



GROWTH AND PERFORMANCE OF ERITREAN AND INDIAN FISH PRODUCTION



Tesfom Melake Araya¹
Masters Scholar, tesmel4@gmail.com
M. Krishnan¹, Head, Social Sciences Division,
mkrishnan@cife.edu.in
R. Venugopalan², venur@ihr.ernet.in

Piyashi DebRoy¹, Ph.D Scholar
piyashi.debroy@gmail.com
Neha W. Qureshi¹, Ph.D Scholar,
nihagureshi01@gmail.com

¹Central Institute of Fisheries Education, Mumbai, India
²Indian Institute of Horticultural Research, Bangalore, India

INTRODUCTION Eritrea occupies a key strategic position on the eastern side of the Red Sea, with an extensive sea area including approximately 355 islands. The long coastline of India extending above 8,000 km and the huge EEZ of 2.02 million sq. km and an estimated MSY around 3.93 million metric tons. (Modayil and Pillai, 2007).

RESEARCH METHODOLOGY Sixty years data (1950-2009) on marine fish production was collected from Sea Around Us Project website for Eritrea and from CMFRI website for India.

Compound growth rate: $Y_t = ab^t$ eq. (1) $\ln Y_t = A + tB + \varepsilon$ eq. (2) - Where Y_t - marine fish production; A-Ln(a)intercept; B-Ln(b) or Ln(1+r) rate of change in time; t-time in years; ε - error term compound growth rate is estimated by $r = [\exp(B) - 1] \times 100$ eq. (3)

Coppock instability index: $CII = |\text{anti} \ln \sqrt{\ln V} - 1| \times 100$ eq. (4) - Where:

$\ln V = \frac{1}{n-1} [\sum (\ln Y_{t+1} - \ln Y_t) - \frac{1}{n-1} \sum (\ln Y_{t+1} - \ln Y_t)]$ eq. (5) - where: n is number of years, Y is the value of marine fish production being observed, and t is the year.

RESULTS AND DISCUSSION

Growth and performance of marine fish production

Table 1. Growth rate and instability indices (%)

Year	Eritrea CGR	India CGR	Eritrea CII	India CII
1950-1959	12.69	3.51	103	7
1960-1969	8.17	2.85	72	62
1970-1979	-50.40	3.13	339	58
1950-1979	-6.86	3.42	98	48
1980-1989	14.06	5.11	180	66
1990-1999	27.58	2.04	142	22
2000-2009	-17.46	2.85	95	48
1980-2009	11.30	2.72	99	47
1950-2009	-1.92	3.11	3	47

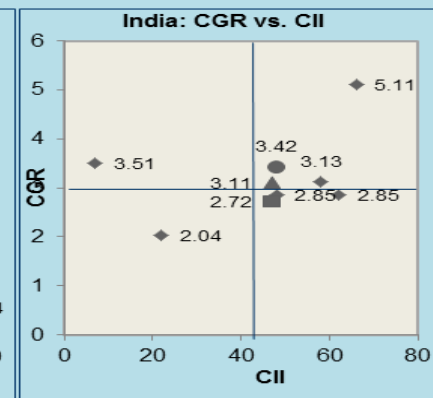
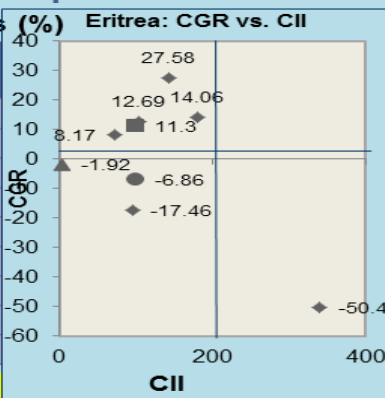


Fig 1. Matrix of CGR and Co instability index of marine fish production in selected countries. (N.B. ball cluster represents phase I (1950-1979), rectangle cluster represents phase II (1980-2009) and triangle cluster represents 1950-2009.)

Performance summary of marine fish production

Table 2. Performance summary

Performance based on CGR/CII tradeoffs		
Years	Eritrea	India
1950-1959	most desirable	most desirable
1960-1969	most desirable	least desirable
1970-1979	least desirable	less desirable
1950-1979	less desirable	least desirable
1980-1989	most desirable	less desirable
1990-1999	most desirable	less desirable
2000-2009	less desirable	least desirable
1980-2009	most desirable	less desirable
1950-2009	less desirable	less desirable

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