

DIFFERENT FISHERIES SCHEMES

Directorate of Fisheries, West Bengal

GN-31, MeenBhaban, Salt Lake City, Kolkata-700091

- **Distribution of IMC fingerlings in small water bodies:**

Enhancement of fish production in the State is one of the priority areas of our Department. Insufficient stocking density of fingerlings and improper management has been identified as the major constraints to increasing fish production. So, if the application of quality fingerlings and balanced farm-made feed (made with locally available ingredients) along with water conditioner (lime) with proper pond management be arranged in the huge available small water bodies of our state in order to carry out the scientific pisciculture, the fish production of the state will be increased automatically. Water bodies owned by individuals, Societies, Fish production Groups, Self Help Groups and Institutions are being utilized to produce more fish and to protect endangered fish with the supply of fish fingerlings and fishery inputs under this scheme. Assistance under this scheme has been provided in terms of quality fish seed (1000 nos. per unit of 10-12 cm size) to the beneficiaries as Government Contribution. The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme is June -July.

- Government assistance is of Rs. 5150.00. Fish fingerlings are being provided under this scheme. No feed is provided by government.

- **Production of Big-Size Fish (IMC) in Big Water Bodies:**

Production of Big sized fish is a major concern of the Fisheries Department, Govt. of West Bengal. “Mache BhateBangali” always searches for big fish (e.g. PakaRui/Catla) on any occasion or in daily life. The Fisheries Department, Government of West Bengal has taken initiatives to bring all water bodies (Ponds/Beel/baors etc.) under scientific pisciculture for better productivity in the inland sector. The State of West Bengal is enriched with a large number of big-sized & highly productive water bodies which have immense scope towards the production of Big Sized Fishes to narrow down the gap between the demand for big fish and its supply.

Keeping these in mind, the scheme for “Production of Big Size Fish (IMC) in Big Water Bodies” has been formulated with the following objectives:

- ❖ To produce Big Sized Fishes with the application of nutritionally balanced floating pelleted feed and proper management of water bodies
- ❖ To involve the Fishermen's Co-operative Societies, Self-help Groups, and Fish Production Groups to uplift their socio-economic status since the big water bodies are mostly been managed by them.
- ❖ To meet up the demand for Big Sized fish in the locality.
- ❖ To create awareness among the fisher flock and effectively demonstrate improved technology towards the scientific culture of big-sized fishes to them.

Assistance under this scheme has been provided in terms of Carp (IMC) Fish seed (250 g) @ 7500 no/ha, Processed good quality floating pelleted fish feed; (Size - 1.5 - 2 mm dia. Animal protein - 28-32%, fat -4 1%) to the beneficiaries as Government Contribution. Beneficiary contributions are Pond Preparation, Lime (Calcium Oxide) @ 500 kg/ha/year, Inorganic fertiliser SSP @ 300 kg/ha/year, Prophylactics & Medicine, Labour Charges with periodical netting and harvesting expenses lump sum amount. The unit area of the Scheme is 1.0 ha. The ideal season for stocking fish under this scheme is August.

- Government assistance is of Rs. 7.37 lakh. Advanced fish seed and 50% of total requirement of feed is provided under this scheme..

- **Pisciculture in Ponds under JalDharoJalBharo Programme:**

The fisheries sector is an important player in the overall socio-economic development in West Bengal which by now has been transformed into a significant commercial enterprise, contributing to employment generation, food and nutritional security and for-ex earnings. A programme named "JalDharo-JalBharo" was launched during 2011-12 with the aim of preserving precious water resources by large-scale harvesting of rainwater as well as arresting runoff of surface water through the construction and management of Minor Irrigation structures. The Water Resources Investigation & Development Department of the Government of West Bengal has taken a lead role in the programme to re-excavate all types of water bodies viz, tanks, ponds, reservoirs, and canals in convergence with the P&RD Department, Govt of West Bengal to enhance the water holding capacity. Increased holding capacities in the water bodies will immensely support protective irrigation during the dry spell. Apart from agriculture, pisciculture activities would develop in such water bodies which in turn open a further avenue of income to the poor farmers. Accordingly, the Fisheries Department has intervened to culture fish in these ponds for employment generation and nutritional security through this scheme.

