

CHAPTER - 2**MEASURES CONSIDERED FOR PISCICULTURE
IN WEST DINAJPUR DISTRICT:**

- i. MEASURES FOR DEVELOPMENT.**
- ii. MEASURES ADOPTED BY THE GOVERNMENT
FROM ITS OWN RESOURCES.**
- iii. MEASURES ADOPTED WITH THE WORLD
BANK ASSISTANCE.**

3.1 MEASURES FOR DEVELOPMENT:

The resources for pisciculture in the district of West Dinajpur are abundant and is in a prominent position in North Bengal. But before the independence of the Country (1947) there were no such measures taken for the development of pisciculture and the fishery activities were mainly confined to the efforts of a few individual fish farmers of the district. Fish production depended on unofficial capture fishery mainly. After the independence of the country organised pisciculture activities were introduced in the district through different five year plans of the country starting from 1951. There were as many as twelve schemes introduced in the district from the year 1951 to 1988 in spite of few individual entrepreneurship in this profession to develop the pisciculture in the district of West Dinajpur .

The different measures introduced for the development of pisciculture in the district of West Dinajpur from 1951 upto 1988 were.

1. Pilot Scheme for the development of tank fisheries through long, medium and short term loan and subsidies.
2. Scheme for assisting the needy fishermen and Co-operatives by granting loans.
3. Training facilities and technical assistance for the fish farmers.
4. Distribution of fry and fingerling of exotic species of fish having commercial importance and fish pond fertilisers free of cost to the fish farmers to increase fish production by organising Co-operatives of the fishermen and Fish Production Groups.

5. Granting financial assistance and subsidies to needy fishermen for enabling them to purchase fishing implements such as nets, boats, etc, to catch fish.
6. Rehabilitation facilities extended to the poor farmers.
7. Streamlining lease arrangement of water bodies to the co-operatives and individual fish farmers.
8. Typing up of the pisciculture scheme with other organisations of rural development.
9. Target setting activities.
10. Dredgation, dewatering and renovation of the derelict and semi derelict tanks.
11. Rearing of fry and fingerling.
12. Demonstration of fish farms.

From the Table 3.1 it is observed that the developmental measures for pisciculture activities in the district of West Dinajpur since 1951 was insufficient. It is also observed that out of all the developmental measures, the maximum number of farmers and fishermen got benefits within a short period since the 'World Bank Assisted Inland Fishery Project' (WBAIFP) was introduced in 1980 and continued upto 1988 in comparison with the number of farmers and fishermen who got benefits of different schemes within a span of thirty seven years i.e. from 1951 to 1988. 55.03% of total water area of the district had been covered through different Governmental schemes and the schemes of 'World Bank Assisted Inland Fishery Project' from 1951 to 1988. Of this 30.43% water area i.e. 55.28% of cultured water area covered by the 'WBAIFP' which clears the measures taken by the Government to develop the pisciculture and fishery activities in the district from 1951 to 1979 were comparatively Poor than the measures taken by the 'WBAIFP' With the assistance of the Government from 1980-1988.

Table 3.I

Nature of Fishery Developments and their Extent

YEAR	NUMBER OF FARMERS GOT LOAN FACILITIES	NUMBER OF FARMERS GOT TRAINING	NUMBER OF FARMERS GOT FRY, FERTILISERS MANURE	NUMBER OF FISHERMEN GOT FINANCIAL ASSISTANCE TO PURCHASE NETS, FISHING IMPLEMENTS	NUMBER OF FISHERMEN/FARMERS GOT REHABILITATION FACILITIES	NUMBER OF FARMERS GOT REARING FACILITIES	TOTAL WATER AREA CULTURED (ACRE)	% OF CULTURED WATER AREA AGAINST TOTAL WATER AREA
1951-61	510	160	210	275	-	40	At the end of '61 995	2.85
1961-71	985	790	445	582	-	52	At the end of '71 4005	11.47
1971-81	4,621	2,245	1,740	925	6	121	At the end of '81 13300	38.10
1981-88	13,324	4,730	3,820	2,720	81	242	At the end of '88 19210	55.03
TOTAL	19,440	7,925	6,185	4,502	87	455	At the end of '88 19,210	55.03
WRAIFP 1980-81 to 1987-88	7,678	3,682	1,675	533	87	192	10,619.31	30.42

SOURCE: D.F.O. Balurghat, W.D.

