

## **1. Establishment of New Freshwater Finfish Hatcheries**

The state of West Bengal is the fourth most populous state situated in the Eastern Region in India. 91.3 million People stay in the State. It is 2.7% of India's area but about 7.54% of the country's population, this state ranks second in terms of density of 1028 per sq. km as per the 2011 census. The proportion of the rural population in the state stands at 69%. Under this circumstance, the greatest challenge is to ensure the food security of the people of the state and protein starved populace in rural as well as urban area. Fisheries, mainly the Aquaculture sector will be the savior to meet the increased demand of food and for this availability of quality fish seed is the main criterion to enhance production and productivity. With increasing demand of fish in the state, quality seeds will be required, and hence, hatcheries will be required to cater the demand of quality seeds specially IMC. The hatcheries will also help the farmers to get the seeds in time and space.

The state shares 38% (highest) of the fish seed production in the country. During the last seven years fish seed production has increased by more than 50% (25000 million in 2020-21). However, to meet the growing demand of qualitative and quantitative fish seed, it is proposed to establish 50 new freshwater finfish hatcheries in the Year 2022-23, the construction Cost of each hatchery is Rs. 25.00 lakh as per Government scheme's approved unit cost. The total admissible Government assistance will be limited to 40% of the project cost for general category beneficiaries and 60% of the project cost for Scheduled Castes (SCs), Scheduled Tribes (STs) and women.

### **Name of Scheme**

**"Establishment of New Freshwater Finfish Hatcheries"** - Beneficiary Oriented Scheme - Enhancement of Production and Productivity Component.

### **Name of the Component**

Establishment of Carp Hatchery

- a) Civil (Pakka) Work – overhead tank, borewell, breeding and hatching pool, shed etc.
- b) Construction of nursery – rearing and brood tank

### **Objective**

- Augment overall fish production & productivity
- Timely availability of quantitative & qualitative seed
- Successful IMC culture
- Enhanced nutritional and food security
- Livelihood & Employment generation.
- Poverty alleviation & social security.

**Project Location**

Different districts in the State of WB.

**Justification of the Scheme**

Self-sufficiency in catering to the qualitative and quantitative seed requirement to meet up the growing demand. This scheme will ensure availability of quality seeds on time and space.

**Selection procedure of beneficiary**

At the district level, the proposal placed before the DLC shall approve the list of screened beneficiaries.

**Implementation of Plan**

The proposed scheme “Establishment of New Freshwater Finfish Hatcheries” is a beneficiary-oriented scheme. After the due approval of schemes by the Government, the schemes will be implemented through District Fisheries Officers by the beneficiary under the technical guidance of Block Fishery Extension Officers (FEO).

**Circular Hatchery**

Circular hatchery has to establish in 0.1 Ha to 0.5 Ha area for fish seed production through induced breeding.

**Over Head Tank**

To supply water in all the units of hatchery a cement concrete tank having capacity 34 cubic meter shall be constructed at 3.7 metre above. With the help of the diesel pump, the underground water would be supplied to the overhead tank.

**Breeding Pool**

As suggested, one breeding pool having dimension of 6 m X 4 m would be constructed of brick work and will be used for fish breeding. A shed would be constructed for its protection.

**Hatching Pool**

Two Hatching pool will be constructed having 2.4 meter diameter to facilitate fertilized eggs to hatch out the spawn.

**Egg-cum-Spawn Collection Chamber**

Egg-cum-spawn collection chamber having size 0.6 m X 0.6 m has been proposed for collection of eggs and spawn. This chamber will be connected with Breeding pool and

Hatching Pool.

#### **Nursery Tank**

One nursery tank proposed of size 2.9 m X 4.8 m. This pond meant for raising 37.5 million Fry from Spawn.

#### **Brood Stocking Ponds**

Two brooder tanks, each having 0.44-acre area has been proposed to rear 2000 kg brooder fishes.

#### **Rearing Tank**

Two rearing tanks is proposed each will have size 0.22 acre to Fry up to Fingerling size and to raise brooder.

#### **Expenditure on unit construction & Inputs**

The estimated project cost of hatchery for one unit has been worked out as Rs 25.00 lakh as per GOVERNMENT guidelines.

#### **Benefits from Implementation of Plan**

- Assured timely availability of quality seed in the state, especially IMC.
- Infrastructure development
- To sensitize the fishers on emerging areas in fisheries technology
- Proliferation of culture-based fisheries in the state
- Percolation of latest fish culture techniques
- Increased income of fish farmers

#### **Governmental Assistance**

The total admissible Governmental Share against the scheme will be limited to:

- 40% of the project cost for general category beneficiaries and
- 60% of the project cost for weaker sections like Scheduled Castes (SCs), Scheduled Tribes(STs) and women.

Beneficiary contribution can either be self-financed or bank loan or both.

#### **Eligible Beneficiary**

All Fishers, Fish farmers, Fish workers and Fish vendors, Fisheries Development corporations, Self Help Groups (SHGs)/Joint Liability Groups (JLGs) in fisheries sector, Fisheries cooperatives, Entrepreneurs and private firms, Fish Farmers Producer Organizations/Companies (FFPO), SCs/STs/Women/Differently abled persons

#### **Sources of Finance**

The estimated project cost of "*Establishment of New Freshwater Finfish Hatcheries*" has been worked as Rs 25.00 lakh per unit as per Governmental guidelines.

