

Challenges faced by the marine fisheries sector of AP

- Increasing deterioration in the healthy status of marine fish stocks of Andhra Pradesh
- Reduction in marine landings of the state
- Reduction in catch rates of major marine fishing gears of the state
- Increasing inter-sectoral conflicts in the marine fishing sector of the state
- Coastal pollution and its impacts on marine fishes
- Climate change and its impacts on marine fishing

Recommendations for sustainable management and conservation of marine fish resources of Andhra Pradesh

- Review, updating and stricter implementation of Marine Fishing Regulation Act
- **Input controls:**
 - Regulation of fishing effort – reduce number of boats, regulate engine power etc
 - Diversification of fishing effort–target deep water resources, convert trawlers to tuna liners etc
 - Mesh size regulations– trawl cod ends should be 40 mm and of square mesh
 - Restriction on number of ring seines
 - Seasonal closure of fishing
 - Marine Protected Areas– conserve eco sensitive areas
- **Output controls**
 - Minimum Legal Size (MLS)
 - Prohibition on catch of endangered species
 - Protection of vulnerable species
 - Shark management program
- Improved Monitoring, Control and Surveillance (MCS) System
- Control of coastal pollution
- Marine habitat restoration - Artificial Reefs
- Infrastructure upgradation particularly with respect to fish marketing and storage facilities
- Improved on-board handling for better post-harvest quality of fish
- Alternate livelihood options
- Need-based research efforts through improved collaboration between state fisheries department and research institutions
- Mariculture of finfish as an additional as well as alternate source of livelihood for fishermen and fish farmers of the state



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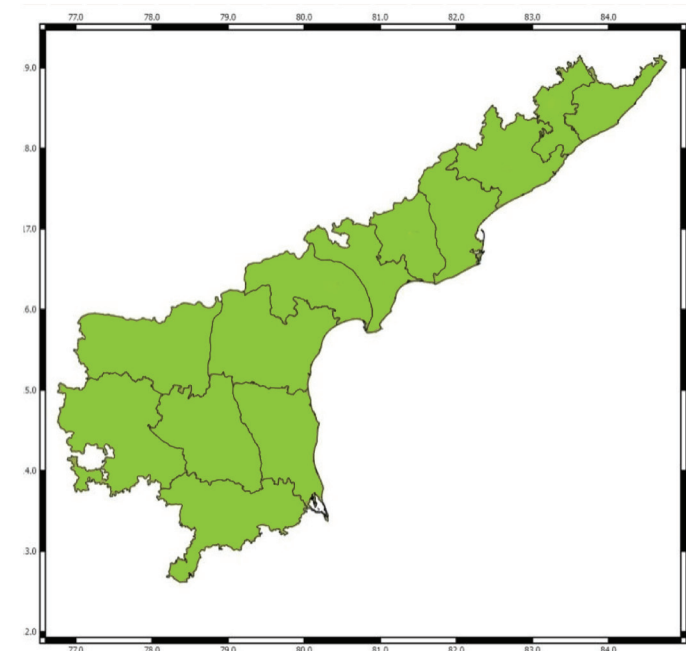
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Policy Guidance for sustaining the marine fisheries of Andhra Pradesh



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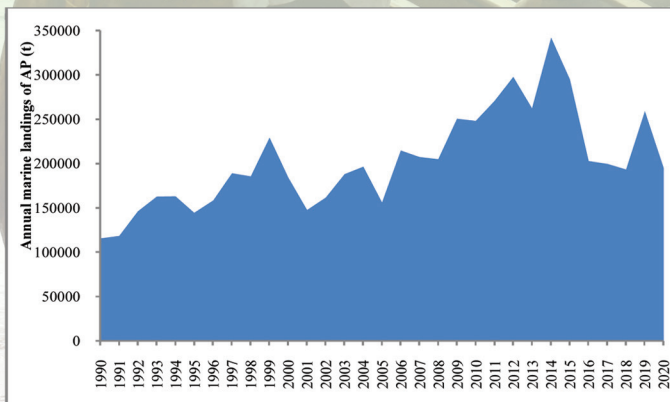
Introduction

The state of Andhra Pradesh with a coastline of 974 km covering 9 coastal districts has a long history of fishing. Starting with traditional fishing in ancient times to the modern, technology-intensive fishing, the marine fisheries sector of the state has grown tremendously reaching record landings of 3.42 lakh tonnes in 2014. The state is also the largest producer and exporter of farmed shrimps in the country contributing to nearly 50% of forex earnings through marine exports. With 1,36,078 active fishermen and 20,219 fishing crafts, the marine fisheries sector is an important source of employment and income generation in the state.