... was taken by the 'WBAIFP' with the sanction of the Government from 1980 to 1988.

3.II. MEASURES ADOPTED BY THE GOVERNMENT FROM ITS OWN RESOURCES:

The Government continued the different measures for the development of pisciculture since 1981 in the district of West Dinajpur from its own resources. The WBAIFP was also introduced from the year 1980.

Out of the total water area of 34,910.43 acre in the district of West Dinajpur 29,275.49 acre culturable and semi derelict water area are available for pisciculture and could be exploited with less difficulties through different schemes of pisciculture; of which 3045.63 acre water area is of the Government ownership. 19210.00 acre water area had been considered for pisciculture in different schemes since 1981 to 1988. Besides these there are 22,393 acre river, khari, beels left for capture and culture fishery.

Table - 2.11

Contribution of the Government for Fishery Developmental Measures adopted from its own resources

Year	Loan disbursed for culture, seedling, excavation	Supply of fry, fertili- sers	Assistance to purchase fishing implements, nets, boats	Rehabilita- tion	Subsidies of fry	Bearing of fry	Demon- stration	Training	Inputs supplied to co- operative	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1951-61	3,10,800	42,250	34,500	-	56,300	62800	12360	-	-	5,19,010
1961-71	12,50,525	1,92,340	1,05,800	-	2,03,000	88440	22425	-	8,17,000	26,79,530
1971-81	48,25,320	7,82,600	4,45,000	-	12,85,200	519200	34200	-	18,05,800	96,97,320
1981-88	1,15,24,674	12,85,000	9,72,400	18,18,950	79,20,100	1080800	85500	6,48,800	72,10,000	3,95,45,924
TOTAL	2,48,41,319	23,09,190	15,57,700	18,18,950	94,64,600	1750940	1,54,485	648800	9832800	52371784
WBATP 4926994	963200	293023	1818950	6830075	876150	80,230	2,55,570	53,04,053	21366745	
80-81 to 87-88										

SOURCE: D.P.O., Balurghat, M.D.

From the Table 3.II it is observed that the amount given for loan, subsidy and spent for fry and fertilisers, nets, fishing implements, rehabilitation of the fish farmers, rearing, demonstration, training and inputs supplied to the Co-operatives and Fish production Group (FFG) for the development of pisciculture in the district of West Dinajpur from the year 1951 to 1988 was Rs. 5,23,71,784 out of which Rs. 2,13,66,745 (i.e. 40.80%) were made for the "WBAIFP" which started from the year 1980. It is also observed that rehabilitation facilities were extended only to the fish farmers and fishermen under the "WBAIFP". Moreover the amount spent for different measures adopted for the development of pisciculture in the district of West Dinajpur from 1951 to 1988 were insufficient considering the vast tank water area (34910.43 acre) of the district of West Dinajpur.

3.III. MEASURES ADOPTED WITH THE WORLD BANK ASSISTANCE:

The World Bank Assisted Inland Fishery Project started in 1980 in the district of West Dinajpur to develop the inland fishery activities in addition to the existing schemes of the Government. The Government have also extended its assistance to "WBAIFP" since 1980 for improved method of pisciculture for the rural farmers of the district giving a scope for additional employment in this avocation. In doing such arrangements of institutional finance, training of the fish farmers, formation of Co-operatives and Fish Production Group, leasing, target setting, subsidy, rehabilitation, benefit for service party Group, minkit distribution and devetailing activities were made for proper exploitation of the water resources of the district. The activities are as follows:

Institutional Finance: Farmers got the financial assistance for pisciculture as loan for short term (one year) and long term (7 to 10 years) from different nationalised bank branches and Co-operative land development bank of the district.

Fish Farmers Training: Fish farmers training is an important programme to make the project a success. The programme aims at massive training and extension work for orienting the rural people specially belonging to scheduled castes and tribes towards pisciculture by disseminating of improved technology of fish production enabling them to ensure credit utilisation. The programme envisaged to secure the participation of intending persons, pisciculturists in harnessing the huge potentialities of fisheries in the district of West Dinajpur. The stress was, therefore, laid not only on the dissemination of fisheries technology but also on the bringing of awareness that pisciculture is no less important an economic pursuit in rural economy than crop husbandry. The following procedures are followed:

(i) Fish farmers at the grass root level recommended by local panchayat are selected for training. Persons owning an water area of at least 0.15 acres are generally sponsored by panchayat.