## Time line for Project Implementation

Activity	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
Submitting DPR												
Approval of DPR												
Beneficiary selection and approval												
Purchase of unit												
Physical verification												
Release of subsidy												
Assessment and evaluation												

## MODEL ESTIMATE FOR ESTABLISHMENT OF NEW FRESHWATER FINFISH (CARP) HATCHERY

[Rates are taken from PWD (WB) Schedule of Rates 2017 Vol-1 for Building works and Corrigendum.]									
Sl No	Description of Items	No	Length(m)	Width (m)	depth (m)	Quantity	Unit	Rate ( Rs.-P.)	Amount ( Rs.- P )
1 (Page No-01, Item No. -02)	Earth work in excavation of foundation trenches or drains in all sorts of soil (including mixed soil but excluding laterite or sand stone ) including removing spreading or stacking the spoils with in a lead of 75 m. as directed.The items including the necessary trimming the sides of trenches,levelling,dressing and trimming the bottom.a) Depth of excavation not exceeding 1.500 m.								
	Water tank column	8	1.500	1.500	1.775	31.950			
	Water tank column	1	1.800	1.800	1.775	5.751			
	Tie beam( TB1)	12	1.000	0.350	0.400	1.680			
	Breeding pool	1	7.000	5.000	0.725	25.375			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	2	5.510	0.000	0.350	3.857			
	Nursery tank	1	5.175	3.200	0.600	9.936			
	Happa	2	0.600	0.600	0.600	0.432			
						<b>78.981</b>	Cu.m.	119.27	9420.06
2 (Page No-02, Item No. -04/A)	(A) Filling in foundation or plinth by silver sand inlayers not exceeding 150 mm as directed andconsolidating the same by thorough saturationwith water, ramming complete including the costof supply of sand. (payment to be made on measurement of finished quantity) (B) By fine Sand								
	Water tank column	8	1.500	1.500	0.150	2.700			
	Water tank column	1	1.800	1.800	0.150	0.486			
	Breeding pool	1	7.000	5.000	0.150	5.250			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	2	5.510	0.000	0.150	1.653			
	Nursery tank	1	5.175	3.200	0.150	2.484			
							Cu.m.		

	Happa	2	0.600	0.600	0.100	0.072			
	Floor	4	2.100	2.100	0.600	10.584			
	Floor (H.P & N. Tank area)	1	10.000	7.000	0.425	29.750			
					Total	<b>52.979</b>	936.21	49599.47	
3 (Page No-14, Item No. -01), 3RD CORRI.	Single brick flat soling of picked jhama brick including ramming and dressing bed to proper level and filling joints with powder earth or local sand.								
	Water tank column	8	1.500	1.500	0.000	18.000			
	Water tank column	1	1.800	1.800	0.000	3.240			
	Tie beam( TB1)	12	2.200	0.350	0.000	9.240			
	Breeding pool	1	7.000	5.000	0.000	35.000			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	2	5.510	0.000	0.000	11.020			
	Nursery tank	1	5.175	3.200	0.000	16.560			
	Happa	2	0.600	0.600	0.000	0.720			
	Floor	1	4.800	4.800	0.000	23.040			
	Floor (H.P & N. Tank area)	1	10.000	7.000		70.000			
					Total	<b>186.82</b>	Sq.m	361.00	67442.02
4 (Page No-34, Item No. -22/I/A(a) 3RD CORRI.	Cement concrete with graded stone ballast ( 40mm ) size excluding shuttering. (a) 6:3:1 proportion								
	Water tank column	8	1.500	1.500	0.100	1.800			
	Water tank column	1	1.800	1.800	0.100	0.324			
	Tie beam( TB1)	12	2.200	0.350	0.075	0.693			
	Breeding pool	1	7.000	5.000	0.100	3.500			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	2	5.510	0.000	0.100	1.102			
	Nursery tank	1	5.175	3.200	0.075	1.242			
	Happa	2	0.600	0.600	0.075	0.054			
	Floor	1	4.800	4.800	0.100	2.304			
	Floor (H.P & N. Tank area)	1	10.000	7.000	0.100	7.000			
	under brick work	1	34.000	0.375	0.075	0.956			
				Total	<b>18.975</b>	Cu.m.	5376.00	102010.94	
5 (Page No-26, Item No. -10) 3RD CORRI. RATE ANALISIS	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes. a) Pakur/ Chandil variety.								
	For R.C.C column footing	8	1.500	1.500	0.250	4.500			
	For R.C.C column footing	1	1.800	1.800	0.250	0.810			
	Trapizoidal Section	9	0.900	0.900	0.450	3.281			
	Column	9	0.300	0.300	5.700	4.617			
	Tie beam( TB1)	3	5.300	0.250	0.250	0.994			
	Tie beam( TB1)	3	4.400	0.250	0.250	0.825	Cu.m.		

