

SoMAS Convocation -- May 2014

Good morning!

Congratulations to our Baccalaureates, and to our Master's and PhD recipients in the School of Marine and Atmospheric Sciences.

It is a great pleasure to participate in this celebration of the accomplishments of our students and it is an honor to be asked to share a few thoughts with you this morning.

For many of you in this room this morning, a long and winding road is finally coming to an end...you've worked very hard, some of you no doubt have stumbled a time or two and had to pick yourself up again; some of you have faced financial hardship... and emotional sacrifice...yet as this chapter endsa new and even more exciting chapter begins.

But I am not talking about our graduates! Your parents are the ones that started you out on this path, and they are here again at the end...or it may some other loved one who sacrificed for you ...and so I would like us to take a moment to acknowledge all the parents, family members, and dear friends that have supported these students

I know I speak on behalf of all faculty and staff at the SoMAS when I say that it has been our privilege to teach and mentor these young people. We will miss them as they move on to other challenges.

The question is: What are those challenges likely to be particularly with respect to the sustainability of plant earth? And how will we solve them?

I want to share with you two reflections of the past that may illuminate the future.

First, when I was a grad student back in the late 70s, things were very different. The environmental challenges were obvious, the enemy was clear. It was industrial effluents, it was phosphate detergents, it was acid rain, it was automobile exhaust, smoke stack emissions, it was thermal effluents, and other point sources, it was overharvesting of the ocean by foreign fishing fleets. In each of these cases, we passed laws like the clean air act, the clean water act, and the Magnuson Fishery Conservation Act that required those entities that were degrading the environment to stop. And it worked. Our waters got cleaner, our air became cleaner, and for a while at least our fisheries came back.

Now we face a very different, far more formidable challenge. It's not the obvious point source impacts to the environment that are relatively easy to solve. It's the very gradual, incremental changes to our environment that get just a little worse each year. There is no longer any doubt that each year our climate is getting a tiny bit warmer, our atmosphere contains a tiny bit more CO₂, our glaciers shrink ever so slightly, sea level rises just a little and our oceans are getting a tiny bit more acidic. And there is also no doubt that we all collectively contribute to this problem. Our culture must change and that makes it a far more difficult to solve.

I am not a pessimist, but I must say that the long term outlook for our planet over the next century is troubling. But I am confident that we will find solutions to these problems, that education can lead to public understanding, and changes in policy, and I believe strongly that the answers will come from many of you and others at academic and research institutions across this Nation and the world.

Why am I so optimistic? So here's my 2nd reflection. What was by far the biggest news story of the spring and summer of 2010? Yes, the Deepwater Horizon oil spill. When I started my appointment at NSF, it was the

midst of that crisis and there are two things about it I will remember forever. First, there was a tremendous response from the ocean science community. Hundreds of scientists called our offices because they wanted to take action, they wanted to understand the impacts, they wanted to change what we had funded them to do in order to study the oil spill. And we issued lots of RAPID grants in a matter of days to enable their work. It was really gratifying to see. But then....after a few months the oil well was capped. Do you remember what happened next? President Obama and his family visited the Gulf, they went to the beaches, they ate seafood, and a prominent member of the Obama administration boldly declared that 75% of the oil was already gone. Only problem was... most of those scientists we were funding on the Gulf did not agree with the government's assessment...and some started holding their own press conferences and the media loved it. The headlines soon became: "Ocean scientists disagree with federal government". Soon after that I get a phone call from someone in the Public Affairs branch of NOAA. "Who are these people? Aren't they under contract to you? Can't you control what they say? And my answer was "We issue grants, not contracts, these are independent scientists, they have academic freedom, we don't control what they say".

You see, one of the great strengths of this country is its academic community employed at great universities like Stony Brook. Where independent scientists seek truth and engage in creative expression free from political pressure or fear of losing a job. We sometimes take academic freedom for granted but for me its value was never more evident than in the summer 2010.

So this is why I am optimistic about the future. Every year, a whole new cohort of young scientists begin their careers. Some will go into business, some will work for the private sector, some will work for government, and some will join the academic community. My challenge to you - whatever you do – is to remember to be an independent thinker – take what you have learned here at Stony Brook and use it to make the world a better place.

So congratulations to our graduates. We wish you the best of luck.