

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.

Dist. Fisheries Dev. Officer:

Creation of 4 (four) posts of DFDO with a supporting staff is essential to keep the tempo of development activities for the 4 (four) districts. They are Kurung Kumey, Anjaw Dibang Valley and Longding. The requirement of posts is shown below.

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

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| 01. Dist. Fisheries Dev. Officer-
(PB-2 Rs. 9300-Rs. 34,000/-GP Rs.5400) | 4 Nos
(D/Valley/Anjaw/K, Kumey, Longding) |
| 02. Fishery Officer
(PB-2 Rs. 9300-Rs.34, 000/-GP Rs. 4200) | 4 Nos.
(D/Valley/Anjaw/K,Kumey, Longding) |
| 03. Statistical Investigator
(PB-2 Rs. 9300-Rs.34, 000/-GP Rs. 4200) | 2 Nos.
(Directorate, Itanagar) |

GROUP-C

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| 01. Upper Division Clerk
(PB-1 Rs.5200-Rs. 20,200-GP Rs.2800) | 4 Nos
(D/Valley/Anjaw/K, Kumey, Longding) |
| 02. Fishery Demonstrator
(PB-1 Rs. 5200-Rs. 20,200-GP Rs. 2800) | 7 Nos
(D/Valley/Anjaw/K, Kumey, Longding) |
| 03. Lower Division Clerk
(PB-1 Rs. 5200-Rs. 20,200-GP Rs. 2800) | 4 Nos
(D/Valley/Anjaw/K, Kumey, Longding) |
| 04. Driver
(PB-1, Rs. 5200-Rs, 20,200-GP Rs. 2800) | (Anjaw, K.Kumey) |

GROUP-D

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| 01. Peon
(IS Rs. 4440-Rs. 7440/-GP Rs. 1300) | 5 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 (43 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. As such an amount of Rs. 29.00 Lakhs have been proposed for this current financial year 2012-13 for up keepment of existing 30 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 2 nos of residential building / quarter have been constructed and 5 (five) nos. new buildings are proposed in this current financial year against Directorate of Fisheries, Itanagar and Jairampur in Changlang district for which an amount of Rs. 44.30 Lakhs have been proposed for this current financial year 2012-13. (4 nos of Ty-II double storied quarter at Directorate of Fisheries, Itanagar and 1 no. Ty-III quarter at Jairampur in Changlang District.)

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. 20.00 lakhs have been earmarked during this current financial year 2012-13.

Misc. and other supporting Schemes:

It has been proposed to construct 2 nos. of boundry wall, extension of water supply Phase-II within the Fishery complex, creation of official website etc. for prevention of encroachment, providing water supply to the staff residing within the office complex and for easy accessibility of information regarding department an amount of Rs. 16.00 Lakhs has been kept as a provision in this current financial year 2012-13.

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. 60.00 lakhs have been proposed during this current financial year 2012-13.

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. 4.00 lakhs have been proposed in this year's AOP 2012-13 against East Kameng , Papumpare and Lower Subansiri 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 supply of fish seed free of cost enabling them to stock their

renovated fish ponds for which provision for an amount of Rs. 11.40 lakhs have been proposed in this year's AOP to meet up the expenditure for procurement of 9.81 Lakhs of quality fish seeds covering 90.1 ha water area.

GIS/Remote sensing images:

Provision for procurement of satellite images from NRSA Hyderabad for detail study and analysis and resource mapping of districts using remote sensing techniques basing which further strategy for systematic and judicious exploitation of the available resources for the benefit of district can be worked out. An action plan in this direction is in the offing. To meet up the expenditure an amount of Rs. 5.00 lakhs have been proposed in this year's AOP 2012-13.

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/chocked 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.12.00 lakhs have been proposed to meet up all such expenses during current financial year 2012-13.

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. 8.00 lakhs have been proposed to meet up all such expenses during current financial year 2012-13.

