is central to our work to shape a healthy future for the global ocean and the people who depend on it.

As we’ve brought these stories to visitors, we’ve learned that some approaches are more effective than others. Drawing on formative and summative evaluations, we continually refine the ways we develop exhibitions and programs to include ocean conservation messages. Over time, we’ve broadened the institutional channels we use to communicate these messages – incorporating social media and our website to engage visitors before and after their visit. We’ve moved from presenting conservation messages just in special exhibitions – where we can test new messaging approaches and interpretive concepts – and have diffused them throughout our permanent exhibitions and public programs.

What we’ve learned from our successes and our failures suggests some guiding

principles and resources that will be helpful to organizations of any size that want to engage their visitors in conservation issues. As the founding (and current) executive director of the Monterey Bay Aquarium, 35 years of experience has shown me that it’s not enough to put your conservation message out there, hope it resonates and that visitors take action. As with every dimension of the visitor experience, success is an outcome of planning, research, trying new engagement strategies, failing forward and trying again (fig. 2). I do know that conservation messaging success at the Monterey Bay Aquarium is not a stand-alone strategy of just an exhibition or a program – it’s a multifaceted approach including exhibitions, programs, facilitated experiences, social media, and calls to action developed by our conservation and science team. Our reputation as a trusted source of science-based information has been an essential underpinning to it all.

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**Surprising Success:
Sustainable Seafood Resonates**

In March 1997, one year after opening our 86,500-square-foot Open Sea wing – which resulted in nearly a 50 percent increase in annual attendance – we opened our first special exhibition with an ocean conservation theme. *Fishing for Solutions: What’s the Catch?* (fig. 3) incorporated live exhibits, explanatory text,

and a visitor-engagement “talkback” area to explore issues around the environmental sustainability of global fishing and aquaculture. The 6,000-square-foot exhibition highlighted issues of overfishing that resulted from inadequate fisheries management rules; inadvertent killing of wildlife in gear intended for commercially important seafood species (bycatch); destruction of coastal habitats to create aquaculture production ponds; and the impact of human population growth on ecosystems and global seafood demand. There was no expectation that it would drive visitation.

While the talkback area (fig. 4) gave visitors an opportunity to write down and share conservation actions they would take, *Fishing for Solutions* itself delivered no specific call to action. Summative evaluation found visitors felt we presented more problems than solutions.¹

But the exhibition tapped a public hunger to know more about the environmental impact of individual seafood choices at a time when sustainable seafood was just emerging as a conservation concern, and when experts recognized industrial-scale fishing as the greatest imminent threat to ocean health.

The first sign of interest came when we noticed that tent cards we’d placed on tables in our café as a component of *Fishing for Solutions* – cards that described steps we’d taken to remove unsustainable seafood from our menu – were disappearing with regularity. Unprompted, visitors reached out to floor staff and wrote us letters, asking if we could suggest environmentally responsible options to guide their seafood purchases when they went home.

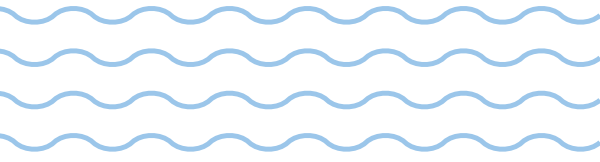
¹ For the summative evaluation for *Fishing for Solutions: What’s the Catch?* see “Summative Evaluation: Visitors’ Reactions to Fishing for Solutions,” *Informal Science* (April 1, 1998), <https://www.informalscience.org/summative-evaluation-visitors-reactions-fishing-solutions>.



Fig. 3. Live exhibits in the special exhibition, *Fishing for Solutions: What's the Catch?*, highlighted both problems, like destructive fishing gear, and creative solutions - like a device created by a fisherman to let sea turtles escape unharmed from shrimp nets.



Fig. 4. A talkback area in *Fishing for Solutions* lets visitors suggest ways they could take action to protect the ocean.



We'd provide a list of seafood we were serving, and species we avoided. We also shared our recommendations in a press release.