Assistance under this scheme has been provided in terms of Lime, Fish seed (fingerlings - 4-6 inches) as Government Contributions. Beneficiary contributions are Lime, Single Superphosphate, Urea, and Fish feed. The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme in May- June.

- Government assistance is of Rs. 5430.00. Fish seed and is provided under this scheme.

- **Macrophyte control by ranching of Grass Carp for increased productivity in beel / boars of West Bengal :**

Enhancement of fish production through aquaculture in the state is one of the priority areas of our Department. One of the important areas for aquaculture in the inland sector is the beel/baor. About 42000 hectares of the water area of beel/baor in West Bengal is under pisciculture mostly undertaken by the co-operative sector. The average productivity in these water bodies is 800-1000 kg/hectare/year. The major constraint for pisciculture in beel/baors is the aquatic weed. Bio-control of aquatic weed/macrophyte by the introduction of Grass Carp is an age-old practice since long back. Grass carp are not only a voracious feeder (feeds on aquatic vegetation) but also their excreta contain the undigested/partly digested vegetation particle which can fertilize the water body. So we can increase the productivity of beel/baors @ 1500 kg/hectare/year by ranching moderate size of Grass

Carp (*Ctenopharyngodonidella*). In this way, we can get the double benefit, one from the biomass of grass carp itself and another from the bio-control of aquatic weeds. Keeping this in mind, a scheme for cooperative societies engaged in pisciculture activities in Beel/Baors has been formulated for implementation throughout the state during 2022-23.

Assistance under this scheme has been provided in terms of Seed of Grass Carp - 250 Grams each as a Government Contribution. The unit area of the Scheme is 1.0 ha.

- Government assistance is of Rs. 25750.00. Advanced Grass Carp Fish seed is provided under this scheme.

- **Increased production of Indian Major Carp along with indigenous local fish species in Beel / Boars / Dighi through Pen Culture activity in the districts of West Bengal:**

There remain about 42000 ha of Beel/Baor/Bundh resources in the State, mostly natural water bodies and plays multifarious functions to provide livelihood support of the local fishermen, act as the above for the small and economic fish species, considered to be the poor men's protein supplement and acts in the process of agri-irrigation, beside many other social functions including abating flood situation etc. since time immemorial.

Most of these water bodies belong to Govt. and have been given to the PFCS members for fruitful utilisation through fish farming. Productivity in these water bodies though observed to have been enhanced from 300 kg/ha to 1000-1500 kg/ha at the present, yet desired development could not have been achieved. Various initiatives have been taken on the part of the Govt. in some cases through NCDC but desired target could not achieve for various reasons. In view of its immense potentiality, it is proposed, under FIDF new initiatives with the following objectives are taken, in some selected water bodies of nine district with an integrated approach as follows:

- In situ seed (fry to fingerling) production in pen culture to meet up the need for stocking material for the entire water body of the PFCS round the year.
- Optimum fish production (by phased stocking of adv fingerling) by adopting necessary Good Management Practice (GMP).
- Stress on the conservation and propagation of the local and indigenous fish species of economic and ecological importance, if necessary by stocking.
- By developing the whole area into Fish Tourism in the long run and ultimately to develop the PFCS as a Profit Making Organization, which will be able to:
 1. Provide employment to all its members for the year round.
 2. Produce optimum fish (>3000 kg/ha/yr.), additionally the local fish species (Pholui, Pabda, Nados, Singhi, Magur, etc.) shall share a significant quantity.
 3. Develop the whole area into a Eco-Tourism (Fish Tourism) area with sufficient plants, water sports etc.

Assistance under this scheme has been provided in terms of Seed of Grass Carp - 250 Grams each as a Government Contribution. The unit area of the Scheme is 1.0 ha.