(ii) Maximum 20 trainees are accommodated in each batch for a duration of 15 days.

(iii) The time and venue of the training programme are jointly fixed by 'Block Development Officer' and 'Fishery Extension Officer' of the block to suit the need of farmers. The site is generally located preferably near a village tank where pisciculture is practised.

(iv) Candidates were selected out of the trained and experienced candidates of grass root level training for further training of one month.

(v) Both the grass root level training and district level training were organised exclusively for the farmers belonging to scheduled castes and scheduled tribes.

(vi) A very small number of candidates were selected for a training of three months at Kalyani training Centre, Nadia, from 1984-85.

(vii) The trainee receives a stipend of Rs. 9.00 per day during the course of training from 1984-85 and accommodation facilities are given in district level training and training at Kalyani for three months specially.

(viii) On successful completion a certificate was issued to the farmers.

Co-operative Societies

Towards achieving the objectives of supplying the inputs like fish seed, Mohua, superphosphate, lime the "West Bengal State Fishermen Co-operative Federation Ltd" had been entrusted with the task of supplying inputs to the remotest points through the "Central Fishermen Co-operative Society Ltd". The Central Fishermen Co-operative Society in turn supplied inputs to the fish farmers through their agencies at the block level.

Out of the total fishermen population of 17500, only 4145 came under the purview of fishery Co-operatives. There are 12 numbers of fishery Co-operatives in the district of West

Dinajpur. The Co-operative Societies are mainly dependent on capture fishery. Northern Zone of this district is bestowed of a number of beels and Jhills colloqually known as "Khari" (Jalkar). These potential assets of fisheries practically lay untapped for its proper exploitation and development as these area are in lease possession of the poorest members of the society, most of whom belong to scheduled Caste and Tribes.

These potential Jalkars are fluvelite only during monsoon months as these are connected with a narrow link with some river. Fishermen Co-operatives having the lease possession of these jalkars earned their subsistence, livelihood by catching fish migrating upwards to these jalkars during monsoons. During the rest part of the year these fishery bases remain practically barren and the fishermen are thrown out of their vocational employment. In order to have substantial employment as well as to boost up fish production from these areas, it is contemplated to bring these areas, under 'World Bank Assisted Inland Fisheries Project' by formulating need-based schemes befitting the water areas. These areas on proper development can be potential spot for culture fishery for a period of eight months of a year. The culture aspect of Khari, Jalkar will be managed by fishermen, shareholders of the Co-operative Society. Consequently they will earn from this programme for uplifting their livelihood. Besides these, government owned tank water area and water area of the individuals are used for pisciculture under the Co-operative Societies.

Fish Production Groups

The creation of a special infrastructure at the community level namely "Fish Production Groups" since September 1974 was initiated as a part of implementation of recommendations of 'National Commission on Agriculture' on nursery rearing practices

and subsequently formed part of advance action programme in the World Bank Project in respect of the supply of quality fry, fingerling to the fish farmers. Its main functions were (i) Group planning (ii) Common aids and mutual help (iii) credit through Group action (iv) Distribution and marketing. Though in the district of West Dinajpur the activity like distribution and marketing are almost absent.

The problems of small fish farmers in the district are mainly (i) Arrangement of inputs (ii) Arrange of periodical netting at low cost (iii) Dearth of quality fish seed (iv) Training in fish pond management (v) Harvesting and marketing.

The FPG could be a suitable answer to all the above problems.

Leasing: Arrangement of long term lease of large water units owned by the State or Central Government for a period of 7 to 10 years to the Primary Fishermen Co-operative Societies and individual fish farmers in order to draw credit support under the Project was an attempt not only to bring bigger areas under scientific fish cultivation in order to create marketable surplus in production of fish but also to some extent to stop the wretched plight of the poor fishermen from fishery profession and to give them employment in many cases all the year round. Arrangement of short term lease (1 year) to oral lease holders of ponds in the district of West Dinajpur under the "WBAIFP" were also made to bring the project towards success.

