

**Jammu and Kashmir News Articles
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Jammu and Kashmir: Trout production touches 700 tonnes

<https://www.thekashmirmonitor.net/fishing-stories-for-best-moments-trout-production-touches-700-tonnes-in-kashmir/>

"Mohammad Subhan, a 50-year-old farmer in South Kashmir's Anantnag district established a fish farm on 30 marlas of land. He earns Rs 6 to 8 lakh annually from trout sales. "Last year, we sold 1400 kilogram of trout and we made an earning of Rs 6 lakh. Rearing trout is giving us better returns than crops that we could have cultivated on this land. This sector has a huge potential. If a person works with dedication, he won't look for a job and will instead provide employment to others," he said.

Trout is cold water fish. It survives only in running water and temperatures between 0 and 20 degree Celsius. It is rich in protein and boosts immunity. Each kilogram is sold for around Rs 500.

There are over 650 private trout fish units in Kashmir. Besides, trout is present in all the streams and Nallahs of the valley. The important ones are Lidder, Wangath, Gurez, Hamal, Lam, Sindh, Kishenganga, Sukhnag, Doodhganga, Erin, Ferozpur(Tangmarg), Bringi, Aharbal, Hirpora, Dachigam, Kokernag, Naristan, Madhumati, and Nowbugh.

According to government figures, private and government farms produce over 700 tonnes of trout annually in Kashmir. They generate more than Rs 14 crore revenue annually.

"This sector has a huge potential and is also being introduced in other parts of the country," an official of the Fisheries Department said.

Various states have introduced trout in their respective places because of its success. "Government in various states purchase trout from us, supply to their farmers who then rear them in their respective farms. This has a good success rate which is why various states are introducing it in their respective places. It has a better quality and growth rate," the official said.

Various areas across the country including Shillong, Shimla, Nagaland, Arunachal Pradesh, Uttarakhand, Sikkim, and neighboring country Nepal are rearing trout fish in their respective places that have been transported from Kashmir.

In the Anantnag district, a lot of fisheries farms have been established by people with the support of the government. In June 2018, Anantnag district was also declared a trout fish district

of India.

The trout was brought to Kashmir over a century ago. The first batch of trout ova of 10,000 eggs arrived from the UK in 1899. Unfortunately, the first batch perished en route due to the non-existence of air transport. The 2nd shipment of trout ova arrived from Scotland on December 19, 1900, through J.S.Macdonall and were reared in the premises of a private carpet factory owner (Michel) in Baghi Dilawar Khan in Srinagar. Since then, the government and hundreds of farmers have been rearing trout on their respective farms."

Jammu and Kashmir: First trout fisheries FPO registered at Anantnag

<https://indiaeducationdiary.in/jks-first-trout-fisheries-fpo-registered-at-anantnag/>

"Anantnag district has got the first trout fish farmers FPO registered under a project funded by NABARD. The said FPO has been incorporated by the Ministry of Corporate Affairs, Govt of India as farmer Producer Company under the name 'Glacial Trout FPO' and is being implemented by an NGO, Human Welfare Foundation under the guidance of Department of Fisheries, Govt of J&K.

DDM NABARD, Rouf Zargar stated that this was the first FPO in J&K to have been registered in the fisheries sector under the Companies Act. This is a pilot project to promote trout fish in the Dachnipora cluster of Anantnag and the registration of FPO was a major achievement, he added.

With more than 100 fish farmers as members of FPO, there are 10 farmers enrolled as board of directors in the FPO, DDM NABARD said adding that one more FPO is being proposed to be formed in Anantnag district to cover the fish farmers of Khoveripora Cluster.

Deputy Director Fisheries, Siddiq Wani said that Govt of India has been laying more focus on formation of FPOs in all allied sectors of agriculture and special focus has been given to the fisheries sector. He said many schemes have been launched by the government for development of aquaculture under cluster approach to bring the blue revolution and every scheme focuses on FPO formation.

Trout fish has been identified as a product under the scheme "the one district one product" in Anantnag district, he stated adding that FPOs can mitigate the problems of farmers with regard to production and post production sale and marketing."

