



Trends in Higher Education – Workforce Development

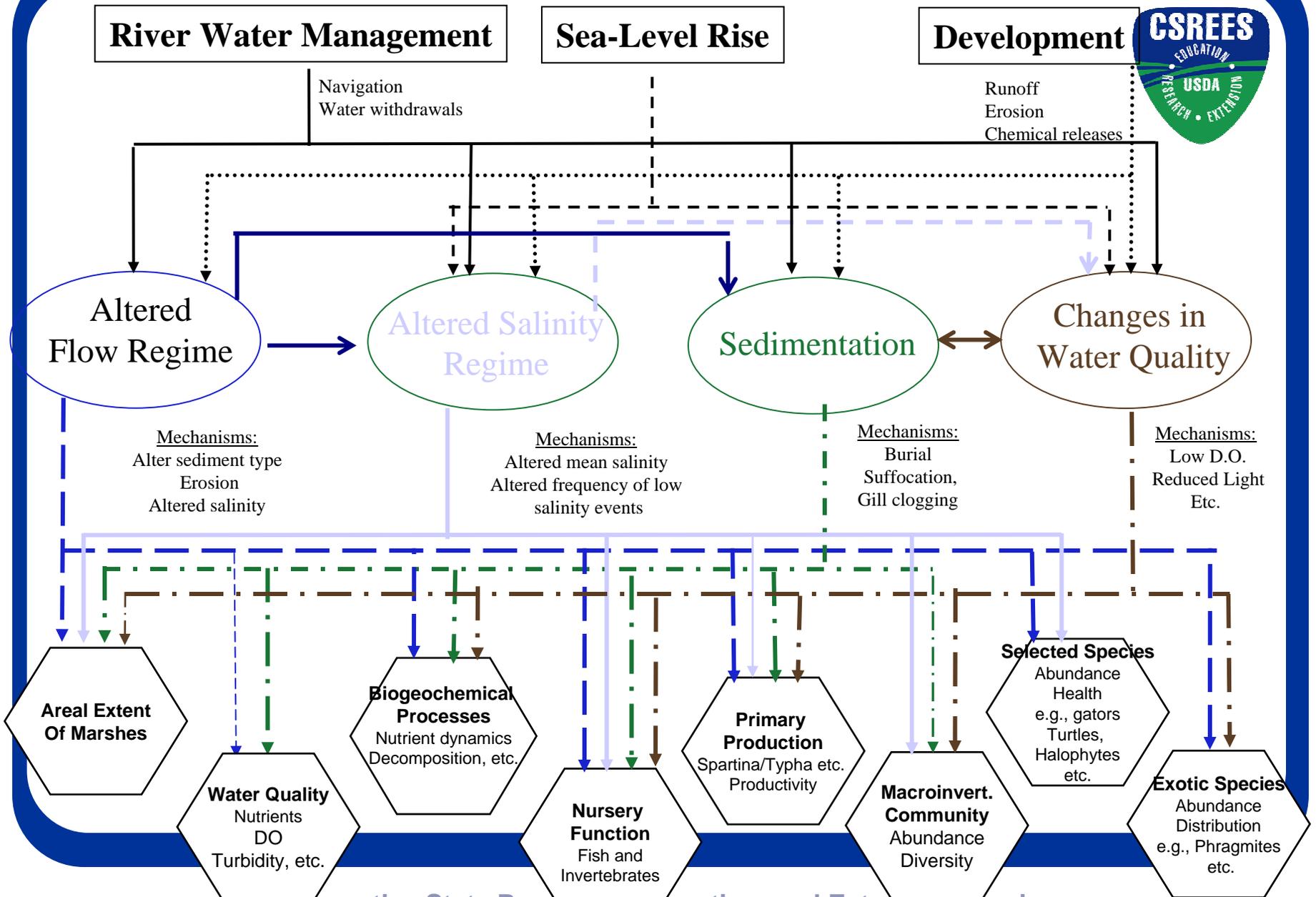
A Case Study in Florida

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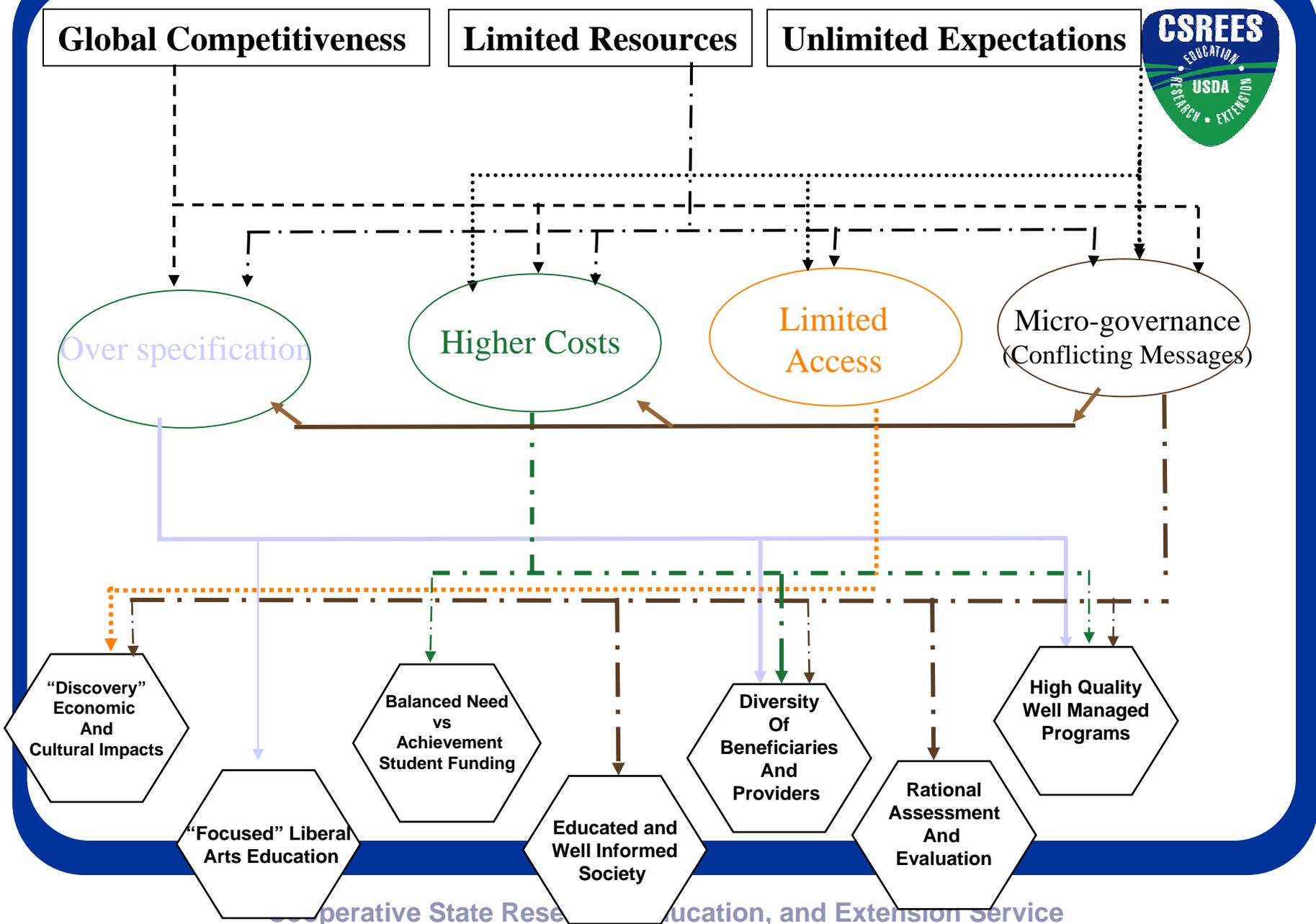
Food and Agricultural Sciences National Needs
Graduate and
Postgraduate Fellowship Grants Program (NNF)
Higher Education Multicultural Scholars Program
(MSP)

October 16-17, 2007
Waterfront Centre, Room 1410
800 9th St. S.W.,
Washington, DC 20024

Apalachicola Bay Salt and Freshwater Marshes



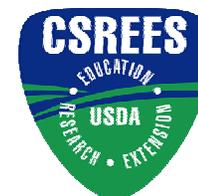
Education: Drivers, Stressors and VECs



The Development of Stressors and VECs in Florida



- **Establishment of the “Advisory Group on Emerging Technologies” in 2001**
 - The AGOET consisted of individuals from Florida industry and universities who were selected based on their broad knowledge of cutting edge scientific research and technological developments.
 - The Advisory Group merged targeted industry sectors identified in the *Workforce Florida, Inc. 2000-2001 Strategic Plan* with areas of research identified by the State University System 1998-2003 Strategic Plan as being important to economic development in Florida.
- **“Targeting Baccalaureate Degree Programs for Florida Workforce Enhancements”**
 - A report submitted to, and adopted by, the Workforce Estimating Conference in 2001, was updated and expanded to include graduate and professional programs.
 - The 2001 report identified baccalaureate degree programs that could be expected to have high demand for at least one of three reasons. Programs either:
 - ✓ met critical state needs
 - ✓ were identified by the AGOET as being important to continued high-tech industry development in the state; and/or
 - ✓ had a record of placing graduates in high-wage positions.