Target Setting

Block-wise and bank-wise allocation of the target under this programme was approved in the standing committee of "Fish Farmers Development Agency" comprising of Additional District Magistrate as Chairman of this Committee, Chief Executive

Officer FFDA, District Fishery Officer, lead Bank Officer, Officers from the District Co-ordinating Branches of State Bank of India, Allahabad Bank, Central Bank of India, United Bank of India, United Commercial Bank, United Industrial Bank, Co-operative land Development Bank, Gour Gramin Bank, Bank of India, Punjab National Bank, Project Officer-Integrated Tribal Development Programme, District Manager, Scheduled Caste and Tribal Development and Finance Corporation.

Every sphere of the programme was discussed in details to acquaint the members so that they may independently work on the schemes. The decision of the standing committee is then communicated to sabhapaties, panchayat samity and all Block Development Officers of this district for their action with copy to all banks and Government agencies related with this programme. In the mean time panchayat functionaries and Bankers of the blocks were invited to a block level seminar and the mode of operation for preliminary selection of beneficiaries are explained to them. It was also decided that Pradhan of each Gram Panchayat would prepare mouza-wise list of fish farmers with the help of the other members of his panchayat under different criteria such as scheduled caste, scheduled tribe, General, small and marginal farmers etc.

Subsidy:

All the farmers under "WBAIFP" are entitled to get subsidy from "Fish Farmers Development Agency" (FFDA) and the farmers holding upto 5 acres of water area and 2.5 acre water area (i.e., small and marginal farmers) and the farmers belonging to scheduled castes and scheduled tribes get subsidy from DDA, SC and ST department,

Under the institutional sector of the WBAIFP, the Fish farmers took institutional loan along with subsidies from the different departments of the Government and FFDA. A maximum of 70% of the total cost of a scheme for fish culture of WBAIFP was available as subsidy to the small and marginal farmers belonging to scheduled caste and scheduled tribe of which FFDA contributes 25%, Special Component plan (SCP) and Tribal Sub-Plan (TSP) contributed 25% to the fish farmers belonging to scheduled caste and scheduled tribes and District Rural Development Agency (DRDA) contributed 25% to the farmers for being small and marginal farmers and the balance of the total cost of the scheme (30%) was supplied by the financial institutions like nationalised banks, co-operative land development banks as loan. The marginal and small farmers and farmers belong to scheduled caste and scheduled tribes get extra benefits of subsidy for fish culture (as mentioned above) from the year 1983-84 in the district of West Dinajpur.

Small and marginal farmers other than scheduled caste, and scheduled tribes for the fish culture got 50% subsidy of the total cost of a scheme of which FFDA and DRDA contributed 25% each and the balance of the total cost of scheme (50%) was supplied by the financial institutions as loan.

Farmers belonging to scheduled caste and scheduled tribes but neither small nor marginal for the culture of fish got 50% subsidy of the total cost of a scheme of which FFDA contributed 25% and SCP, TSP contributed 25% to the farmers for being scheduled caste and scheduled tribes; the balance of the total cost of the scheme (50%) was supplied by the financial institutions as loan.

General farmers, neither small nor marginal, and not even belonging to scheduled castes and scheduled tribes for the

culture of fish get 25% subsidy of the total cost of Scheme from FFDA and the balance of the total cost of the Scheme (75%) was supplied by the financial Institutions as loan.

Under non-institutional sector of the WBAIFP the farmers for the culture of fish get subsidy @ 25% of the total cost of Scheme from FFDA and the balance of the 'total cost' was arranged by the farmers individually.

From the year 1980-81 to 1982-83 farmers got only 25% subsidy of the total cost of scheme (from FFDA) in the culture of fish of "WBAIFP".

Rehabilitation:

To rehabilitate the poorer section belonging to scheduled caste and scheduled tribes, who are also small and marginal farmers willing to engage themselves in pisciculture, the fishery department arranged them with huts at the pond site in different blocks of the district of West Dinajpur.

Service party Group:

Arrangement for distribution of devices for catching fishes among the service party groups belonging to scheduled caste and scheduled tribes comprising of maximum ten fishermen families are made to boost up the fish production in the district.

Minikit:

Minikit in the form of fry and superphosphate are given to the poor small and marginal farmers free of cost to accelerate the pisciculture activities in the district of West Dinajpur.

