



## Dear Friends of Project Kaisei,

We have had an incredible start to our project. Within just our first year of operation, we have raised enough funds from donors around the globe to launch our first ocean research expedition to analyze the scope of marine debris and ways to begin clean-up of the North Pacific Gyre. Our two affiliated research vessels, the 151ft brigantine vessel the *Kaisei*, (which means “Ocean Planet” in Japanese) and the *New Horizon*, owned by Scripps Institution of Oceanography, spent the month of August putting science and action to work in our troubled ocean. If not for your support and encouragement, the world would not have the understanding and concern for this problem that we share today.



## The News from the Gyre

**What We Observed:** Our first expedition confirmed that the problem of plastic in our ocean is pervasive. Across the 3,500 miles of the North Pacific Gyre, our regular surface sampling found plastic in every single sample net. Most of this material has been degraded and made brittle by exposure to the sun, and then broken up into tiny pieces by wind, currents and waves. The plastic “photo degrades” as a material, but it does not biodegrade – every piece of plastic that has ever been made, and that has ended up in the ocean, is still with us. Humanity has unknowingly impacted the largest and most remote ecosystem on our planet. We have produced a new material in such scale and volume that our broad use of plastic polymers, approximately 50% of which are simply used as disposable products – have through our neglect and failure to understand or

interpret the results of our actions, resulted in tremendous environmental degradation. Here lies the issue – once you are done unpacking, unwrapping, eating and drinking from plastic products, they are here to stay with us for hundreds of years or more. We must ask ourselves, is this truly necessary? What is the true price of this “convenience”? Is it necessary? Is it right to do so?

Along with the hundreds of surface samples we gathered, we removed large pieces of plastic, floating drift (ghost) nets, and other man-made debris that we found in the gyre. To test new ideas and techniques, we have shipped some of the ghost nets to Korea to show that these recovered materials can have economic value. The ghost nets will be re-processed and re-woven into clothing.

**Our Research in the Gyre:** Our science teams are now working to analyze the data that we sampled this year, and we expect many of the results to be ready by February. We will be looking at such things as the volume of material caught, the type of material, its energy value, toxins that may be attached to the debris, issues with invasive species in the ecosystem carried by this floating debris, micro organism and marine life analysis, possible effects of toxins in the area on marine life samples, and much more.



**Testing How to Capture Plastic Particles:** During our expedition, we also tested a variety of capture methods to better understand how to remove some of these poison materials from the ocean in greater volumes. We focused on approaches that can be sustained by low energy input and are minimally invasive to our struggling marine ecosystem.

**Future Plans:** Our main objective with this expedition, and those to come, is to learn from science, research and technology so that we can best heal and restore the North Pacific Gyre. We will look for solutions that can remove large volumes of this debris from the water, and then process the debris into a useful byproduct, be that a fuel, or other form of recycled material.

**Project Kaisei in the Media:** We have achieved significant global visibility on our efforts across newspapers, magazines, TV, radio and web media channels, and continue to do so. The use of our Voyage Tracker caught the eye of Google who has now credited us as a “Google Earth Hero” for our work as an environmental cause that has used new media technology to help show the world the scale and importance of this issue. The Voyage Trackers is still useable on our site, and is a great tool for teachers and classes to visit and re-trace the exact voyage paths that each vessel took, and to experience what was going on each day by the research teams, all via video blogs.

**Spreading the Word:** Upon returning from our 2009 expeditions, we have been speaking to a wide variety of business, community and educational groups at conferences, private functions, and fundraisers in order to spread the word, both in the US and Hong Kong. We have had groups on both sides of the Pacific organize fundraisers on our behalf via open water swimming events, art shows, dinner functions, and some clever ongoing promotions which help to spread the Project Kaisei message. We are now translating some of our short video clips into Chinese, and other languages will follow, thanks to the support of one of our main sponsors, the Bureau of International Recycling (BIR).



**Why We Are Here:** Our goal is to bring awareness about the ocean and its potential for recovery to individuals, communities, industry and government globally. Project Kaisei was inspired by the fact that while many people love the sea, it is sick and dying because nobody is directly responsible for taking charge of global oceanic stewardship. Thirty percent of this planet is land, while seventy percent of this planet is ocean. Our world ocean is truly one system of water. Our countries on land are represented by 193 flags – while our waters – are lost in their vastness. The flag of Project Kaisei is the flag of the ocean and we will be working to find solutions for restoring the health of our oceans. With your help we hope to see the flag of Project Kaisei, the flag of the Ocean, flying at the United Nations, with all the other flags so that those making decisions on land are always

reminded that they are also responsible to the birthplace of life on this planet, our oceanic ecosystem that connects and gives life to us all.

Project Kaisei addresses the issue of marine debris, both at sea, in focal points like the North Pacific Gyre, but also on land. We are researching and bringing awareness to solutions that include new materials, recycling innovations, consumer awareness and policy change. Project Kaisei is helping to heal the seas by bringing together experts to collaborate on this critical global issue. As we connect people, institutions and technologies, we are able to inspire awareness, understanding and change.

**Next Steps:** Our next mission is planned for the summer of 2010. With sufficient funding, we plan to complete three 30-day ocean research and action expedition segments, once again to the North Pacific Gyre, but also incorporating areas closer to Hawaii in this effort. We will conduct further scientific research following on from the questions raised in the 2009 expedition, but we will also concentrate on capturing larger volumes of debris. We will use a number of re-purposed fishing vessels to help us with this task, which will incorporate scaled-up versions of the catch techniques that we tested last summer.

With the data gathered from our 2010 ocean expedition, we will achieve a greater understanding of the measures, processes, scale and economics of opportunities that are available for deployment of large ongoing clean-up, as well as the processing of the material once it is removed from the sea.



**Joining Project Kaisei:** We need your help to achieve our goal of enabling and speeding up ocean recovery, and to maintain the tremendous momentum we have gained. The ocean is a vast, but we can make a difference. Together we are raising awareness, showing industry leaders that it makes economic sense to get involved, and inspiring new scientific inquiry to better understand the problems that are destroying our seas and solutions that will heal them.

You too can make a difference in the products you buy and consume. You can let companies know about their packaging or use of plastics if it is not necessary,

either through your purchasing decisions, or via correspondence with them. Use this issue as the cause to create change in what we produce and consume.

Please spread the word about Project Kaisei through your network and community. All donations are helpful, as are introductions to larger groups. We have great programs planned for 2010 that will build our ocean recovery alliance and help bring the global community back to the ocean to make positive changes. We will continue to work on two clear fronts:

- **Ocean Expeditions:** We will launch a fleet of vessels to conduct research, test clean-up techniques, and collect and remove large quantities of marine debris (plastic).
- **Educational Outreach:** We will build from our science and hands-on findings in the field to provide educational content at multiple levels, community exhibits for aquariums and museums, and technical communication to industry and those developing policy.

All of this will be delivered through a broad continuum of face-to-face and new media platforms to build and sustain engagement of those who want to learn and actively help clean-up our ocean.

A special thanks to all of our supporters, sponsors and collaborators for helping build the great momentum we have today, in the name of the Ocean.

<http://www.projectkaisei.org>

Facebook and Twitter: Project Kaisei

Photos courtesy of Annie Crawley and Andrea Neal

