

RCN CE³SAR PROJECT SUMMARY

The RCN CE³SAR will be led by **Texas A&M University-Corpus Christi; Dr. Luis Cifuentes (PI)**, Professor of Oceanography; AVP for Research and Dean of Graduate Studies.

Members of the steering committee and home institutions include: **Dr. Ping Chang**, Professor of Atmospheric Sciences and Oceanography; Director, *Texas Center for Climate Studies*: Scherck Chair in Oceanography (Texas A&M University); **Dr. Hudson DeYoe**, Professor of Biology; Director, *Center for Subtropical Studies*; and **Dr. Jude Benavides**, Assistant Professor of Hydrology and Water Resources, (U. Texas-Pan American); **Dr. Fidel Hernandez**, Associate Professor, *Caesar Kleberg Wildlife Research Institute* (Texas A&M-Kingsville); **Dr. Gary Jeffress (Co-PI)**, Professor of Geographic Information Science; Director, *Conrad Blucher Institute for Surveying and Science* (Texas A&M-Corpus Christi); **Dr. Rudolph Rosen (Co-PI)**, Research Professor and Director, *River Systems Institute* and Director, Conservation Leadership Initiative (Texas State University); **Dr. Rogelio Saenz**, Professor of Sociology and Dean, College of Public Policy (U. Texas-San Antonio); **Dr. Venkatesh Uddameri**, Professor of Environmental Engineering; Director, *CREST Center for Research on Environmental Sustainability in Semi-Arid Coastal Areas* (Texas A&M-Kingsville); **Dr. Jorge Vanegas (Co-PI)**, Professor and Dean, College of Architecture; Director, *Center for Housing and Urban Development* (Texas A&M); **Dr. Arnie Vedlitz**, Bullock Chair in Government and Public Policy; Director, *Institute for Science, Technology & Public Policy* (Texas A&M); **Dr. Carol Waters**, AVP for Academic Enrichment/ International Development; Director, *Binational Center* (Texas A&M International); **Dr. Ralph Wurbs**, Professor of Civil Engineering; Associate Director, *Texas Water Resources Institute* (Texas A&M); **Dr. David Yoskowitz**, Endowed Chair for Socio-Economics, *Harte Research Institute* (A&M-Corpus Christi); and **Wes Patrick (Co-PI)**, Vice President, Geosciences and Engineering Division, Southwest Research Institute, San Antonio TX.

Intellectual merit will derive from the proposed research coordination network's (RCN) -- ***Climate, Energy, Environment and Engagement in Semi-Arid Regions*** (CE³SAR) – capacity to develop an innovative and comprehensive collaborative of researchers aligned to advance the understanding of science, engineering and education for sustainability (SEES) in South Texas. South Texas historically has been underserved and isolated in terms of resources to support and advance regional research and education critical to the future of the predominantly Hispanic population. CE³SAR's **overarching goal** will be to **build a research network that brings together regional capacities specific to sustainability in semiarid climates contiguous to the coastal Gulf of Mexico** while leveraging external expertise through research partnerships incorporated in the steering committee. The network will focus on engagement and education through **inclusion of stakeholders from regional communities**, government and private sectors from the outset of networking activities. Because the RCN universities are immersed in the region and its culture, they are well-positioned to recognize **region-specific sustainability research needs and impacts** and have the associations with the community that are vital to effective societal engagement in the process. **This goal** will be accomplished through a five-year strategic plan using a *charrette* process conducted by network members. **Major planned networking activities** will begin (Year 1) with a **Kick-Off Symposium and Charrette** (i.e., collaborative sessions **research and research-development planning**) involving researchers and policymakers, **stakeholder meetings, curriculum development** meetings, **online course** development, **collaboration visits**, etc. A **workshop focused on international partnerships** (Year 2), and a **summit** (Year 5) will be held. **Mechanisms for actively promoting participation** are integral to RCN strategic planning and scenario planning which will use an iterative process to **integrate existing and consolidate new network collaborators** among the key thematic domains (i.e., climate, energy, water, environment, societal engagement).

The broader impacts of the RCN will derive from aggregating regional institutional capacities into network that will advance sustainability science research in the region **and include affected populations by engaging them in the process**. This networking process will focus activities in a way that facilitates identification and prioritization of factors and intersections among a range of regional sustainability variables; for example, **physical variables such as climate, water, energy; spatial variables such as scale, geographies, and community locations; and socioeconomic variables such as populations, cultures, and institutions**. Significant **broader impacts** also will be achieved by the integration of sustainability science research and education across the six HSI's through engagement of students in research, course and curriculum development and social network groups focused on sustainability science in this region while **preparing them as future regional leaders in institutions and communities impacted by sustainability science**.