Within 18 months from the time the exhibition opened, we created the aquarium's *Seafood Watch* program.² This science-based initiative initially aimed to raise consumer awareness about sustainable seafood options through a printed guide that listed seafood under categories with an easy-to-grasp, traffic-signal color code: green for "Best Choice," yellow for "Good Alternatives," and red for species to "Avoid" (fig. 5). It has grown to become the global "gold standard" for sustainable seafood purchasing decisions. By establishing clear

science-based environmental sustainability standards, it has earned the trust of North America's top retailers and foodservice companies, which use *Seafood Watch* science to inform their buying decisions – and to drive sustainable practices worldwide. Nearly 200 aquariums, zoos and science centers in the United States are conservation partners of *Seafood Watch*, sharing the same message and building consumer demand for better seafood choices nationwide.

The *Seafood Watch* message remains one of our foundational conservation calls to action across a number of exhibitions and public programs. In 2005, we opened our "Real Cost Café" exhibit (fig. 6), a simulated coastal seafood restaurant where visitors interact

2 For more information about the Monterey Bay Aquarium Seafood Watch Program please visit www.seafoodwatch.org.



Fig. 5. The *Seafood Watch* consumer pocket guide, first released in 1999, uses a green-yellow-red "stoplight" color code to help consumers identify which seafood items to eat and which to avoid.



Fig. 6. The permanent “Real Cost Café” exhibit uses touchscreens and video to engage visitors with information about sustainable seafood issues.



Fig. 7. Hot Pink Flamingos interactives included a station (right) where visitors could write electronic postcards to their U.S. senators, urging them to take action for the ocean.



Fig. 8. Visitors to Hot Pink Flamingos could choose a conservation action, take a selfie at the interactive exhibit and see an animated version of themselves “living” their pledge.

with videos of a chef, waitress, and busboy who critique the seafood dishes they order via touchscreen menus, sharing a sustainability message in a lighthearted and engaging way. *Seafood Watch* is also the call to action in our permanent exhibition, *Fragile Seas*, which draws a connection between individual seafood choices and the survival of sharks, tunas, and sea turtles.

Hot Topic, Cool Reception: *Hot Pink Flamingos*

In March 2010, we opened *Hot Pink Flamingos: Stories of Hope in a Changing Sea*, a 7,000-square-foot special exhibition. Our goal was to connect the public's love for marine life with the impacts of climate change on ocean ecosystems and animals, and to highlight concrete steps people were taking to make a difference. As with all our exhibitions, compelling live animals were the focus. Eponymous pink flamingos and other wading birds helped illustrate the impact on wildlife from sea level rise (as did an online YouTube animated video, created for the exhibition and narrated by comic actor John Cleese).³ A colorful living coral reef community was the vehicle for addressing ocean acidification, and exhibits of sea turtles, jellies, and Magellanic penguins shed light on the ways a warming ocean would affect the survival of different species.

Each live exhibit of animals was paired with interpretive elements describing ways people were responding to the climate crisis with creative solutions: dairy farmers using animal waste to generate energy; faith communities installing solar panels on their houses of worship; and the potential for individuals to save energy around the home by making small changes in everything from home cooling,

³ To view the animated video, "Change for the Oceans," visit <https://youtube/hnh5PVMj8BU>.

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to cooking, to washing clothes. We placed calls to action at a number of different exhibits. These included a kiosk where visitors could write letters to their U.S. senators to voice their concern for the ocean and ask them to support climate-friendly legislation (fig. 7), and an animated interactive (fig. 8) where visitors could take a photo of themselves, choose an eco-friendly action (e.g., bike to work or shop for locally grown produce) and see their action embodied on a video wall where animated characters (with photos of the visitors' faces) acted out the commitments they'd made.

At the time, summative evaluation revealed that about two-thirds of visitors felt it was appropriate for the aquarium to raise climate issues (that sentiment is much stronger these days) – however, many visitors reported that they did not take away anything new from the exhibition. Some expressed a sense of saturation around climate change messages, despite previous evaluation findings showing that aquarium visitors did not in fact know much about how climate change and the ocean were connected.

A majority of visitors also noticed a difference in tone with this exhibition's overt focus on

climate change impacts. The response to this was polarizing. Some visitors who had a lukewarm reception or mixed feelings about the messages felt the tone was too preachy, negative, or political – with some even comparing it to “propaganda.” Meanwhile, other visitors described the exhibition as “upbeat,” inspiring, and “a call to action,” as the aquarium had intended.