Jammu and Kashmir: Women's empowerment is important

<http://brighterkashmir.com/women-empowerment-and-its-importance>

"In Kashmir, many women have made fishing their business. After sparing the time from household works, women go to fish farms and collect fish which later they sell them in the market. The most successful trend of women in Kashmir is to be economically stable.

Modern society has enlarged its scope in various fields of human development whether be its social, economic, cultural or any other field. But if we will study society closely, we will find some loopholes in modern society as well. Ever since society has come into existence, the society has always been suppressed or controlled by the higher authorities of the society whether they fall in economic class of caste, colour, creed or even gender.

Although modern society has enlarged its roots of modernity but still it has failed to deal equally with both the genders. Every society starts from a family and every family from two members of society. While joining the life of a man and a woman, it is considered that they will be treated equally. But once the marital knot is tied and the couple proceeds their journey of living together, suddenly the sense of inequality creeps in from somewhere and the powerful (usually man) suppresses and exploits the weaker (usually woman).

Rather taking the decisions of her family a woman is being suppressed by her husband and in-laws who usually expect from her to produce off- springs and do other house-hold works without involving her any decision-making—neither about the family she belongs nor of her life. Contrary, if she speaks or goes against any of the ideas, she is being punished in one way or the other way. This is not only the situation where women are forced to obey laws.

In past eras women were not considered to be educated. They were blind folded from the education. Now the trend has changed. Unlike past, now women have been allowed to study and they have proved themselves by achieving tremendous performances in the competitive examinations and thus achieve their dreams.

The modern society allows women to come out of their homes and widen their field of work where they could excel. Despite their good performances in different spheres, they are still ignored. This does not only happen in social bias but political authorities also have not given the credit to the women which they deserve in all aspects of the society. The governmental sector is not even fair of providing jobs on the basis of some reservation considered to men. It is a fact that a woman is playing an important role in the economic development of the country.

According to PWC study of 2016, the growth of the women billionaire is out racing the growth of men billionaire. Women were meant to be in the kitchen, look- after the children but this

thought has changed now in current societies. They handle the family and help the family financially as well. They are not now dependent on their partners as a kind of burden on them, rather they work to generate economy and thus lessen the burden of their partners.

In Kashmir, many women have made fishing their business. After sparing the time from household works, women go to fish farms and collect fish which later they sell them in the market. The most successful trend of women in Kashmir is to be economically stable. The young girl students, besides their study, work partially in economy generated works such as spinning, hand crafting etc. which not only help them to earn money for their studies but they also help their family in needy times by the collection they have made. Despite this fact, women still face criticism. This biased thinking of the modern society needs to be eradicated. New laws shall be included if a woman is being suppressed. She should also be given the equal opportunity in every field. The society is surviving due to woman and man if one is suppressed by the other it will lead to the consequence where society will die."

Jammu and Kashmir: Fishermen fall on tough times: Catching fish does not yield much these days

<http://brighterkashmir.com/kashmirs-fishermen-fall-on-tough-times>

"As the clock passes 4 in the morning, Ashfaq, along with his uncle, will spread nets on Dal Lake, hoping to catch fish in large numbers.

For the last 10 years, I have been continuously catching fish, the process which commences early morning, said Ashfaq. That said, every early morning, we would come to lay the net, drop food grains, and wait for one to two hours.

It is then up to almighty Allah how many fishes we are blessed with, Ashfaq said. He further said, ""There are times when we would catch fish in huge numbers, then there are days when we would end up having a few only. Ashfaq said, ""I have learned this art of catching fish from my father. He used to come here to Dal Lake every day and catch fish. We would then sell them in the market while keeping a few for ourselves. He is aged now, so I told him to stay home"".

Asked about the condition of Dal Lake, Ashfaq said, ""Government has done a tremendous job for the last several years in cleaning the Dal Lake. But, it is the locals that are making Dal Lake polluted. Much like Ashfaq, there are dozen are people would catch fish every day for their livelihood. One among them is Ghulam Ahmad. Ghulam Ahmad, who resides inside the Dal Lake, said, ""Our day starts when the whole world is asleep. We cast nets into the water during dusk and pull out the net full of fishes in the morning after waiting for a few hours"".

