Appraisal & Development of Fisheries in Himachal Pradesh

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A workshop entitled 'Appraisal & Development of Fisheries in Himachal Pradesh' was organized and held at Bilaspur under the chairmanship of Sh Tarun Shridhar, Principal Secretary (Fisheries) to the government of H.P. Besides Chairman, the meet was participated by Sh Anupam Kashyap, Additional Secretary (Fisheries) to the government of Himachal Pradesh, Dr. Ajay Sharma, Deputy Commissioner, Bilaspur, Sh. Pradip Thakur, Additional District Magistrate, Bilaspur, Dr. Gopi Reddy D, Senior Executive Director, NFDB, Hyderabad, Dr. Feroz Khan, Scientist Incharge, CIFRI Unit, Bangalore, Sh. B.K. Mishra, Managing Director, FISHCOPFED, New Delhi, Sh. Rajiw Kumar, Director Fisheries, Jharkhand, Dr. N.N. Panday & Dr. S Chandra, Senior scientists & Dr. R.L. Haldar, Technical Officer, all from Directorate of Coldwater Fisheries Research, Bhimtal-Uttarakhand, Sh. K.S. Sandhu, Chairman, Punjab Fish Farmers Association, Dr. Kuldip Kumar, former Advisor-cum- Director Fisheries Himachal Pradesh, Sh. K. B. Ralhan, Ex- Deputy Director-cum-Secretary General Himachal Angling Association, Palampur, all the Deputy/Assistant Directors and Fisheries Officers of the state's fisheries department were present in this important meet. Members from Trout Grower's Association, Himachal Trout Angling Association, were specially invited for contribution of their inputs and views.
Workshop was split-up in 4 technical sessions as under:

1. Reservoir Fisheries- Status, Scope & Development;
2. Trout Aquaculture- Status, Scope & Development;
3. Carp Aquaculture- Status, Scope & Development;
4. Riverine Fisheries- Status, Scope & Development.

During each session, theme papers on focal issues were presented by subject specialists and representatives from Trout Growers Associations, Angling Associations also presented their papers/ views, in the workshop.

After two days intense interaction and discussions in the workshop, with new and divergent views among the participants, the following recommendations were firmed up for development and promotion of fisheries of hill states particularly Himachal Pradesh.

**Reservoir Fisheries Development:**

- With a view to increase fish production of state reservoirs, Cage Fish Culture was identified as quite high potential area, as such may be undertaken in state reservoirs on experimental basis with Pangasius sutchi, Mirror carp or any other non predatory species;
Taking in view the menace of logs/trees etc. in Chamera reservoir, causing great technological problem for fishing in the water body, it was decided to take up the issue with Central Institute of Fisheries Technology (CIFT) Cochin for tackling the problem;

A decision was taken to initiate more welfare schemes for the benefit of fisherfolk, having component from FISHCOPFED, Government of India as well as fishers;

It was decided to implement National Fisheries Development Board (NFDB) funded Mobile Fish Market Vehicle Scheme, in the state as it would benefit both producers & consumers, promoting sale & availability of fish;

Presently, the gears being used in state reservoirs, since seventies are effective only upto the depth of 5 mtrs against the reservoir’s depth ranging from 30-80 mtrs, as such a decision was taken to take up the matter with Central Institute of Fisheries Technology (CIFT) for improvisation of gears so that deeper layers of water could also be optimally exploited.

**Trout Aquaculture Development:**

Marketing, feed subsidy, transportation subsidy & Insurance, were identified as the main impediments in the expansion of trout farming in private sector. A decision was taken for initiation of efforts for
resolving the issues at department/government level.

✔ Cost & easy availability of trout feed were highlighted as main constraints of trout growers in the workshop. A decision was taken to setup more feed mills and evolve cheap pelletized feed with locally available ingredients in collaboration with Directorate of Coldwater Fisheries Research (DCFR)-Bhimtal.