It is estimated that in 2019 the landing centre value of marine finfish and shellfish landed in the state were to the tune of ₹ 3341 crores (FRAD, ICAR-CMFRI, 2020). Moreover, the fisheries sector as a whole contributed about 29.7% of the national fishing production and also contributed 40.4% to the total value of seafood exports from the country (AP Socio-Economic Survey 2021). Recognizing the importance of fisheries to the state, the state government has accorded the sector a special place in its development plans. ICAR-CMFRI as per its mandate brought out a guidance document on marine fisheries policy for Andhra Pradesh to ensure sustainability of the state's marine fisheries which is highlighted here.

Marine Fisheries Profile of Andhra Pradesh

Marine fish landings of the state fluctuated in past two decade with an average annual landing of 2.51 lakh tonnes, with maximum landings recorded in 2014 (3.42 lakh tonnes) and minimum in 2018 (1.93 lakh tonnes). The major groups contributing to the state's marine landings during 2019-20 were pelagic fish (1.3lakh t, 67%), demersal fish (0.42lakh t, 22%), crustaceans (0.17 lakh t, 9%) and molluscans (0.03 lakh t, 2%). The major fishing gears that contributed to the state's marine landings were trawl nets (0.75 lakh t, 39%), seine nets (0.62 lakh t, 32%), gillnets (0.37 lakh t, 19%), hooks and lines (0.1 lakh t, 5%), Non mechanized 0.08 lakh t, 4% and others



0.009 lakh t, 1%. Mechanized trawls landed resources at the rate of 34.1 kg/hr, hooks and lines landed on average 162.5 kg/unit, gillnets landed 112.6 kg/unit and seine nets landed 1622 kg/unit.



District-wise details of fish landing centres and fishing villages of Andhra Pradesh

There are 353 landing centres along the coast of Andhra Pradesh where fishermen land their catch. Most of the landing centres are regularly surveyed for data collection on marine landings using the "Stratified Multistage Random Sampling" design resulting in estimates of marine landings for the state. Major resources are studied in further detail for estimating Biological Reference Points (BRPs) from selected major fishing harbours and stocks are assessed using length-based fish stock assessment models. Assessment of fish stock status is carried out by first estimating the standing stock of fish in the sea and the maximum yield that can be obtained from a single fish in the fishery (gram body weight per recruit). The annual average landing of the fish species and the present yield per recruit is estimated and compared with the estimate of standing stock and maximum yield/recruit. Based on the status of stock, management advisories are issued for sustainable utilization of the resources.

District	No of Landing Centres	No of Fishing villages
Srikakulam	47	122
Vizianagaram	8	20
Visakhapatnam	22	63
East Godavari	25	79
West Godavari	5	9
Krishna	12	41
Guntur	8	40
Prakasam	41	66
Nellore	66	93
Total	234	533

Source: CMFRI-DoF (2020). **Marine Fisheries Census 2016 - Andhra Pradesh**

Demographic details of fishermen and their families of Andhra Pradesh

1	No. of fisher folk families	1,55,062
2	Fisher folk population	5,17,435
	a. Adult male	1,66,642
	b. Adult female	1,67,887
	c. Children	1,82,906
3	Average population per village	971
4	Average family Size	3.0
5	Literacy (%)	
	a. Primary Education	17
	b. Secondary Education	15
	c. Higher Education	5
	d. No formal education	63
6	Active Fishermen	1,36,078
	a. Full time	1,20,733
	b. Part time	15,345
7	Fishermen population members of fisheries co-operative societies	44,488

Source: CMFRI-DoF (2020). **Marine Fisheries Census 2016 - Andhra Pradesh**

Details of marine fishing crafts used in Andhra Pradesh

Mechanized Trawlers	OAL	11 – 15 m
	Engine HP	90 – 250 hp
	Gear carried on board	Semi pelagic fish trawl nets, shrimp trawl nets
Mechanized Gill Netters/ Ring seiners/ Hooks & Lines	OAL	14-16 m
	Engine HP	100-180 hp
	Gear carried on board	Gillnets, Ring seines, Hooks & Lines
Motorized (OBM) theppa	OAL	7-10 m
	Engine HP	8- 10 hp
	Gear carried on board	Ring seines, Hooks & lines and Gillnets
Motorized (IBM) theppa	OAL	9-12 m
	Engine HP	20 hp
	Gear carried on board	Ring seines, Hooks & lines and Gillnets