We have been using traditional ways since the beginning. Nets are woven with two pockets in which fish gets trapped. It requires a lot of muscle power and hard work to perform the task of catching fish", he said. "We throw nets into the water and then we wait and pull it out and remove some weeds and then we stir the water with a big wooden cane and again repeat the task until fishes are trapped," Ghulam Ahmad said.

This activity doesn't yield us much nowadays but back then, it was a profitable business as the water was clean and clear. Today Dal Lake has become a hub of plastic littering, which has made conditions of aquatic animals miserable, he said. "We used to drink water from Dal Lake but today it is beyond one's imagination to drink water from it. Many measures were taken to clean its water but no positive results have come out. My suggestion to Government is that they should try to stop drainage water that pollutes Dal Lake. If they do it, in coming years we will see Dal Lake will flourish again if this is implemented", Ahmad said."

Jammu and Kashmir: Youth of Baramulla taking up fish farming to defy unemployment

<http://risingkashmir.com/youth-of-baramulla-taking-up-fish-farming-to-defy-unemployment-2c38fa5d-ba72-44f9-9ee4-f32d6746d5f5>

"The youth of Baramulla have defied all odds by carving the niche for themselves through setting up fish farming units to earn for themselves and create jobs for others. Baramulla has been bestowed with famous water bodies having a great potential of fisheries. Angling and fish farming is fast emerging as a potential sector for providing vocation for the rural youth.

The fish farmers in the private sector have increased manifold with hundreds of people getting attracted towards this trade in Baramulla District. Giving an insight into this new attraction being explored by the local youth to generate income and employment, the Director Fisheries, Irshad Ahmad Shah said that the government has strengthened the fisheries sector to make it a useful instrument of economic growth especially in district Baramulla. He said a number of developmental and welfare schemes have been launched for providing assistance to rural unemployed youth for taking up fish culture. Fish farming especially of trout with improvised technology applications is proving to be a bullying economic indicator besides supplementing protein in diet.

The fisheries department is extending technical knowhow in this regard so that they can produce quality products and get remunerative prices and the fish growers all over the district are employing these latest technical knowledge in fish culture to boom the production. He said the

experts interact with the fish growers regularly to boost fish farming in the district. "During last year the department under the Centrally sponsored schemes (CSS) / Pradhan Mantri Matsya Sampadha Yojna (PMMSY) has constructed 18 No's of Trout Units, 01 No of Carp Unit and 01 No of Biofloc Unit in the District", said the Director.

Under Pradhan Mantri Matsya Sampadha Yojna (PMMSY), the department provides a subsidy of Rs. 2.20 lacs for construction of Trout Unit for general category and for women/ST/SC category the subsidy component is 3.30 lacs for establishment of Trout Unit. For establishment of Carp pond the department under Pradhan Mantri Matsya Sampadha Yojna (PMMSY) is providing a subsidy component of 0.74 lacs and for women/ST/SC category the subsidy component is 1.10 lacs."

Jammu and Kashmir: Encroachment threatens Wular lake and with it, thousands of fishermen

<https://www.deccanherald.com/national/north-and-central/encroachment-threatens-kashmirs-wular-lake-and-with-it-thousands-of-fishermen-1150196.html>

"The shrinking size of Wular lake, Asia's largest freshwater body due to encroachments, has resulted in depleted fish stocks causing distress among hundreds of fishermen families living in and around the lake. The lake that produces varieties of fish, water chestnuts and fodder besides serving as a habitat for migratory waterbirds, provides livelihood to over 30,000 households in over three dozen villages surrounding it for generations.

However, now these families are struggling to earn a living from it as the lake's condition deteriorates steadily due to growing pollution in the area, causing many varieties of fish to disappear. Rehti Begum, a fisherwoman who lives in Lankeshpora village near the lake in north Kashmir's Bandipora district, says the quantity of fish and chestnuts has drastically dwindled in recent years.

