

Charting a Course for Sustainable Fisheries

Julie Packard
Monterey Bay Aquarium, USA

ABSTRACT: Over a quarter century has passed since the international aquarium community gathered in Monaco at the first IAC meeting to share ideas and best practices. Over time, our missions have evolved as the world has changed, toward more focus on our role in solving the growing environmental crisis that surrounds us. But, are we doing enough? Freshwater aquatic systems are a basic requirement for human survival, from drinking water to food security. And, healthy ocean and aquatic ecosystems are critical to enabling life on Earth to exist. Their future will determine our future... and, in fact, our very survival. The ocean is our lungs, our pantry, our playground, a massive driver of global commerce and a storehouse for innovation to meet human needs. But, we know now that these aquatic systems are changing at a dangerous pace.

Our global community of aquariums has a massive untapped opportunity to turn this tide. We have done a good job of helping millions of visitors know more and care more about the ocean and aquatic life, but we haven't done nearly enough to guide them to take the next step. Fortunately, we have created an amazing array of effective models for ocean and aquatic conservation, from marine protected areas to fisheries governance reform to consumer movements for sustainable seafood. And, we now have a road map in the new UN Sustainable Development Goals which include specific targets for freshwater and life in the sea.

I am confident we can turn the tide -- by investing in people and ideas to demonstrate solutions, nurturing hope and aspiration, and showing our audiences how they can engage to make change. The collective action of everyone in this room -- whatever we decide to do at our institutions in the next few years -- will help shape the future for humanity on this planet.

INTRODUCTION

The global aquarium community has done a fantastic job in providing experiences that are engaging, educational and fun for our visitors. And since we first gathered as an international community in Monaco 58 years ago, we've been talking about the urgency of taking our missions to the next level, to help people not only know more and care more about the aquatic world, but also to do more on its behalf. Today I'm happy to say that the vast majority of us have the word conservation in our mission statements. But are we doing enough to make good on that promise?

Healthy ocean and aquatic ecosystems are critical to life on Earth. Their future will determine our future. The ocean is our lungs, our pantry, our playground, a vast driver of economic security and a storehouse for innovation to meet human needs. But, we know now that the aquatic systems that provide these services are being degraded at a dangerous pace.

THE CHALLENGE WE FACE

The ocean today is changing before our eyes, becoming more impoverished in biodiversity and more unpredictable in the services it provides to humanity. Scientists agree on the overall causes of this decline: Unsustainable fishing; land-based pollution including plastic pollution; and climate change.

Global climate change is clearly the biggest threat to healthy ocean ecosystems. Already greenhouse gas emissions are causing big changes in ocean circulation and ecosystem composition. Pollution from land-based sources – plastic, nutrients, and chemicals – is a second major concern. Unsustainable fishing is the third big impact area; how much seafood can we extract from the sea and still expect it to function and to feed the millions who depend on it for sustenance and livelihoods?

World catch of wild fish peaked in the mid-1980's and has remained level. Since that time, aquaculture has escalated to meet the growing global demand, expanding at a nearly exponential pace to meet the needs of a growing population. While many forms of aquaculture have undesirable environmental impacts, done in a sustainable way, aquaculture will be key to enabling food and economic security to millions of people. The good news is that aquaculture practices are rapidly improving and on their way to sustainability. In contrast, we have a long way to go to achieve sustainable wild fisheries.

Humans have looked to the sea for sustenance for thousands of years. What has changed is how we fish and the scale at which we do it. Global wild fishery production has peaked, with over 4 million vessels catching 80 million metric tons in 2016. Of the large scale commercial and managed fisheries for which we have data, 33% are overfished, 60%