Evaluators suggested that visitors’ own deeply embedded personal feelings about climate change affected their response to the exhibition – which meant different guests could have opposite reactions to the same message. Visitors did, in fact, indicate that their experience with the exhibition simply reinforced their previously held beliefs, likely demonstrating they already had strong opinions that were not easily changed. Interestingly, more personalized interactions with volunteer guides around the exhibition space, and a related public theater program, tested more positively than the exhibition itself.⁴

Our messaging hadn’t achieved the level of engagement we’d seen earlier with sustainable seafood, nor did it facilitate the kinds of experiences we know from our research are the main driver for visiting: to see cool live animals and have fun while sharing experiences with the people they love.

Overall, reactions to *Hot Pink Flamingos* helped fuel a growing desire to gain a deeper understanding of the psychological barriers associated with communicating climate change at informal learning centers like aquariums and museums. Years earlier, as a first step, we and several hundred like-minded colleagues had convened in Monterey to discuss – with

4 For the summative evaluation for *Hot Pink Flamingoes* see “Summative Evaluation of Hot Pink Flamingos: Stories of Hope in a Changing Sea,” *Informal Science* (January 1, 2011), www.informalscience.org/summative-evaluation-hot-pink-flamingos-stories-of-hope-changing-sea.

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scientists, peers and science communicators – how to develop climate messages that would resonate with our audiences. As we all continued to share and learn from our experiences together, that convening grew into a national network of climate change interpreters.

In 2011, the aquarium, along with National Aquarium in Baltimore and the New England Aquarium, supported the establishment of the National Network for Ocean and Climate Change Interpretation – NNOCCI – and the related website, ClimateInterpreter.org.⁵

5 To learn more about the National Network for Ocean and Climate Change Interpretation, and the resources available to informal science centers, see <https://climateinterpreter.org/about/projects/NNOCCI>.

NNOCCI teaches social science research-based communications strategies, developed with the Frameworks Institute, that mitigate psychological barriers on climate change. These techniques are now being implemented at 184 informal learning centers in 38 states. Evaluation of these efforts indicates increased understanding of climate change, support for solutions, and commitment to civic engagement among visitors.⁶

We also incorporated findings gleaned from an earlier multiyear, multi-institutional study in which we participated, along with other members of the Association of Zoos and Aquariums (aza.org), that assessed the conservation impact of a visit to an aquarium or zoo.⁷ Published in 2007, the study, “Why Zoos and Aquariums Matter,” concluded that visits to accredited aquariums and zoos can prompt people to reconsider their role in environmental problems and conservation action, and to see themselves as part of the solution.

Over time, through a growing body of research,⁸ we’ve come to understand the importance of approaching climate change through the lens of shared values, to establish common ground and prime our audiences for receptivity to new information. We’ve also learned that people have become weary of messages that seem like “just more bad news” on climate change. Instead, pairing a more explanatory tone with solutions and clear calls to action can cut through confusion and fear. And a better

understanding of Americans’ preconceived notions on climate allows us to tailor our communications to align with more productive thought patterns and dodge triggers for problematic mental models.

At the aquarium, we’ve applied this evolving understanding of the social psychology around climate change – and our own findings about the effectiveness of personalized interaction – to bolster training programs for our more than 800 interpretive staff and volunteers. Exhibit elements support the efforts of our volunteers by providing platforms to facilitate personalized climate storytelling.

One example is a digital interactive station based on our award-winning 2010 auditorium program “Whales to Windmills: Inventions Inspired by the Sea.” At the station, volunteers share with visitors stories about innovative energy efficiency solutions adapted from nature – including the body shapes of whales, sharks, boxfishes and other animals – and explain the role we can all play in protecting ocean wildlife by supporting efforts to move our communities toward a clean-energy future.

Such messaging opportunities are now integrated across several different exhibitions and strategically embedded within public programs like “Journey To Baja,” a staff-led auditorium program using video that incorporates themes from our *iViva Baja!* special exhibition. Rather than concentrate climate messages into a single stand-alone exhibition that can be more easily missed or misinterpreted, we’re working to link these messages organically into everything we do and to work toward more meaningful outcomes with help from social science research.

6 Evaluation details can be found at <https://climateinterpreter.org/content/right-message-right-messenger>.

7 John H. Falk, Eric M. Reinhard, Cynthia L. Vernon, Kerry Bronnenkant, Joe E. Heimlich, and Nora L. Deans, “Why Zoos & Aquariums Matter: Assessing the Impact of a Visit to a Zoo or Aquarium,” *ResearchGate*, January 2007, www.researchgate.net/publication/253004933_Why_Zoos_Aquariums_Matter_Assessing_the_Impact_of_a_Visit_to_a_Zoo_or_Aquarium.

