A bipartisan delegation of U.S. lawmakers, including Rep. Jeff Flake, R-Ariz., participated in the Brazil Climate Change Forum, together with colleagues from the G8 and key emerging economies - Brazil, Mexico, China, India and South Africa.

At the February forum, U.S. representatives reassured the world that the United States is ready to reverse its policies and, independent of who wins the presidency in November, will collaborate in finding global solutions to climate change.

Legislative bodies and politicians across the globe, including the U.S. Congress and Arizona Gov. Janet Napolitano, are introducing laws and regulations, together with executive policies, to mitigate and adapt to the long-term and potentially devastating effects of global warming.

This July, Brazil Forum representatives will present policy recommendations to the Heads of Government meeting in Tokyo, leading to a comprehensive new global treaty on climate change to replace the Kyoto Protocol.

Brazilian President Luiz Inacio Lula da Silva spoke eloquently about the economic development, agriculture and forestry at risk from unsustainable exploitation of natural resources and consequent climate change. However, companies, aided by financial subsidies and effective regulatory policies, are showing that sustainable logging can, in fact, help preserve forest ecosystems.

Politicians from the Amazon region have reversed their formerly unsustainable policies. Instead of offering forest dwellers free chain saws, as they did 10 years ago, governments are supporting community efforts to save the rain forest.

The leader of the U.S. delegation, U.S. Rep. Ed Markey, D-Mass., argued that sustainable policies related to energy generation and use are essential. Legislators remain concerned, however, about technical, trade and environmental agreements affecting national energy policies and investments.

Biofuel production now has a worldwide political impact, with the conversion of food crops into biodiesel causing food shortages in some areas. In Brazil, sugar-cane ethanol comprises 30 percent of road-transport fuel, greatly reducing the need for oil imports.

Biofuels are sustainable because the base crops are not irrigated and grow on marginal land where there are no forests and no significant food production. However, the United States and Europe are restricting trade in such sustainable biofuels, while subsidizing and exporting their
own biofuels derived from food crops grown on prime farmland using artificial fertilizers and water resources.

The United States must replace this misplaced approach with innovative algae-based sustainable techniques, for example, that operate even in the Arizona desert.

Investments in more efficient energy-generation systems with lower carbon emissions are developing through technology and market mechanisms, such as carbon trading, which offers economic incentives for achieving reductions in the emissions of pollutants. Legislators at the Brazil Forum critiqued the slowness of transfer of technology and investment funds to developing countries. Reduced energy use translates into reduced carbon emissions. Such measures can be introduced much more quickly - and locally - as communities are demonstrating everywhere with zero-carbon housing that recycles its water and waste.

"Soft" methods of energy saving through changes in transport and in lifestyle have been used as short-term crisis measures; in the 1970s, for example, U.S. speeds were limited to 55 mph. Now is the time for long-term measures, especially for energy and transport regulations. Oil companies or airlines might consider running ships 10 percent to 20 percent slower, saving fuel and carbon emissions.

Japan and China have increased the temperatures of buildings in summer, coupled with the adoption of cooler clothing styles.

"Soft" policies will stimulate new designs of low-energy and safer products, such as low-speed cars and aircraft.

Politicians must be brave.

Developing countries are highly vulnerable to both sudden and longer-term hazards from hurricanes to desertification and deforestation. Secondary hazards include mudslides, oil spills, and diseases.

Climate change increases the risk of all these hazards. Future climate-change agreements will need to include funding for infrastructure - roads, dykes, drains, and shelters - and also the data for better warning systems.

Sadly, even where data is available, it is not always distributed to communities at risk. Recent disasters have shown that, without social capacity, there can be no recovery. An additional source of recovery funding may be partnerships between governments and insurance companies.

In summary, there is growing consensus about climate-change solutions among legislators across the globe: firstly, that action is needed to deal with global climate change and secondly, that a wide range of regulatory and market measures are needed.
Technology is not enough. The Chinese delegation presented a video of older, inefficient power stations being demolished; the replacements have impressively high efficiencies - those greater than 40 percent, illustrating the integration of regulatory, market and technological solutions.

To ensure the effectiveness and acceptance of future international climate-change policies, we must face this urgent task head-on and define and agree upon our national and global targets for greenhouse-gas emissions. It is refreshing to know that the United States is moving from being part of the problem to part of the solution.

*Lord Hunt, a member of the House of Lords, is currently a visiting professor at Arizona State University. Formerly he was head of the Meteorological Office in the United Kingdom. He is also vice president of Globe International.*