

BRIEF WRITEUP FOR ANNUAL OPERATING PLAN 2010-11

INTRODUCTION

FISH-1

Horizontal expansion in Agriculture and other allied sectors has been squeezed by land fragmentation; intensification of cultivation is the only left out option. Only in the Fishery sector has the scope for horizontal expansion in Arunachal Pradesh in un-utilized and under utilized water bodies. Considering the prospects in fisheries the whole hearted efforts would be to fulfillment of present fish requirement to the tune of 14000 tones whereas the present production is about 2900 tones only.

The thrust for the current in the Fishery sector would be the Following:

- i) Boost up fish and fish seed production.
- ii) Create opportunities for self employment.
- iii) Generate direct and indirect employment.
- iv) To enter in a) the domestic market b) foreign market for ornamental fisheries and Trout.

As now the people have realized the benefit of Pisciculture, therefore the urgent would be to go for integrated fisheries Development during the year 2010-11 which is expected to bring many fold increase in the fish production level, in spite of the State's hilly topography, cold climate, resource scarcity and inadequate infrastructure.

Topographically, the State Arunachal Pradesh has been delineated into three broad line climate zones based on the altitude ranging from 120 mtr to as high as 3000 mtr. It is estimated that the State has 14030 ha. Of cultivable water area of still water resources and 9339 Km of flowing water resources including the Cold water stream (Subject of revision after getting GIS data through Satellite) with about 150 fish species. In the planning and development approach aquaculture sector is holistic, dynamic and futuristic. The Fish production has registered an increase by 5.76% from 9th plan to 3rd year of Eleventh Five Year Plan. Increase production has registered an increase in its contribution to the State Gross Domestic Product (GDP) and in the Net State Domestic Product (NSDP).

All through humble beginning has been made in the Fisheries sector now to give a proper shape in the development process it has been felt to have a flexible policies and attempt has been made in the following paragraphs to describe the specific scheme/programme.

Direction & Administration

Human resource or manpower is the basic minimum requirement of any organization to work for the destined goal and accelerate the process of development and its fruit to the people in general and the beneficiaries/fishers in particular. Since Bifurcation of the Department from the mother department Agriculture the activities related to fisheries have increased many folds and is managed with minimum staff compared to vast geographical area and for many years no manpower at any level have been appointed or any post creation has taken place. Literally speaking the department is under staff and since the departmental activities have been extended to all the Districts and even very far flung areas its management must be taken care of and hence the urgent need of the hour is to create another 38 Nos. of posts both administrative and supporting as per the designation and pay structures here under.

Fishery Guard:

Arunachal Pradesh is having vast potential in the form of lotic and lentic water bodies in the different topographic of the State. The water bodies having rich biodiversity and rare fish species. In this respect for protection and conservation of ecosystem Fishery legislation has been enacted of late. The Department is having inadequate staff for proper vigilant of these resources. As such to protect pristine water bodies mainly rivers/mahals and many high altitude water bodies Fishery Guard is very essential at this juncture.

GROUP-B

- | | |
|---|------------------------------------|
| 01. Dist. Fisheries Dev. Officer-
(PB-2 Rs. 9300-Rs. 34,000/-GP Rs.5400) | 3 Nos
(D/Valley/Anjaw/K,Kumey) |
| 02. Fishery Biologist
(PB-2 Rs.9300-34,000/-GP Rs. 5400) | 1 No
(HQ) |
| 03. Fishery Officer
(PB-2 Rs. 9300-Rs.34, 000/-GP Rs. 4200) | 3 Nos.
(D/Valley/Anjaw/K,Kumey) |
| 04. Statistical Investigator
(PB-2 Rs. 9300-Rs.34, 000/-GP Rs. 4200) | 2 Nos.
(Directorate, Itanagar) |

GROUP-C

- | | |
|--|-----------------------------------|
| 01. Upper Division Clerk
(PB-1 Rs.5200-Rs. 20,200-GP Rs.2800) | 3 Nos
(D/Valley/Anjaw/K,Kumey) |
| 02. Fishery Demonstrator
(PB-1 Rs. 5200-Rs. 20,200-GP Rs. 2800) | 5 Nos
(D/Valley/Anjaw/K,Kumey) |
| 03. Lower Division Clerk
(PB-1 Rs. 5200-Rs. 20,200-GP Rs. 2800) | 3 Nos
(D/Valley/Anjaw/K,Kumey) |