"There was a time when the lake was full of varieties of fish and chestnuts and we would make our living decently. However, now the situation is very difficult as the population of fish has decreased considerably," she said. "We have been dependent on the Lake for generations. But as the condition of the Lake is worsening day by day, the future of our children looks bleak," she added.

The decline in fish catch and rising debts have forced some fishers to shift to other activities for their livelihood. "For generations, we used to catch fish in the lake and sell the same to make our

living. But as it became difficult to sustain my family with the income from fishing, I started a small tea stall in Bandipora town to make a living,” said Ghulam Mohammad Dar.

He said his two sons were also assisting him in running the tea stall. “Due to the hard work of all of us, we are able to make our huge family run. Fishing in the Lake has not remained a viable option now,” Dar added. Large parts of the lake are covered with silt, polyethene and other solid waste. While some varieties of fish have disappeared over the years, many others, experts say, are endangered.

A 2018 study by *Agro Economist*, an international science journal, said in the last 100 years, the lake has shrunk by 45 per cent from 157.74 square kilometres (60.9 square miles) in 1911 to 86.71 square kilometres (33.48 square miles) in 2007. The Wullar Conservation and Management Authority (WUCMA), which was set up for the Lake's conservation more than a decade ago, is carrying out dredging for its restoration.

An official of the Authority said that 1.50 sq km of the Lake has been dredged so far and work was in progress. “The government has cleared the Wular Action Plan with a budget of Rs 200 crore for conservation and management of the Lake and we are hopeful in the coming years the condition will improve,” he said.”

Jammu and Kashmir: Decline in native fish species

<https://kashmirpatriot.com/2022/09/09/kashmir-sees-decline-in-native-fish-species/>

"The indigenous fish breed has been waning in Kashmir with experts saying lack of research and growing pollution are the main reasons for native species decline. As per a government document, the indigenous fish species of Kashmir have shown sharp decline with the result some of them have become “endangered and threatened”. The major fish fauna of Kashmir water bodies comprise of exotic carp (*Cyprinus carpio*) and indigenous *Schizothorax* species. However, the indigenous fish species *Schizothorax* have shown decline in production.

“This local species, which is cold and clean water loving, finds it difficult to cope up with the problem of eutrophication in water bodies,” an official at the Fisheries Department told news agency KINS. The government document says that some exotics, especially the common carp (*Cyprinus Carpio*var, *Specularis*, and *Cyprinus Carpio*var, *Communis*) have adopted well in Kashmir and are the most suitable cultivable fish species.

Tahir Ahmad, a researcher gives varied reasons for decline in native fish species. He said, “We

have not done much research on local breeds unlike exotic species whose production is increasing. We don't have the technology to know how to increase the production of local breeds. The indigenous species have not adopted culture well here."

He however said the Fisheries Department has no data available about the number of indigenous fish in water bodies of Kashmir. "Fish species have also been affected due to growing pollution in water bodies," he added.

Meanwhile, a senior official of the Fisheries Department said they have submitted a report to the government on fish production in Kashmir. "We have mentioned what are the constraints we are facing in Kashmir to increase indigenous fish production and what needs to be done," the official said. The government document says that aquatic resources have to be free from pollution, encroachment, and from the invasive fish species.

"A comprehensive plan for giving the boost to the fisheries sector is needed in the state," it added. The total fish production of 19850 tons of JK forms less than 1 percent of the country's fish production. JK is importing 11000 quintals of fish annually to meet the needs of the Union Territory. The total fish demand of JK is 163136.97 tonnes but Jammu and Kashmir is deficient of 143286.97 tonnes in fish production."

Jammu and Kashmir: Fisherwomen around Kashmir lake fear losing livelihood

<https://www.aljazeera.com/gallery/2022/9/5/photos-fisherwomen-around-kashmir-lake-fear-losing-livelihood>

"Surrounded by the majestic Himalayas, Lake Wullar in Indian-administered Kashmir's Bandipora district is one of Asia's largest freshwater lakes. The lake that produces varieties of fish, water chestnuts and fodder besides serving as a habitat for migratory waterbirds, provides livelihood to nearly 32,000 households in the 40 villages surrounding it for generations. Shortly after midnight, Kashmiri fisherwomen, dependent on the lake for survival, leave in rows of boats to fish and collect chestnuts.