are fully fished, and only 7% are considered underexploited (FAO 2018). The global average rate of overfishing has grown steadily over the past 30 years and in many regions shows no sign of slowing until effective management action is taken. For many fisheries, such as tunas, overfishing is occurring at a much higher rate. In addition to the basic harvest of seafood, our increasingly effective fishing methods are wreaking havoc on ocean life including many valuable food species, and it is estimated that 9-15% of global fish catch is thrown away as wasted non-target species (Gustavsson *et al.* 2011). Fishery management is generally very poor in most countries, characterized by a lack of science to inform policy along with ineffective regulations and enforcement. Many countries lack sufficient data capability or governance to address the crisis in their waters, not to mention the crisis in international waters governed by ineffective treaty organizations. Illegal, unregulated and unreported (IUU) fishing is rampant. Solving the IUU fishing problem and achieving traceability of sustainable and legal seafood is exacerbated by the highly complex nature of the global seafood supply chain. Finally, today's industrial scale seafood harvest technology and even small scale fishery methods are causing rampant degradation of ocean ecosystems, from bottom trawling to coral reef dynamiting.

FISHERIES PROBLEMS ARE SOLVABLE

Unlike many of the intractable environmental problems humanity is trying to turn around, *the good news about fisheries is that we have the solutions*. We know what to do. We know what a successful model looks like, the ingredients for success and we've seen time and time again how severely depleted fisheries can recover to provide food and economic security once again. Attention is finally escalating to action on the global stage at a growing number of international conferences on the subject, building on the remarkable progress made so far by business and non-governmental organizations (NGO) leaders. New revelations about the scale of IUU fishing and the dark secrets behind the human rights abuses in the seafood industry have brought a new lens and a new urgency that has captured the public's attention.

The U.S. aquarium community has been a huge driver of this success through our collaborative work to raise public awareness of sustainable seafood through Seafood Watch. Together, we have helped build a global sustainable seafood movement, built on the premise of leveraging the buying power of the U.S. market

which imports over 80% of the seafood Americans eat.

Seafood Watch assesses seafood sustainability across a range of dimensions consistently applied, based on published data from governments and the scientific literature. Our team has rated nearly all globally traded and domestic seafood products consumed in the U.S., however information is still sparse at the global scale. Third party certification programs like the Marine Stewardship Council and Aquaculture Stewardship Council are making progress but to date, only 7% of global seafood is certified and many fisheries lack the data to even being to assess their status.

Seafood Watch is based on the following theory of change. Consumers create market demand; businesses commit to sustainable sourcing; producers improve production practices; and governments improve regulations to lock in effective management long term.

In the early years, Monterey Bay Aquarium's Seafood Watch pocket guide and underlying seafood sustainability rankings were focused on building consumer awareness. We also enlisted the help of celebrity chefs to talk about the issues and their own commitment to sustainable seafood, broadening our audience and our media reach.

As media attention and business interest grew, we turned to a higher impact strategy to enlist sustainable seafood commitments from the large retail and food service corporations in the U.S., in turn leveraging their buying power to demand change among producers. As interest grew, a robust community of collaborating NGOs evolved to meet the need. Along with the U.S. aquarium partners, these groups coordinate their strategies and work collaboratively through the Conservation Alliance for Seafood Solutions. Today, thanks to everyone's collective efforts, nearly all of the big grocery retailers and food service companies in the U.S. have made time-bound commitments to source only sustainable seafood that meets Seafood Watch guidelines.

We now have moved to the next big challenge: meeting the growing demand for sustainable seafood products. This has required a shift in strategy. We now are focusing on working directly with seafood producers to meet sustainable standards required by their buyers. This means advising them on what aspects of their fishing and aquaculture practices need to improve to meet an acceptable Seafood Watch rating.

Seafood Watch sustainability criteria and assessment methods have become the most widely accepted sustainability standard for seafood worldwide, and our team of staff and global contractors have produced assessment reports for thousands of global fisheries, with more to come. Beyond big business commitments, Seafood Watch standards are increasingly used as the basis for regional and country-wide initiatives for sustainable seafood, from Brazil to Southeast Asia.

