

# Communicating Climate Change and the Ocean

2009–2012

Final Report



An empowerment evaluation of a national coalition of aquariums

## Evaluation and Report

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In December 2008, the Monterey Bay Aquarium, in partnership with the New England Aquarium and the National Aquarium in Baltimore, hosted a summit of leaders from aquariums across North America and beyond. The intent was to empower aquarium professionals to elevate their collective focus on the relationship between climate change and the ocean, and to develop collaborative strategies for communicating climate change and inspiring solution-oriented actions among our institutions and audiences.

The summit represented the birth of a community. The three-day event succeeded in mobilizing 34 institutions to make more than 100 specific pledges to engage their internal and external audiences with climate change and ocean issues. Four years later, the majority (29 of 34) of these institutions remain actively engaged with climate change communications. They have tripled the number of pledges they have executed and the community has expanded to include zoos, national parks and a wide-range of visitor centers. This report charts key findings this innovative coalition has to offer about communicating impact of climate change on the ocean.



## Key Finding 1:

# The most meaningful learning comes through conversations with each other.

*"It was great to be with people from Monterey Bay Aquarium where they're very comfortable talking about climate change, especially for the girls from some of the aquariums down south where their directors don't even agree with them speaking about it. We could see where everybody was coming from and to feel supported and to really have that sense of camaraderie to figure it out together."*

Ashley Elliott  
Aquarium of the Bay

*"I find that a lot of the best communications I have on these topics are those one-on-one conversations that I have with people who have been in the trenches on these issues for years, and it's just been fascinating to see the accomplishments and the different directions....we're always laughing about like, 'Oh my gosh, that would be impossible here' or 'Why can't you do that, it's no big deal.' And it always comes down to institutional culture."*

Michelle Parker  
Shedd Aquarium

Participants seek forums where they can see what each other is working on and grapple with common issues.

Coalition members desire to learn from each other's experiences. Over the three years of the evaluation, specific grants to increase collaborative learning across the coalition were valued highly by coalition members and were identified by them to be important sources for building expertise and relationships. These included the NSF-funded National Network for Ocean and Climate Change Interpretation (NNOCCI) study circles, and mini grants as part of NOAA funding to the coalition.

Designing webinars as facilitated conversations among coalition members increased their relevance and value.

Coalition members were invited to participate in climate-focused webinars created and hosted by Tom Bowman of Bowman Global Change. The design of the webinars changed in year two based on participant feedback. An initial emphasis on featuring external experts shifted to facilitated panel discussions in which coalition members shared firsthand experiences with challenging issues such as linking climate change to the Gulf Oil Spill or talking with children about climate change. A number of participants cite the value of these facilitated conversations, not only for their own learning, but also as a means to engage their staff and volunteers with communicating climate change.

## Key Finding 2:

# Visitors expect aquariums to talk about climate change.

*"They are expecting to hear about this topic and they are expecting to leave with some suggestions, some ideas of what they can do in their daily lives to help mitigate global climate change. It's important that we don't feel like we have to dance around this subject anymore. We have our guests' support, and many of us also have our institutional support to be engaged and to be engaged at a much deeper than what we have ever done before. I feel like all the lights are green and we're getting on the on-ramp and we're picking up speed.*

*John Garner  
Point Defiance Zoo & Aquarium*

Anxiety about communicating climate change remains a powerful perceptual barrier.

Fear of negative interactions around climate change is diminishing across the coalition though it remains a powerful barrier for some. Coalition members report that in reality, negative interactions with climate change deniers is far less of an issue than anticipated across all institutions.

Some aquariums define themselves as social change institutions and feel comfortable communicating climate change. For others, climate change raises anxieties with respect to their organizational identities vis à vis science and advocacy. Many aquariums and zoos have traditionally shied away from taking absolute stands on topics, with the exception of conservation issues in which their scientific staff hold specific expertise. As Shawn Rowe at Hatfield Marine Science Center says, "Whenever we start talking about communicating climate change within our organization, the scientists start to get a little scared off. They want to have that air of neutrality around their work. Whether it's true or not, they want that perception."

Evaluation evidence from individual institutions, regional alliances and national surveys indicate that the message of climate change resonates with aquarium and zoo audiences.

