



# Efforts to Advance Awareness, Understanding and Action around Ocean Acidification

## Summary Findings

The Ocean Project recently completed a set of research activities to better understand how to improve awareness, understanding, and action around the growing threat of ocean acidification, by working in partnership with zoos, aquariums, science museums (ZAMs). The findings are summarized in this report and detailed in the appendices.

The Ocean Project has a long track record of working in partnership with ZAMs, helping them in their efforts to address a wide range of ocean issues with their visitors. Based on our experience, we knew that in order to help our partners expand and improve their efforts around ocean acidification (OA), our first step would be to establish a reliable baseline. Specifically, we would need to know the extent to which our partner institutions are already addressing, and/or interested in addressing this issue with their visitors; the extent to which the broader public and, specifically, the visiting public, is already informed about it; and, perhaps most important, whether in the combination of these factors there is an opportunity to make a difference.

**KEY FINDING: Our partner network is very interested, but not yet very active in addressing OA with visitors**

We base this first finding on the results from three project activities. The first was a survey sent to the entirety of our partner network. (See also the report, *Findings from a summer 2012 survey of our partner institutions*); the second was a series of in-depth interviews completed with representatives from a dozen leading institutions; the third was a comprehensive review of the online presence of 52 partner institutions. (See also the memo, *Findings from partner surveys, interviews and online review*.)

The partner survey confirmed that the members in our network are indeed active in communicating a wide range of issues with a wide range of audiences. Yet, at the same time, it also informed us that they are not yet focused on the issue of OA. Approximately 35% of staff active

### PARTICIPATING PARTNERS

1. Cabrillo Marine Aquarium
2. California Academy of Sciences' Steinhart Aquarium
3. Exploratorium
4. Florida Aquarium
5. MOTE Marine Laboratory
6. National Aquarium, Baltimore
7. North Carolina Aquarium at Fort Fisher
8. Oregon Coast Aquarium
9. Pacific Science Center
10. Science Museum of Minnesota
11. Seattle Aquarium
12. Virginia Aquarium & Marine Science Center

in communications indicated that their institutions are already addressing OA in some way. Another 52% of these respondents noted that their institutions either are planning to do so, or "thinking about it."

The information gathered in the other sections of the survey, combined with the insights gained specifically from the in-depth interviews, helped to further flesh out this finding, letting us know that among those already addressing OA, only in a few cases is it currently a focal issue. More commonly, it is mentioned in passing as part of a larger conversation about climate change or in the context of threats to, for example, coral reefs. The online review provided further support, as only 12 of 52 institutional websites we reviewed mentioned OA, with only four of those sites offering any significant detail about the issue.

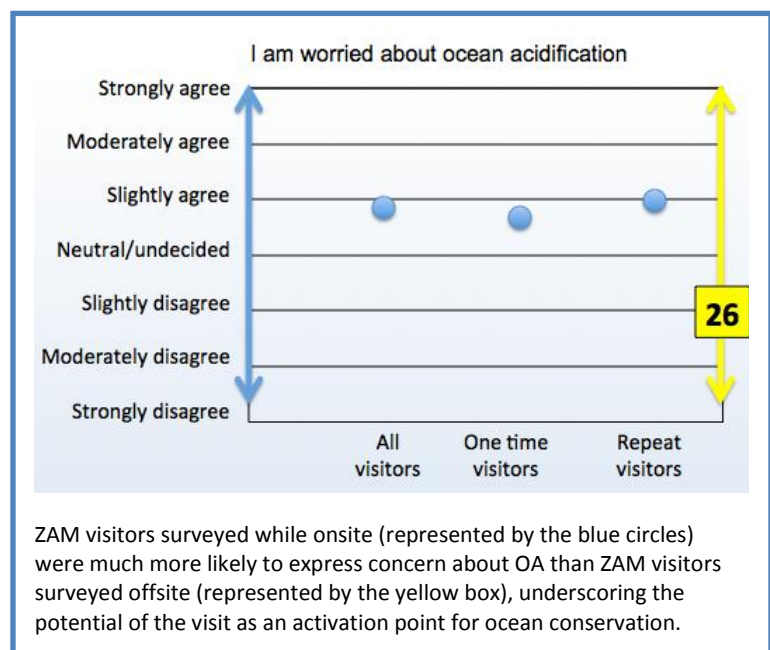
To help them in their efforts, the partners emphasized in both the survey and the interviews that they would welcome three specific types of assistance: strategy sessions to help shape their efforts, monitoring and evaluation to help measure their successes, and case studies through which to learn about the work of others.

**KEY FINDING: The broader public is largely unaware of OA; yet, when provided with basic information when visiting an aquarium or science museum people quickly become concerned about the problem and interested in being part of the solution**

This finding has its foundation in two other program activities, a national survey of broader public opinion (See also *Summer 2012 Special Report: Public Awareness of Ocean Acidification*) and a set of onsite visitor intercepts at 11 participating partner institutions.<sup>1</sup> (See also the report, *Findings from baseline visitor surveys at leading partner institutions.*)

The national survey confirmed our sense that unaided awareness of OA is extremely low. On our agreement scale, which runs from 1 (total disagreement) to 100 (total agreement), the unaided score for "I have heard of the issue of ocean acidification" was a 14 for the public as a whole, rising only slightly to 19 when looking at recent visitors to a ZAM, and to 31 when looking only at those who already claimed concern about climate change. Yet, once made aware of the issue, concern spiked significantly. With recent visitors to a ZAM, for example, the agreement score on "worried about ocean acidification" went from 26 without prompting to 60 with prompting.

For those already concerned about climate change, it went from 58 or moderate agreement without prompting to 78 or strong agreement with prompting. This suggested that right now there is a notable



<sup>1</sup> The Pacific Science Center will be completing its visitor intercepts in November.

opportunity for aquariums and other informal science education centers to raise awareness, and, in so doing, spark appropriate levels of concern about the serious situation facing our ocean.

With the above in mind, we asked our participating partner institutions to conduct on-site visitor surveys. They surveyed more than 3,200 visitors in less than two months using a new iPad-based approach we pioneered. These on-site intercepts confirmed what the national survey had suggested, which is that onsite visitors tend to express higher levels of concern for ocean issues. A typical visitor, for example, was much more likely to express agreement with the statements, "I worry about the future health of the ocean and its animals," and "I am worried about ocean acidification." Moreover, visitors claimed to have higher baseline knowledge of ocean issues, including OA, proving to be more likely to agree with the statement, "I am informed about ocean acidification." In sum, visitors are much more likely than are members of the broader public to be highly interested and easily engaged on this issue.

**KEY FINDING: Aquariums and science museum visits are activation points, offering an excellent opportunity for raising awareness and inspiring action on the issue of ocean acidification**

Perhaps most important, the data gathered in the visitor surveys offered the strongest support to date for our hypothesis that ZAM visitors - especially, but not limited to aquarium visitors - are not only a self-selecting group with an interest in the ocean and ocean animals, but also a group whose interest is activated upon arrival at one of these institutions. Across all ages, visitors indicated that they expect, trust, *and* appreciate the ocean conservation information they receive from our partners, seeing receipt of such information as a key part of good experience. The importance of this last finding cannot be overstated, as it is the first solid data we've seen that advancing conservation can also be good for the "gate" at these institutions.

**THE OPPORTUNITY**

The data tells us that zoos, aquariums and museums want to do more on this issue, and that the visiting public would welcome that information. In sum, it seems that there is now an excellent opportunity to work with ZAMs in order to advance public awareness and action on this important issue.