	Beam	1	29.100	0.250	0.300	2.183			
	Lintel	1	26.600	0.250	0.250	1.663			
	Tank Slab	1	5.300	5.300	0.200	5.618			
	tank wall	2	5.300	0.200	1.550	3.286			
	tank wall	2	4.900	0.200	1.550	3.038			
	Top beam	4	5.300	0.250	0.300	1.590			
	Breeding pool	1	7.000	5.000	0.125	4.375			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	2	5.510	0.000	0.125	1.378			
	Nursery tank	1	5.175	3.200	0.100	1.656			
	Cantilever	2	6.200	0.450	0.100	0.558			
	Cantilever	2	5.300	0.450	0.100	0.477			
	top beam at hatching pool	2	8.321	0.250	0.200	0.832			
	top beam at Breeding pool	1	18.500	0.375	0.200	1.388			
					Total	<b>43.066</b>	6124.73	263769.77	
6 (Page No-44, Item No. -40) 10TH CORRI.	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction. (a) For works in foundation, basement and upto roof of ground floor/upto 4 m (i) Tor steel/Mild Steel								
	1.3% of total concrete volume.								
	43.066 M3					4.27	M.T.	60003.00	256212.81
7 (Page No-42, Item No. -36/F)	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor) (f) 25 mm to 30 mm shuttering without staging in foundation								
	With out staging								
	Foundation footing	32	1.500	-	0.250	12.000			
	Foundation footing	4	1.800	-	1.250	9.000			
	Tie beam( TB1)	24	2.500	-	0.250	15.000			
	Column	9	1.200	-	0.500	5.400			
	Tie beam( TB1)	6	5.300	0.000	0.250	7.950			
	Tie beam( TB1)	6	4.400	0.000	0.250	6.600			
	Breeding pool	2	24.000	0.000	0.125	6.000			
	Hatching pool(3mtr Dia)(22/7 XR <sup>2</sup> X h)	4	8.321	0.000	0.125	4.161			
	Nursery tank	2	16.750	0.000	0.100	3.350			
	top beam at hatching pool	4	8.321	0.000	0.200	6.657			
	top beam at Breeding pool	2	18.500	0.000	0.200	7.400			
					Total	<b>83.517</b>	Sq.m	209.00	17455.116

8 (Page No-42, Item No. - 36/A)	With Stagging						Sq.m	335.00	67127.300
	Column	9	1.200	-	5.200	56.160			
	Beam	2	29.100	0.000	0.300	17.460			
	Lintel	2	26.600	0.000	0.200	10.640			
	Tank Slab	1	5.300	5.300	0.000	28.090			
	tank wall	4	5.300	0.000	1.800	38.160			
	tank wall	4	4.900	0.000	1.800	35.280			
	Slab edging	4	5.300		0.200	4.240			
	Cantilever	1	23.000		0.450	10.350			
					<b>Total</b>	<b>200.38</b>			
9 (Page No-15, Item No. - 07/A) 3RD CORRI.	Brick work with 1 st class bricks in cement mortar ( 4:1) a) In foundation & plinth						Cu.m.	5682.00	156637.75
	Breeding pool( )	1	18.500	0.375	1.150	7.978			
	Hatching pool	2	8.321	0.375	0.450	2.808			
	Hatching pool	2	8.321	0.250	0.800	3.328			
	Happa	2	0.600	0.600	0.250	0.180			
	nursery Tank	1	15.150	0.250	1.000	3.788			
	Lab cum record room	6	4.400	0.250	0.600	3.960			
	Floor (H.P & N. Tank area)	2	7.000	0.250	0.650	2.275			
		2	10.000	0.250	0.650	3.250			
				<b>Total</b>	<b>27.567</b>				
10 (Page No-15, Item No. - 07/B) 3RD CORRI.	Brick work with 1 st class bricks in cement mortar (4:1) a) Superstructure						Cu.m.	5905.00	65545.50
	Lab cum record room	3	4.400	0.250	2.600	8.580			
		3	2.000	0.250	2.600	3.900			
		2	2.000	0.250	0.600	0.600			
	Deduction window	-4	1.200	0.250	0.900	-1.080			
	Deduction door	-2	0.900	0.250	2.000	-0.900			
					<b>Total</b>	<b>11.100</b>			
11 (Page No-16, Item No. -16) 3RD CORRI.	125 mm th. Brick work. (4:1)						sq.m.	736.00	5299.20
	nursery Tank	3.00	2.400	0.000	1.000	7.200			
12 (Page No-189, Item No. - 01/III/B) 3RD CORRI.	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface] (i) With 1:4 cement mortar (c) 15 mm thick plaster (Out side wall)						Sq.m.		
	Over Head Tank	1	21.200	-	3.800	80.560			
	Lab cum record room	1	15.600	-	3.900	60.840			
	Lab cum record room	4	2.000	-	1.100	8.800			