SEAFOOD SOLUTIONS AT SCALE

Today we are working with our NGO partners to effect change on a regional and global scale. An example of this is the Southeast Asia Sustainable Fisheries and Aquaculture Initiative. As part of this initiative, at the recent Our Ocean Conference in Bali last week I was excited to announce our partnership with two of the largest seafood companies in the world – Thai Union and Minh Phu Seafood – to improve practices of their thousands of shrimp farms in Viet Nam and fishery and aquaculture farms across Southeast Asia. Thai Union committed \$28 million to this effort, which is unprecedented. Minh Phu committed to bringing 20,000 shrimp farms in the Mekong Delta up to a Seafood Watch green rating by 2025 year. This will give these farmers access to the U.S. market and reduce the damaging impacts of current shrimp farming practices, from water pollution to clearing of mangrove forests that sequester carbon and protect communities from devastating tropic storms.

As we move forward, we are continuing to refine and improve our definition of sustainability. Seafood Watch and NGO Liberty Asia recently created a human rights risk tool to help businesses identify the labor practice risks associated with certain countries, regions and fisheries. This tool will give them guidance on where to delve deeper to demand higher standards where needed or refrain from doing business with bad actors.

At the broader scale, the Monterey Bay Aquarium’s Seafood Watch program is part of our overarching model for conservation success that goes far beyond the markets-based work. We focus on linking the power of four strategies for impact: audience engagement, science, markets and policy. Voluntary business commitments are a start, but to lock in long term effective management, robust science-based policy approaches must be adopted by governments.

A CRITICAL TIME FOR AQUARIUMS TO STEP UP

Achieving impact at a global scale is not something we can do alone and the success of the sustainable seafood movement in the U.S. has required a massive amount of collaboration among players across sectors and across the globe. Achieving victories like the tuna-fishing nations’ recent agreement on the need for a plan to replenish severely depleted Pacific Bluefin tuna stocks required experts, advocates and international diplomacy work over a decade. I’m proud of the role of the aquarium community in these successes. And, I know we can do more. Toward this end, we have recently launched the Aquarium Conservation Partnership, a collaboration of 22 U.S. aquariums to expand our collective conservation impact.

Along with advocating for strong ocean protection policies, the Partnership has adopted plastic pollution as its primary focal area. To start, last year all member aquariums pledged to immediately eliminate all plastic straws from our food service and takeaway bags from our gift shops, and significantly reduce or eliminate plastic beverage bottles by 2020. Monterey Bay Aquarium has already phased out our single-use beverage bottles, along with all other single-use plastic in our front-of-the-house food service operations. We are also working with our food and retail service provider to reduce single-use plastic in our gift stores.

We know this isn’t easy, which is why we work to champion businesses willing to make incremental change in the right direction. We hope the more committed we are to change, the more new and innovative solution strategies will emerge to solve the problem of ocean plastic pollution for good.

Each of our organizations has assets to bring to the cause of ocean conservation, and the time is ripe to take advantage of the growing global focus on the urgency of turning around the ocean’s decline. Your engagement in conservation action in your own country will require its own approach. I offer these U.S. experiences only to inspire each of us to think about what we can bring to the cause. As an example, here in Japan, seafood businesses are starting to make sustainability commitments working with a Japanese organization called Seafood Legacy. In Japan, seafood is a deeply

cherished part of Japanese culture, much more so than in the U.S. Seafood Legacy, which is not an advocacy NGO, is making great progress working directly with business on the premise that everyone wants to ensure that the rich Japanese seafood experience will be here for the next generation. Japan also has set a sustainability theme for the 2020 Olympics that includes goals for sustainable seafood.

World leaders have issued a global call to action to all of us who care about the future of the ocean and the people who depend it. For the first time the U.N. Sustainable Development goals have a dedicated goal for the ocean, #14 “Life Below Water.” It states a mandate to “conserve and sustainably use, the oceans, seas and marine resources” with specific goals and timeframes for action. We must rally around this opportunity.

This is just the beginning. We have the power to inspire and engage through our exhibits and experiences, to get people to know more and care more about the ocean. It’s time now to ask them to do more for the ocean. We need to lead the way, before it’s too late. Global leaders are realizing we are running out of time to turn the tide on climate change and ocean health. We have the power to both inspire action and demonstrate success in our own countries and across the world.

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