

State of the College, 2 November, 2007  
College of Geosciences, Texas A&M University  
Björn Kjerfve, Dean

## **Sustainable Growth after Reinvestment: Building on a Strong Foundation**

I would like to welcome all of you to the College of Geosciences' annual Fall Meeting. Thank you for attending. I can hardly believe that I am already delivering my fourth *State of the College* presentation. When I think back on the activities of the past three years, it seems like a fast-paced blur. We have been dealing with so many different issues and at the same time adjusting to growth and changes in the College. Now is the time to build on the strong foundation laid by Reinvestment and focus on a sustainable development and excellence in both academics and research.

At the Academic Convocation in September, Interim President Eddie Joe Davis commented on the fast-paced changes at A&M suggesting that "Everyone is in favor of progress; it's just all this change they dislike." And there are still additional changes on the horizon. We are still waiting for the Board of Regents to announce who will become our next President – at this stage I know no more than you do – and we then also need the appointments of a permanent Provost, a permanent Vice President for Research, and a permanent Graduate Dean, as well as a resolution for how the Texas A&M System will either manage research or restructure the current model for research management.

I think President Davis' statement on progress & change also aptly applies to the College of Geosciences. While we have made great progress during the past year, we have had to accept and adapt to a great deal of change, and that change is an ongoing process.

One of the most important changes, I believe, is our new faculty. You are of course already aware of this, but it bears repeating. As a consequence of the Faculty

Reinvestment Hiring program, initiated by former President Gates, and also the ODASES hiring program, the College has hired 30 new tenure-track faculty members and has as a result grown by 37% since 2004. Of these 30 faculty, 18 are assistant professors and 7 are women. In addition, we have added 3 new research faculty, potentially with more research faculty to come. The College now has 108 tenured or tenure-track faculty, the largest number in its history. We have focused on building a great group of young faculty, with so much to offer, who have joined our existing faculty, already acknowledged for their experience and excellence. Our investment in faculty quality, capacity, and diversity acknowledges that the premier resource of any university is its faculty. This positions us well towards fulfilling the challenges of Vision 2020.

The College of Geosciences is a multi-national college with 21 faculty members who hail from ten different countries. Increasing diversity among our faculty is progressing but at a rather slow pace, and we are still not where we would like to be or need to be. We have doubled the ranks of our female faculty members since the fall of 2002, and currently have 18 women faculty members or 17% of the total. Our current College faculty also include 12 Asian-American, 4 Hispanic, and 2 African-American. We will need to be much more proactive in identifying and recruiting qualified women, Hispanic and African-American candidates to begin to approach the population demographics of the State of Texas.

I know that you are already aware that Luis Cifuentes became the Interim Vice Provost this past summer and that Ethan Grossman as a result was appointed the Acting Executive Associate Dean and Associate Dean for Research in the College. Both of these individuals are already making positive differences in their respective new positions. It also gives me great pleasure to highlight the new leaders in our academic departments – Andreas Kronenberg in Geology & Geophysics, Piers Chapman in Oceanography, and Ken Bowman in Atmospheric Sciences. They join Geography Department Head Doug Sherman. With this leadership team, I am expecting that we will see great strides made towards increasing the excellence in all areas of academics and research.

Although welcome and long overdue, some of the most disruptive changes around the College this past year are the facility changes. We are pleased to see construction having begun on the Radiogenic Lab in Halbouty, a \$2M investment plus new instrumentation; the renovation of the Dean's office suite in the O&M Building; the ongoing renovation of the 12<sup>th</sup> floor in the O&M; and the soon to start creation of new teaching labs for Oceanography on the 2<sup>nd</sup> floor in O&M; and new teaching labs for Geography in Teague. Since my last State of the College presentation to the present, we have completed 15 facilities projects of differing degrees of magnitude, at least 5 of which we characterize as major. For the current fiscal year, we have 16 projects on the drawing board, and most of them are major, equally divided between O&M and Halbouty, and also the move of Sea Grant to GERG West. Looking further into the future, we would like to be able to repaint and seal the exterior of Halbouty, but when this will happen depends on Physical Plant.

We have tried to keep everyone up-to-date on the progress and schedule for facility changes through our information letters. Thanks to the perseverance of Maureen Reap, our facilities coordinator, projects mostly run as smoothly as can be expected, and if not completed on time, then pretty close to it. New labs and faculty offices, remodeled classrooms, and office suites, and updated infrastructure are long overdue, hopefully including locks on the many entrances to Halbouty. We greatly appreciate your patience and tolerance in living with the necessary disruptions while the work is being done.

I wish I could report an increase in student enrollment, but I cannot yet. While the total number of undergraduate majors this fall reflected a modest 3.1% increase over a year ago, the College's graduate enrollment decreased by 2.9% compared to Fall 2006. The overall number of students in the College of Geosciences thus remains fairly flat with a total of 754 majors, divided with 489 undergraduates and 265 graduate students. Most of the increase in undergraduate majors this fall was in Geology and Geophysics, and also with modest increases in our two Environmental degree programs. We ascribe the upsurge in the number of G&G majors to the boom in the energy sector of our economy.

