



8.4 THINKING ABOUT CLIMATE AND ENERGY AS CHANGE

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As I was listening to the symposium presentations, it occurred to me that we might better understand climate change and energy

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change simply as change. To do that, we need to embrace the notion that we are moving through time and that this present is just this moment. And that we are, in effect, on a kind of a passage.

This passage has three parts; those three parts are well understood by us in terms of language. There is a near term, a mid term, and a long term. Now imagine this passage as a true sea passage in a vessel. In the near term, your vessel is fully aware of its surroundings. It can see all of the navigational aids, it knows where all of the landscape is close to shore, it is on a path, and it understands where it is right now and maybe a little ways downstream. But then there is a murkiness ahead—there is fog, there are all of the issues that come with looking ahead a little bit further in time. Now you can still see a few navigation lights that faintly guide you so that you can continue on your course with some confidence. But then farther out you cannot see anything. You are heading toward something, you are going to get there, but right now you are relying on dead reckoning.

Now if you imagine the world that we are in now going through these changes, your approach to both the mid term and the long term will be more urgent; it will inform the things that you are doing now. And yet we live in a very different kind of mental context. The world that we inhabit is more closely focused on just what we can see around us. So let me take you through a kind of matrix where we look at the near term, the mid term, and the long term in terms of the various ways that we describe energy change and climate change.

So today it is all about measurement. The policy-driving question that we are most concerned about is: how will climate change and energy change affect what we do now? It is essentially a different version of DoD's perennial question: what is the threat? Well, the threat is to the world we have built; it is called the strategic environment. It is an environment that we want to keep as it is, pretty much; we want to manage it. So our response is effectively always to try and figure out how to manage the threat within the current framework or within some slightly modified version of that framework.

In other words, what minor improvements or what doable alterations, shifts, responses, and modifications can we make that will allow us to just continue to manage change? And this is in organization, it is in forces, it is in command relationships, it is in the policy process itself, not to mention the whole POM process. What is the prognosis? Well, the prognosis is pretty easy to identify here. And these are terms of art, and they are very important terms of art. They define how we talk to each other and how we conceptualize the world we inhabit. And the term that I think is most apropos here is “increased risk.”

According to General Engel’s presentation, global climate change will have wide-ranging implications for U.S. national security. It will aggravate existing problems that threaten state stability. In other words, the context of the change is completely enclosed within a world that seeks to maintain itself and in a world, more specifically our world, that seeks to be the lead in managing the world system as we know it. Now let’s look at the geographical term of art that we use to inform effects and the problems that climate change or energy change create. That term is “the local level.” It is about the nation state or maybe non-state actors in that same local arena. What is the naval vehicle to address the problems of global climate change and energy change? That vehicle is captured in the term “maritime cooperation.”

There is a powerful new acronym that gets to our ability to adapt to or accommodate climate change, and that is “HA/DR”—short for humanitarian assistance and disaster relief. Now the issue of living in this kind of orbit is that it is very hard to do the very thing identified by Dr. McGrady, which is to assess things as they change in the out-years. However, I think if you seriously live in the entirety of the passage knowing that you are heading to the mid term and then to the long term, you might be willing to do your assessment differently. Because I don’t think it is a problem of intellectual capability, tools, or even money; it is a problem of urgency and significance in our minds. That significance becomes greater when we see the mid term. In the mid term—remember, those navigation lights are there—you can use extrapolation.

Now John Benedict did this a bit. He took the kinds of impacts that others in the government have identified and used them to paint a very powerful picture. However, he did not paint the same picture that General Engel painted. The General said that climate change alone is highly unlikely to trigger failure in any state. If you look at General Sullivan's declaration about the Earth being a system-of-systems, that the challenges are all interlinked and interconnected and reinforcing each other, then what John is saying becomes very, very powerful. You have powerful upheavals in America, Australasia, and Africa.

If you were to go down the list that I just did with the near term, by extrapolating things that we know now, you could get to a very different policy-driving question: can the global system effectively respond and adapt? The threat is different too. The threat is no longer to be codified in terms of art that maintains the strategic environment. The threat is to a functioning world system itself. The response that we take is no longer management; it is about mitigation and it is about triage. It could be about human rationing.