GROUP-D

- | | |
|--|-----------------------------------|
| 01. Peon
(IS Rs. 4440-Rs. 7440/-GP Rs. 1300) | 3 Nos
(D/Valley/Anjaw/K,Kumey) |
| 02. Fishery Guard
(IS Rs. 4440-Rs. 7440/-GP Rs. 1300) | 10 Nos. |

Contingency Staff:

To cope with the works, the existing contingent staff (39 nos.) are inadequate to meet up the requirement of the newly created districts. As such 10 nos. contingent staff has been proposed for the current year 2010-11.

Transport

It clearly denotes the means of communication. With the expansion of the department, developmental activities have also been increased leap and bound. To keep pace with such expansion of activities and to accelerate the momentum of development, means of transportation is of quite significance. For successful execution/implementation of all the developmental projects/Schemes being undertaken in different districts its success and sustainability depend on forward and backward support/linkages in addition the prime criteria being the effective monitoring rights conceptualization to grounding / implementing and subsequently follow up action. For all this easy mobility of man and material is a criteria factor for which mechanized mode of transportation is must to continue the tempo of development in this sector. It is proposed to purchase 3 more LMV's against East Kameng, Papum Pare and for Lower Dibang Valley. An amount of Rs. 49.50 Lakhs have been proposed for this current financial year 2011-12 for purchase of 3 new LMV & up-keeping of existing 27 nos. vehicle as well as recurring (POL) expenses.

Building

To provide congenial homely atmosphere in the working places where an employee can be at ease and comfort with his or her family and able to discharge duties without being felt lonely and in companion of family. Last year 5 such residential / quarter have

been taken up but due to paucity of fund which have to be spilled over to this financial year 2 new buildings are proposed in this current financial year against West Siang and Papumpare districts for which an amount of Rs. 40.00 Lakhs have been proposed for this current financial year 2011-12 (5 nos. spill over Rs. 24.00 lakhs & 2 nos. new buildings at Darak & Kimin Rs. 16 Lakhs).

Minor Works:

A number of residential as well as other non-residential buildings like office building, stores, garage, hatchery building etc. have been constructed way back for the past few years due to meager allocation proper up-keepment of such assets of department so created could not be taken up and due to this reason most of the assets are in a dilapidated condition which require immediate repairing / maintenance before its gets completely damage against almost all Districts. An amount of Rs. 15.00 lakhs have been proposed during this current financial year 2011-12.

Misc. and other supporting Schemes:

It has been proposed to clear land revenue of some of the Govt. Farms, Lakes, Directorate Office Complex, bore-well with iron flushing filter for the Directorate Complex and for web-site development & procurement of office equipments etc. an amount of Rs. 11.50 lakhs has been kept as a provision in this current financial year 2011-12.

Construction and maintenance of fish farms:

Farms are the lifeline for the developmental activities related to aquaculture. Most of the farms in Govt. sector have been established with sole motto for production of quality fish seed as a demonstration unit. Most of the have infrastructure for production of quality fish seed and a few of them are equipped with modern facilities for fish seed production like the eco-hatchery. The farms are the nuclei of the aquaculture related activities in the districts to maintain the tempo of the developmental activities its sustainability and continuance is must. It also acts as a hub for all kind of scientific experimentation seed and table fish production and above as a demonstration unit, since the private sector is still lagging in such type of infrastructure. For maintenance of 31 nos. Govt. fish farm in 15 districts including construction of retaining wall and gate etc. at Gumto an amount of Rs. 40.00 lakhs have been proposed during this current financial year 2011-12.

