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IMPACTS OF E.P.A.'S PROPOSED EFFLUENT GUIDELINES
ON THE BLUE CRAB PROCESSING INDUSTRY

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Preliminary Comments D.P.R.A. Study

DIVISION OF THE ENVIRONMENT
SCIENCE & STATISTICS

General comment should first be made regarding the basic nature of Development Planning and Research Associate's (D.P.R.A.) Draft Report on the "Economic Impact of Proposed Limitations for the Seafood Processing Industry." The roughly dozen pages is clearly not sufficient to characterize an industry as diverse as hard blue crab processing. Every item from the overview of crab demand indicators to the characterizations of individual firms "model financial statements" is deserving of severe criticism for being simply too general for any meaningful analysis of economic impact. It is clearly not appropriate to attempt such a difficult characterization of a very complex industry in what appears to be an almost "cavalier" manner. In short D.P.R.A. simply does not do the blue crab industry justice.

The following comments generally follow the studies progression from Data Sources to Economic Impact Analysis.

DATA

Reportedly financial data on blue crab processing plants was collected from a survey of processors in Maryland. To date, those interviewed have received no summary of data collected except for D.P.R.A.'s model plant financial statements herein. There is, to say the least, considerable skepticism from industry sources on the accuracy of that economic characterization.

Secondary data source cited would not provide the necessary data for such a characterization.

Further, there are serious problems in trying to characterize the entire blue crab processing sector from a limited survey of Maryland processors. As will be discussed later the blue crab processing industry varies greatly from state to state and region to region.

INDUSTRY PROFILE

The general nature of D.P.R.A.'s study is obvious in this section. Geographic stratification represents nothing specific about blue crab, rather "crab" is spoken of more generically. Most of this section demonstrates little specific knowledge of the blue crab processing industry.

Employment data gathered is too limited. For the sake of impact analysis employment in the harvesting sector must be considered also.

The harvesting sector is, of course, tied directly to these processing firms (for better or worse). Vis a vis a derived demand relationship: Whatever impacts shoreside plant viability directly impacts vessel viability which should be looked at in terms of the "first stage" of blue crab processing for this analysis.

The soci-economics of the labor force are ignored for the most part.

The community impacts resulting from any shut-downs would arise from the unique nature of the processing personnel: generally low income, minority, uneducated, elderly with little if any employment opportunity costs. In short even more significant than number of employees in D.P.R.A.'s impact assessment should be the kind of employees impacted and the location of specific firms affected. (p. II-18 vs. p. VII-14?)

LANDINGS

Variability of landings are alluded to, however the implications of this variance have not been considered in terms of the model plant financial analysis. Substantial variability in product availability translates into cash flow binds for crab processors. A realistic seafood business analysis should include a conception of such "risks". One indicator of uncertainty is the probability of a low production year.

As seen below this risk may be expressed by comparing the standard deviation of landings of a species with its average landings over a given number of years. Differences in these ratios (coefficients of variations) between States suggests another problem with D.P.R.A.'s modeling based upon a limited (Maryland only) sampling.

Average Hard Blue Crab Landings and Standard Deviations for the U.S. and selected states -

	I	II	III
	Average ('65-'78) Landings (Blue Crab)	Standard Deviation	Standard Deviation as % of Average Landings
U.S.	138.07 X 10 ⁶	16.9	12.2
VA	42.8 X 10 ⁶	9.8	22.9
FLA	18.9 X 10 ⁶	3.6	18.9

As the table indicates the variability in Blue Crab landings as measured by column III (coefficient of variation) suggests differences among regions. The relative impact of variability of product availability on the processing sector thus is probably different from region to region.

This variability between business environments is one critical problem in D.P.R.A.'s depiction of a "U.S. model blue crab processing plant" -- there probably is no such thing.

Each region presents a different set of external conditions for the blue crab processing sector. Again D.P.R.A.'s attempt to utilize gross (national/data) to depict the micro-economics of processing firms is not sufficient.

The characterization represented by D.P.R.A.'s model plant financial statements may not be accurately presenting a firm's ability to finance new capital required to install water pollution controls. Further this "risk factor" should be included in the simplified Net Present Value Analysis presented. In short variability in the stream of cash earnings is affected by the uncertainty of product procurement, i.e. investment risks are probably different from region to region.

IMPORTS

In terms of total crab landings imports may not be significant, however, it is probably significant relative to the specialized domestic canned blue crab market. Further, the sole domestic blue crab canner purchases much of its product from other firms and small vessel operators.

PRICES AND PRICE DETERMINATION

D.P.R.A.'s Demand analysis is based upon price and income elasticities for "all crab". Data used to determine crab consumption is very dated (1973). Since that time there has been an actual decrease in the real disposable income of consumers and (assuming the National Marine Fisheries

Services' income elasticities used by D.P.R.A.) there is a resulting decrease in quantity demanded for products like blue crab. Therefore the ability for firms to "pass along" increased operating costs resulting from pollution control investments probably should be looked at more closely using more recent data.

Again this price analysis is somewhat questionable because supplies are based on "all crab" landings. This further illustrates the problem of the limited (Maryland) data base for characterizing blue crab processing economics. For example Maryland processors have substantial activity in the "basket market" for whole crabs. This unique basket market is an example of the different influences determining processing profitability from region to region.

WASTE WATER CONTROL COSTS

Effluent characterization data is dated. Since the very limited sampling conducted in 1973, processing equipment and techniques have changed considerably.

Mention should be made of the waste characterization data base. Subcategory C-Mechanized Blue Crab's Raw Wastewater Listing is based on only two plant's data collected on a total of seven days of operation during late May and early June 1973. The variability of that data may be too great to draw conclusions regarding clean up costs for use of screening and dissolved Flotation (D.A.F.) systems.

According to E.P.A.'s "Development Document of Effluent Limitations Guidelines and New Source Performance Standards - 1974" the waste of the mechanized blue crab subcategory "had greater variability than the conventional

process." However fewer samples were used to characterize this waste than that of the "relatively uniform conventional process using hand picking." Apparently a contradiction exists between "methodology" and "rationale" upon which the sampling was reportedly based.