The prognosis no longer is simply increased risk that just continues to increase and by definition, because it increases in small increments, we can manage it. No, now you have something like a crisis. In terms of geographical terms of art and focus, you are no longer looking at local nation states or failing states, you are looking at regional systems. You are looking at potential cascades where whole areas collapse.

I need not go through that with exemplars because I know they were brought up. You can look at the gigantic cities that are emerging in and around the Niger Delta and see the collapse of megaslums. Sudden water stress combined with all sorts of other things can create a giant crisis in the heart of the two Asian states, India and China. So this is a different kind of place that you are getting to. A key societal and governance issue is, how do you maintain and how do you approach what amounts to a shrinking global stability, a shrinking stability of humanity, and also literally a shrinking humanity that is part of our globalized system?

In other words, it is not globalization anymore; Earth's future is heading in a different direction. There is a whole other world emerging out there that is no longer part of our system. We do not know what that world will look like because our lens, our little framework on alternatives to western civilization and globalization, is simply in the context of failing states. Thus, we are unable to understand what happens to places left behind as they develop in different directions.

In that world, the new acronym will not be HA/DR, but some jumble of letters that are revolving around major rescues. The question is, when you get to the naval vehicle, it is no longer maritime cooperation; it is much more serious. It is really about the survival of cooperation. In a world of that level of stress, can the cooperative nature of the world that we inhabit now, to the extent that it is cooperative, continue? Or in fact, do things flip the other way, and do you see an emergence of a kind of global collective mobilization? That could happen too, but we do not know; we have not examined that as a possibility, and yet we can extrapolate to that point.

Now when it comes to the long term, I would refer, as Adam Siegel did several times, to Dr. Gulledge. You are now no longer able to extrapolate. You cannot see. But what you can do is assess possible high-risk outcomes. You can leap ahead, and you can get at it. That is important because that organizes—not the probability of risk—but it organizes your understanding of the limits of risk, how big, how bad, how devastating to humanity this could get.

The point that I like most about Dr. Gulledge's presentation is that although there are interventions that we cannot bound at this point, they could make the high risk super high. So a low probability is still a high risk. That point was the most important to me. We have always approached low-probability, high-risk outcomes. We did it all through the Cold War, and we really need to do that now, and I do not see that happening.

When it comes to the prognosis, we see increased risk in the near term; in the mid term, you have a sense of crisis. In the long term, what is it? I call it subsidence. The world network is subsiding.

While that network is actually many, many different networks, at the heart of that network is a network of critical nodes of cities, of which there are only about 40 in the world. Richard Florida wrote about this in *The Atlantic*. Those nodes are the heart of our world system. If those nodes begin to subside, how do we keep the network going? The geographical focus is global, and the societal governance node is the network—keeping the network going so the world does not subside to the level it did in the 7th century.

Well, this is a world where the naval vehicle is literally about the system surviving and the Navy is the most important tool that humanity has at that point in that low-probability, high-risk situation. It is not the destination, but it sure is out there. However, just because it is out there does not mean that we should not give it the kind of urgency we give things today. This is a situation where it is too late for mobilization and you are really trying to keep alive a subsidiary shrunken world network.

The reason for adopting this different kind of world view where you frame the significance of the future differently is simply to allow you to get to the point that Adam Siegel raised, I thought very powerfully: that we need to do the kind of analysis that our current framework of thinking will not encourage or even allow. We have to do this kind of analysis now because unless we do the analysis now, we will not be able to plan a few years down the road. A few years more down the road, we will not be able to procure and pre-position and develop the actual institutions and forces that we are going to need. Thus, when we finally get down there, and it is going to happen, or maybe it is not, we are prepared. Right now we are simply at the moment of recognition and we do not have any path ahead.

And the path ahead, and here I would echo Adam Siegel again, is to find a way to get started in the assessment process seriously—not necessarily in planning, but in assessment. We have to think about how long it takes for the Navy to actually get a ship after it starts a new ship program. Then once you get the ship, where are the other 800 ships that you want? We do not even know what kinds of ships those might be. All we can think of right now is, “Oh, HA/DR, maybe we need sea basing.” Yes, but until we go to the

end and figure out what this kind of low-probability, highest-risk situation could be, we will not really know what the outer boundaries of possibility are for the Navy as a whole.

I am going to stop there, but the essence here is fundamental. It is existential. To effectively approach the things we have been talking about, we have to change the boundaries of how we think about time, about ourselves, and about history.