Paddy cum Fish Culture:

This type of culture practice has been known to the people of the Apatani Plateau long back is one of the most popular practice/Scheme in the plateau in particular and State in general. A part from well established culture in different districts and with the coming up of more and more minor irrigation channel more areas are brought under WRC. Since the people knows of fish culture in paddy fields its time proven/tested technology and outcome and income aptitude for such culture has gained momentum and are coming forward to adopt the same. An amount of Rs. 3.00 lakhs have been proposed in this year's AOP against East Kameng & Papumpare District.

Distribution of Fish Seed:

In the recent past, support to beneficiaries was provided under this scheme and since due to paucity of fund the scheme was discontinued. Most of the beneficiaries/fishers are economically not sound enough to procure fish seed in spite of being having a fish pond and ignorance about quality fish seed and its availability. Since quality fish seed is one of the most vital inputs in pisciculture which determines the outcome because of their ignorance they are exploited by the unscrupulous private traders (handiwalas) and result in less production and low income. Feedback receipt from the ground level and on critical analysis it is felt necessary to re-introduce this scheme and extend support to the fishers who have undertaken renovation of ponds at their own with assistance of fish seed enabling them to manage an amount of Rs. 5.65 lakhs have been proposed in this Year's AOP to meet up the expenditure.

Pilot project on Giant Freshwater Prawn (M Rosebergii)

The culture of giant freshwater prawn (M Rosebergii) is a lucrative venture and is being practiced in isolation (mono-culture) or with carps (poly-culture) through out the Country and is practiced either as intensive or semi-intensive. Because of its high market demand and value fishers get remunerative prices in the market. The State has a suitable agro-climatic condition to adopt such culture especially in the lower belt where physico-chemical parameters are quite conducive. It is therefore been proposed to study and document its adaptability growth, production and income purely as pilot project and after considering all factors the same could be extended to other places of the State feasible for such culture. Provision for an amount of Rs. 1.00 lakhs in this year's AOP have been proposed.

Pilot project on ornamental fish culture & propagation:

Ornamental fish culture is gaining popularity throughout the world. Awareness about this farming activity coupled with the interest of the hobbyist around the world is sure to address rural unemployment. The State is endemic to various ornamental fish spp. And are found in wild sources. The people here to collect and keep the literally colored fishes in aquarium as hobby and for beatification. The breeding techniques its adaptability to confinement compatibility etc. of these endemic spp. Is not well documented and hence requires proper documentation as regard to their adaptability in confine areas breeding habits, standardization of culture and breeding techniques and documentation of the same future extension to other places of the State. Hence it is proposed as a pilot project with provision of Rs. 2.50 Lakhs.

GIS/Remote sensing images:

Provision for procurement of satellite images for detail study and analysis of resources of two districts basing which further strategy for systematic and judicious exploitation of the available resource for the benefit of the district. An action plan in this direction is in the offing. To meet up the expenditure an amount of Rs. 2.00 lakhs have been proposed in this year's AOP.

Reclamation of beels/lakes etc:

A number of beels and lakes have been identified/located in high, mid and in the lower belts of the State. The beels and lakes located are either infested/choked with rich/luxuriant growth of aquatic weeds/vegetation restricting their effective area to a minimum. A vast area of such resource is yet to be claimed or new supportive intervention is required for its existence. In spite of the resource crunch and against all odds significant areas of these resource have been reclaimed and brought under systematic scientific culture/ exploitation and management, while areas are still needs intervention/attention ensuring sustainability of the reclaimed portion is of paramount importance approached with new addition of newly reclaimed areas. Attaching less importance for its reclamation and up-keepment most of these resource are in the threshold of being encroached followed by habitat destruction. Once reclaimed and brought under systematic management will definitely enhance the table fish production and ensures its availability. Above all it will be an asset of the department. An amount of Rs.9.00 lakhs have been proposed to meet up all such expenses during current financial year 2011-12.

