

**Detailed project report for establishing common
incubation center for
fish processing**

Submitted to
Ministry of Food Processing Industries
PM-FME

Submitted by

_____12.2020_____



S. No		Details of Host Institute
1	Name of the Host Institute	
2	Institute Head	
3	Email id and contact number	
4	Government/Private	
5	If Private the percentage contribution for establishing the common incubation Facility?	
6	Registration Details (for private agency)	
7	Name of the Mentor Institute	
8	Incubation Center applied for (which processing line)	
9	Building/space available for the proposed incubation center	
10	Whether the space available for incubatee /startups in the proposed building	
11	If Yes, give the details If No, propose the plan	
12	Existing facility for the proposed common incubation center	
13	Activities carried out currently	
14	List of existing equipment available for the proposed incubation center	

15	Does the host institute requires upgradation of the existing facility	
16	If Yes , address the gap	Flooring has to be made according to FSSAI standards. Electrical and plumbing works has to done to facilitate functioning of incubation centre
17	If upgradation required, cost required for the same	
18	Is food testing facility available at the host institute	
19	If No mention the equipments required with cost	
20	List out the GMP / GHP Practices to be followed in the proposed incubation center.	
21	Measures to be adopted for human / food safety	
22	Expertise in the relevant processing	
23	Modality to fix the external agency to run the common incubation centre	
24	Modalities for fixing commercial charges to run the facility	
25	Suitability of the proposed facility for processing other commodities	
26	Will the host institute provide water, electricity to run the common incubation facility	

27	Annual Maintenance Plan for the machineries installed at incubation centre	
28	Expected number of entrepreneurs to be benefitted through incubation center per year	Will follow as mentioned in guidelines

29. Justification for the proposed facility at the Host Institute (Modify as per the proposal)

India's coastline stretches from Gulf of Khambhat in Gujarat to Sunderban forests in West Bengal stretching for the distance of 7516 kms including island territories of 2094 kms. The coastal states of the country consist of Gujarat, Maharashtra, Karnataka, Kerala and Goa in Western Coast and Tamil Nadu, Andhra Pradesh, Odisha and West Bengal in East Coast. According to Central Marine Fisheries Research Institute's marine fisheries census, there were 3,288 marine fishing villages and 1,511 marine fish landing centres in 9 maritime states and 2 union territories. The total marine fisher folk population was about 4 million comprising in 864,550 families. Nearly 61% of the fishermen families were under BPL category. The average family size was 4.63 and the overall sex ratio was 928 females per 1000 males. Almost 58% of the fisher folk were educated with different levels of education. About 38% of marine fisher folk were engaged in active fishing with 85% of them having full time engagement. About 63.6% of the fisherfolk were engaged in fishing and allied activities. Nearly 57% of the fisher folk engaged in fish seed collection were females and 43% were males. Among the marine fishermen households nearly 76% were Hindus, 15% were Christians and 9% were Muslims. The overall percentage of SC/ST among the marine fishermen households was 17%. The modernization of fishing sector started in 1960 – 70s under Indo-Norwegian pact when the trawl nets and mechanized boats were introduced along the coasts. The modernization further deepened the disparity among the community as who could afford this modernization or not. The traditional fishermen using non-destructive fishing practices were pushed to the fringes of society over the decades. Though the mechanized fishing has taken the country to leaps and bounds, the marine wealth of the country and state is steadily deteriorating due to overfishing.

Uplifting the fisherfolks with food processing

For ages, the fishermen community has been processing the excess catch as dried fish, seasoning the fish with salt, sun and sand. Dry fish was the first food item that was exported from the coastal region to hinterland when there were no refrigeration and proper transport.

At present, prawns, cuttle and crabs are the major seafood exported from India. Along the coast, the seafood processing companies handle prawns, cuttle and crabs while the fishes like snappers and cods caught in huge volumes are grinded and turned into fishmeal and fish oil.

Most of the commercially viable fishes like mackerels, sardines, seer, groupers are sold in markets and there is little processing of them along the Indian coast. There is huge potential for tinning them and exporting them. The major problem the fishermen face along the coast is the syndicate of fish processing companies. The fish processing syndicate decides the prices of export fish varieties based on their market and fishermen in spite of their hard work and hefty expenses of fishes, incur very little profit. At least ₹.50,000 to 5 lakhs required to take out fishing operations depending on the size of craft and crew. Most of the mechanized boats hardly make even because of the depletion of fish stock and prolonged fishing days. It is imperative to probe the cost effectiveness of the smaller fish processing units along the coast and involving the fisher women.

