PBTC 03-3

International Agricultural Trade and Policy Center

# VALUES ASSOCIATED WITH THE APALACHICOLA BAY MARINE ECONOMY

By

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# INTERNATIONAL AGRICULTURAL TRADE AND POLICY CENTER

**MISSION AND SCOPE**: The International Agricultural Trade and Policy Center (IATPC) was established in 1990 in the Food and Resource Economics Department (FRED) of the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida. Its mission is to provide information, education, and research directed to immediate and long-term enhancement and sustainability of international trade and natural resource use. Its scope includes not only trade and related policy issues, but also agricultural, rural, resource, environmental, food, state, national and international policies, regulations, and issues that influence trade and development.

**OBJECTIVES:**

The Center's objectives are to:

- Serve as a university-wide focal point and resource base for research on international agricultural trade and trade policy issues
- Facilitate dissemination of agricultural trade related research results and publications
- Encourage interaction between researchers, business and industry groups, state and federal agencies, and policymakers in the examination and discussion of agricultural trade policy questions
- Provide support to initiatives that enable a better understanding of trade and policy issues that impact the competitiveness of Florida and southeastern agriculture specialty crops and livestock in the U.S. and international markets

# VALUES ASSOCIATED WITH THE APALACHICOLA BAY MARINE ECONOMY

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## Economic Characteristics of the Apalachicola Bay Region

The table below characterizes the economic structure and value of the Apalachicola Bay region, including Gulf, Franklin, Liberty and Wakulla Counties. Total economic output in 1999 (expressed in year 2002 dollars), was $1.40 billion, with total employment of 17,336 jobs, and total value-added personal and business net income of $859 million. The largest economic sectors were manufacturing, services, finance/insurance/real estate, government, and construction, as is typical of the Florida economy in general.

**Output, Value Added and Employment of the Four County Area of Apalachicola Bay, Florida, by Major Industry Group, 1999***

| Industry Group | Industry Output | Employ-ment (jobs) | Employee Compen-sation | Proprietor Income | Other Property Income | Indirect Business Tax | Total Value Added |
|---|---|---|---|---|---|---|---|
| Agriculture | 40.3 | 1,244.4 | 5.7 | 9.4 | 12.2 | 2.0 | 29.4 |
| Mining | 0.3 | 7.5 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 |
| Construction | 179.4 | 1,668.2 | 36.8 | 10.1 | 4.5 | 1.0 | 52.3 |
| Manufacturing | 155.2 | 963.1 | 46.1 | 6.3 | 7.8 | 1.3 | 61.6 |
| Trans., Com., Public Utilities | 124.6 | 638.0 | 19.9 | 4.8 | 39.1 | 10.1 | 73.9 |
| Trade | 135.4 | 3,320.7 | 57.3 | 3.0 | 20.0 | 18.3 | 98.6 |
| Finance, Insurance, Real Estate | 364.0 | 1,175.4 | 82.8 | 7.4 | 135.5 | 27.9 | 253.6 |
| Services | 230.9 | 4,197.6 | 100.6 | 22.7 | 14.0 | 4.0 | 141.4 |
| Government | 167.9 | 3,936.5 | 130.9 | 0.0 | 15.7 | 0.0 | 146.6 |
| Other | 1.7 | 184.1 | 1.9 | 0.0 | (0.2) | 0.0 | 1.7 |
| Totals | 1,399.5 | 17,335.5 | 482.0 | 63.8 | 248.7 | 64.6 | 859.2 |

*Millions of dollars (deflated 2002) except employment.
Source: Implan data for Florida counties, MIG, Inc., Stillwater, MN

## Value and Economic Impact of Commercial Fisheries in the Apalachicola Bay Region

As an indication of the value of economic activity at risk due to disruption freshwater flows to the Apalachicola Bay estuary, below are tables and charts showing the volume and value of commercial fisheries landings at Apalachicola reported by National Marine Fisheries Service for 1980-2001. As is evident in the chart, landing volumes and values fluctuate considerably from year to year. The average annual landings over the last past ten years were 7.3 million pounds, valued at $12.2 million. The key commercial species harvested in the region during 2001 were oysters (2.5 million pounds) and shrimp (2 million pounds). The majority of oyster production in Florida (96%) occurs in the Apalachicola Bay region. The economic activity generated by harvesting, processing, and wholesale distribution of oysters and shrimp is an important source of economic activity in the region.