Cold Water Fisheries:

Importance of cold water fisheries of late has been recognized as a potential source of sustained income coupled with tourism and recreational activities. The State is blessed with immense potential of cold water resource in the form of lakes, river streams etc. especially in the higher reaches. To improve and strengthen the culture techniques of cold water species sustained efforts needs to be put in to bring it at par with other advanced state in such type of culture specially Jammu & Kashmir, Himachal Pradesh, Uttrakhand and Sikkim. Literally speaking sector is still in infancy and requires tremendous efforts and budgetary support to revamp the existing infrastructure facilities of Govt. farms, hatcheries, raceways etc. and constant refining of culture and breeding techniques and dissemination of proven techniques of culture and rearing practices purely on scientific line needs to be encouraged for production of quality trout fish. The people in general and the fishers in particular have

accepted the concept of eco-tourism were both culture & capture system needs to be developed for which a large number of quality fish seed will be required which is supposed to be supported by the established farms and hatcheries in Govt. sector. An amount of Rs. 6.00 lakhs have been proposed to meet up all such expenses during current financial year 2011-12.

Fisheries Extension & Training Programme:

The State as far fisher flock is concerned are nontraditional and needs basic knowledge and training for up-keepment and culture related activities. Further, vast natural resources of the State has been exploited using all available harsh method there by destroying all important breeding ground and habitats and threatens are very existence of fishes and sustainable fishery. So as to develop sustainable fishery mass awareness camping symposia, seminars will be of beneficial for motivating people to preserve/conservate the fish germplasm in its natural habitats. To meet up the expenses an amount of Rs. 6.00 lakhs proposed during this current financial year 2011-12 to meet the requirement of Stipend/ Publication/ advertisement etc.

Pearl Culture:

Pearl is a natural gem and is produce by mollusk. Demand of pearl in India and elsewhere is increasing thereby creating a huge gap between demand & supply. Supplies from nature have decreased due to over exploitation & pollution. India is importing substantial amount of culture pearls every year from the international market to meet the domestic demand. With the adoption of the culture technology of pearl developed by CIFA, Bhubaneswar. Pearl culture from water mussels which are widely distributed in freshwater habitat is possible. With the induction of this culture practice the beneficiaries would be able to produce this varieties gem which will not fulfill domestic demand but can export them to other National or International market earning a handsome return as well as substantial revenue to the State ex-chequer.

Initially it has been proposed to introduce its culture as a pilot and will be encouraged to adapt this culture practice after proper documentation of its adaptability in this agro-climatic condition.

Hence an amount of Rs. 50 lakhs have been proposed to start with the culture in the State for the first time.

Rejuvenation of existing old fish pond:

A large no. of ponds has been constructed under various beneficiary oriented programmes from different from different schemes till inception/propagation of aquaculture in the State. Altogether 3029 ha of water area have been developed till date and 5470 nos. of ponds constructed covering 4500 nos. of beneficiaries. A sizeable no. of ponds have either been partially damaged due to siltation, flood, landslide because of excessive rains been faced by the State and Up keep-ment/renovation could not be taken up by the beneficiary because of economic condition.

These ponds with little efforts and investment could be best utilized/put into use for continuing culture in these ponds and enhancement of fish production in the State.

Hence an amount of Rs. 48.30 lakhs have been proposed to rejuvenate 30 ha of ponds covering 200 to 250 beneficiaries throughout the State for the first time.

Providing of Soil & Water testing kits:

Soil and water quality determines the quantifiable impact of production and productivity. Various parameters of both soil and water influence the growth and fish health. Except for few traditional methods to determine soil & water chemistry no proper scientific methods is in practice till date. Because of non availability of scientific analyzing method, severe setback in production of fish health had been faced by the pisciculturist throughout the State thereby demoralizing and making them less interest in Pisciculture. Once the analyzing kits are made available it will act as a catalyst and will definitely help to achieve the desire production and productivity. Over and above it will help in proper management and intervention as and when required.

Hence an amount of Rs. 12.00 lakhs have been proposed during current financial year to procure 24 nos. of such testing kits for 12 Districts of the State which can be used/utilized centrally for analyzing soil & water chemistry in the nest interest of pisciculturist.

