

## **Admiral Lopez**

My name is Admiral Joe Lopez and my naval career has included tours as commander-in-chief of U.S. Naval Forces Europe and commander-in-chief, Allied Forces, Southern Europe from 1996 to 1998. I commanded all U.S. and Allied Bosnia Peace Keeping Forces in 1996; and served as deputy chief of naval operations for resources, warfare requirements and assessments in 1994 to 1996.

National security involves much more than just military strength. National security is affected by political, military, cultural and economic elements. These elements overlap, to one degree or another, and every major issue in the international arena contains all of them. And climate change has an impact on each of them. This will be particularly more pronounced in the world's most volatile regions, where environmental and natural resource challenges have added greatly to the existing political, economic and cultural tensions. The instabilities that already exist will create a fertile ground for extremism – and these instabilities are likely to be exacerbated by global climate change.

If you look at the Middle East, it has long been a tinder box of conflict. The natural environment of this region is dominated by two important natural resources – oil because of its abundance, and water because of its scarcity. Climate change has the potential to exacerbate tensions over water as precipitation patterns decrease, projected to decline as much as 60% in some areas. This suggests even more trouble in a region of fragile governments and infrastructures and historical animosities among countries and religious groups.

Another challenge of climate change is projected sea level rise. Couple this threat with a predicted increase in violent storms and the threat to coastal regions is real. Not only is this a threat to Homeland Security as a response mechanism, but some of our most critical infrastructure for trade, energy and defense are located on our coasts. A more concrete example of expected sea level rise affecting national security and our strategic military installations can be seen in low-lying islands, such as Diego Garcia, which is a critical base of support for our Middle East operations. Climate Change is a “threat multiplier.”

These are a few examples of how the expected effects of climate change can lead to increased stress on populations and increased strife among countries. We believe that climate change, national security and energy dependence are a related set of global challenges.

With my remaining time, I'd like to make three observations:

- The first is to highlight that link between climate change and energy security. One can describe our current energy supply as finite and foreign. Continued dependence on overseas fossil fuel energy supplies, and our addiction to them, cause a great loss of leverage in the international arena. Ironically, a focus on climate change may actually help us on this count. We should leverage

technology and extract and exploit our natural resources including coal to make it safe and environmentally friendly. Nuclear power ne be exploited. The Navy has been safely doing this for years. Key elements of the solution set for climate change are the same ones we would use to gain energy security.

- Second, this issue is great and the US alone cannot solve it. If we in our nation do everything right – assuming we know what is right – the hazards of global climate change would not be solved. China and India are integral to the global solution. We must engage them.
- My third point: For military leaders, the first responsibility is to fight and win. The highest and best form of victory for one’s nation involves meeting the objectives without actually having to resort to conflict. It takes a great deal of investment, planning, strategy, resources and moral courage. But the prevention of conflict is the goal.

Finally, our security revolves around issues that are political, economic, cultural and military in nature. We have concluded that the potential effects of climate change warrant serious national attention. As General Sullivan has mentioned, national security and the threat of climate change is real, and we can either pay for it now, or pay even more dearly for it later. Thank you.