Devetailing:

Devetailing WBAIFP with other organisation of Rural Development by tying up of the schemes with Integrated Rural Development Programme (IRDP), special component plan (SCP) for Scheduled Caste and tribes and Tribal Sub-Plan (TSP) for tribes has evoked much response from the small and marginal farmers because of lucrative subsidy element of the devetailed Scheme. It has also enrooted the schemes in the alleviation of rural poverty.

Right from the selection of prospective farmers upto the execution of the fish culture process, the WBAIFP schemes are nurtured by Bankers, Fishery extension officers, Panchayet functionaries, members of Co-operative and Fish Production Group giving scope to minimise the number of declined cases are having perennial flow of applications for credit support from the fish farmers and also for increased mobilisation of credit support. It has also infused a new look into the bankers towards the potentiality of fishery for investment : 'World Bank Assisted Inland Fishery Project' made an attempt to improve the economic profile of the district of West Dinajpur. The WBAIFP started phase-wise, the first stage of the phase being the period 1980 to 1985 and the latter being the rest of the period upto 1988.

Different attempts have been made right from the district level to Gram Panchayet level (i.e. grass root level) to popularise the improved methodology of pisciculture, Government officials of the district administration and rural development, panchayet functionaries, members of Co-operative societies and Fish production Group had extended their support in motivating the rural fish farming. However institutional finance (for example bank loan, subsidies were arranged to improve the effectiveness of all the programmes) were made in all the sixteen blocks of the district of West Dinajpur. The total outlay can

broadly be divided into two groups, rather the improvement programme followed a definite pattern of progress through two sectors i.e. institutional sector and non-institutional sector. The distribution system was based on geographical areas and by dividing the entire district into respective blocks. The finance for the operation of the programme was channelised through nationalised banks of the respective blocks as well as separately through different number of State Government Offices.

For implementing the WBAIFP at the district level a standing committee was formed having representatives of the FFDA, Zilla Parishad, Panchayet and B.D.Os. Normally the basis of target fixing was based on the availability of water areas and prospective farmers in the respective blocks.

For the implementation of the programme a total water area of 10,275 acre was the target for the WBAIFP in the district of West Dinajpur for the period 1980-81 to 1987-88 of which Institutional responsibility was for 8037.50 acre to be achieved through different number of nationalised banks and Co-operative land development banks of the Government of West Bengal and the balance 2237.50 acre remained for non-institutional one indirectly by the Government through FFDA along with the individual investment of fund by the farmers.

Table - 3.IIX**Target Water Area**

Year	Institutional Acre	Non-Institutional Acre	Total Acre
1980-81	275	105	380
1981-82	425	200	625
1982-83	1000	250	1250
1983-84	1475	400	1875
1984-85	1150	350	1500
1985-86	975	275	1250
1986-87	1012.50	257.50	1270
1987-88	1725	400	2125
T O T A L	8037.50	2237.50	10275

Source: FFDA, Balurghat, W.D.

Out of total target water area of 10275 acre 78.22% water area had been considered for fish culture under the WBAIFP in the institutional sector where the fish farmers get loan from financial institutions and lucrative subsidies from different departments like SCP, TSP, BBDA and FFDA and 21.78% water area had been considered for fish culture under the WBAIFP in the Non-institutional sector where the farmers get subsidy from FFDA and the rest of the total cost of the scheme was to be arranged by farmers themselves from their own resources. It is also observed that activities like loan advancing, training, organising Co-operatives and Fish Production Group, leasing, target setting, subsidies distribution, rehabilitation, benefit of service party Group, minikit distribution, dovetailing were continuing more fluently in the year 1987-88 than other years i.e., from 1980-81 to 1986-87 and considering 20.68% of the total target water area (10,275 acre) by combining the institutional

and non-institutional responsibility in the year 1987-88, which was the highest in the period 1980-81 to 1987-88.

