

# Implications of Shrimp Aquaculture



Sarah VanWye

# Introduction

- Importance of fisheries as world food source
- Growth in aquaculture - UN recommends doubling by 2010
- U.S. is largest importer — Shrimp is main commodity
- Ecuador is 3<sup>rd</sup> largest supplier

2000 Annual Report on the United States Seafood Industry

## U.S. Shrimp Imports 1990-1999 *Trend Continues Upward*

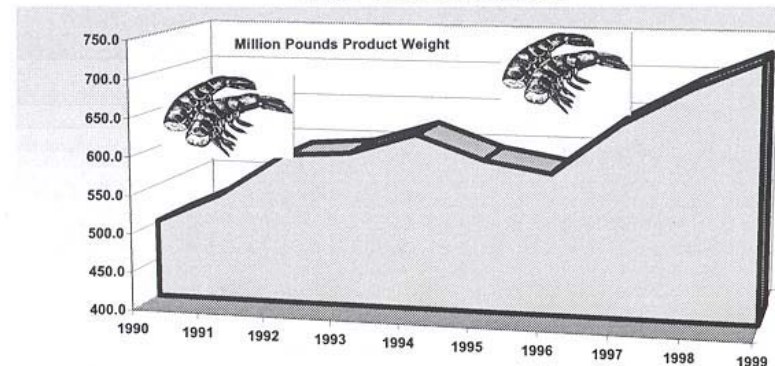
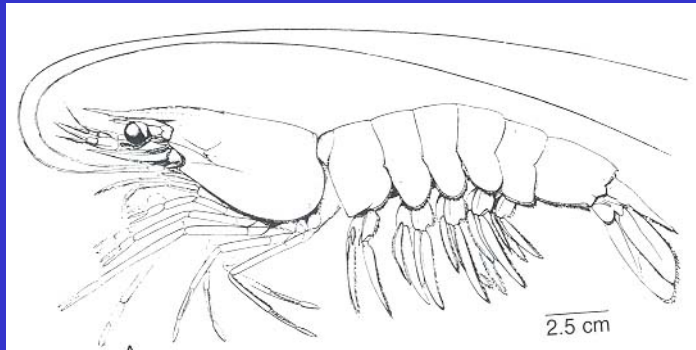


Figure 6.6.4, Source: NMFS

# Scientific Background

## *Penaeus vannamei* (Large White Shrimp)



## Mangroves

- Sub-tropical trees and shrubs which grow at boundary of land and saltwater
- Biodiversity
- Filter materials from water
- Natural disaster shield
- Dependence of local communities

# A Shrimp Farm

- 100-200 hectares
- Waste water discharged to ocean
- Possible human health risks
- Government Corruption
- Inflated land prices
- Acquisition without compensation

- Muisne
- 1985: 20,000 hectares of mangrove
- 1999: 500 remaining
- 1 hectare of mangroves sustains 10 families
- 1 shrimp farm usually employs 6 people full-time
- Standard of living

# Government Corruption



- Existing law prohibiting shrimp farm construction since 1985
- Moratorium on mangrove destruction
- World Bank says income distribution has worsened in the 1990s

# White Spot Disease



- White Spot Syndrome Baculovirus Complex (WSBV)
- Consists of many small viruses
- Infected shrimp reduce consumption
- 100% mortality within 3 to 10 days
- Caused 70% decline in Ecuador's shrimp exports last year
- More ponds are created as others must be abandoned

# Support for Shrimp Farming

- Shrimp: Ecuador's 3<sup>rd</sup> leading export
- Average this year: 1840 tons/ month

## GAA claims:

- Shrimp aquaculture only 5% of mangrove loss
- Ecuador has in fact increased its mangrove area in past 5 years
- Trend towards inland farms

# Conclusions

- Environmental and social issues must be addressed
- Funding needed for research on sustainable solutions
- Possible ban on construction of new shrimp farms – Internationally enforced