	out side col.	1	1.200		2.000	2.400			
	Deduction window	-4	1.200	0.330	0.900	-1.426			
					<b>Total</b>	<b>151.174</b>	167.00	25246.12	
13 (Page No-189, Item No. - 01/II/A) 3RD CORRI.	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface] (i) With 1:4 cement mortar (b) 20 mm thick plaster								
	Breeding pool( )	1	18.500	0.000	3.075	56.888			
	Hatching pool	2	8.321	0.000	3.150	52.422			
	Happa	2	2.900	0.000	0.600	3.480			
	nursery Tank	2	4.875	0.000	2.250	21.938			
	nursery Tank	5	2.400		2.250	27.000			
	Lab cum record room	6	4.800	0.000	3.100	89.280			
	Deduction window	-4	1.200	0.330	0.900	-1.426			
	Deduction door	-2	0.900	0.330	2.000	-1.188			
					<b>Total</b>	<b>248.39</b>	Sq.m.	194.00	48188.38
14 (Page No-189, Item No. - 01/III/C) 3RD CORRI.	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface] (i) With 1:4 cement mortar (b) 10 mm thick plaster								
	Lab cum record room ceiling	1	4.800	0.000	4.800	23.040			
	Cantilever	1	23.000	0.000	1.000	23.000			
						<b>Total</b>	<b>46.04</b>	sq.m.	133.00
15 (Page No-192, Item No. -15)	Neat cement punning about 1.5mm thick in wall,dado>window sill,floor etc. NOTE:Cement 0.152 cu.m per100 sq.m.								
	Breeding pool( )	1	18.500	0.000	3.075	56.888			
	Hatching pool	2	8.321	0.000	3.150	52.422			
	Happa	2	2.900	0.000	0.600	3.480			
	nursery Tank	2	4.875	0.000	2.250	21.938			
	Over Head Tank	1	21.200	-	3.800	80.560			
						<b>Total</b>	<b>215.287</b>	Sq.m.	34.00
16 (Page No-48, Item No. - 06/III)	Artificial stone in floor, dado, staircase etc. with cement concrete (4:2:1) with stone chips, laid in panels as directed with topping made with ordinary or white cement and marble dust in proportion (2:1) including smoothing finishing and rounding off corners and including application of 1.75kg/sqm. All complete including all materials and labour. a) 35mm thick.								
	Breeding pool	1	6.000	-	4.000	24.000			
	Hatching pool(3mtr Dia)	2	0.000	-	4.520	9.04			
	Over Head Tank	1	4.900	-	4.900	24.010	Sq.m.	337.00	54118.83



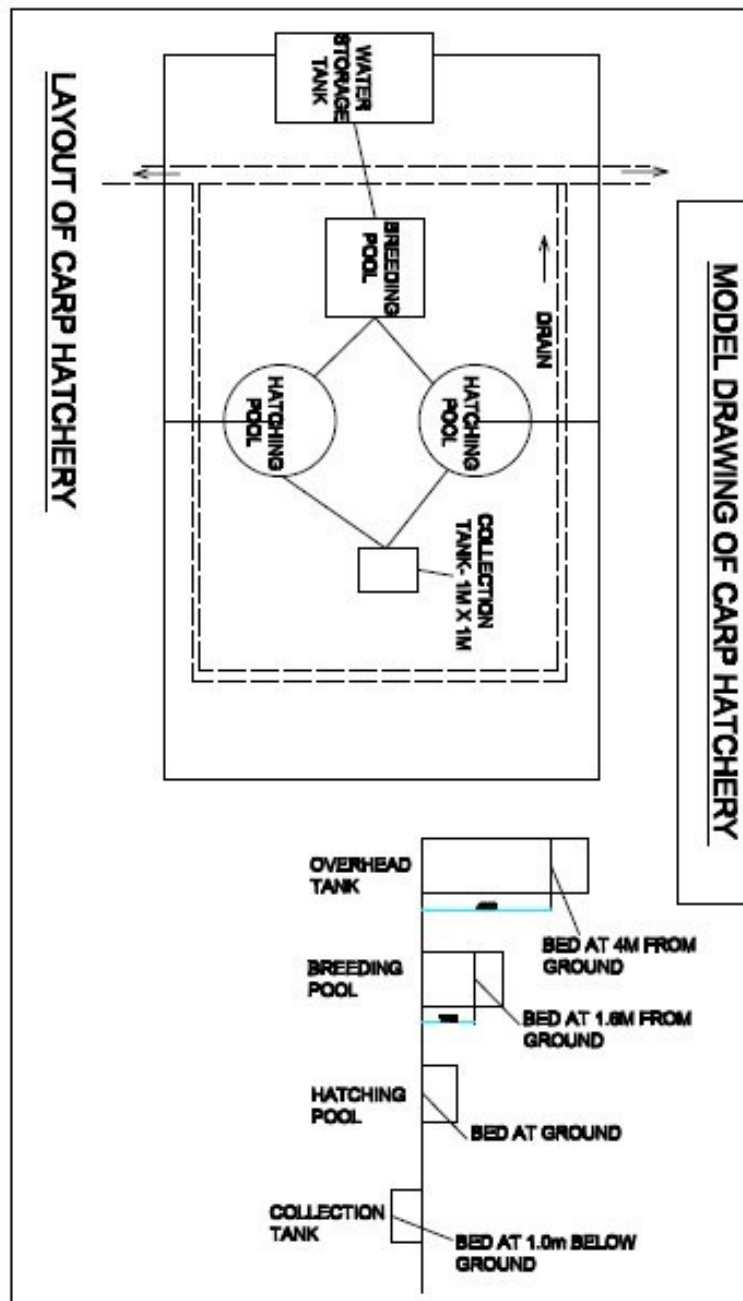
	nursery Tank	1	4.375	-	2.400	10.500				
	Lab cum record room	1	4.800	-	4.800	23.040				
	Floor (H.P & N. Tank area)	1	10.000		7.000	70.000				
					<b>Total</b>	<b>160.590</b>				
17 (Page No-200, Item No. - 02/B/II)	A) Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary :									
	Door	2	2.00	0.90	-	3.600				
	Window	4	1.20	0.90	-	4.320				
					<b>Total</b>	<b>7.920</b>	Sq.m.	77.00	609.84	
18 (Page No-197, Item No. - 15/III)	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface) as per manufacturer's specification. (iii) Two coats.									
						204.16	Sq.m.	49.00	10003.84	
19 (Page No-107, Item No. - 20/B) 3RD CORRI.	Supplying, fitting and fixing windows and ventilators with or without integrated grills conforming to IS 1038-1975 and manufactured from rolled steel sections conforming to IS 7452-1974 with non-friction projecting type, box type hinges, glazing clips, lugs locking bracket, handle plate etc, including hoisting in position, straightening if required, fixing lugs in cement concrete ( 1:2:4) with stone chips 20 mm down cutting holes and mending good damages to match with existing surface complete in all respect excluding glazing. Openable steel windows as per IS sizes with side hung shutters and horizontal glazing bars. [The extra rate admissible for the openable portion only]									
	Lab cum record room window	4	1.2	0.9		4.32	sq.m.	2199.00	9499.68	
20 (Page No-124, Item No. - 11/A)	Supplying solid flush type doors of commercial quality, the timber frame consisting of top and bottom rails and side styles of well seasoned timber 65mm wide each and the entire frame fitted with 37.5mm wide battens places both ways in order to make the door of solid core and internal lipping with Garjan or similar wood veneers using phenol formaldehyde as glue etc. complete, including fitting, fixing shutters in position but excluding the cost of hinges and other fittings in ground floor (a) 35 mm thickshutters (single leaf)									
	Lab cum record room door	2	2	0.9		3.6	sq.m.	2659.00	9572.40	
21 (Page No-205, Item No. -1/II)	Supplying best Indian sheet glass panes set in putty and fitted and fixed with nails and putty complete. (In all floors for internal wall & upto 6 m height for external wall) 4 mm thick									
	Lab cum record room window	4	1.2	0.9		4.32	sq.m.	536.00	2315.52	
22 (Page No-219 , Item No. -1/B)	Fixing post of iron or precast concrete by digging hole in the ground (in all sorts of soil) and embedding the same by packing the hole with cement concrete (1:3:6) (with jhama khoa. For Purulia, Bankura and Darjeeling Hill by Pakur Variety, Local Black Hard Stone & Bazree respectively) and finishing the top surface to regular shape (as directed) with 15 cm cement plaster (1:6) complete, including the cost of concrete, plaster etc.but excluding the cost of the post : Depth exceeding 500 mm. but not exceeding 600 mm.									