Assistance under this scheme has been provided in terms of Construction / development of Pen / pond (1 hectare area) for seed production, fry - 20-25 mm. (stocking materials) (2.5 lakh in number in 15 days old fry), Lime, Stocking with indigenous fish species fingerlings [Pabda (1.5 “ -2.0”) 2500 nos, SarPunti (2”-3”) 2500 nos, Singhi (3”-4”) 2500 nos, Magur (3”-4”) 2500 nos.] as Government Contributions. Beneficiary contributions are Boats (2 nos), Drag nets (2 pcs), Mohua Oil Cake, Cowdung, Feed (Rice polish and mustard oil cake - ratio 1:1), Feed (Considering high natural productivity), Netting and harvesting - 10 times. The unit area of the Scheme is 5 Hectare (1 hectare for fingerling production & 4 hectare for table fish production.).

- Government assistance is of Rs. 6.30599 lakh. Pen (made of bamboo splits) for one hectare water, Fish seed(fry) and 50% of total requirement of feed (fund involvement Rs.3.60 Lakh) is provided under this scheme

- **Composite Fish Culture with the supply of pisciculture accessories under Tribal sub Plan:**

West Bengal is one of the largest states which has the highest concentration of tribal population in the country. The concentration of tribal population is very high in rural areas especially in mountain and forest zones when compared to urban areas. Nature here comes forward and joins hands with tribal to fulfil their needs fashioned of course in their way depending on their customs, traditions, demographic structures etc. The socio-economic structure in tribal communities is markedly different from that of the non-tribals. They have a very simple technology which fits well within their ecological surroundings and conservative outlook. Moreover, their economy can be termed as subsistence type. The concept of livelihoods has become increasingly popular in development thinking as a way of conceptualizing economic activities in their totalities. Livelihoods are the means people use to support themselves, survive and prosper, which are shaped by the broader environment in which they live and other factors like economic and cultural systems. For the economic upliftment of tribal people through the operation of pisciculture, the scheme “Composite Fish Culture (IMC) with supply of pisciculture accessories” has been formulated by the Fisheries Department. The main objective of the scheme is Training the tribal people on pisciculture, Community development of tribal people through pisciculture and allied activities in a cluster approach and aid during their financial crisis.

Assistance under this scheme has been provided in terms of Carp (IMC) Fingerlings (10-12 cm size) @ 9000 no/ha (no. of fingerling should not be more than 45-50 per kg), Lime (Calcium oxide), Process floating pelleted fish feed as Government Contribution. Beneficiary contributions are Pond Preparation, Inorganic fertiliser SSP, Raw Cow Dung Lump sum amount, Processed floating pelleted fish feed, Prophylactics & Medicine, Labour Charges with periodical netting and harvesting expenses lump sum amount. The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme is June -July.

- Government assistance is of Rs. 27950.00. Fish seed, lime and 50% of total requirement of feed is provided under this scheme.

- **Air-breathing Fish Culture with Singi under Tribal sub-Plan:**

West Bengal is one of the largest states which has the highest concentration of tribal population in the country. The concentration of tribal population is very high in rural areas especially in mountain and forest zones when compared to urban areas. Nature here comes forward and joins hands with tribal to fulfil their needs fashioned of course in their way depending on their customs, traditions, demographic structures etc. The socio-economic structure in tribal communities is markedly different from that of the non-tribals. They have a very simple technology which fits well within their ecological surroundings and conservative outlook. Moreover, their economy can be termed as subsistence type. The concept of livelihoods has become increasingly popular in development thinking as a way of conceptualizing economic activities in their totalities. Livelihoods are the means people use to support themselves, survive and prosper, which are shaped by the broader environment in which they live and other factors like economic and cultural systems. For the economic upliftment of tribal people through the pisciculture operation of Singi culture in small ponds, a scheme for the tribal fishermen of different tribal-dominated districts of the state has been formulated by the Fisheries Department. The main objective of the scheme is Training the tribal people on pisciculture, Community development of tribal people through pisciculture and allied activities in a cluster approach and aid during their financial crisis.

Assistance under this scheme has been provided in terms of Singi seed (3'' size), Processed fish feed as Government Contributions. Beneficiary contributions are Pond Preparation, Lime (Calcium oxide), Raw Cow Dung, Processed fish feed, Prophylactics & Medicine, and Labour Charges with periodical netting and harvesting.

The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme is June -July.