Audience survey results confirming visitor interest in climate change have been done in partnership with five aquariums in North America, including, Shedd Aquarium, Monterey Bay Aquarium, Aquarium of the Bay, National Aquarium, and New England Aquarium, as well as eight Latin American partner zoos belonging to the Latin America Association of Zoos and Aquariums. The *Global Warming's Six Americas* study conducted by the Yale Center for Environmental Policy and Law continues to be an important evaluation framework and source of confidence for coalition members to engage in climate change communications.

## Key Finding 3:

# Support for interpreters from senior leadership is essential.

*"I think the biggest institutional elephant is still, in many places, a real lack of top-level support, whether it's the board or the executive director. Climate change is quietly encouraged or tolerated but not well supported at that policy level. When I talk to cohorts, members of other organizations, it's like, 'Well, we do this but we need to make sure we don't get too many negative comments or generate hate mail or anything because we're not sure if our backs are covered or not.'"*

*Jim Covell  
Monterey Bay Aquarium*

*"The interpreter is the key leverage point. Interpreters touch so many people, both guests and staff. They work with program development, exhibit development and across the whole institution."*

*Billy Spitzer  
New England Aquarium*

Institutional leadership must support interpreters in order for them to feel confident about communicating climate change.

Fear of naysayers or backlash from directors, donors or board members are major barriers for communicating climate change and the ocean for interpreters (staff and volunteers). As Kerry Carlin-Morgan of Oregon Coast Aquarium puts it: "We, as an industry, know that our visitors want more of this information from us, but for my institution it's been hard convincing our volunteers of that and making them comfortable and confident enough to want to do that." Leaders in some coalition institutions send the message that climate change is anti-business or too political. Coalition members with higher levels of comfort communicating climate change praise their institutional leadership for recognizing the strong scientific consensus around climate change and the urgency of the issue and express quiet frustration with what they perceive to be the tendency for aquariums and zoos to "tiptoe" around climate change issues.





## Key Finding 4:

### Make it real. Make it local.

*"It's not just happening in the Arctic. We actually have a program coming out tonight on NBC news, where the message is, 'It's here. It's real. It's now.' We're talking about how we're seeing the effects of climate change right here where we live."*

*Maria Brown  
Gulf of the Farallones National  
Marine Sanctuary*

*"We're choosing to partner with our local university, which is the University of Texas at Corpus Christi, and particularly their research institute with a focus only on the Gulf of Mexico, really trying to sort of think about how they view climate change and how it's affecting the Gulf of Mexico and how it's affecting folks who live along the Gulf Coast, who largely come to the aquarium and participate in our programs."*

*Tom Schmid  
Texas State Aquarium*

#### Reframe global climate change into local and regional contexts.

Coalition members have shifted from presenting generalized climate change messages to targeting specific audiences and focusing on specific regional climate change issues. Aquariums in the Pacific Northwest report that guests tend to be more interested in the effect of climate change on marine mammals and the impact of ocean acidification on the shellfish industry. Guests to aquariums in Florida, Tennessee and Texas engage more readily when climate change messages are framed in terms of resilient coastal communities, sea level rise and sustainable lifestyles. At Ocean Park Aquarium in Hong Kong, links between climate change and sustainable seafood are the issues with the highest resonance for guests.



## Key Finding 5:

### Green your own house.

*"We're reducing our emissions. We're going to be reducing our landfilling. We're looking at reducing employee commutes. We are reducing our own contributions to the problem. I think that all this work that we are doing is going to be the foundation of how we talk about climate change to the public. We're taking the approach: 'Shedd cares deeply about this and this is what we did about it, and we hope you'll join us. Here's how you can join us.' It's that 'walking the talk,' demonstrating commitment through action."*

*Michelle Parker  
Shedd Aquarium*

Institutional greening is seen as an important means to communicate climate change.

Climate change mitigation measures are increasingly being integrated into the day-to-day operations and organizational infrastructures of institutions within the coalition. This includes a number of efforts to "green" institutional practices. According to Ian Dutton, formerly of the Alaska SeaLife Center: "Nothing we do about climate change is more effective than the act of demonstrating that there is an energy efficient alternative, that does all this, saves you money, and takes advantage of local resources."