In the process of WBAIFP in the district of West Dinajpur FFDA arranged funds out of World Bank Assistance for training the fish farmers for improved pisciculture and for granting subsidy with the Bank loan to the fish farmers of the district of West Dinajpur during the period 1980-81 to 1987-88 to the extent of :

Training to the Fish farmers	R. 2,55,000
Subsidy for fish culture given to the fish farmers	R. 74,52,425
Bank loan (Institutional Loan)	R. 1,47,80,981
TOTAL	R. 2,24,88,406

Source: FFDA, Balurghat, W.D., 1988

In implementing the 'World Bank Assisted Inland Fishery Project' the 'Fish Farmers Development Agency' meets three basic needs of fish farmers (i) Technical Support, (ii) Extension Support, (iii) Financial support.

The impact of the Co-ordinated extension programmes was reflected in FFDA's achievements towards the fulfilment of the target.

The introduction of inland fisheries programmes under WBAIFP in West Dinajpur district has streamlined most of the bottlenecks in the inland fish cultivation. The programme has got four sub schemes and other subsidiary activities.

Schemes:

- (i) Utilisation of extending culturable tank for intensive pisciculture.

- (ii) Semi-derelict Tank requiring about one feet excavation and culture.
- (iii) Semi-derelict Tank requiring about two feet excavation and culture.
- (iv) Semi-derelict Tank requiring about one metre excavation and culture.

The sub schemes of WBAIFP have been implemented through different number of activities dovetailing with other governmental programmes with the assistance of the Government namely arrangement of institutional finance, training of the fish farmers, formation of Co-operatives and Fish Production Group, leasing, target setting, subsidy distribution, rehabilitation, benefit of service party Group, minikit distribution.

On the whole the 'World Bank Assisted Inland Fishery Project' in West Dinajpur district started with an enthusiastic and concerted effort as in the matter of assessment of total water areas and semi-derelict water areas, fixation of targets both subdivisionwise and blockwise, co-ordination activities of the district fishery cell. Besides efforts to have a comprehensive grasp of the total inland fisheries development plan in the district by different operating and co-ordinating agencies like standing committee of the FFDA, BDOs of the respective blocks, the co-operative societies - central and primary one, FFDA, DFO including nationalised banks and co-operative land development bank, the WBAIFP also initiated measures to make the fisheries programmes a successful one.

To conclude the present analysis, it is found that, before the independence of the country (1947) the fishery activities were very much insufficient in the district of West Dinajpur as no measures were taken from the Government for the development of fisheries. Fish production in the district entirely depended on a few unofficial capture fishery.

Pisciculture activities started officially by the Government since 1951 through the introduction of the 'five year plan' of the country for economic development.

It is also observed that from the year (1951) of introduction of fishery development programmes upto 1979 the fishery activities were poor whereas with the introduction of World Bank Assisted Inland Fishery Project (WBAIFP) since 1980, the fishery development measures received a new life and a maximum water area i.e. 55.28% of the cultured water area were covered during the period 1980-81 to 1987-88 through the WBAIFP. The amount spent on different developmental measures for pisciculture in the district were also insufficient. Approximately on average Rs. 1500 per acre of water area were allotted for the pisciculture in the district of West Dinajpur from 1951 to 1988, whereas maximum cost of a scheme of pisciculture is Rs. 17,760 per acre and the lowest is Rs. 4850 per acre for the period 1980-81 to 1987-88 in spite of cost for other development programmes connected with the pisciculture.

Attempts were made to develop pisciculture activities through WBAIFP in the district of West Dinajpur by arranging massive three-tier training programme, co-operation of the fish farmers, rehabilitation of the fish farmers and other dovetailing activities with the Government in addition to the financial assistance as loan from the banks and lucrative subsidy element.

Scientific and improved pisciculture started with the objective to develop the fishery activities through WRAIFP by connecting the district administration with the rural fish farmers. Maximum target water area were considered for the institutional sector and the remaining were for the non-institutional sector where individuals or rich farmers could get the facilities of improved pisciculture and they also get the facilities of subsidy as an incentive and extensive training facilities. Massive extension programme carried on by the Fishery Extension Officers included an effort to give the suggestions and advices from time to time and also to bring the optimum skill of the fish farmers in the district which would not only help to increase the production of fish but also give scope to the rural people to be self employed through pisciculture and different fishery activities thereby improving their social and economic status, which could be a good machinery to improve the economic condition of the district of West Dinajpur as a whole. The pisciculture and fishery activities could be a good alternative occupation in this district in addition to the first and traditional occupation, 'Agriculture' (1).

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