What can you expect when the cost of a barrel of oil this week peaked at \$96/barrel on the stock market in Singapore? With a new Student Recruitment Coordinator in the College and the acknowledgement by all departments that recruiting is important, we expect to increase our majors and student credit hours significantly in the next few years. A top priority for the College is to increase student enrollment, the number of majors in our programs, and the number of student credit hours we teach to provide an opportunity for our newly hired professors to teach and to respond to the needs of the State of Texas.

The diversity of our students has changed slightly in the past year, although percentage changes when applied to small numbers need to be treated carefully. We have increased our international students by 4%, our Asian students by 15%, and our African-American students by 17%, albeit representing an overall change of only 11 students. In addition to increasing our minority student enrollment, we must also focus on staying competitive in recruiting high quality graduate students. Additional funding from the University has allowed us to increase teaching assistant stipends this fall, which helps, but a great deal of work remains to be done.

Another step in the right direction, is the recent \$600K NSF grant to Mary Jo Richardson, Ken Bowman, David Cairns, and Assistant Provost Joseph Pettibon from the NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program to provide two-year scholarship awards for at least twenty-six undergraduate students majoring in Geosciences. One emphasis of the project is increasing the ethnic diversity in the geosciences.

The Texas Higher Education Coordinating Board has set a goal for the state colleges and universities in Texas to double enrollment/graduation rates in higher education by the year 2015. In 2005, nearly 624,000 students were enrolled in our state colleges and universities. The goal is to enroll an additional 630,000 students by 2015. And those enrollment and graduation rates must reflect the population of Texas, which means that higher education institutions must become more successful in recruiting, retaining, and

graduating minority students. Texas A&M University and the other public colleges and universities in the State face a challenge ahead, and we in the College of Geosciences need to pay attention and do our part. Having Geosciences receiving equal state-wide billing with Biological Sciences in the high-school curricula would seem a reasonable first step.

I know that I have already talked about the faculty, but I would be remiss if I did not recognize a few of you for having recently been rewarded from outside the University. If I listed every award and recognition bestowed upon College faculty this past year, we would be here for a long time. However, I would like specifically to highlight two individuals.

In the three years since she became a member of our faculty, Sarah Brooks, assistant professor in Atmospheric Sciences, has distinguished herself and her work, most recently by being presented a Presidential Early Career Award for Scientists and Engineers (PECASE) just yesterday at an awards ceremony and reception at the White House. Last year, she received a National Science Foundation CAREER award. Congratulations Sarah! What next?

Last summer Jerry North created a lot of excitement nationally and in Washington, DC, as he chaired a National Academy of Sciences committee and testified before Congress, regarding the validity of the global temperature trends commonly known as the “hockey stick graph”. At the bidding of NRC, Jerry put together a team of scientists to evaluate the validity of this hotly debated research. His interviews appeared widely in the press. Our only disappointment is that he did not appear on the Daily Show or the Letterman Show. Jerry did a tremendous job, and distinguished his department and the College in doing so. And not surprisingly, just a couple of weeks ago, Jerry was selected as the 2008 recipient of the Jule G. Charney Award by the American Meteorological Society. The citation noted his “groundbreaking research on climate models, atmospheric statistics, and satellite mission development.” Congratulations Jerry!

I believe the foundation is now in place for the College to develop its vision and set new priorities. I will be asking for your help and input as we develop a new comprehensive vision statement with priorities and implementation goals over the next few months. That said, perhaps it is time I explain the theme I have chosen for the College of Geosciences for the coming year – “Sustainable Growth after Reinvestment: Building on a Strong Foundation.” I would like to see this College embrace the concept of sustainability in all of its future endeavors. Merriam-Webster defines sustainability as “relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged.” We harvest minds, creativity, ingenuity. And we use our human resources daily. There are a lot of avenues and angles to the emerging concept of sustainability, but as I would like to use it, sustainable growth means approaching growth through global thinking, interdisciplinary planning, and partnering with others outside the traditional academic arena. It means focusing on collaborative research, building global connections, and adapting all research to consider global human and environmental implications and more.

With respect to program development and teaching, we plan to build on the Reinvestment and ODASES hiring programs, using the talents of our new faculty members to enhance the learning experiences of our undergraduate and graduate students, provide more research-based learning opportunities, offer more honors courses, add additional writing courses, develop a richer summer school program, seek funding for more internships, mature our environmental Programs in Geosciences, and provide additional study abroad offerings. We also plan to help focus faculty to collaborate on multi-disciplinary proposal developments in response to RFPs and maybe establish interdisciplinary research teams to be able to “attack” more complex research programs, link up with the Jackson School of Geosciences at University of Texas, and capitalize on the broader research experience within the College for an even greater impact on the national and international arena in the Geosciences.