	(Cement -9.65 kg/No.)							
				17	nos	202.00	3434.00	
23 (Page No-101 , Item No. - 2/A)3RD CORRI.	M.S. structural works with hollow sections (square or rectangular shape) conforming to IS: 806-1968 & IS:1161-1998) connected to one another with bracket, gusset, cleat as per design, drawing & direction of Engineer-in-Charge complete including cutting to requisite shape & size, fabrication including metal arc welding conforming to IS: 816-1969 & IS: 9595 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete. (P-101, I2/A)							
	Post (60x60x2.6)	12	3	36				
		5	3.3	16.5				
	post over water tank	6	0.9	5.4				
		2	1	2				
				59.9	m			
				@	4.55K/M	272.54	KG	
	38x38x2.6	3	10	30				
		6	7	42				
				72	M			
				@	2.75K/M	198	KG	
	32x32x2.6	2	10	20				
		2	7	14				
		12	3.75	45				
	over water tank	5	5.3	26.5				
				105.5	M			
				@	2.26K/M	238.43	KG	
	25x25x2.6	6	10	60				
		6	1.5	9				
	over water tank	10	2.75	27.5				
		4	5.35	21.4				
			117.9	M				
			@	1.69K/M	199.25	KG		
			Total	<b>908.22</b>	<b>KG</b>			
			say	<b>0.90822</b>	<b>MT.</b>	72316.00	65678.84	
24 (Page No-83 , Item No. - 14/I/A)	Supplying, fitting & fixing Zn-Al alloy (55% Al & 45% Zn) coating of 150 grams per sq. metre (followed by colour coated on both side) steel sheet work having minimum yield strength of 550 Mpa of trapizoidal profile of approved make (excluding the supporting frame work) fitted and fixed with 55 mm & 25 mm self tapping screw, EPDM Washer 16 mm dia & 3 mm th. washer etc. complete with 150 mm end lap and one corrugation minimum side lap. (Payment to be made on area of finished work). In Roof:- With 0.5 mm thick sheet							
	over hatching pool	2	3.75	10.15	76.15			
	over water tank	2	5.45	2.9	31.61			
				Total	<b>107.76</b>	<b>sq.m</b>	787.00	84807.12

25 (Page No-84 , Item No. -18(A))	Aluminium sheet ridging fitted with self tapping screws, EPDM washers etc complete.(Minimum 225mm end lapping). (A) 300 mm lapping each way							
	over hatching pool	1	10.15	10.15				
	over water tank	1	5.45	5.45				
				Total	15.6	mtr	394.00	6146.40
26 (Page No-201 , Item No. -3/B)	Painting with superior quality aluminium paint of approved make and brand including smoothening surface by sand papering etc. on steel surface : Two coats				50.7	sqm	57.00	2889.90
27	Plumbing works (P.V.C. Pipes, Vulbe, Nipple.... Etc.				L.S.			100000.00
28	Sinking of Sub Mersible Pump (2 H.P.)				L.S.			300000.00
29	Electrical works.....				L.S.			30000.00
30	Drain				L.S.			25000.00
31	Misllanious				L.S.			4000.00
<b>Total Rs. =</b>								1855473.9
<b>Add. GST 12 % = Rs.</b>								222657.00
<b>Rs.</b>								2078130.9
<b>Add. Cess. 1% = Rs.</b>								20781.00
<b>Total Rs. =</b>								<b>2098911.9</b>
<b>Say Rs.</b>								<b>2,100,000.00</b>

N.B :- Details of work against. Sl. No. 27, 28, 29 and 30 have to be obtained from engineer in charge before execution of work.

