

My name is Brad Ack, I am the executive Director of Ocean Visions.

I want to talk about what we might do to actually solve the problems of warming, deoxygenation and acidification – not just adapt to them. The driving cause of these three existential threats to the ocean is too much CO<sub>2</sub> in the air. Now.

And the evidence is clear: it is now likely late to fix our damaged ocean and climate simply by reducing future emissions of CO<sub>2</sub>.

We see devastating changes in the ocean now at current atmospheric concentrations of CO<sub>2</sub>. These will only worsen at NetZero by 2050.

The only way to ultimately turn this problem around, to being to reverse these devastating changes, is to *reduce* atmospheric concentration of CO<sub>2</sub> and thereby the tremendous heat that we are trapping on the planet and driving into our ocean, along with the acidity we are adding in the form of CO<sub>2</sub>.

This means cleaning up decades of CO<sub>2</sub> pollution.

The good news is there are many opportunities to build a large-scale carbon clean-up enterprise on the planet. The most important clean-up in human history, and the oceans may be able to play an enormous role in drawdown and safe sequestration of carbon. There are a number of innovative pathways for ocean-based carbon removal, and many of these ocean-based approaches may also counter ocean acidification directly.

Now we need greatly accelerated research and development, very large infusions of talent and resources, and ocean nations can lead creation of this new sector.

The ocean crisis and the climate crisis are two sides of the same coin, and they can only be addressed effectively and durably by changing the equation that is causing them: too much CO<sub>2</sub> in the atmosphere.

Let's clean it up.