Academic Program Categories Deemed Areas of Strategic Emphasis

- **Mechanical Science and Technology Programs**
- **Natural Science and Technology Programs**
- **Medical Science and Technology Programs**
- **Computer Science and Information Technology Programs**
- **Analytical and Conceptual Programs**

This list was modified slightly to add

- **Design and Construction and**
- **Electronic Media and Simulation**

Academic Programs Deemed “Critical Needs”

- **Education**
- **Health Care**



Adopting Quantitative Output Criteria

- In December 2002, the ***Higher Education Funding Advisory Council*** recommended that Florida seek to reach the national average in number of bachelor degree graduates per capita
- This goal was extended to graduate and professional categories.
- It is proposed that underrepresented minorities degrees should be representative of their composition in the total population (ages 18-44) by 2012-2013.



Achieving the Output Goals

Applying the system's share of all degrees granted (public + private) in 2001-02 to the 2012-2013 combined target yields:

- Bachelor: $67.6\% \times 86,732 = 58,622$
- Master's: $55.8\% \times 31,981 = 17,845$
- First Professional: $41.5\% \times 5,488 = 2,278$
- Doctoral: $55.6\% \times 2,712 = 1,508$

Reaching these targets would require the following annual growth rates in degrees granted from 2002-2003:

- Bachelor 4.34%
- Master's 4.34%
- Doctoral 1.53%
- Professional 5.73%
- All Degrees 4.32%

THE BOTTOM LINE:

- It was initially proposed universities must produce 50% of degree recipients in the targeted areas with strategies codified in Board of Governors' approved Strategic Plans.
- Later Performance Funding Implemented with criteria for degree production in targeted programs
- Priority given to proposed new degree programs in targeted areas



Taking a Closer Look...

- Issue: How can the BOG best address perceived needs to increase output in specified majors and degree programs?
- This issue can be addressed in three ways:
 - (1) by attempting to actively channel students into specified degree programs,
 - (2) by providing inducements to students to choose specified degree programs, and
 - (3) by seeking greater efficiencies in current programs.



How might students be actively channeled into specified degree programs? Two possibilities spring to mind:

- a) Shrink access to other majors while increasing access to targeted majors. This may be done by:
 - Controlling the resources allocated to departments
 - Arbitrarily capping the size of some majors
 - Toughening requirements to enter and remain in good standing in certain majors
- b) In its admissions process, the university can choose to admit a greater percentage of applicants who declare their interest in certain majors.



Will this be effective? Are there unintended negative consequences to this approach?

- Students “vote with their feet”. Students denied entry to the major of their choice may react in several ways. (Transfer, tread water, etc.)
- One may propose implementing strategy (b) to favor applicants interested in certain majors. However, students who enter as freshmen change majors on average more than once, and there is no guarantee they will remain in their initially declared major.
- There can be quick swings in critical need areas. These are sometimes due to economic changes.
- Public state universities must carefully balance what they do consonant with their missions. Students and the public expect a range of options.
- Universities compete on a national and global scale. If they are to compete successfully for prestige, students, faculty, and dollars, they must optimize their research and education portfolios with respect to their peers, and these are growing increasingly multidisciplinary.



Positive Approaches - 1

Students do respond to positive inducements, and there are several that should be provided.

- Consider using differential tuition as a financial inducement. Perhaps the cost of targeted degree programs should be smaller than the cost of other degree programs.
- Other financial inducements can be applied as well, including more liberal scholarship and loan programs associated with targeted degree programs.
- Students are influenced by good job prospects and good advice.
- Ensure open access to targeted degree programs. That is, departments should have adequate resources to handle the flow of students. Prerequisites for entry and GPAs to remain in good standing should be pegged at reasonable levels.



Positive Approaches -2

Seek greater efficiencies in current programs

- The BOG and universities should agree to set reasonable goals for improvement of graduation rates, particularly in targeted degree programs to improve output. **(PERFORMANCE MEASURES)**
- Look even closer at other factors for “critical needs” graduates, e.g., *Simply increasing the number of degrees produced in targeted disciplines may address the problem in an inefficient and wasteful manner. In 2002-03, the SUS produced 3,977 teacher education graduates. Only 65.4% of these graduates were employed in Florida public schools in 2003.*
- Meeting overall BOG targets may well depend on effectively addressing the special needs of underrepresented groups.

The BOG plan should identify successful models for promoting the recruitment, retention and graduation of underrepresented students.



Expanding on Access

- Meeting The Board of Governor's goals for educational access will depend upon Florida's core capacities to produce and distribute degrees, especially with respect to:
- Geographic access to the mix of programs needed to support state, regional, and local needs;
- Program design and delivery that assures diverse groups of people can participate;
- Systematic preparation to enable success of those participating in the programs; and
- Affordability of educational programs.