## Design and Layout of Hatchery



<b>Operation Cost for Establishment of New Freshwater Finfish (Carp) Hatcheries</b>			
	<b>Quantity</b>	<b>Unit Price (Rs)</b>	<b>Total Expenditure (Rs)</b>
i). <b>Cost of Liming (Kg) @ 180 kg /acre Initially + 20 kg/ for 5 months.</b>	400	12	4800
<b>ii). Cost of Manuring/fertilization</b>			0
a) Cow dung (ton).@ 5 tons/acre/y	8	1000	8000
b) inorganic fertilizer ( kg)- SSP @100 kg/acre	100	10	1000
Urea ( kg) 40 kg/acre	40	11	440
<b>iii). Inducing Hormones (ml)</b>			0
@ Av. 0.3 ml/kg body for 1400 kg brooder	420	40	16,800.00
<b>iv). Cost of feed</b>			0
<b>(a) Feed for Brooder ( kg) For 1400 kg brooder @ 2 % of body wt For the period of 5 months (Rice bran + De oiled cake )</b>	4200	35	147000
Mineral mixture (Kg)	40	55	2200
<b>(b) Feed for Spawn to Fry</b>			0
De oiled Cake ( kg)	1500	57	85500
Mineral mixture ( kg)	15	55	825
v). Salary & wages of Farm staff for 12 months	1	5000	60000
vi). Chemical & medicine			5000
vii). Electricity & fuel			50000
viii). Extra Labor during operation.@9 man day/month)	45	350	15750
ix). Miscellaneous exp.			3000
<b>Total (Rs.)</b>			<b>400315</b>
			<b>Say (Rs.)4,00,000</b>
			<b>(Rupees four lakh only)</b>

**Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted to rupees four lakh only towards input cost.**

<b>Particulars</b>	<b>Amount (Rs)</b>
Capital cost	21 lakh
Recurring cost	04 lakh
<b>TOTAL COST</b>	<b>25 lakh</b>

**Estimates of Output and Value of Output**

<b><u>Brooder Account</u></b>	
Weight. of female brooder	700 kg
Weight of male brooder	700 kg
Total weight of brooder	1400 kg
<b><u>Spawn Production Account</u></b>	
Total spawn produced -	60 million
Spawn available for direct sale-	45 million
Spawn available for fry raising -	15 million
<b><u>Fry Production Account</u></b>	
Total Fry production-	37.50 lakh
Number of crop/cycle in a year -	5
Fry production in each cycle-	7.50 lakh

<b>Particulars</b>	<b>Amount (Rs)</b>
<b>A. Income out of sales proceed of spawn-</b>	1.8 lakh
Rs 800/ lakh for 225 lakh of spawn	
<b>B. Income out of sales proceed of fry-</b>	11.25 lakh
Rs 30000/ lakh for 37.50 lakh	
<b>C. Income out of sales proceed of damaged brood fish -</b>	0.28 lakh
@ Rs 200/kg for 140 kg (10% of total stock, 1400 kg)	
<b>TOTAL INCOME - (A+B+C)</b>	<b>RS. 13.33 Lakh</b>

**MODEL ESTIMATE FOR ESTABLISHMENT OF NEW FRESHWATER FINFISH (*C. batrachus*) HATCHERY**

[Rates are taken from PWD (WB) Schedule of Rates 2017 Vol-1 for Building works & Vol-3 for Sanitary & Plumbing works]