- Government assistance is of Rs. 19500.00 Singhiseed and 50% of total requirement of feed is provided under this scheme

- **Culture of Coldwater species in hill areas of Darjeeling & Kalimpong District:**

To produce cold water fish species in jhora of hill areas this scheme is being provided to the fish farmers of hilly areas. The unit area of this scheme is about 250 sq. ft. Cold water species like Katli/Asla, grass carp common carp seed 400 no, feed 125 kg (2 and 3 mm, to be provided in two instalments), lime and other pisciculture accessories are being provided to fishers.

Assistance under this scheme has been provided in terms of 400 fingerlings (Cyprinus 200 pc. (4 ''), Grass Carp or Amur carp -100 pc. (4 '' and Catli/Asla 100 pc. (7-8 cm.), 125 kgs. Floating feed as Government Contribution. Beneficiary contributions are Lime, Single Superphosphate, Urea, and Fish feed. The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme in May- June.

- Government assistance is of Rs. 8335.00. Fingerling, plastic pipe, lime and 50% of total requirement of feed is provided under this scheme.

- **Development of Sewage fed Fisheries:**

Sewage-fed pisciculture is an important part of the augmentation of fish production activities undertaken in the East Kolkata Wetlands and a few other parts of the state. The uniqueness of these wetlands is that the sewage and wastewater of the city get treated in a natural way through the practice of sewage-fed pisciculture. By using Kolkata's sewage water for pisciculture, these wetlands have become a unique eco-system for natural treatment of sewage water. But, it is important to note here that this sewage fed fisheries are facing certain problems such as siltation, an insufficient supply of sewage water in the fisheries and a decline in the quality of nutrients in the sewage water, escalating costs for production in terms of input costs etc. Keeping this fact in mind and for the preservation and sustainable development of the sewage-fed fisheries a scheme named "Development of sewage-fed fisheries" (with Single Stocking Multiple Harvesting) has been formulated by the Fisheries Department.

Assistance under this scheme has been provided in terms of Carp Fingerlings (10-12 cm size) @20000 no/ha, Lime (Calcium oxide), and Nutritionally balanced floating feed as Government Contributions. Beneficiary contributions are Pond preparation, Nutritionally balanced floating feed, Prophylactics & Medicine lump sum amount, Labour Charges with periodical netting and harvesting expenses lump sum amount. The unit area of the Scheme is 1.0 ha. The ideal season for stocking fish under this scheme in June - July.

- Government assistance is of Rs. 2.64 lakh. Fish seed and lime and 50% of total requirement of feed is provided under this scheme.

- **Airbreathing Fish Culture with DeshiMagur and Singhi:**

In order to the diversification of aquaculture in the Inland Fisheries sector as well as to utilize the small tanks especially the seasonal ponds, DeshiMagur / Singi culture has been propagated throughout the state. In addition, this culture practice will facilitate to minimize or abolish the culture of banned species Clariasgaripinus in many parts of West Bengal. Keeping this in mind, Fisheries Department has formulated the scheme Air-breathing fish culture with Singhi and Magur to implement in various districts.

Assistance under this scheme has been provided in terms of DesiMagur/ Singhi seed (3"-4" size) as Government Contributions. Beneficiary contributions are pond preparation, lime (Calcium oxide), Raw Cowdung, Feed prepared with locally available ingredients, Prophylactics & Medicine, Labour Charges with periodical netting and harvesting expenses, aluminiumHundi 20 inches in diameter. The unit area of the Scheme is 1.0 bigha. The ideal season for stocking fish under this scheme is June - July.

- At present Government assistance is of Rs.11125 for Deshi magur and Rs. 9888.00 for Singhi is provided under this scheme.