30. Map of the Host Institute showing accessibility for transport and market

31. Plan for upgrading/setting the proposed facility

(Details of space available, machineries required with cost and capacity)

- i. Land required for setting the proposed plant: 6900 sq.ft
- ii. Approximate cost: 275.13

A.The possible processing lines that can be established for common incubation facility is given below with the details and cost of machineries required for processing of Fish.

Cost for the proposed fish processing facility

S. No	Fish Processing Lines	Machineries required for Processing	Capacity	Cost (in Lakhs)	Quantity
1	Pre processing	Pre-processing tables	8'x5' (SS 304)	2	4
		Flake Ice machine	100-200Kg / Hr	8	2
		Refrigerator	220 L	0.2	1
		Cold store unit (Freezer cum chiller unit)	2 Ton	12	1
		De-Scaling / Deskinning machine		2	1
		Weighing balances (platform type)		0.2	1
		Sub-total			24.4
2	Processing for chilled and frozen products	Air blast freezer	200-500kg/cycle	22	1
		Walk –in-Chiller	1.2 tons	11	1
		Flake Ice machine	3tonnes/24 h	20	1
		Cold store	50 tonnes	15	1
		Sealing Machines		0.5	5
		Processing Tables	8'x5' (SS 304)	0.5	2
		Sub- total			69
3	Fish Mince based products	Hand mincer	3kg/hour	0.1	1
		Table top batter & breading machine	50-60kg per hour	7	1
		Mixer/grinder		0.5	1
		Pin bone remover		4	1
		Meat bone separator		12	1
		Meat mincer		1.5	1
		Forming machine		6	1
		Tray sealing machine		8	1

		Vacuum Sealing machine		3	1
		Form(Liquid) Fill Sealing machine		6	1
		Strapping machine		0.5	1
		Band Saw		2	1
		Sub-total		50.6	
4	RTE fish products in cans/pouches	Horizontal over pressure retort	600 pouch/batch	24	1
		Air compressor		1	1
		Water tank		0.75	1
		High pressure water pump		1	1
		Air Surge tank		1	1
		Boiler		6	1
		Can seamer		3	1
		L.P.G. commercial stove (SS)		1	3
		Air exhaust line (steam injection)		0.3	1
		Impulse Pouch Sealing Machine	12" length seal width 6mm	1.5	4
		Through flow pouch drying unit	(40-50°C)	0.15	1
		S.S. dressing table, packing table etc		3	
		Steam jacketed kettles		2	
		Vegetable cutting machine		1	1
		Mixer/grinder – heavy duty		1	2
		Treadle embossing system		0.7	1
		Sub-total		47.4	
5	Solar dried fish	Solar dryer with LPG back up (including Drying chamber, SS trolleys, SS trays, Solar hot water system. LPG back up etc. with all control and PLC System)	50-60 Kg/batch	4.2	1
		SS 304 Pre-processing table		0.294	

		SS 304 Dry fish sorting and packing table		0.263	1 No.
		SS 304 Trolley for fish handling		0.210	1 No
		Dry fish Storage racks		0.300	1 No.
		Platform weighing balance		0.126	2 Nos.
		Electronic table balance		0.189	1 No.
		Hand sealing machine		0.126	1 No.
		Band sealing machine		0.147	2 Nos.
		Insulated fish tubs		0.100	1 No.
		Fish salting tanks		0.150	2 Nos.
		Plastic crates for fish storing, washing, and grading		0.050	2 Nos.
		Stainless steel (knives, knife stand, cutters etc.)		0.025	5 Nos.
		Chopping board		0.030	1 set
		Waste disposal drums		0.025	2 Nos.
			Sub-total	6.235	
6	Auxillary line for production of feed from fish processing waste	Shredder	100Kg/ Hour	6	1
		Pulverizer	100Kg/ Hour	3	1
		Blender	250 Kg/ Hour	3	1
		Steamer	250 Kg/ Hour	6	1
		Pelletizer & Dryer	250 Kg/ Hour	8	1
		Bag sealer		0.6	2
		Weighing balance (platform type)		0.4	2
			Sub-total		27
7	Accessories	Cutting Knives	SS	0.05	10
		Industrial Water purifier		2	1
		Weighing balance (small)		0.1	4
		Storage racks		1	5
		Power generator		5	1
		Insulated boxes		1	10

