S.	State / Union	Population in	Quantity Consumed (kg)	
No.	Territory	Million (2001)	Rural	Urban
16.	Mizoram	0.7	0.17	0.10
17.	Nagaland	1.2	0.26	0.39
18.	Orissa	31.6	0.29	1.94
19.	Punjab	20.2	Neg.	Neg.
20.	Rajasthan	44.0	Neg.	0.01
21.	Sikkim	0.4	0.01	0.08
22.	Tamil Nadu	55.8	0.17	0.17
23.	Tripura	2.7	0.89	0.89
24	Uttar Pradesh	139.1	0.04	0.02

	•	Population in	Quantity Consumed (kg)	
	Million (2001)	Rural	Urban	
25.	West Bengal	68.0	0.54	0.72
26.	Andaman & Nicobar	0.3	1.40	1.05
27.	Chandigarh	0.6	0.02	0.01
28.	Dadra & Nagar Haveli	0.1	0.39	0.28
29.	Daman & Diu	0.1	1.07	4.12
30.	Delhi	9.4	0.03	0.03
31	Lakshadweep	0.05	3.79	3.61
32.	Pondichery	0.8	0.69	0.71

#### **Fishery Resources in Andhra Pradesh**

Resources		
Rivers and Canals (km)	11,514	
Rersorvoirs (lac ha)	2.0	
Ponds, Tanks (lac ha)	2.0	
Lakes, Water bodies (lac ha)	2.0	
Brackish Water (lac ha)	1.0	

## **Fishery Resources in A.P.**

Cultivable Fish	Rohu, Catla, Mrigal,	
Species	Murrel, Magur, Singhi	
Cultivable Prawn	River prawn, Scampi,	
Species	Black Tiger, Indicus	

## **Fish Production and Revenue Generation**

Production levels	Fish	7.5 MT/ha	
	Prawn	750 k/ha	
Annual Production	Fish	8.0 lac MT	
	Prawn	0.3 lac MT	
Farm Gate Price	Fish	28/- per kg	
	Prawn	150/- per kg	

#### **Revenue Generation from Aquaculture**

Item	Rate	Amount (Rs. Crore)
Market Cess	0.5%	9.0
Sales Tax		
Seed	4.0%	2.0
Feed	4.0%	50.0
Water Cess	500	12.50
Indirect taxes		27.00
Total		100.00

#### Why Freshwater Aquaculture is important?

- Marine produce remained static during last 5 years
- Brackish water resources over exploited through coastal trawler operations
- Construction of dams and barrages, increase in riverine pollution, absence of auto-stocking lead to depletion of capture fishery resources

- Sustained food grain production in the country achieved the goal "Food for all"
- Objective for the present day is "Protein food for all"
- Fish is an ideal animal food for providing quality and healthy protein at an affordable price for poor man

### Direct Rural Employment Generation through Aquaculture

Watch and ward employment on pond	0.5 lac work force
<b>Contingent employment for miscellaneous operations &amp; Netting operations</b>	1.0 Crore man days
Expenditure on employment (Rs.)	70.0 Crore

## Cost effectiveness of different animal proteins

Source	Protein (Rate / k)
Fish	65.00
Chicken	125.00
Mutton	230.00

## Fish – A Source of Nutrition

- High nutritive value with high digestibility
- Rich in high quality protein with all essential amino acids
- Rich in vitamins A, B & D
- Rich in essential minerals such as zinc, selenium, clacium, phosphorous and iodine

Fish Protein – High biological value and protein efficiency ratio
Fish oil – rich in w-3 polyunsaturated fatty acids (PUFA) with many therapeutic values

#### **Health Benefits of Fish**

- Protects from coronary heart diseases
- Reduces blood clot formation and thrombotic problems
- Reduces cholesterol and triglycerides in blood.
- Controls diabetes and consequent renal problems.
- Improves functioning of the nervous system
- Inhibits development and progression of a range of human cancers
- Reduces rheumatoid arthritis