I can report that our total Geosciences E&G budget for FY08 is \$14.1M, of which \$600K supports Sea Grant. As we did get a budget increase, we were delighted to be able to increase the operating budgets for the departments by \$140K more than last year, for a total of \$620K, a 24% increase.

This has been a good year for our faculty and College in research funding. Last year's research expenditures in the College were more than \$14M, including \$3.5M from GERG but excluding IODP, up 4.6% from last year. This is a healthy trend, led by sizable increases in Atmospheric Sciences and Geography. It could be argued that the increase in research funding reflects the increase in number of faculty, but actually research funding per faculty FTE increased 5.5% over the last year. Let me highlight three research projects.

The cover article of the soon-to-be-released 2007 edition of Geoconnections features Bill Bryant and Donny Hamilton's \$4.8M study of the "Mardi Gras" shipwreck. Funded by Okeanos Gas Gathering Company through an agreement with the Minerals Management Service, this 4000-foot archaeological survey is the deepest ever in the Gulf of Mexico and one of a handful of deepwater archaeological surveys attempted anywhere.

The Antigua Project, a six-year, \$60 million dollar research project of coastal zones in the eastern Caribbean was privately funded by Sir R. Allen Stanford in 2007. To date, we have received \$3.9M although actual project plans continue to be somewhat of a roller coaster ride. The project is a partnership with the Rosenstiel School of Marine and Atmospheric Sciences at the University of Miami, involves 28 TAMU faculty members, mostly from the College of Geosciences, and currently funds 20 graduate research assistantships and tuitions.

Judi and Fred Chester and their colleagues are active participants in NSF's Earthscope initiative. They are part of the SAFOD team, the San Andreas Fault Observatory at

Depth project, an effort to characterize at seismogenic depths the physical and chemical processes most important for generating earthquakes

With respect to academics, by Fall Semester 2008, all our Bachelor degree curricula must be no more than 120 credit hours as recently mandated by the state legislature. Our two newest undergraduate degrees, the Environmental Geosciences degree and the Environmental Studies degree, now boast 51 and 35 majors respectively. Andrew Millington, the interim director of Environmental Programs, is working with his Executive Committee to finalize the by-laws for creating the Geosciences Environmental Faculty. We anticipate a steady increase in our environmental majors given the relevance of climate change and human-environment interactions to our society and the world.

Our internal communications and connectivity to the University and the outside world have just had a very positive boost. Thanks to the efforts by Jennifer Rumford, the new College Web Developer, and Carol Trono, the new College Communications Coordinator, the web site for our Environmental Programs was re-designed and launched last week. All other web sites in the College will soon be redesigned with new templates, fonts, colors, and logos as directed by Vice-President for Marketing and Communications Steve Moore as an effort to systematically brand and market Texas A&M University more effectively and consistently.

We have made great strides in development. Just over a year ago, we hired Diane Barron as our Director of Development. She has worked with our Former Students, Department Heads, faculty, and myself to build better relationships with our alumni and provide the necessary stewardship for future development opportunities. A major accomplishment has been the re-establishment of two development councils. For the first time in a decade, the College of Geosciences has managed to reestablish a Development and Advisory Council, consisting of six senior alumni. The College Council recently met with the Executive Committee of the College and defined graduate student scholarships and fellowships as the development priority. At the same time, The Geology & Geophysics Development and Advisory Council has become fully engaged,

and a true partnership now exists between the faculty and the council. Further, Members of the Advisory Council for Oceanography have been contacted and have agreed to reconvene in the near future.

I would be remiss if I did not give you an IODP update. The *JOIDES Resolution* has been the workhorse of the Ocean Drilling Program and Integrated Ocean Drilling Program for the past 25 years. She is currently in the Jurong shipyard in Singapore being reconverted in a major way of most of its habitable space and laboratory facilities at a Congress-allocated cost of \$115M. Because of delays and budget challenges brought on by Hurricane Katrina and the price of steel and petroleum, the project is taking longer and costing more than anticipated. The SODV conversion is now well on its way with the ship due to be ready in April or May 2008, with expeditions planned from the Bering Sea in the north to Wilkes Land in the south. IODP is entering into an exciting and challenging new phase of scientific discovery.

Many challenges lay ahead of us for the coming year. Some will be more achievable than others. Of course, planning will be easier once the University has a permanent President, Provost, Vice President for Research, and Dean of Graduate Studies in place. However, many issues simply cannot wait. I will be calling on many of you over the next few months to help us develop a new comprehensive vision statement for the College. We look forward to many academic challenges ahead, the successful completion of the Mardi Gras project, continuation of the Antigua project, the launch of a more capable *Joides Resolution*, and more. With your help, I intend to position the College of Geosciences as a “College on the move” within the University and nationally, building on the momentum of the recently concluded China-US Relations Conference and the formulation of a joint Ph.D. degree with Ocean University of China. We will build on our strong foundation, follow a sustainable growth plan, and look for still greater achievements. Now let’s get going! Thank you.