The total economic impact of the seafood industry in the Apalachicola Bay region was estimated based on the annual dockside value of seafood landings averaged over the past 10 years, together with a regional economic model (Implan Pro) and base economic data for Florida counties (MIG, Inc.). This model enables estimation of the indirect effects of input purchased from other businesses, and induced consumer spending by industry employees, as well as the direct effect of raw seafood sales. The total output impact was $22.7 million, the total value added impact was $17.4 million, and the total employment impact was 707 jobs.

| Economic Impacts of Seafood Landings in the Apalachicola Bay Region* | | | | |
|---|---|---|---|---|
| Impact Measure | Direct | Indirect | Induced | Total |
| Output ($1000*) | 13,695 | 1,203 | 7,833 | 22,731 |
| Value Added ($1000*) | 11,829 | 628 | 4,957 | 17,415 |
| Employment (jobs) | 575 | 16 | 117 | 707 |
| *Direct effect based on average value of landings during period 1991-2001, expressed in year 2002 dollars. | | | | |

## Impact of Wildlife-Related Recreation in the Apalachicola Bay Region of Florida, 2000

As an indication of the recreational value of marine and other natural resources in the Apalachicola Bay region, the following table summarizes the jobs, retail sales, total economic output, and number of permits or visitors in the four counties of Franklin, Gulf, Liberty, and Wakulla for year 2000, by type of recreational activity (hunting, freshwater fishing, saltwater fishing, wildlife viewing). The total economic impacts of all activities in the region include 3,361 jobs, $140 million in retail sales, $236 million in economic output, and 154 thousand visitors or permitted users. Saltwater fishing was by far the most important activity, representing about 86 percent of the output impacts, and Franklin County had the highest share of output impacts (40%).

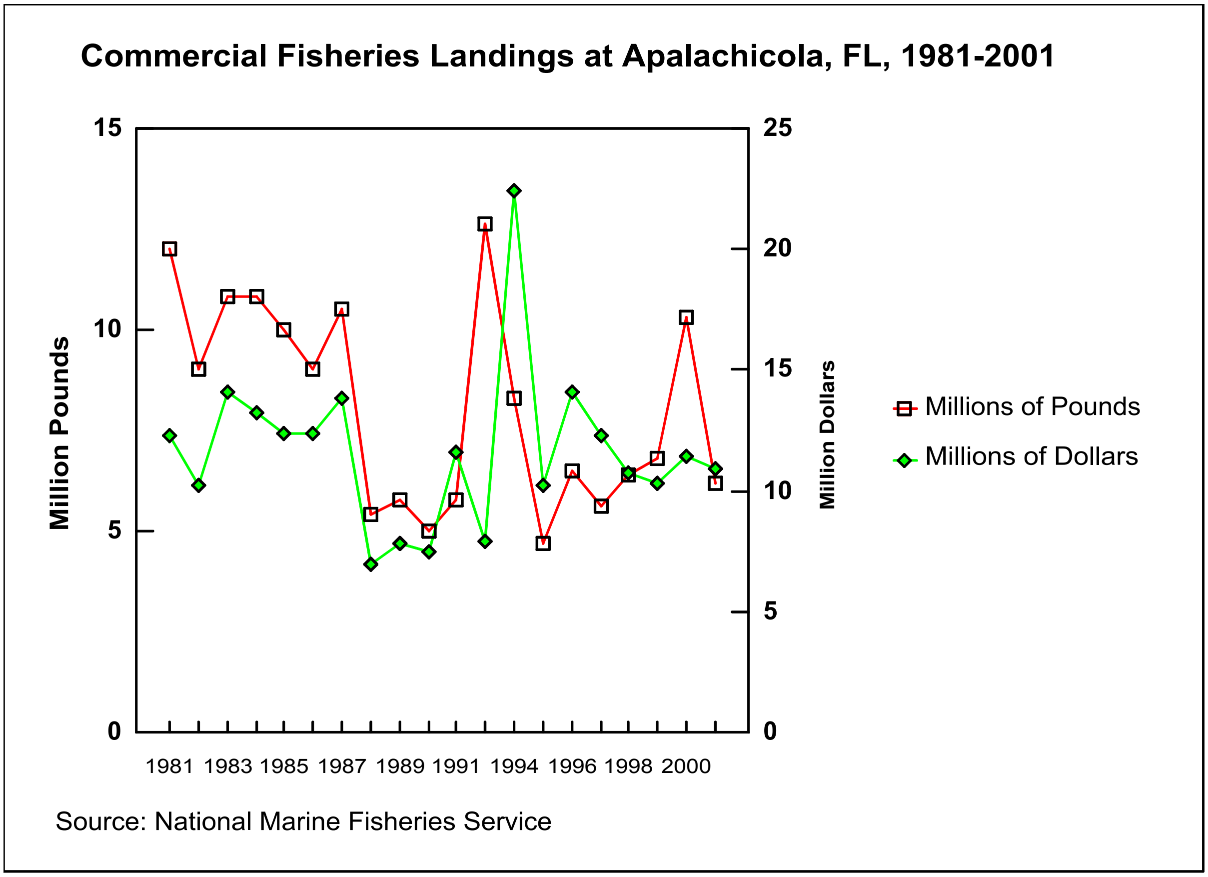
| Impact of Wildlife-Related Recreation in the Apalachicola Bay Region of Florida, 2000, by Activity and County, 2000 | | | | | | |
|---|---|---|---|---|---|---|
| | Activity | Franklin | Gulf | Liberty | Wakulla | Total Four Counties |
| Jobs | Hunting | 69 | 83 | 62 | 101 | 315 |
| | Freshwater Fishing | 47 | 121 | 50 | 111 | 329 |
| | Saltwater Fishing | 1,116 | 709 | 24 | 687 | 2,536 |
| | Wildlife Viewing | 36 | 52 | 26 | 67 | 181 |
| | All Activities | 1,268 | 965 | 162 | 966 | 3,361 |
| Retail Sales ($1000) | Hunting | 1,929 | 2,331 | 1,744 | 2,849 | 8,853 |
| | Freshwater Fishing | 2,325 | 6,074 | 2,481 | 5,567 | 16,447 |
| | Saltwater Fishing | 47,543 | 30,223 | 1,014 | 29,250 | 108,031 |
| | Wildlife Viewing | 1,254 | 1,792 | 896 | 2,331 | 6,272 |
| | All Activities | 53,052 | 40,421 | 6,134 | 39,997 | 139,604 |
| Economic | Hunting | 2,076 | 2,509 | 1,876 | 3,066 | 9,528 |