- **Distribution of Bicycle with hundi for fish Vending for Tiger shrimp seed catchers as an alternate livelihood option:**

Collection of prawn/shrimp seed from natural resources is an age-old practice among the farmers in coastal areas of three coastal districts. Culture of tiger shrimp has gained momentum over the last decade in many parts of the world due to its high export value. Generally, the catchers belong to poor community of the society. The exact number of wild prawn seed catcher has not been assessed. However, as per the estimation by the Fishermen's Association approximately 25,000 people (7000 men and 18,000 women) are engaged in wild collection of prawn seeds. Out of 25,000, approximately 8,000 people (6000 women and 2000 men) operate in core areas of Sunderbans. It extremely difficult to assess the exact number due to the fact that when there is availability of seeds in the estuary people from various areas plunge in for the booty, who otherwise are agricultural labours. A collection of 1000 seeds gets them around Rs 500/-. It has been reported that during P. monodon seed-collection other fish species also be collected and this practice cause's indiscriminate destruction of natural resources of estuarine faunas, which may have an adverse effect on the estuarine ecology and fisheries. The by-catch comprises a wide variety of fish and shrimp species of commercial importance. It is reported about 36 species of finfish and 18 species of shellfishes are destroyed as by catch.

Some Steps has been taken by the Fisheries Department to counter the problem through:

1. WB Inland Fisheries Rules 1985, Rule No 46

Sub Rule(1)-----use of nets having 12mm mesh or below in open waters is banned.

Sub Rule (2)----- use of nets having 25mm mesh or below in open waters is banned between 15th June to 30th September.

2. WB Marine Fisheries Regulation Rules 1995, Rule no 50

Sub Rule (4)-----Shooting or any bag net made of mosquito netting can not be used for catching seedling of marine fish and prawn, in coastal areas, esturine mouths, creeks and canals including the Sunderbanareasof the state. This is in accordance to Wild life Protection Act 1972.

Sub Rule (5)-----In the afore stated areas there shall be no fishing from March to June each year.

But in true sense the mechanism of strict enforcement against the wild seed collectors does not work due to the geographical/physiographic/social issues and lack of alternate income options in the difficult terrain.

It consists of providing some means of income to the seed collectors and to bring them away from the hazardous practice of prawn seed collection. As land availability and other resource are scarce, providing self sustaining options in the form of Bicycle with AluminiumHundi for fish vending have been proposed which will serve the dual purpose of vending and using the cycle for other purposes.

Assistance under this scheme has been provided in terms of Bi-cycle 22'' with specially fabricated carrier for carrying Hundi, Alluminiumhundi(wt 2.5 kg, dia 50 cm) as Government Contributions.

- At present Government assistance is of Rs.7200(Bi-cycle 22'' and aluminium hundi) is provided under this scheme.

● **Monoculture of Tiger shrimp:**

The Brackishwater sector is an important area of pisciculture in the three coastal districts of West Bengal. In West Bengal, there are about 60000 hectare area is under culture out of 91000 ha of backwaters. Tiger shrimp (*P. monodon*) is an important cultivable fish species with a huge local and export market. Farmers are undertaking brackish water farming are mostly interested in shrimp farming which is done in the coastal area. Most of the aquaculture farmers are carrying on with their business in these coastal areas depending on the verbal agreement with the owner which is mostly for 5-7 years. Maximum ponds are marginal & small in size measuring around 0.2 to 0.3 ha. Extensive/improved extensive farming is mainly concentrated with proper management strategies, high-quality pelletized feed & artificial aeration system; farmers are capable to achieve the production @ 3-4 MT/ha/crop for *P. monodon*. For undertaking shrimp culture registration from the Coastal Aquaculture Authority (through District level committee) is required. To extend shrimp farming Fisheries Department has formulated a scheme to be implemented in three coastal districts-PurbaMedinipur, South-24-Parganas and Nort-24-Parganas with an objective to produce Black Tiger Shrimp in modified extensive culture in a sustainable way, to bring more brackish water areas under scientific culture method, Application of good quality feed with better management practice to enhance productivity 2000-2500 kg /ha/crop and to motivate fish farmers to adopt modern technology for better production.

Assistance under this scheme has been provided in terms of Shrimp Seeds (PL-15-20, stocking density 30 pc/m²) as Government Contributions. Beneficiary contributions are Hydrated lime, Dolomite, Urea, Feed, Single Super Phosphate, Probiotics, and Prophylactics. The unit area of the Scheme is 1.0 bigha.

- At present Government assistance is of Rs. 42000.00. Only Shrimp seed is provided under this schemes. Feed and other components are being arranged by beneficiaries.