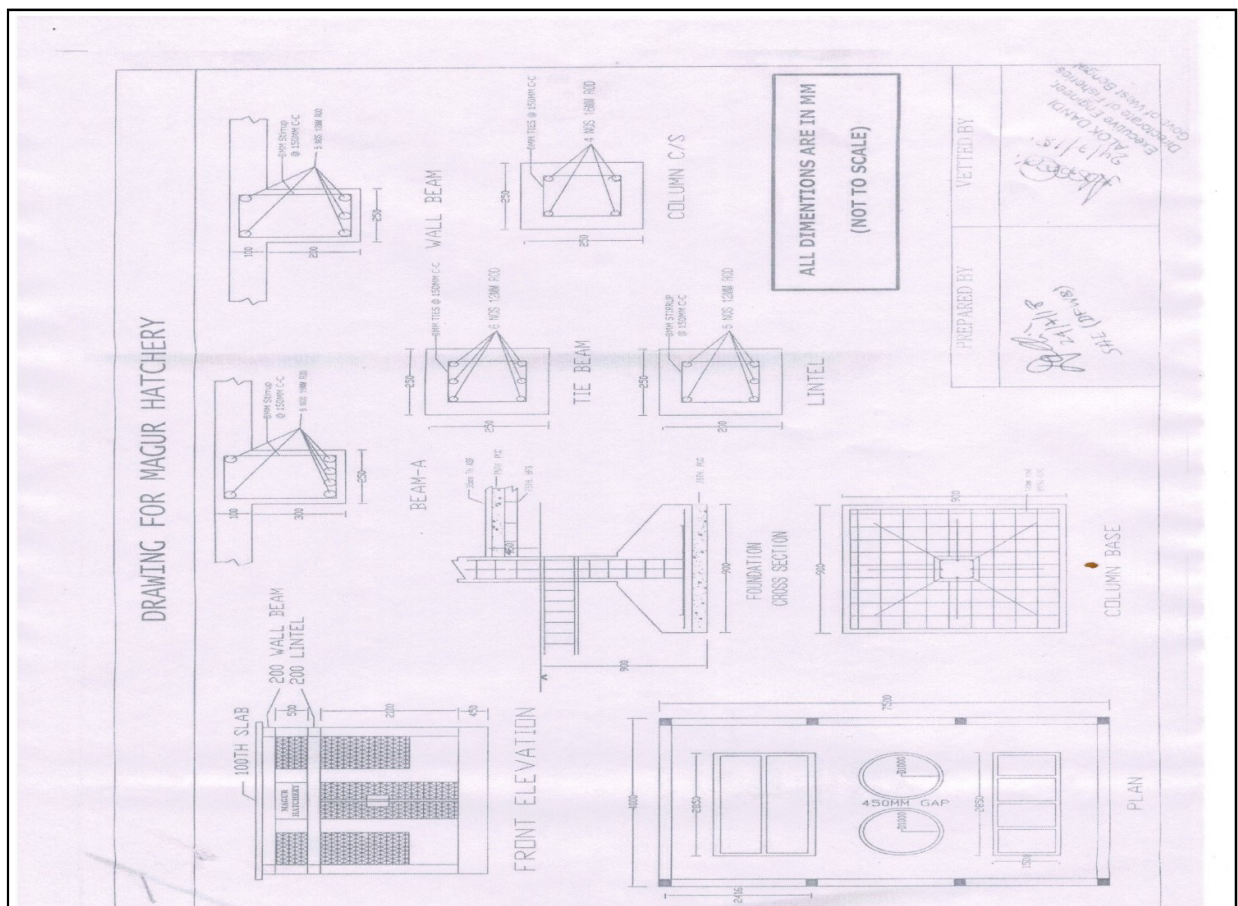
Sl. No.	SOR Ref.	Description of Item	Qty	Unit	Rate	Amount
1	Page- 01 Item No - 02	Earth work in excavation of foundation trenches or drain in all sorts of soil (including mixed soil but excluding laterite or sand stone) including removing spreading or stacking the soil within a lead of 75m. as directed. The item includes necessary trimming the sides of trenches leveling dressing and ramming the bottom bailing out water as required complete. a) Depth of excavation not exceeding 1500mm.	11.89	M3	119.27	1,418.12
2	Page- 01 Item No - 03	Earth work in filling in foundation trenches or plinth with good earth. (a) With earth obtained from excavation of foundation.	1.2	M3	77.54	93.05
3	Page- 15 Item No - 07.a	Brick work with 1st class brick in cement mortar 4:1 in foundation and plinth.	6.52	M3	5575	36,349.00
4	Page- 15 Item No - 07.b	Brick work with 1st class brick in cement mortar 4:1 in superstructure ground floor	1.00	M3	5798	5,798.00
5	Page- 26 Item No - 10 analysis rate	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20mm nominal size) excluding shuttering and reinforced if any in ground floor as per relevant is code i) Pakur variety	10.50	M3	6209.55	65,200.28
6	Page- 42 Item No - 36.a	Hire and labour charges for shuttering with centering and necessary staging up to 4m using approved thickness with required bracing for concrete slabs, beams, columns, lintels curved or straight including fitting, fixing, and striking out after completion of works. (Up to roof of ground floor).	85.50	M2	335.00	28,642.50
7		(f) 25 mm to 30 mm shuttering without staging in foundation	16.10	M2	209.00	3,364.90
8	Page-44 Item No - 40	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection complete as per drawing and direction. i) Tor steel/Mild steel <b>I. SAIL/ TATA/RINL</b>	1.440	MT	68200	98,208.00
9	Page-16 Item No 16-	125 mm. thick brick work with 1st class bricks in cement mortar (1:4) in ground floor.	70.00	M2	724.00	50,680.00
10	Page- 189 Item No - 01.iii.c	Plaster (to wall, floor, ceiling, etc) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints or roughening of concrete surface including threading and drip course where necessary. 10mm thick plaster. (3:1)	46.00	M2	135.00	6,210.00