		Fish handling trays		0.5	20
		Solar-hybrid drier		3	1
		Water treatment/Effluent treatment		3	1
		Gun thermometer		0.05	3
		Induction stove		0.05	1
		Accessories, Spares, AMC Charges		5	
		Pest Repellents		0.25	5
		Other Miscellaneous items		4	
		Sub-total		25	
8	Fire Safety Measures	Fire extinguishers		0.5	
		Fire hydrant			
9	Food testing facility	Estimation of protein, fat and other proximate analysis		25.0	
Total				275.13	

B. Waste Management/ By- Product utilisation

C. Waste Disposal

Whether the host institute has Effluent treatment / Solid Waste management facility ?				
1	If yes, the same can be utilized for waste management of the proposed incubation center?			
2	If No, Propose the plan for waste management from the incubation center.			

Summary of the cost break up

S. No	Processing Lines	Approx (Cost in lakhs)
1	Pre Processing	24.4

2	Processing for chilled and Frozen products	69.0
3	Fish Mince based Products	50.6
4	RTE fish Products in cans/ pouches	47.4
5	Solar dried Fish	6.235
6	Auxiliary line for production of feed from fish processing waste	27.0
7	Accessories	25.0
8	Fire Safety Measures	0.5
9	Food testing facility	25.0
Total		275.13

32. Can the facility be utilized to process other crops. If so, list the allied products that can be processed at the centre?

33. Will the host Institute make use of the machines already available for the proposed incubation centre?

34. Feasibility report for commercially running the Common incubation facility

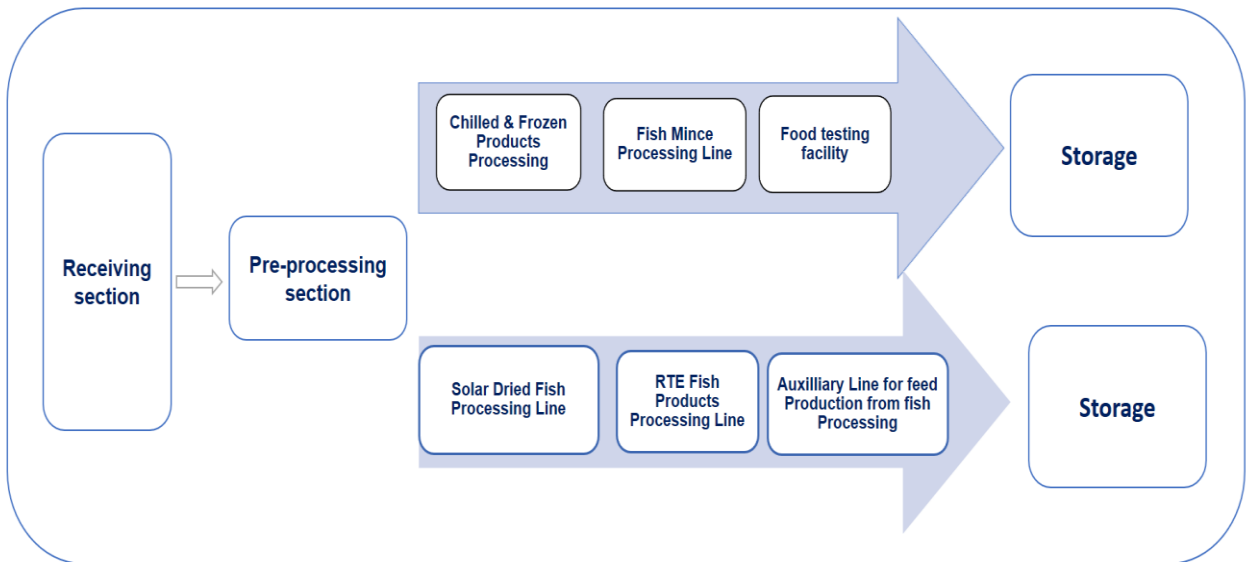
(To be provided by Host Institute)

- a. Business plan for running the common incubation center
- b. Minimum 5 years of Operating plan should be provided.
- c. Man power requirement
- d. Minimum operational hours/ days per year
- e. Operational cost involved (water, electricity, raw material cost, fuel charges)
- f. Fixation of utility charges
- g. Details of the agency identified to run the proposed incubation facility

h. Tripartite agreement format to be signed by private agency, stale level nodal agency and the Host Institute

35. Layout for the proposed facility

Incubation centre Plant layout



36. Recommendation of SNA with Signature

37. Signature of the Head of the SLTI/ Host Institute with Designation.