Fisheries Extension & Training Programme:

The State as far as fish farmer/fisher flocks are concerned in non-traditional and need basic knowledge and training for up-keepment and culture related activities. So as to develop sustainable fishery, mass awareness campaign symposia, seminar etc will be beneficial for motivating people to diversify into other culture techniques/technology and to preserve / conserve the fish germplasm etc. innovative schemes needs to be introduced into the system to give a new lease of life to this sector. Presently carp centric culture is being practiced throughout the State. With the opening of this sector and taking development to the door step of the farmers many new emerging opportunities has opened up which needs to be tapped/exploited to its optimum. Techniques/technology being practiced in other developed States needs to be introduced into the state with refinement suiting local condition which can best be obtained through interaction and sharing of techniques with the institutes, researchers, entrepreneurs, farmers etc. through symposia,

seminars exhibition and melas. Further a lot of progress in aquaculture development since its inception in the state has been achieved/made. A large number of progressive fish farmers and entrepreneurs have established themselves through aquaculture and many have received State as well as national recognition but could not be highlighted due to want of proper platform. Because of this the general masses are ignorant about the activities of the department and the benefits derived by the farmers from this sector. Fish festival, Krishi mela will bring all the stake holders and facilitate to showcase different activities, programmes and schemes techniques technology through this platform and most importantly sharing of knowledge, experience expertise etc. an amount of Rs.25.00 lakhs under publication/advertisement/exhibition (Krishi Expo Cum Mela) and amount of Rs. 16.00 lakh against awareness programme symposia/seminar/fish festival have been proposed to meet up the expenses during this current financial year 2012-13.

Fishery Research:

The State has large varieties of sport and food fishes and a bounce equally with diverse numbers of ornamental fish spp. Through a number of them have been identified and taxonomically classified still there are more to be identified and scientifically classified. More over most of these spp. Are found only in wild and still in dark about their physiological reproductive biology feed and feeding habit etc. efforts are on to domesticate them and introduce these spp. In the culture system for which study of all these characters is of immense important to develop standard protocol of breeding, food and feeding and physiological characters. More with their rapid pace of development and changing weather due to global warming these spp. Have become vulnerable to different parasitic bacteriological and viral diseases severe pollution leading to habitat destruction and must mortality which also needs to be taken care of and suitable prophylactic measures developed and adopted for enhancing production and understanding of soil texture and nutrient profile and also limnological parameters are of paramount important which needs to be analyzed during pre and post stocking management. Innovative techniques with reference to local condition needs to be developed and standardized to minimize post harvest losses to the beneficiaries/ farmers for which extensive and continuous research on all these aspects is required. Hence an amount of Rs. 14.00 lakhs have been proposed to carry out all these activities during the current financial year 2012-13.

Poly-Culture of Labeo bata / Puntius sarana along with Carps:

These are the warm water fish species which can be suitably be in-corporate into the culture system along with carps in the foot hill belts of the State. These fish species having high market demand and high value. These fish species could well cultivated in the foot hill leading to crop diversification and generating remunerative income to the fish farmers. Hence an amount of Rs. 8.00 Lakhs have been proposed to carry out all these activities during the current financial year 2012-13.

Culture of Mahseer in the earthen raceways:

Mahseer is one of priced spp. Both food and sport. It is an indigenous fish and distributed in the mid/high belt of the State. Once this spp. used to constitute majority of the fish catch but of late has dwindled to almost few numbers in the catch constituent. Successful attempts have also been made to culture these spp. Along with carps in both Govt and private fish ponds. From the point of conservation and its importance as both food and sport, these spp. Can be cultured in earthen raceways employing latest techniques in intensive form. In future it could be developed with assistance from other funding agencies by dovetailing of scheme for promotion of sport fishery/eco-tourism enabling handsome earning by the farmer sustaining his economic condition. Hence an amount of Rs. 10.00 lakh have been proposed to carry out these activities during the current financial year 2012-13.