11	Page- 189 Item No - 01.ii.b	Plaster (to wall, floor, ceiling, etc) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints or roughening of concrete surface including threading and drip course where necessary. 15mm thick plaster. (4:1)	121.00	M2	161.00	19,481.00
12	Page- 200 Item No - 01.b	(b) Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	54.00	M2	38.00	2,052.00
13	Page-197 Item No - 17.a	Protective and Decorative Acrylic exterior emulsion paint of approved quality, as per manufacturer's specification and as per direction of Engineer-in-Charge to be applied over acrylic primer as required. The rate includes cost of material, labour, scaffolding and all incidental charges but excluding the cost of primer. In Ground floor (Two Coat) a) Normal Acrylic Emulsion	54.00	M2	67.00	3,618.00
14	Page-200 Item No - 2.a.iv	Painting with quality synthetic enamel paint of approved quality including smoothening surface by sand papering etc. on the surface if necessary. a) On timber plastered surface. Two coats.	18.1	M2	81.00	1,466.10
15	Page-02 Item No - 04.a	Sand filling in foundation or plinth in layers not exceeding 15cm. as directed and consolidating same by through saturation with and ramming completed including cost or supply of sand (payment to be made on measurement of finished quantity.)	21.50	M3	936.21	20,128.52
16	Page-48 Item No - 06.iii	Artificial stone in floor, dado, staircase etc. with cement concrete (4:2:1) with stone chips, laid in panels as directed with topping made with ordinary or white cement and marble dust in proportion (2:1) including smoothing finishing and rounding off corners and including application of 1.75kg/sqm. All complete including all materials and labour. iii) 35mm thick.	43	M2	330	14,190.00
17	Page- 14 Item No - 01	Single brick flat soling of picked jhama brick including ramming and dressing bed to proper level and filling joints with powder earth or local sand.	63	M2	358.00	22,554.00
18	Page- 24 Item No - 4.a analysis rate	Cement concrete (1:2:4) with graded stone chips (20mm size) in ground floor.	3.00	M3	5663.38	16,990.14
19	Page-104 Item No - 13.i	M.S or W.I ornamental grill of approved quality design joints continuously welded with M.S W.I flats and brass with windows railing etc. fitted and fixed with necessary screws and lugs in ground floor. (wt. 16kg/ sqm.)	3	Qntl	7238	21,714.00
20	Page- 192 Item No - 15	Net cement punning about 1.5mm thick in wall dada window sill floor etc.	121.000	M2	34	4,114.00
21	Page- 200 Item No - 1.a	(a) Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	18.100	M2	38	687.80
22	Page- 47 Item No -3	Supplying and laying Polythene Sheet (150gm / sq.m.) over damp proof course or below flooring or roof terracing or in foundation or in foundation trenches.	23.250	M2	24	558.00



23	L.S.	Plumbing		L.S.	150,000.00
24	L.S.	Electrical installation		L.S.	105,000.00
25	L.S.	Sinking of tube-well		L.S.	180,000.00
Total estimated cost (X) =					858,517.41
ADD GST (+) 12% of (X)					103,022.00
Sub-total					= 961,539.41
ADD Labour cess (+) 1% of (X)					9,615.00
Add 3% of Total estimated cost Contingency =					28,846.00
Total cost =					1,000,000.41
Say =					1,000,000.00
Rupees Ten Lac Only					

**DRAWING OF NEW FRESHWATER FINFISH (*C. batrachus*) HATCHERY**



Sl.No.	Schedule/Items	Amount [Rs]
	<b>Capital Cost : Part -I</b>	
1.	Cost for the construction of hatchery shade, 3 nos. rearing tanks, overhear tanks,etc as per P.W.D Schedule of rates	1000000.00
Total Amount :		1000000.00
	<b>Capital Cost : Part -II</b>	
1.	PVC hatching Tray 450 x 300 x 75 mm size [15 Nos.] @ Rs. 750.00 per tray.	11250.00
2.	PVC rearing Tray 900 x 450 x 150 mm size [25 nos.] @ Rs. 500.00 per tray.	12500.00
3.	Tray stand [ for hatching & inside operation made of MS square bars & flats with 02 coats of paint] (LS)	15000.00
4.	Air-pump with socket & switch arrangement all completes [30 Nos.] @ Rs. 400.00 per unit	12000.00
5.	Air blow rubber pipe [ 04 cells] and different type of connector & air stones (LS)	4000.00
6.	Inverter 300 watts with Exide battery [ 25 plates] (LS)	12000.00
7.	5 HP Kilosker diesel engine including centrifugal pump ,suction pipe, delivery pipe etc. (LS)	35000.00
Total [Rs] :		101750.00
8.	Contingency [3% appx]	3053.00
Total Amount :		104803.00
	<b>Recurring Cost:</b>	
1.	Brooder for 4 cycles (Av. Wt. 13.75 Kg. per cycle] 55 Kg. @ Rs.800.00	44000.00
2.	Synthetic hormone (eg. Ovaprim, Ovatide, Ovasis etc.) @ Rs. 400.00 per 10 ml vial for 8 vials	3200.00
3.	Feed for fry and brood fish (including live feed)	8000.00
4.	Labour charge for hatching and rearing operation @ Rs. 7000.00 per month for 5 months	35000.00
5.	Other incidental charges	5000.00

	Total Amount :	200003.00
	Say amount:	200000.00
	<b>Grand total amount [Capital cost + Recurring cost] Rs:</b>	1200000.00

**Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted as per the guideline of the Government.**

Particulars	Amount (Rs)
Capital cost (Part I & II)	11.0175 lakh
Recurring cost	0.952 lakh
<b>TOTAL COST</b>	<b>12 lakh</b>

#### Estimates of Output and Value of Output

<u>Brooder Account</u>	
Considering average weight of 250 and 150 gm for female and male brooders respectively and sex ratio of 1: 2 (female to male)	
Weight. of female brooder (Ave. 250 gm)	25 kg
Weight of male brooder (Ave. 150 gm)	30 kg
Total weight of brooder	55 kg
<u>Fry Production Account</u>	
Number of cycle in a breeding season (Mid may to September)	4
Fry production in each cycle-	0.68 lakh
Total Fry production-	2.69 lakh

Particulars	Amount (Rs)
Income (out of sales proceed of fry @ Rs. 5.00 per piece fry)	13.45 lakh
Sale of sacrificed male brooder (@ Rs. 250.00 per Kg)	0.075 lakh
<b>Gross Income</b>	<b>13.525 lakh</b>
<b>Net Income [Gross income – (20% of capital cost as depreciation cost + recurring cost)]</b>	<b>10.36 lakh</b>