| Impact of Wildlife-Related Recreation in the Apalachicola Bay Region of Florida, 2000, by Activity and County, 2000 | | | | | | |
|---|---|---|---|---|---|---|
| | Activity | Franklin | Gulf | Liberty | Wakulla | Total Four Counties |
| | Freshwater Fishing | 2,498 | 6,526 | 2,665 | 5,981 | 17,670 |
| | Saltwater Fishing | 88,783 | 56,440 | 1,894 | 54,622 | 201,739 |
| | Wildlife Viewing | 1,324 | 1,892 | 946 | 2,461 | 6,623 |
| | All Activities | 94,682 | 67,367 | 7,381 | 66,131 | 235,561 |
| Number Permits or Visitors (1000) | Hunting | 1 | 2 | 1 | 2 | 6 |
| | Freshwater Fishing | 3 | 7 | 4 | 7 | 22 |
| | Saltwater Fishing | 49 | 31 | 1 | 30 | 112 |
| | Wildlife Viewing | 3 | 4 | 2 | 6 | 14 |
| | All Activities | 57 | 44 | 8 | 45 | 154 |

Source: David Harding (Fla. FWCC), Southwick & Associates, USFWS.
Note: County level data were estimated from 1996 USFWS survey of hunting, fishing and wildlife watching, restated in year 2000 dollars using the consumer price index, and adjusted for growth in county population and number of permits. County data may have low reliability because the survey sampling was designed to provide statistical estimates at the state level.

| Commercial Fisheries Landings at Apalachicola, FL, 1981-2001 | | |
|---|---|---|
| Year | Volume (Millions Pounds) | Value (Millions Dollars) |
| 1981 | 12.0 | 12.3 |
| 1982 | 9.0 | 10.2 |
| 1983 | 10.8 | 14.1 |
| 1984 | 10.8 | 13.2 |
| 1985 | 10.0 | 12.4 |
| 1986 | 9.0 | 12.4 |
| 1987 | 10.5 | 13.8 |
| 1988 | 5.4 | 7.0 |
| 1989 | 5.8 | 7.8 |
| 1990 | 5.0 | 7.5 |
| 1991 | 5.8 | 11.6 |
| 1993 | 12.6 | 7.9 |
| 1994 | 8.3 | 22.4 |
| 1995 | 4.7 | 10.2 |
| 1996 | 6.5 | 14.1 |
| 1997 | 5.6 | 12.3 |
| 1998 | 6.4 | 10.7 |
| 1999 | 6.8 | 10.3 |
| 2000 | 10.3 | 11.4 |
| 2001 | 6.2 | 10.9 |

Source: National Marine Fisheries Service



Commercial Fisheries Landings at Apalachicola, FL, 1981-2001
Million Pounds
Million Dollars
15
10
5
0
25
20
15
10
5
0
1981 1983 1985 1987 1989 1991 1994 1996 1998 2000
Millions of Pounds
Millions of Dollars
Source: National Marine Fisheries Service