

# How We Can Save The Oceans

**WASHINGTON** – We humans are unfortunately very good at damaging or destroying the world in which we live. Delicate and complex ecosystem which nature built over millennia have been compromised in almost no time by careless and damaging human activities resulting in pollution and often physical destruction.

## **Recreating coral reefs**

Coral reefs are among the notable victims of human actions. However, in this case human ingenuity may help repair some of the damages caused by human carelessness or utter stupidity. *(Unfortunately, this is not a perfect solution. Regarding reefs not everything can be remedied via ad hoc interventions. Larger issues like rising water temperatures which in turn severely damage marine ecosystems, including coral reefs, would require broader, longer term systemic interventions).*

As we know, there have been many initiatives aimed at creating man-made new habitat for marine life, mostly by literally “throwing” into the oceans all sorts of discarded man-made objects with the hope that they would offer an appropriate habitat for marine life.

## **“Reef Balls”**

But now we have something much better, and much more sophisticated. I am referring to the innovative activities of the Reef Ball Foundation, located in Athens, Georgia, ([www.reefball.org](http://www.reefball.org)). As the name indicates, their work is all about man-made “balls” to be deployed on the sea floor, so that they will help nature by offering “platforms” that will allow coral to attach to its surface, this way allowing the creation of new reefs.

The reef balls are essentially a man-made, eco-friendly

structure placed on the sea floor that soon becomes a home for seaweed and coral, this way creating a habitat that attracts fish and other marine life. These “balls”, (in fact, half balls), are simple, and yet very ingenious, objects that provide an opportunity to recreate or strengthen dead or severely damaged coral reefs.

The foundation came up with an easy to make, extremely durable concrete structure –guaranteed to last 500 years– that looks indeed like a hollow ball, (hence the name: “reef ball”), except that it is more like a half ball, so that its large base will allow it to firmly rest on the sea floor. The clever feature is that this structure has several large holes, so that water, nutrients and fish can flow through it, or live inside it, while coral and plants little by little start clinging on its corrugated, uneven surface.

### **A new reef in just 3 to 5 years**

Well, the evidence shows that coral easily attaches itself to this man-made structure securely anchored on the sea floor. Amazingly, in just a few years (3 to 5) an almost complete replica of a natural reef is created, thanks to the reef balls habitat. You can place as many “reef balls” as you want on the sea floor. Soon enough, they will “come to life”, playing host to coral, algae and fish.

The added bonus of this solution is that it is easy to make the reef balls on site, near the area where they will be deployed. This greatly simplifies all logistical arrangements, considering the bulk and weight of large concrete structures. The reef ball molds can be shipped close to the deployment area, near the water. Making the reef balls “on site” is relatively simple, and a good way to avoid all the complex logistics that would be entailed in making the (heavy) reef balls in one place, shipping them probably far away, with all the associated transportation costs.

## **Easy to deploy**

Once the balls are made and ready, inflatable balloons are placed inside the hollow structures, so that they can easily float until they reach the designated deployment area. At that point, with the help of divers, the balls are guided down, as the balloons are deflated.

Once the reef balls have safely reached the bottom of the sea, that's it. They are designed to stay there, in perpetuity. They are heavy and stable, and so they will not be displaced by underwater currents, or other forces. The holes allow water to pass through them. Their hollow interior will become a habitat for fish and other creatures. The rugged exterior will allow coral to attach to its surface.

## **A new reef**

Over a relatively short period of time, the reef balls will become the home of new coral and plant life, while creating a new habitat for fish and crustaceans. This almost natural habitat will allow the replenishment of various species, contributing to the healing of many parts of our damaged Oceans.

This may not be perfect. Nothing beats Mother Nature's physiological ways to create and self-perpetuate its own ecosystems. And, as indicated above, in many regions there are serious sustainability issues regarding old reefs –like rising water temperatures– that the reef balls “solution” cannot address. Still, as far as cost-effective, man-made remedies go, this is pretty good.

## **More than 62 countries have reef balls**

Reef balls have already been placed in more than 62 countries. They are relatively inexpensive, and easily deployable. And, just as intended, they create a new habitat for marine life.

Let's hope that more and more people and organizations around the world will become aware of this ingenious way to recreate precious coral reefs.

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