✔ In order to boost trout marketing, it was decided to provide Mobile Fish Market vehicle for trout growers association for intensifying publicity efforts by holding trout fairs, clutching Hotel Industry and by using Electronic Media etc.

✔ State trout farms may be expanded ensuring departmental water supply system so that adequate seed be produced for catering the need of growers as well as ranching programme. Further in view of proximity of long distance and concentration of growers in Bharmour & Pangi areas of Chamba district, it was decided that special efforts be made to identify sites, for the construction of Model trout seed farms, on the analogy of trout farm Patlikuhal/Kashmir.

✔ It was decided that a high level delegation must visit Kashmir to study the design & functioning of Trout farms & hatcheries, feed mill etc. constructed by Jammu & Kashmir Fisheries Department.

Carp aquaculture:

In view of poor growth rate due to genetic degradation of Mirror carp, main culturable fish in semi temperate waters of the state, it
was decided to replace it with quick growing disease free strain like Hungarian strain of Common carp and build a rich brood stock (Brood Bank);

✓ Aiming at species enhancement of culturable fishes, more fish species in coldwater be screened in order to test their amenability of survival, growth and propagation in coldwater pockets of the state with the help of Directorate of Coldwater Fisheries Research;

✓ In view of porosity, due to low clay content in the soil, seepage and water retention were highlighted as serious problems standing in way of promotion of aquaculture. It was decided to take the services of National Institutes/consultants, in resolving these problems;

✓ Himachal being a state with undulating terrain, complex topography, it was stressed in the workshop that the norms under Fish Farms Development Agency of providing subsidy on hectare basis be revised to unit basis for hill states.

✓ It was also desired to send fish farmers/staff members on exposure visits/trainings.

**Riverine Fisheries**

✓ In view of damming and ecological degradation of state’s streams, it was decided that selective stretches about 100-200 kms. be identified. These stretches after meticulous ecological restoration viz. silt removal, deepening, strengthening of embankments, intensive stocking etc. be opened for fishing to anglers &
fishermen;

- In view of prevalence of migratory fishes in Himachal river & streams, it was decided that provision of installing fish ladders be made mandatory while sanctioning any Hydel project. Help of Central Inland Fisheries Research Institute (CIFRI)-Barrackpore be taken in providing design of such devices viz. Fish ladder, locks, lift etc. suitable in hill streams;

- In view of paucity of fish seed suitable for stocking in coldwater streams, it was decided to seek the help of Directorate of Coldwater Fisheries Research for evolving dependable technologies for large scale seed production of *Tor putitora*, snow trout and other suitable species, if any;

- Since, number of ornamental fishes grow & thrive in cold water streams. It was decided that Directorate of Coldwater Fisheries Research / National Bureau of Fish Genetic Resources scientists would undertake a survey of Himachal Pradesh streams and prepare an inventory of these species suitable as aquarium fishes;

- It was decided to upgrade the skill of all Departmental Officials by sending them for trainings outside the state as well as abroad also.

**Impact of introduction of Gambusia affinis fish species in state waters:**

The reported decision of Health & Family Welfare Department for the introduction of *Gambusia affinis* for controlling larvae & pupae anopheles generated considerable debate in the workshop & any further action on these lines was viewed with alarm.

- *Gambusia affinis*, being pugnacious and omnivore, may make it detrimental to the production of other commercially important species;
✔ It is prolific breeder with 9 broods a year and gestation period is 21 – 28 days;

✔ It is highly aggressive, predatory, injures, kills & devour all other fishes;

✔ Further, larvae & pupae of mosquitoes are not the preferred food of Gambusia and hardly form for 10% of its dietary;

✔ Citing the example of Nainital lake, members highlighted the menace created by this pest fish by monopolizing the lake and eliminating all other fishes;

✔ Viewed with danger, the accidental entry of Gambusia in state open waters could prove havoc to the existing fish stock. Taking all this into consideration, members were unanimous in view that introduction of Gambusia in Himachal Pradesh should not be permitted.

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