But they have reasons to worry now as the lake's condition deteriorates steadily due to growing pollution in the area, causing many varieties of fish to disappear. Hajra Begum, 45, a fisherwoman in Lankeshpora village, leaves home when most of her family members are asleep and rows for hours in the lake.

Until a few years ago, her hard work would fetch her a boat full of chestnuts and kilograms of fish, helping her livelihood. But she says the quantity of both has drastically dwindled, causing

her distress. “Our future is uncertain because the lake is helpless. If it dies, we will die with it,” she told Al Jazeera. “We are in grief because the source of our livelihood is in a terrible condition. We are affected both physically and mentally.”

The job of the fisherwomen is not easy. Many complain of various ailments, including mouth ulcers, blistering, fungal infections and body ache due to long hours of fishing in the lake. They also suffer harsh sunburn and melasma. “My hands swell and I often get skin rashes and fungal infection,” Hajra said. Her three daughters are school dropouts and help her in her work and selling the produce in the market.”

Jammu and Kashmir: Mining destroys rivers and wildlife

<https://pakobserver.net/mining-mafia-destroys-kashmirs-rivers-and-wildlife/>

“On the night of July 30, 2022, at about 9 pm, I spotted a JCB machine extracting sand and gravel from the bed of the Shali Ganga stream in the Lalgund Panzan area of district Budgam. The Shali Ganga is a small stream that originates in the Tatakoti glacier in the Pir Panjal mountain range as a tributary of the Doodh Ganga, which itself is a tributary of the Jhelum river. This little stream is also the subject of an appeal I filed with the National Green Tribunal (NGT) in May 2022 about what I believe is the illegal grant of environmental clearance (EC) for riverbed mining on the Shali Ganga by the Jammu and Kashmir Environment Impact Assessment Authority (JKEIAA) to a Gurugram-based construction company named NKC Projects Pvt Ltd.

I filed this case with the NGT when, after nearly a year of appealing to various government authorities, including the District Mineral Officer, Budgam, the Sub Divisional Magistrate, Chadoora, and the Secretary, Mining, J&K government, to look into violations of environmental laws by various contractors including NKC Projects Pvt. Ltd, I saw that no action was being taken.

Based on my appeal petition which needed to be filed within one month of the project clearance as mandated by the EIAA guidelines, the NGT had given the JKEIAA and NKC Projects a month to reply to my charges that they were violating the regulations of the Jammu and Kashmir Minor Mineral Concession, the Transportation of Minerals and Prevention of Illegal Mining Rules, 2016, and the standard guidelines of the JKEIAA itself.

In response to the notice issued by the NGT, member secretary of the JKEIAA Rakesh Kumar wrote on June 26, 2022, to the Registrar General, National Green Tribunal, denying that the

agency's guidelines were being violated.

On July 29, 2022, NKC Projects Pvt Ltd also wrote to the NGT, denying the charges I made against them. Supported by an affidavit, a copy of which is in my possession, NKC Projects said that the heavy machinery brought to the site was being used merely to create an approach road to the mine and that all mining operations stop at 6 pm.

Yet, on the night of July 30, at about 9 pm, exactly one day after the NGT received the reply and affidavit from NKC Projects Pvt. Ltd that denied all violations, I spotted a JCB machine extracting sand and gravel from the bed of the Shali Ganga.

It seems the problem of illegal mining in the Kashmir valley is set to continue for years. Machines at midnight Part of the beauty of the Kashmir Valley comes from the many rivers and streams that arise in the mountains of the Himalayas and the Pir Panjal and flow into the Jhelum river. Most of these tributaries are less than 50 meters wide. But their waters are used for drinking and to irrigate paddy fields and apple orchards.

In the last 20 years, the combination of massive urbanisation and a population explosion has put pressure on the Jhelum and its tributaries, many of which are being mined for construction material like sand, gravel and boulders regardless of environmental concerns. While riverbed mining has always been conducted in this area, it was carried out manually by local workers, so the environmental impact was low. However, in the last few years, contractors have been bringing in heavy machines for riverbed mining, which is degrading and destroying these rivers. Since the cost of construction materials has also nearly doubled, locals believe that an organised mining mafia is working across the Kashmir valley, clandestinely backed by officials from several government departments including the geology and mining department, the irrigation and flood control department, and the departments of fisheries, revenue and police.

