Thank you very much Chancellor Woodson for your introduction. It is indeed a pleasure to join you this afternoon for a conversation on a topic of great personal and professional interest to me - global food and nutrition security. I congratulate you on the completion of this visionary document calling for global investments in food and nutrition security in order to meet the needs of 9.7 billion people by 2050. The full engagement of APLU and its members in attaining this goal will be vital.

As many of you know, my own interest in food security began on a 604-acre farm in Indiana, which I still manage. My father, Marvin Lugar, a Purdue graduate, bought the land in the 1930s. Each year we plant roughly 200 acres of corn and 200 acres of soybeans to go with our acreage planted in Black Walnut and other hardwood trees.

Our chances of a bumper crop year-to-year are excellent, given the astounding array of technologies that our farm and most of American agriculture use to maximize yield and protect the environment. The Lugar farm is benefitting from genetically engineered seed, advancements in soil analysis, GPS mapping of the land, sophisticated weather forecasting, and numerous other technologies. In 2014, we set a record for corn yield at 192 bushels per acre. This is roughly a fourfold increase from the yields we experienced on the same land when I was a boy. At that time, my dad was pleased when we achieved even 50 bushels an acre.

I relate this personal experience to underscore that agricultural science is capable of delivering miraculous results. Having witnessed such amazing productivity growth in the span of my lifetime, I have always believed that we can develop the technology necessary to grow, store, distribute, and market a safe and nutritious supply of food, even as the number of people who inhabit our planet reaches 9.7 billion by 2050.

However, this challenge is further complicated by a troubling trend of over-nutrition among populations in both developed and developing countries. Obesity and the accompanying chronic diseases associated with it come at an enormous cost to individuals, health systems, and even economies.
When food price spikes in 2007 and 2008 set off a series of events that pushed an additional 200 million people into chronic hunger, bringing the total number to nearly a billion, I instructed my staff on the Senate Foreign Relations Committee to study the complexities of this situation and recommend solutions. They examined a host of factors in both food secure and food insecure countries that contributed to the level of hunger in each. Several of the recommendations that resulted from this report were later incorporated into President Obama’s Feed the Future Initiative.

Regrettably, one recommendation remains largely unaddressed. That is the role of higher education institutions in developing countries in promoting food and nutrition security. What was evident to us was that those countries in which these institutions were able to participate in developing solutions to local agricultural challenges, often in partnership with U.S. universities, had a greater likelihood of achieving food security for their people.

I am pleased that The Challenge of Change report you are launching today not only highlights that North American public research universities are uniquely positioned to bring technology and innovation together to address plant diseases, nutritional deficiencies, and food loss, but also that it reinforces our own committee report’s findings regarding these higher education institutions and partnerships among them.

The report emphasizes, “Frequently, food security and hunger alleviation programs have addressed either domestic or international concerns, not both, largely because of competitive funding allocations. A combined approach — long overdue — will strengthen university programs in the United States, North America, and around the world. The future requires leveraging both domestic investments and global partnerships to increase overall global food and nutrition security.” I believe that building and supporting the human and institutional capacity of universities in developing countries will be the key to bringing generations out of hunger and poverty. By educating and training scientists, researchers, nutritionists, small and large business creators, and government leaders, these institutions will simultaneously build a more stable and prosperous country in which they operate.

Implementation of the report’s recommendations will unquestionably face many challenges. I commend the authors for addressing the need to reform the historical university system, calling for a breaking down of silos within individual areas of discipline and instead aligning university resources and structures for transdisciplinary approaches. Organizational change within any large institution is never easy. But the urgency and complexity of addressing the food and nutritional needs of 9.7 billion people requires it, and your leadership within your institutions will be vital to achieving it.

The current political climate in the U.S., the disturbingly large numbers of populations at risk of famine as a direct result of conflict – 20 million in just the four countries of Yemen, Nigeria, South Sudan, and Somalia - and the role of government in committing to fund this endeavor also present tremendous challenges. Despite these situations, and because of them, the time to act is now.
The United States remains the leader of the free world and the most generous during times of humanitarian crises. And while I am optimistic about our country’s future as a global leader, I have serious concerns about the current direction of U.S. foreign policy. In the budget he is expected to release next week, the president will seek large increases in military spending and substantial cuts to diplomacy and development programs. While a strong, well-funded military remains as important as ever in deterring aggression and addressing threats that cannot be solved in any other way, military power cannot substitute for other forms of leverage.

In attempting to cut funding for the State Department and USAID by 31 percent, the administration needlessly creates a void in building and securing new kinds of relationships with emerging partners in trade, security, and democracy. Programs such as the Global Food Security Act, supported by large, bipartisan margins in the Congress last year and signed into law by President Obama, represent opportunities for the U.S. to lead in supporting safe, stable, and prosperous nations. These kinds of U.S. partnerships with developing countries helps to provide the tools, systems, and support for pro-business climates that enable countries to feed and educate themselves, as well as participate more fully in the global economy.

I believe we have no choice but to lead in this space. President Trump’s announcement last week nominating Ambassador Mark Green to the position of USAID Administrator is a positive step in providing a rational voice for development. We must work together to do more to support diplomacy and development as separate and distinct, yet critical, components of U.S. foreign policy to achieve these goals.

Despite the political and budget climate, I assert for other reasons that the time to act is now. A timely commitment for investing in public research is imperative if we are to meet food and nutrition challenges incumbent on us by 2050. I recently had the opportunity to participate in the release of a new study on the importance of investing in publicly-funded agriculture research commissioned by the Farm Journal Foundation and authored by Professors Phil Pardey and the late Jason Beddow of the University of Minnesota. That study, “Revitalizing Agricultural Research and Development to Sustain US Competitiveness,” noted that “it still takes seven to 10 years of R&D to turn out a new wheat or corn variety, and the lags in deploying new agricultural technologies are often decades long.” With decades required for the scientific development, regulatory approvals, and market entrance for new seed varieties, there is no time to waste.

This is why I have recently called for a 21st Century Green Revolution. I noted earlier that the Lugar farm is benefitting from a host of technological advances such as genetically engineered seed, advancements in soil analysis, among others. The complexities presented by today's environment require a new kind of investment in meeting the needs of our global population both now and as we approach 2050. I encourage your partnership in this endeavor as we work to raise productivity of staple and indigenous crops, build resistance to climate change, stimulate scientific collaboration, and greatly increase access to modern farming techniques for millions of smallholders, many of whom are
A 21st Century Green Revolution would have the potential to transform politics in many unstable regions of the globe. It would help strengthen the global economy, reduce conflict and save millions of lives, enriching the prospect for tens of millions of children. As your report notes, the upcoming reauthorization of the Farm Bill represents a good opportunity to support these kinds of investment.

Last, but certainly not least, is the important role your report places on partnerships. With a $20 trillion national debt, today’s fiscal environment at every level of public funding also requires partnerships. In calling for community-engaged scholarship that involves communities in the design and implementation of public university research and the development of partnership with NGOs and international research institutes, you are wise to recognize the value and necessity of partnerships for successful outcomes. Private sector partnerships, which already exist among universities must be further strengthened and leveraged. This is especially necessary globally where systems and regulatory structures for new business development are often weak. This is also an area where a three-way partnership together with the U.S. government can leverage capacity building to assist with the development of governmental systems that are open to a business climate, promote globally recognized regulatory systems and standards, and have relatively low levels of corruption.

Clearly, much work lies ahead to meet the 2050 challenge. I commend you for taking the important step in assessing the challenges and carrying out the recommendations in the days and months ahead and wish you much success.