A number of aquariums are working with initiatives sponsored by city, regional and state agencies to improve their energy efficiency and reduce their carbon footprints. Mark Plunkett of the Seattle Aquarium says that greening institutions may soon become a norm for the Association of Zoos and Aquariums members. "We're looking at establishing green standards and motivations for being green across all AZA zoos and aquariums. We're dovetailing with the climate initiative task force to have a green threshold be part of AZA accreditation."



## Key Finding 6:

### Focus on the animals.

*"We painted the viewing glass with ice frosting images of a bicycle, the earth, slogans like 'keep it cool for polar bears', and then released the bears. Watching them licking that off the glass was pretty hard to beat as an attention getter. It was a great enrichment for the bears. The public loved it because it brought the bears close to them. While you've got the public there, it's a great opportunity to talk about our connections to polar bears and climate change."*

*John Garner  
Point Defiance Zoo & Aquarium*

Connect climate change stories to the specific animals guests are watching.

Animals remain the key way aquariums engage guests. Coalition members are devising innovative ways to link the animals on display to climate change messaging. A new video at the Shedd Aquarium, for example, describes how the dolphins in the show like cold water, and how the aquarium pumps the water from the dolphin habitat to the roof in the winter where it is chilled. By turning off their chillers in the colder seasons, they save lots of energy. The video goes on to encourage guests to make the connection to their own homes: "When you are doing laundry at home, think dolphins. Use cold water."

According to Michelle Parker, "We evaluated the videos and they are wildly successful. People reported that they had a better impression of Shedd after viewing them. People also had really high recall of the messages...It shone the light for us that we can tell these climate change stories in a powerful way and people can enjoy hearing them. That was new for us."





## Key Finding 7:

# Match the scale of the response to the scale of the problem.

*"We need to try to communicate with individuals as members of families, as groups of visitors. We need to think in terms of identity building and community building and social benefits and social norms that arise when you're organizing on these kinds of levels. We should activate the needs that people have for social gathering and to feel connected. The question that we haven't really resolved is what are the roles of our institutions in that? Is it to tell people about climate change? Or, is it to facilitate their involvement in communities of action?"*

*Billy Spitzer  
New England Aquarium*

Move beyond individual behavior change to broader communities of action.

Aquariums have traditionally focused on individual behavior change. Climate change is an issue of global proportions. While still at an early stage, coalition members are increasingly interested in shifting emphasis beyond recommending individual actions toward community, city and regional responses that better fit the scale of climate change issues. This requires new organizational capacities and poses new demands on their abilities to operate in broader collaborative arrangements. Aquariums enjoy high levels of public trust and are deeply embedded within a strong sense of place. Some of them are openly questioning how best to leverage these strengths to help their guests feel connected to, inspired by and empowered to participate in larger-scale climate change initiatives.

As Patricia Filipe of the Lisbon (Portugal) Oceanarium says, "the majority of the people who visit us think that climate change is already happening and they cannot do anything about it as individuals because they hear that the world polluters are not addressing the issues seriously."

## Key Finding 8:

### Collaborate.

*"It is unbelievably critical that aquariums and other cultural and scientific institutions work more closely than ever with a common set of tools and a common set of messages to try and get the American public and decision makers and corporations and educational systems moving on climate change. It is more important than ever that we all coordinate together."*

*Aaron Pope  
California Academy of Sciences*

Approaching climate change communication as a collaborative network yields powerful results.

Coalition members report increased collaborations with other aquariums, zoos, national parks, universities, governmental (municipal, state and federal) agencies, school districts and NGOs. This expanding collaborative network consists of multiple institutions, individuals and perspectives.

The issue of climate change has risen in the strategic planning processes of the NW Zoo & Aquarium Alliance and other well-established networks and alliances. Workshops, such as the one conducted by the North Carolina aquariums with aquariums from South Carolina, Charleston and Virginia, and others in the Gulf States, are yielding new regional collaborations. There is a tendency toward regional groupings, as members recognize the value of talking about very similar ecosystems, similar visitors and similar political contexts.

The timing of a major NOAA grants application, coming just after the initial summit, was ideal. It provided financial resources and third party validation that a number of participants used to embed climate change messaging into their institutions. The establishment of the coalition positioned aquariums as a voice for public engagement with the issue and improved access to other grants that further spurred collaboration.