- **Monoculture of Vannamei shrimp (*Litopenaeusvannamei*):**

The Brackishwater sector is an important area of pisciculture in the three coastal districts of West Bengal. In West Bengal, there are about 60000 hectare area is under culture out of 91000 ha of backwaters. Vannamei shrimp (*L.vannamei*) is an important cultivable fish species with a huge local and export market. Farmers are undertaking brackish water farming is mostly interested in vannamei shrimp farming due to its faster growth rate, less disease prone and suitability for high stocking density which is done in the coastal area. Most of the aquaculture farmers are shifting their business in these coastal areas from tiger shrimp to Vannamei shrimp culture. Extensive/improved extensive farming is mainly concentrated with proper management strategies, high quality pelletized feed & artificial aeration system; farmers are capable to achieve the production @ 5-6 MT/ha/crop for *L. vannamei*. For undertaking shrimp culture registration from the Coastal Aquaculture Authority (through District level committee) is required. To extend the Vannamei shrimp farming Fisheries Department has formulated a scheme to be implemented on three coastal districts-PurbaMedinipur, South-24-Parganas and Nort-24-Parganas.

Assistance under this scheme has been provided in terms of Vannamei shrimp Seeds (Avg. PL-15-18 stocking density 35 pc / m²) as Government Contributions. Beneficiary contributions are Hydrated lime,

Dolomite, Urea, Feed, Single Super Phosphate, Probiotics, and Prophylactics. The unit area of the Scheme is 1.0 bigha.

- Government assistance is of Rs. 35750.00. Only Vennami Shrimp seed is provided under this schemes. Feed and other components are being arranged by beneficiaries.

- **Polyculture of Tiger shrimp (*P. monodon*) with mullets (Bhangon and Parse)” in Brackish Water fisheries sector :**

The Brackish water sector is an important area of pisciculture in the three coastal districts of West Bengal. In West Bengal, there are about 60000 hectare area is under culture out of 91000 ha of backwaters. Tiger shrimp (*P. monodon*) along with mullets (bhangon and parse) are the most common and compatible fish species for polyculture in brackish water system. Both the shrimps and mullets has huge local and export market. Farmers are undertaking brackish water farming is mostly interested in poly culture fish farming due to lesser risk factor due to disease outbreak in shrimp monoculture. Here at least farmers can get the product from mullets if disease occurred in shrimp species. Extensive/improved extensive farming is mainly concentrated with proper management strategies, high quality pelletized feed in polyculture system. Good quality seeds of mullets are locally available however for shrimp it is always advisable for hatchery seeds. Farmers are capable to achieve the production @ 3-4 MT/ha/crop for polyculture. To extend the polyculture fish farming of tiger shrimp with mullets, the Fisheries Department has formulated a scheme to be implemented in three coastal districts- PurbaMedinipur, South-24-Parganas and North-24-Parganas.

Assistance under this scheme has been provided in terms of Shrimp (tiger Prawn) Seed (Avg.PL-15-20 size), Mullet Seed (Bhangon) ((Avg. 1 -2 inch), Mullet Seed (Parshe) (Avg. 1 -2 inch), as Government Contributions. Beneficiary contributions are Lime, Urea, Single Super Phosphate, Mullet feed, Shrimp feed, Probiotics, Prophylactics. The unit area of the Scheme is 1.0 bigha.

- Government assistance is of Rs. 35000.00. Shrimp and Mullet seed is provided under this schemes. Feed and other components are being arranged by beneficiaries.

- **Fattening of mud crab (*Scylla serrata*)” in Brackish Water fisheries sector:**

The Brackish water sector is an important area of pisciculture in the three coastal districts of West Bengal. In West Bengal, there are about 60000 hectare area is under culture out of 91000 ha of backwaters. Tiger shrimp (*P. monodon*), Vennami shrimp (*L. vennamei*), Bhetki (*L. calcarifer*), Mullet (bhangon and parse) are the most common culturable fish species in brackish water system as because these fishes have huge local and export market. Crab farming is an another area of aquaculture in brackish water sector. Two types of crab culture are being practiced in coastal districts, GROW OUT CULTURE and CRAB FATTENING. Crab fattening is more profitable to the farmers. It requires 15-20 days in a cycle. 7 to 8 cycle is possible in a year. Farming is mostly done in small ponds, 4-5 katta. In this system water crab are release in the ponds and the pond dykes are covered with poly-nets or bamboo splits pen. Water crabs are provided with trash fish as feed.

