**2009 William K. Deal Endowed Leadership Lecture**
**"Preparing Leaders to Meet Future Global Challenges"**
**Ambassador Charles T. Manatt**
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The recent launch of the interdisciplinary Global Resource Systems program at Iowa State University further solidifies the commitment Iowa has made to innovation and revitalization of its traditional sectors. This approach is increasingly important in today's global economy because it combines technical knowledge and business and management techniques with international leadership and multicultural engagement in the global context of sustainable development.

While the concept of sustainable development universally promotes shared goals, the application to each project must reflect distinct, local conditions. Each project utilizes technical and economic policies designed specifically for that region, that incorporate local environmental and social aspects into the long-term vision. Often, successful policies in one country build on or from previous successes in other countries, so leading international institutions and businesses need leaders who can assess country differences, balance competing demands, and develop new initiatives that will take each country forward. The Global Resource Systems program prepares students to participate in the global community that is currently confronting these challenges. Students will graduate as dynamic professionals equipped to navigate international markets as they promote sustainable resource-driven development throughout the world.

Iowa has a strong history of achievement in the advancement of food quality, quantity and availability throughout the world. The World Food Prize, founded by Iowa's own esteemed Nobel laureate Dr. Norman Borlaug in 1986, recognizes agricultural leaders and establishes them as role models to inspire future generations. This further underscores Iowa's commitment to agricultural progress, calls attention to ongoing improvements to the world food supply development, and encourages continued dedication to future advances. The 2008 World Food Prize Laureates, former Senators Robert Dole and George McGovern, two in an impressive list of laureates from the Midwest, serve as inspirations to future Global Resource Systems graduates.

This innovative integrated approach to promoting sustainable development is also at the forefront of current economic policy, as evidenced by this year's Nobel Prize winner in Economics, Elinor Ostrom, recognized for her research on the economic governance of common resources. Dr. Ostrom, the first woman to receive the Nobel Prize for Economics, has done extensive fieldwork, analyzing situations all over the world, and her training was as a political scientist, not as an economist. Her work shows the importance of integrating ideas from economics, political science, sociology, and other fields to create practical solutions to world problems. Her research has been extensively applied to sustainable development practices in developing countries and has been credited with bringing resource management to the forefront of scientific and political inquiry.

The global economic crisis has brought international attention to serious food security issues throughout the world. On the heels of the food crisis in 2006–2008, the U.N. Food and Agriculture Organization (UNFAO) finds that the global economic slowdown has deprived an additional 100 million people of access to adequate food. Recent increases in staple food prices can be attributed to general population increases, erratic weather patterns, and higher oil and fertilizer prices. While this crisis most severely affects the poorest populations, increased demand can also provide them opportunities, as a majority of the least developed countries have agriculturally-based economies. New strategies for developing countries to stabilize their economies are increasingly focusing on targeted investment in new agriculture technologies, including the application of the American capital-intensive agribusiness model that has already demonstrated much success in areas reaching from Brazil and Chile to many African countries. Increased investment in agriculture technologies can allow these countries to increase profitability through the implementation of new irrigation, fertilization and crop rotation techniques. Recent efficiency improvements in renewable energy sources, from advancements in biofuel technologies to wind and solar installations, also create new potential markets for areas of declining agricultural productivity.

The relevance of the Global Resource Systems program is further underlined by the growing volatility in commodity trends in recent years. These fluctuations have reoriented government attention towards the need for investment in new energy technologies to combat climate change, promote geopolitical security, and provide new growth industries for the U.S. market. As part of the worldwide commitment to cut 80 percent of greenhouse gas emissions by 2050, President Obama has dedicated $36.7 billion in stimulus money to the Department of Energy for investment in renewable energy, efficiency technologies, safe nuclear waste storage, carbon capture, and scientific research for energy innovation. This reorientation has created new opportunities for skilled resource professionals, and the November U.N. Climate Change Conference in Copenhagen emphasizes how global collaboration on these issues is becoming increasingly necessary as the world moves towards new global standards.

In all sectors, but in agriculture and resources particularly, the ability to navigate between public and private sectors is increasingly important. New industry subsidies, legislation setting new environmental standards, government-funded research, new business incubators, and shifting allocations of public funding towards commodity-driven innovation are just some of the tools that must be utilized to encourage the success of these new markets. The Clean Tech Open Competition, for example, has had high levels of success in "finding, funding, and fostering the big ideas that address today's most urgent energy, environmental, and economic challenges," through the support of 125 different start-ups since 2006.

Leading development organizations are also focused on sustainable resource-driven development. The Millennium Challenge Corporation, a U.S. government agency created to lift the poorest countries out of poverty through a project-based approach, has made a commitment to sustainable development and requires strict governance and institutional preconditions for large assistance packages. The U.S. Agency for International Development (USAID) has taken a similar approach, supporting country-driven strategies and investing in the strengthening of both public and private institutions that underpin growth of the agricultural sector. Columbia University's Earth Institute has also just launched a Master's in Development Practice program

that is founded on many of the same interdisciplinary principles present at Iowa State. This 2-year graduate program will be replicated in 9 universities around the world and is designed to be a rigorous professional training program for future leaders in sustainable development.

Despite international organizations' best intentions, however, the strongest evidence against international development are the long lists of failed projects many organizations have left in their wake. As an example, a Dutch aid organization built a milk-processing plant to create employment opportunities in Iquitos, Peru, an area there are no dairy cows. The plant was put to work bottling reconstituted dry milk imported from New Zealand, but the people in Iquitos do not purchase the milk because of the lack of dairy cows in the area, so it must be transported to other cities to be sold. Iquitos has used the invested infrastructure to continue processing imported milk and has created some jobs in the area, but the project could have been much more effective and efficient a more culturally-appropriate, locally-driven approach been chosen.

Iowa State University's anticipation of this emerging need for integrated, creative business solutions to challenges in today's global market could not have come at a better time. The global business market today demands highly-skilled professionals with the capacity to efficiently navigate international markets. The program's language requirement and study abroad programs and internship opportunities are integral aspects of the program, as they recognize and foster the appreciation of historical country and regional cultural influences to effective program implementation. By combining technical skills, cultural awareness, and adaptability, Global Resource Graduates will be just the kind of professionals many international businesses and organizations need and are actively pursuing to promote innovative and sustainable global development.