## Key Finding 9:

# Conservation psychology, evaluation and framing are important.

*"The whole psychology of behavior change has become a major focus for me. Whether we're talking about a healthy harbor or ocean acidification, we're really talking about environmentally sustainable behaviors. Ultimately, we're asking people to do very similar behaviors: Live more sustainably and reduce carbon. The research into conservation psychology continues to build my confidence about how we're framing those messages."*

*Nancy Hotchkiss  
National Aquarium in Baltimore*

*"We realized that we didn't really have enough data about our region and about our states and about peoples' attitudes and beliefs... We postponed the development of our outreach activities until the survey results came back, and we had a better sense of which behaviors people are most likely to change and those that they are most resistant to change."*

*Debbi Stone  
The Florida Aquarium, speaking on behalf of a regional collective of aquariums situated around the Gulf of Mexico*

Targeted evaluations lead to more effective framing for climate change communication messages.

There is growing recognition among the coalition that knowing what one should do does not necessarily mean one will do it. Changing personal lifestyles is difficult, even for those who understand the impacts on climate change. "Our staff really know how climate change is affecting the oceans but they are not willing to make big changes in daily life," says Patricia Filipe of the Lisbon Aquarium. "The administration paid for transportation for anyone who would leave their car at home. Out of our 51 permanent staff, only 5 or 6 are using this new incentive. People don't want to leave their comfortable life."

Recognition of how greatly attitudes, values and engagement with climate change vary between individuals, communities and regions has fostered a keen interest in the psychology of climate change and visitor evaluation. Coalition members are eager to understand how and why people make decisions, rather than thinking that if they provide information about climate science, people will do the right thing. They have conducted collaborative, multi-institutional visitor evaluations in many regions of the USA, including the Pacific Northwest and the South. These evaluations, in turn, are actively shaping the way in which climate change communications are being framed and executed.



## Key Finding 10:

### Personalize for more impact.

*"The empowerment evaluation is our secret weapon to keep our institutions engaged and involved over the last four years. And when we were planning our 2012 summit, it was a very valuable tool for really understanding, 'Where is this field? Who really should be coming? Who is active? Who needs to be pushed? Who is not involved?' It's incredibly useful."*


*Billy Spitzer  
New England Aquarium*

Focusing on individuals and relationships empowers people to create and feel part of a bigger movement.

With the rise of social networking, many now refer to the current time as the Age of Personalization. This movement towards personalization is evident in the rise of social media usage by coalition members over the past four years. Pledges reflect a shift from an initial focus on creating climate change exhibits to more emphasis on interpreters and social media.

High-quality climate-change communications and education resources from numerous sources are far more readily available now than four years ago. Rather than creating new material, coalition members are more actively engaged in targeting and personalizing materials for specific audiences and partners.

Social change literature reflects how rarely single individuals working in separate institutions are able to effect change. Individuals are far more likely to succeed when they feel connected to a wider community that is trying to do the same thing. The personalized nature of the empowerment evaluation, with its self-determined pledges and personal check-ins, builds upon this work. It has succeeded in helping individuals working in separate aquariums to become change agents as part of a broader movement committed to communicating climate change and the ocean.



## Four years onward: planning to gather the coalition for a summit in Baltimore.

Nearly four years after the original group assembled in Monterey, the coalition made plans to assemble in Baltimore to share their experiences, their resources and their sense of new steps forward.

The empowerment evaluation was used to gather coalition members' input into the shape and emphasis of the summit. They expressed a strong desire to work in a highly interactive manner, seeking to learn from each other's experiences and to have time to forge stronger collaborative relationships. The following themes were widely requested:

- Learn how others have surmounted obstacles and how they've succeeded
- Frame a common "ask"
- Work in facilitated forums to network, converse and personalize ideas to their own institutions
- Develop successful thematic and regional collaborations
- Address how to deal with fear of naysayers
- Hear updates on climate change science from aquarium directors and other influential leaders

The summit planning committee worked with these suggestions and their impressive contacts within Baltimore and across the country to create a three-day summit. The results of that gathering are shared in a separate report entitled, *Extending the empowerment evaluation to encompass the Baltimore Summit*. The question of how to sustain the coalition beyond the life of the grant is explored in a third report entitled, *Building communities of support: Growing the experience of the Climate Interpretation Coalition*.

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