It is never easy for a project proponent (contractor) to get a river bed mining contract anywhere in the country since there is a long and rigorous process involved in acquiring environmental clearance from the relevant State Environmental Impact Assessment Authority.

In Jammu & Kashmir, the JKEIAA, which works under the direction of the Union Ministry of Environment Forests and Climate Change, is the authority that grants the EC document when the project proponent fulfils several standard and specific conditions. These conditions include the prohibition of mining at night, the prohibition of the use of heavy machinery in mining operations, a provision to sell the excavated material from the riverbed locally at a discount of

50% and the use of CCTVs on the site.

The rigorous process exists for a reason. Already, Kashmir's paddy land has been destroyed by brick kilns and almond orchards in karewa land (elevated table land) have been wasted due to clay mining. Rivers and streams are unscrupulous contractors' next target. Without an environmental impact assessment, no project proponent can undertake riverbed mining. In the case of the Shali Ganga mining site, the EC was granted by the JKEIAA to NKC Project Pvt. Ltd under proposal numbers SIA/JK/MIN/255737/2022 and SIA/JK/MIN/233732/2021 and an order dated April 19, 2022, to undertake riverbed mining on approximately three hectares of riverbed around minor mineral Block No. 4 located between Panzan bridge and Trumbi Bagh, in downstream Shali Ganga. This is located at Lalgam village in Chadoora tehsil of Budgam district.

NKC Project Pvt. Ltd, incidentally, also holds the contract for the Srinagar Semi Ring Road. When the NGT heard my appeal against the JKEIAA and NKC Project Pvt. Ltd, my counsel Rahul Chowdhary argued that the EC granted by JKEIAA was in violation of Rule 4(iv) of the Jammu and Kashmir Minor Mineral Concession which states that the licensee of a unit/plant/crusher should maintain all records of the minor minerals procured, processed and supplied to further destinations and submit monthly returns.

Chowdhary added that Rule 4 of the J&K Mining Rules, 2016, is also being violated as it prohibits mining within 25 meters from the embankments. Since the widths of the Doodh Ganga and Shali Ganga streams are no more than 40 meters on an average, it seems that no verification of the width of the streams was made on ground. Thus, it is illegal to allow mining in their riverbeds.

When the court issued a one-month notice to the JKEIAA and NKC Project Pvt. Ltd, the JKEIAA responded within two days, stating that the rule regarding distance from the embankments had been amended, reducing it to 10 metres on either side. Even with this new parameter in place however, the fact remains that the mining is being carried out just two to three metres away from the embankments."

Jammu and Kashmir: Govt using latest technologies to boost Fish Farming culture

<https://www.greaterkashmir.com/todays-paper/business-todays-paper/jk-govt-using-latest-technologies-to-boost-fish-farming-culture>

"J&K Government is Promoting Fisheries culture by use of latest technologies of Fish Farming like Composite Fish Culture of Indian Major Carps and Exotic Carps besides quality Trout Seed is being produced for amplifying the growth of this sector.

The department is also promoting the sector by filling the Natural Cold Water Streams with trout seeds to promote sports fisheries across Jammu & Kashmir.

The fisheries department is also propagating fish Culture in Private Sector to provide avenues of earnings to the educated unemployed youth besides the development of recreational Fisheries as a means of earning for the interested persons who take up Aquarium Fisheries as a trade is also being promoted.

Notably, Kashmir offers one of the best spring-fed as well as snow-fed trout fishing, in the world, with pollution-free, scenic and exclusive streams and rivers with snow-capped peaks and thick pine forests, besides a number of freshwater lakes.

There are about 150 fishing boats spread over 40 streams with an aggregate length of 500 kms, besides, there are 12 high-altitude lakes ranging from 8000 feet to 12000 feet above sea level having Brown Trout.