To extend the mud crab farming, we have formulated a scheme to be implemented in three coastal districts- PurbaMedinipur, South-24-Parganas and Nort-24-Parganas..

Assistance under this scheme has been provided in terms of Water Crab (soft crab) (150-200 gms size male and female crab), as Government Contributions. Beneficiary contributions are Lime, Feed (raw fish) @ 10% of body weight/day, Harvesting, roping and packing cost etc. The unit area of the Scheme is 5 katta.

- Government assistance of is Rs.43500.00. Water Crab (Soft crab) 150-200 gm size is provided under this scheme.

● **SwarnaMatsyaYojana:**

To assist the “Yass” affected Brackish water Fish Farmers in PurbaMedinipur, North and South 24 Parganas a flagship project namely SwarnaMatsyaYojana has been taken during 2021-22 with administrative approval of Rs. 1683.25 Lakh. Under this project four nos. of schemes (i) Monoculture of shrimp, (ii) Polyculture of shrimp with mullet, (iii) Monoculture of Vannamei shrimp and (iv) Fattening of mud crab are being undertaken. The inputs are shrimp seeds and aerators etc.

Assistance under this scheme has been provided in terms of Shrimp, Seed (Avg.PL-15-20 size), Mullet Seed (Bhangan) ((Avg. 1 -2 inch), Mullet Seed (Parshe) (Avg. 1 -2 inch) and aerator as Government Contributions. Beneficiary contributions are Lime, Urea, Single Super Phosphate, Mullet feed, Shrimp feed, Probiotics, and Prophylactics. The unit area of the Scheme is 1.0 bigha.

Under SwarnaMatsyaYozona there are four nos.of Scheme.

- Monoculture of shrimp:Government assistance is of Rs.82000.00. Shrimp seed and aerator is provided under this scheme
- Polyculture of shrimp with mullet: Government assistance is of Rs. 75000.00. Shrimp seed, Mullet and Mullet seedand aerator is is provided under this scheme.
- Monoculture of Vannamei shrimp: Government assistance is of Rs. 77250.00. Shrimp seed and aerator is provided under this scheme.
- Fattening of mud crab: Government assistance is of Rs. 42500.00. Water Crab (Soft crab) 150-200 gm size is provided under this scheme.

● **Distribution of 70 It Insulated Box and Weighing Balance to the fish Vendors**

Component of the Scheme :

1. One Insulated Box : 70 Litres capacity..
2. Standard digital weighing machine upto capacity of 20 Kg.

Only fish vendor/ seller or person related to fish selling would be eligible to get the unit as mentioned above under this scheme. He should be sincere, laborious and faithful to this innovative marketing system. Unit cost is Rs. **5,100.00**

Distribution of Bicycle with 50 liter insulated

box

Component of the Scheme :

3. One Standard Branded Bi-cycle (24 inch frame size) with a specially fabricated jumbo carrier to carry the 50 litres insulated box.
4. One Insulated Box: 50 Liters Capacity.
5. Standard digital weighing machine upto capacity of 20 Kg. **Project cost is Rs. 10500.00**

Distribution of Fishing Nets and Fishery Requisites in Inland and Marine Sector.

A. Unit Composition and Rate

1. Distribution of Net and Hundi to Individual Fish Farmer for all districts excepting GTA, Darjeeling & Kalimpong.

Sl	Items (Composition of 1 Unit)	Item Cost (in Rs.)	Contingencies (2%)	Total Unit Cost (in Rs.)
1	Cast Net: 1 Unit	2100.00	42.00	2142.00
2	Aluminium Hundi: 1 Unit	1000.00	20.00	1020.00
Total			62.00	3162.00

2. Distribution of Net and Hundi to Individual Fish Farmer belonging to GTA, Darjeeling and Kalimpong.

S	Items (Composition of 1 Unit)	Item Cost (in Rs.)	Contingencies (2%)	Total Unit Cost (in Rs.)
1				
1	Cast Net: 1 Unit	1050.00	21.00	1071.00
2	Aluminium Hundi: 1 Unit	1000.00	20.00	1020.00
Total			41.00	2091.00