8 For a full report on recommended message strategies please visit www.frameworksinstitute.org/assets/files/PDF_oceansclimate/climatechangeandtheocean_mm_final_2015.pdf.



INTERACTIVE, PARTICIPATORY & INNOVATIVE.



DESIGN,
FABRICATE &
IMPLEMENT.

F&W
FLUTTER & WOW MUSEUM PROJECTS

We've also recruited and trained a group of volunteer guides as English-speaking "Conservation Associates" and Spanish-speaking "Naturalistas." Informally in our exhibition galleries, they can talk with visitors about climate change and other conservation issues in ways that incorporate principles from NNOCCI and other conservation communications expert resources.

Moving Forward: Redefining our Approach to Conservation Messaging in Exhibitions

Over the past two decades, we have increased our knowledge about effective conservation messaging methodologies. Now we are embarking on redefining our approach in exhibitions while building upon our successes. We know that visitors come to see the amazing animals that live in Monterey Bay and the world ocean, and we will continue to leverage these animals to deliver credible science-based conservation stories about them and share with visitors what people can do help ensure their future.

We are also exploring ways to reinterpret and evolve our live animal exhibits to create a personal connection through empathy. Empathy is a complex ability that requires the development of different cognitive and affective mental processes. These processes can occur naturally within most of us, but to fully develop empathy, skills must be tended to through formal and informal education. We are exploring the many ways to engage visitors in non-facilitated empathic learning in our forthcoming exhibitions, including framing, modeling, increasing knowledge, providing experience, practicing and activating the imagination.⁹

⁹ For current research on fostering empathy for wildlife, please see Seattle Aquarium's project at www.seattleaquarium.org/fostering-empathy-wildlife.



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We plan to assess over the long term whether visitor behavior changes when we combine live animals, empathetic practices, conservation messages, and science stories. We will continue to look for opportunities to tie species to conservation actions, both individual and collective. We hope to measure whether there is an increased level of action being taken due to increased empathy.

Conclusion and Tips

- Don't shy away from telling important conservation stories (or tackling other complex topics) – especially those that relate directly to your mission. Look for ways to introduce the stories to visitors not just in stand-alone exhibitions but broadly throughout your institution and exterior channels. We've learned through market research that being a voice for ocean conservation stories strengthens our brand and reinforces interest not just in our conservation work but in visiting the aquarium. We've also learned that visitors who attend one or more public programs during a visit are significantly more likely to take home a conservation message.
- Create experiences within and outside your exhibitions that facilitate one-on-one encounters with staff and volunteers to communicate difficult issues. Over the years, we've developed more visitor programs, auditorium programs, and discovery stations, where we can deliver conservation messages more organically.
- Tap into collaborative resources to inform effective conservation messaging and deploy those messages in an exhibition or a program.

For example, we use NNOCCI messaging, and the recently released Heartwired guidelines, developed by the David and Lucile Packard Foundation, for communicating ocean conservation.¹⁰

- Think about your own exhibition practice. How can your organization be bolder and evolve to address (more) conservation issues? How can your organization create a stronger platform for learning, connection, and empathy that results in taking action?

As the Monterey Bay Aquarium works to redefine conservation messaging in our exhibitions, a quote from Rachel Carson's *The Sense of Wonder* comes to mind: "For most of us, knowledge of our world comes largely through sight, yet we look about with such unseeing eyes that we are partially blind. One way to open your eyes to unnoticed beauty is to ask yourself, 'What if I had never seen this before? What if I knew I would never see it again?'"

We, as informal learning institutions, need to open our visitors' eyes to the planet's beauty, and to its plight. We have huge untapped potential to move from our role to inform and inspire, to a new role of building communities of action among people who have embraced our cause. Whether your institution's mission is about nature or people, there is no shortage of urgent needs and causes. And, there is no time to lose.

¹⁰ "Heartwired to Love the Ocean: A Messaging Guide for Advocates"; 2019, www.packard.org/wp-content/uploads/2019/05/Heartwired-to-Love-the-Ocean-Final.pdf.

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