## **Development of Allied industries**

- Transport sector for transporting manures, seed, feed and fish
- Ice industries to production the order of 6.0 lakh tons supporting more than 200 ice plants
- Packing industry providing 5.0 lakh plastic crates, 1.0 lakh syntex tanks, polythene bags for feed and seed every year
- Nets, Gears and Crafts, Boats, Biofertilizer and other industries

## **Ancillary aquaculture activities**

- Promotion of short term corps in aquaculture with supplementary fishes
- Supplementary food fishes for diversification
- Ornamental fish breeding
- Aqua shops for single window operations to meet farmer requirements
- Value addition for fish and fishery product

### **Marketing Practices**

- Undressed Fish Marketing is in vogue at present
- Marketing Capacity 2000 Mt/day
- Average selling price 28/- per kg at Farm gate
- Transport System under compact and frozen ice

## **Scope for innovative Marketing**

- Dressed and processed fish meat sales should be encouraged
- Value addition to fish food products
- Caning and ready to eat fish
- Establishment of modernized fish markets
- Packed and frozen fish meat

#### Scope for Aquaculture in Government policies

- Include fish in menu of mid day meal schemes
- Procure fish for supply in defence, jails and institutional canteens
- Aquaculture must be treated at par with agriculture
- Exempt sales tax on feed ingredients
- Stop collecting sales tax on prawn seed sales

#### **Development activities for aqua industry**

- Fisheries paying 0.5% market cess. Proportionate allocation of funds to this sector is not available
- Infrastructure like roads are lacking for fish ponds
- Common auction platforms are not available.

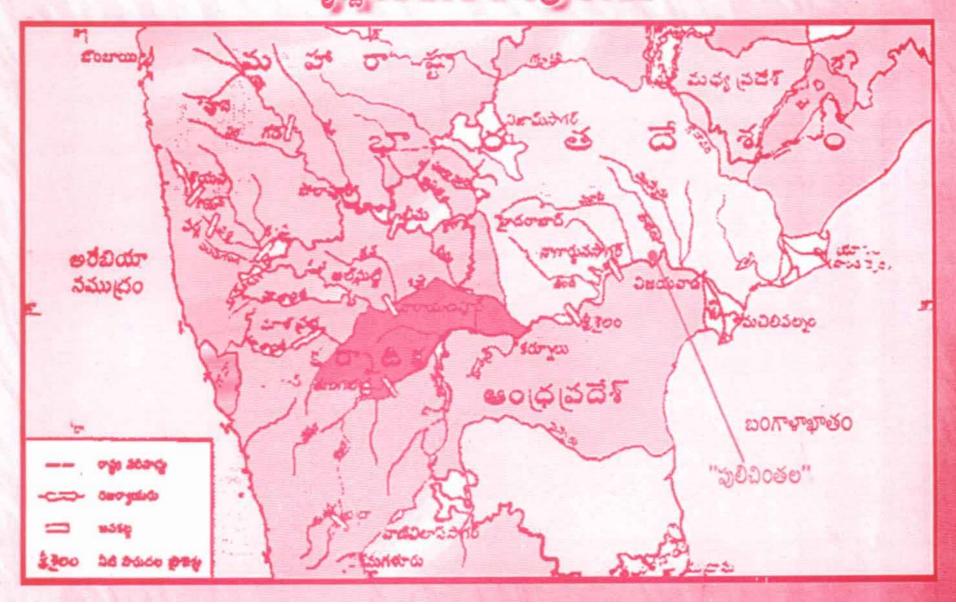
#### **Opportunities in freshwater aquaculture**

- Enhancement of aquaculture productivity (present national average 2.0 ton/ha) through multiple harvests and stock replenishment
- Increasing aquaculture production for export market
- Diversification of culturable species Murrel, Magur and Singhi
- Fingerling Stocking in short seasonal tanks
- Integration of freshwater aquaculture with organic farming
- Intervention of Genetic and Biotechnological techniques for improving quality of aqua crops