3. Distribution of Nets and Hundies to Co-operative Societies/ Registered Fish Production Groups/ Self Help Groups.

Sl	Items (Composition of 1 Unit)	Item Cost per piece (in Rs.)	Item Cost per beneficiary (in Rs.)	Add Contingencies (2% of Rs. 57,000.00)	Total Unit Cost (in Rs.)
1	Drag Nets: 2 Units	26,000.00	52,000.00	1140.00	58,140.00
2	Aluminium Hundi: 5 Units	1000.00	5,000.00		
Total			57,000.00		58,140.00

4. Distribution of Behundi Fishing Net specially for Khuti Fishers and other marginal marine fishers.

Sl	Items (Composition of 1 Unit)	Item Cost (in Rs.)	Contingencies (2%)	Total Cost (in Rs.)
1	Behundi Net with square mesh in cod end: 1Unit	26,000.00	520.00	26,520.00
Total				26,520.00

- **Tribal Housing**
Beneficiaries: Poor Tribal Fishermen, Scheme cost, Rs. 100000.00. Fund is provided through DBT mode.

- **Cage culture**

Cage culture is an aquaculture practice where fish are held in floating cage or basket in large water bodies where water allowed to pass freely and permitting exchange into the surrounding environment.

Big and unmanageable water resources can be used for higher fish production, livelihood generation and nutritional security. It includes lakes, reservoirs, ponds and rivers. The major and important fish species for cage culture are: *Pangasianodon hypophthalmus*, GIFT Tilapia (Monosex), Jayanti rohu (genetically improved variety of *L. rohita*), *Lates calcarifer*, *M. rosenbergii*, besides and ornamental fishes.

Cost of Cage : One battery with 6 nos. of cages (5 X 5X 4 meter.) Rs. 26.78 Lakh.

Fish Feed Mills

Fish feeds are an integral part of commercial aquaculture, which provides a balanced diet and nutrition for farmed fish. On an average 60% of the operational cost is incurred in supplementary feeding. For availability of quality fish feed at affordable price to the farmers, it is important that fish feed mills of different capacities are established in order to cater to the market need. Financial assistance is available for establishment of Fish Feed Mills under Beneficiary Oriented Activity, wherein, govt. assistance is available upto 40% of the project cost for general category and 60% for SC/ST/Women category.

The different categories of fish feed mills include:

Capacity of Fish Feed Mill	Unit Cost (Rs. in lakhs)	Govt. assistance	
		General	SC/ST/Women
Mini Mills of production Capacity of 2 ton /Day	30.00	12.00	18.00
Medium Mills of production Capacity of 8 ton /Day	100.00	40.00	60.00
Large mills of production Capacity of 20 ton /Day	200.00	80.00	120.00
Fish Feed Plants of production Capacity of at least 100 ton /Day.	650.00	260.00	390.00

Cold Storage/Ice Plant

Fish being a highly perishable commodity requires adequate cold chain network for its transportation through marketing channel. Cold Storage/Ice Plant are an integral part of the Cold Chain System. Inadequate numbers of Cold Storages/Ice Plants in vicinity of the fish production areas, is a major hindrance in hygienic marketing of the produce. Financial assistance for infrastructure development through establishment of cold storages/ice plants of varied capacities is available under the Beneficiary Oriented Activity, wherein, govt. assistance is available upto 40% of the project cost for general category and 60% for SC/ST/Women category. The different capacities of Cold Storage/Ice Plant is as follows:

Cold Storage/Ice Plant	Unit Cost (Rs.)	Govt. assistance
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	in lakhs)	General	SC/ST/Women
Plant/storage of minimum 10-ton capacity.	40.00	16.00	24.00
Plant/storage of minimum 20-ton capacity.	80.00	32.00	48.00
Plant/storage of minimum 30-ton capacity	120.00	48.00	72.00
Plant of minimum 50-ton capacity.	150.00	60.00	90.00
Modernization of Cold storage /Ice Plant	50.00	20.00	30.00