Growth impact study of indigenous species in existing Govt. farms and subsequent introduction in Pond Culture and ranching in river system and Propagation:

National Commission on agriculture stated that “there was general decline in the Mahaseer fishery due to indiscriminate fishing of brood and juvenile fish and adverse affect of river valley Projects”. The major fishery in the upland mainly consists of very popular snow trout (*Schizothorax richardsonii*) and Mahaseer. The rapid overall development and ever increasing population lead to anthropogenic activities resulted in disturbing the fragile eco-system and fish fauna. To replenish the fish diversity – existing scope of these coldwater species, seed ranching in selected water bodies (rivers/streams/lakes etc.) is required on priority basis. Artificial propagation and seed production from this stocks raised in the farm conditions are to be standardized for future cultivation.

Hence it is proposed to collect the seed from the wild sources rearing them up to standard fingerlings size and releasing them back to their natural habitat. Efforts for artificial fecundation and hypophysation in captive / farm condition also be tried upon and standardizing the culture technique for subsequent propagation to other parts of the State.

Thus an amount of Rs. 6.00 lakhs has been kept for the project covering 6 existing Govt. fish seed farm as per feasibility.

Baseline survey of Lakes / Rivers stretches for conservation effort:

The State has enough lakes / hill streams and river line resources which abounds in economically important coldwater fish species. All these natural resources are not yet properly surveyed. There is a need for proper survey and documentation of hydro-biological parameters including flora and fauna and to identify and ascertain probable stretches for development of fishery in these natural resources. Identification of the probable breeding ground of fishery in these natural resources. Identification of the probable breeding ground of fishes, angling spot, socio-economical and ethnic demographic composition, religious taboos associated etc.

Hence an amount of Rs. 9.60 lakhs have been proposed to meet the minimum requirement of such baseline surveys covering all 16 districts of the State.

Creation of Central facilities for gear for the use of fishers:

Most of the beneficiaries because of their poor economic background could not even afford gears required for harvesting of their ponds because of high cost of such gears (viz. drag net, nursery net, and cast net, different hapas). Procuring this paraphernalia at his or her own is sometimes not economical considering the size / area which he or she may be having / holding. Most of the pisciculturist in the State has backyard ponds with an average area ranging between 0.1 to 0.5 ha and in exceptional cases up to 2-3 ha. Moreover round the year fishing operation are still not continued / carried out even in larger areas. Fishing operation in open water bodies is also occasional / seasonal rather round the year. Community fishing is prevalent in open water bodies predominated by the tribal population of the State.

Pisciculturist sometimes are reluctant to harvest their ponds owing to non availability of harvesting gears with them or within their locality thus adversely affecting the production and availability of fish in their area in particular and the State in general.

It is therefore proposed to create central facility with required harvesting gears/ paraphernalia so that they could avail this facility as and when required on use of return basis.

Hence an amount of Rs. 12.00 lakhs have been proposed to create such facilities during current financial year covering all 16 district of the State.

Stocking of upland / high altitude lakes:

The State has a number of upland / high altitude lakes with rich population of indigenous fish species and thriving fishery. All these resources are exploited either for domestic or commercial purposes without being replenished thus drastically reducing the fish

population and fishing activities. Because of exploitation without being replenished, in near future all these resources will be devoid of fish population and disturbed ecology.

With massive stocking of these resources with endemic species it is proposed to replenish the dwindling fish population / stock and restore its ecology. Further on accomplishment of the target and objective the same could be utilized for eco-tourism (sport fishery, fish watching etc.) in liaison with the tourism department).

Hence an amount of Rs.2.10 lakhs have been proposed during current financial year to achieve the target of stocking 6 nos. of such high altitude Lakes as per feasibility.

Centrally Sponsored Scheme (CSS):

Major chunk of the budget provision / support from the State sector goes for direction & administration left with a meager amount to manage all the developmental activities and to add with more beneficiary oriented scheme. Lot of fund is required to undertake such activities for which alternative source of funding has become order of the day to exploit and to make the use of all available resources fund sustainability is paramount significance and hence the Centrally Sponsored and Central Sector Scheme has come as savior and source of alternative funding to avail this opportunity number of beneficiaries oriented scheme have been proposed to be taken up for funding under this sponsorship as under:

- a) Development of fish ponds and tanks on 75:25 ratio (Central : State)
- b) Training and extension on 80:20 ratio (Central : State)
- c) Inland capture Fisheries on 75:25 ration (Central : State)
- d) National Scheme of Welfare of Fishermen on 75:25 ratio where 25% is as beneficiaries contribution

Accordingly State matching share amounting to Rs. 101.85 lakhs have been exclusively proposed in this current financial year 2011-12 against expected Central assistance has been exclusively proposed.