#### **Thrust Areas in Aquaculture**

- Aquaculture diversification
- Genetic improvement of fish and prawns
- Molecular biology and Biotechnology
- Fish, Nutrition and physiology
- Water budgeting
- Waste Water management
- Farm mechanization and automation
- Farmer support services through aquaclinics at mandal levels
- **Post Graduate Fishery education in the state**

#### **ಕೈವಾನೆಬಿ ಬಿರಿವಾಬಾಕ್ ಪ್ರಾಂತೆಮು**





#### A large commercial fish pond in Andhra Pradesh (40 ha)



Progressive farmer Sri M.V.S. Nagireddy with marketable size grownout Catla from his culture pond located under Krishna Delta



Progressive farmer Sri K. Bhaskara Rao monitoring netting operations from his culture pond located under Krishna Delta



Final harvesting of fish from large commercial ponds in Krishna Delta



Cooking of Feed and broadcasting is one of the feeding practices adopted by fish farmers in A.P.



Harvest of all female Scampi Prawn from a large watershed pond (40 ha) in Andhra Pradesh (Farmer : S. Nagireddy)



Commercial pond culturing Tiger Prawn in freshwater using long arm paddle wheel aerator (Farmer : N. Tejopati Rao)



Harvested Tiger Prawn from a freshwater pond (1.0 ha) in Andhra Pradesh (Farmer : N. Tejopati Rao)



#### Seed of 45 day old Jayanti Rohu (>1.5 inch size)



#### Seed of 45 day old Jayanti Rohu,>1.5 inch size (Farmer : S. Suparna)



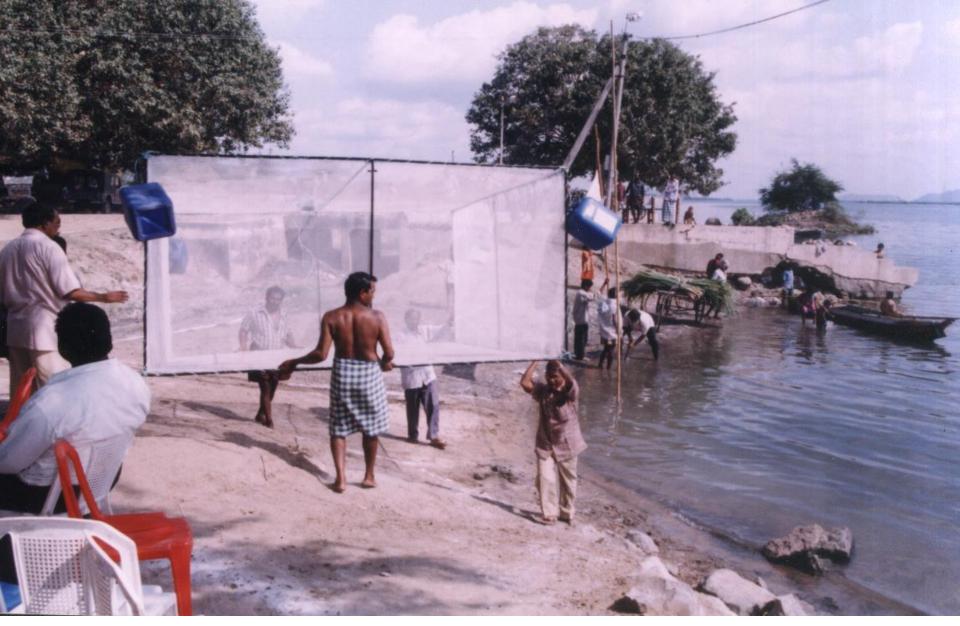
Fully grown Jayanti Rohuharvested from culture pond in Krishna Delta area (Farmer : Co-operative pond, Yaganamilli)



Progressive farmer Sri M.V.S. Nagireddy with marketable size grownout Pungassius from his culture pond located under Krishna Delta



Stocking of Singhi in commercial fish pond for mixed culture with major carps (Farmer : Ch. Narasimha Raju)



#### Introduction of cage in Krishna reservoir near Vijayawada

## Fish for Health Fish for Wealth

# Thank You'