THIRTEENTH FINANCE COMMISSION

Construction of new ponds & rejuvenation of existing old fish pond & conservation/preservation of indigenous fish species.

During this current financial year under Thirteenth Finance Commission against Forest Related Grants assistance have been provided to the department for construction of new ponds and rejuvenation of existing old fish pond. It is proposed to develop 25 ha of new water bodies in private sector along with rejuvenation of 20.96 ha of existing dormant fish ponds of beneficiaries for augmenting fish production in the state and for all round socio-economic development of farmer. A vast resource available for development of aquaculture through ponds and tanks remains still to be exploited. If these are brought under systematic and scientific form of aquaculture this not only will enhance fish production but equally benefits the farmers in terms of remuneration and will ensure protein security to all people. 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.

Indigenous fish species are the states wealth Rampant killing, heightened anthropogenic activities and drastic change weather condition due to global warming and severe pollution resulting in habitat destruction threatening its very existence if allowed to continue unabated a time will come when it will all become the past. So as to maintain sustainability in fishery development immediate intervention for its containment is necessary for preservation/conservation of these species through mass awareness campaign and other conservation measures.

Hence an amount of Rs. 120.00 lakhs have been proposed to construct new ponds and rejuvenation of existing old fish pond in all 17 districts of the State during this current financial year 2012-13.

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. 4.30 lakhs have been proposed during current financial year 2012-13 to procure 10 nos. of such testing kits for 10 Govt. farms of the State which can be used/ utilized for analyzing soil and water chemistry of these farms as and when required.

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 ecosystem 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 upto 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. 8.00 lakhs has been kept during the current financial year 2012-13 for the project covering 8 existing govt. fish seed farm as far feasibility.

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.6.00 lakhs have been proposed during current financial year 2012-13 to achieve the target of stocking 12 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
- e) National Scheme of Welfare of Fishermen (Fishermen's group accident scheme) @ 75:25 ratio where 25% is State's contribution.

Accordingly State matching share amounting to Rs.83.00 lakhs have been exclusively proposed in this current financial year 2012-13 against 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.387.30 lakhs have been approved by the SLSC for the current financial year 2012-13 for taking up rejuvenation of existing fish ponds & establishment of portable hatchery construction of new ponds for commercial farming & training and exposure of beneficiaries.

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. 1000.00 has been proposed for current financial year 2012-13.

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. 26.00 lakhs proposed in this current financial year 2012-13 under 100% Central Assistance towards establishment expenses.

ANNUAL OPERATING PLAN 2011-12

1. 12TH PLAN (2012-17) PROPOSED OUTLAY : RS. 2900.00 LAKHS
2. APPROVED OUTLAY 2011-12 : RS. 429.00 LAKHS
3. ACTUAL EXPENDITURE 2011-12 : RS. 429.00 LAKHS
4. APPROVED OUTLAY 2012-13 : Rs. 556.60 LAKHS
5. SCHEMEWISE BREAK-UP OF ALLOTTED OUTLAY 2012-13

I) DIRECTION & ADMINISTRATION

A) WAGES : Rs.24.60 LAKHS

B) POL : Rs. 15.50 LAKHS

C) MAINT. OF VEHICLE : Rs. 13.50 LAKHS

D) MINOR WORKS : Rs. 20.00 LAKHS

E) OFFICE EXPENSES : Rs. 20.00 LAKHS

F) OTHER CHARGES : Rs. 8.00 LAKHS

TOTAL : Rs. 101.60 LAKHS

II) ONGOING SCHEMES : Rs. 159.70 LAKHS

III) NEW SCHEMES : Rs. 92.30 LAKHS

IV) CENTRAL SPONSORED SCHEME
(STATE SHARE) : Rs. 83.00 LAKHS

v) TFC(FOREST RELATED GRANT) : Rs. 120.00 LAKHS

GRAND TOTAL : Rs. 556.60 LAKHS