Rashtriya Krishi Vikash Yojna (RKVY):

Concerned by the slow growth in agriculture and allied sectors the National Development Council resolved to boost up its growth with special assistance in the form of Central Assistance Scheme (RKVY). The council resolved that the developmental strategies must be reoriented to meet the needs of the farmers to achieve 4% annual growth. During the year an amount of Rs. 118.80 lakhs have been approved by the SLSC for the current financial year 2011-12 for taking up rejuvenation of existing fish ponds & establishment of portable hatchery with rearing facilities in private sector, but allocation has yet to be received.

Special Plan Assistance (SPA)

Under Special Plan Assistance (SPA) development / creation of infrastructure and strengthening of the available existing infrastructure is taken up so as to facilitate all round development for the benefit of the State as a whole. Under this a number of projects benefiting the department have been taken up earlier and proposed to be taken up this year also which in terms has accelerated and will accelerate the pace of development in this sector. An amount of Rs. 800.00 has been proposed for current financial year 2011-12.

Strengthening of Database & Networking in Fisheries Sector:

Database as for many a mere statistical juggleries, but is a vital significant as far as planning and formulation of strategies vision plan and policies of the organization is concern. It is also yardstick to determine the performance of any organization at a given point of time. Database of a organization needs constant refining and up-dating so as to keep track of the various activities being undertaken its data's impact etc. accurate or near the accuracy database is reliable / dependable and helps in highlighting the strength weakness, lacunas, deficiencies of organization and helps in better management in planning and helps in promptly redressing its deficiencies. Database of the department is infancy and needs to be nurtured to developed the grow keeping with pace with the activities which have expanded many folds. Hence the proposal kept especially to overcome the deficiency and to improve upon and

strengthening its overall performance. An amount of Rs. 24.50 lakhs proposed in this current financial year under 100% Central Assistance towards establishment expenses.

Post harvest infrastructure:

Mere emphasizing production is not justifiable unless a network of post harvest structure needs to be developed for marketing of their products enabling the beneficiaries to get a remunerative return. A chain of activity involving its proper storage handling and display and hygienic marketing is equally important as production. Beneficiaries will definitely put on their hard work and increase production if they have better post harvest management facilities which will face them a handsome return and avoid spoilage of their product. An amount of Rs. 50.00 lakhs has been proposed under 100% Central Assistance for establishment of 1 unit Post harvest infrastructure.

ANNUAL OPERATING PLAN 2011-12

1. 11 TH PLAN (2007-12) PROPOSED OUTLAY	: RS. 3086.00 LAKHS
2. APPROVED OUTLAY 2010-11	: RS. 228.00 LAKHS
3. ACTUAL EXPENDITURE 2010-11	: RS. 235.50 LAKHS
4. APPROVED OUTLAY 2011-12	: Rs. 429.00 LAKHS
5. SCHEMEWISE BREAK-UP OF ALLOTTED OUTLAY 2011-12	

I) DIRECTION & ADMINISTRATION

A) WAGES	: Rs.22.00 LAKHS
B) POL	: Rs. 15.00 LAKHS
C) MAINT. OF VEHICLE	: Rs. 15.00 LAKHS
D) PURCHASE OF NEW VEHICLE	: Rs. 19.50 LAKHS
E) MINOR WORKS	: Rs. 15.00 LAKHS
F) OFFICE EXPENSES	: Rs. 10.00 LAKHS
G) OTHER CHARGES	: Rs. 4.00 LAKHS

TOTAL : Rs. 100.50 LAKHS

II) **ONGOING SCHEMES** : Rs. 110.65 LAKHS

III) **NEW SCHEMES** : Rs. 116.00 LAKHS

IV) **CENTRAL SPONSORED SCHEME (STATE SHARE)** : Rs. 101.85 LAKHS

GRAND TOTAL : Rs. 429.00 LAKHS