The Government of India has identified various schemes for the development of both inland fisheries and Marine Fisheries in the country to boost fish production and create avenues of better earnings for the fish farmers and professional fishermen engaged in the exploitation of natural water resources.

As far as the J&K is concerned, in view of the feasibility, several Centrally Sponsored Schemes are in operation in the J&K.

The Centrally Sponsored Schemes operational in Fisheries Sector is Development of Inland Fisheries and Aquaculture, PM's Package for creation of employment opportunities, Fisheries Training and extension, National Welfare Scheme for Fishermen, Construction of low-cost houses, Group Accident Insurance scheme for active Fishermen besides Rashtriya Krishi Vikas Yojana (RKVY) for construction of low cost /houseless fishermen for upliftment of this backward community.

Jammu and Kashmir: A hygienic hoggard, at last: An innovative dryer developed at SKUAST can make Kashmir's famed dried dish easier to prepare, healthier to consume

<https://kashmirreader.com/2022/07/04/a-hygienic-hoggard-at-last-an-innovative-dryer-developed-at-skuast-can-make-kashmirs-famed-dried-dish-easier-to-prepare-healthier-to-consume/>

"The prevalent practice of unhygienic drying of fish in Kashmir is all set to change with the Faculty of Fisheries at SKUAST Kashmir ready to introduce its innovative and economical fish dryer, which operates on hybrid electric as well as solar energy and is expected to churn out more hygienic 'hoggard' (dried fish).

The new technique of drying of fish, as per experts at the Faculty of Fisheries, will not only end the widespread unhygienic drying practices, but will also benefit economically the women who are engaged in this work. The use of the machine will bring down the time spent on the drying process, significantly, and enable the women to negotiate better prices for their produce, as the machine-dried fish will be better in quality and more durable.

Dr Rizwana Malik, who has taken up this project at the faculty, said that during their in-depth study of the fishing sector in Kashmir, mostly around the Wular Lake with focus on Laharwalpora area, it became evident that the smaller-size fish that are most preferred for drying go through a very unhygienic process. "Neither are they de-gutted nor does the drying process, which involves splashing fish with rice bran and later drying them upon twisted paddy ropes, qualifies as a hygienic practice. That will never allow the penetration of this product anywhere in outside markets," she said.

Dr Malik said that the traditional process also exposes the fish to different pathogens or bacterial growth, and not to ignore the fact that dust, rains and attack from animals is a threat throughout the days-long drying process. The new prototype fish dryer, built by Central Institute of Fisheries Technology (CIFT), Kochi, Kerala, according to scientists is specifically designed to counter these challenges. It will not only bring down the time spent on drying but also make the product hygienic and safer for consumption.

The National Bank for Agriculture & Rural Development (NABARD) has funded the SKUSAT faculty's project under the name of 'Technological interventions: A step to enhance fishers' livelihood in Kashmir Himalayas.' According to Dr Malik, the traditional process of drying is started by September; however, the catch is best obtained in summers. Drying in summers spoils the whole catch, but with the introduction of the dryer, the process can pick up in summer itself, giving the people associated with the sector ample time to manage drying of their catch efficiently. The dryer has the capacity of drying about 40-50 kg fish in just 5-6 hours.

The studies by the faculty have shown that this mismatch of the drying process has often resulted in middlemen making more profit from the tiresome work of the women who are associated with this process. Often, women have no option but to sell their produce at throwaway prices.

“This process will increase the shelf life of the product significantly. We are also working on forming of fisher producer organisation (FPO) clusters so that the product is certified and could make it to the outside markets,” Dr Malik said, adding that the packaging is also to be looked into to see what hygienic ways can be opted for to increase the shelf life.

Trials carried out by the faculty have shown that hygienic packing of the machine-dried fish will make the product last for at least a year.

The dryer is easy-to-fix and can be set up easily in open areas, which fetches it the required solar energy to dry the fish. Hot air is evenly dissipated inside the dryer for effective drying. Dr Malik said that given the fact that fisherwomen will save a lot of time, it will help them focus on other home chores and improve their living standards and also help them earn more.

She said that government authorities need to focus on improving the lives of the Wular fisher folk. Introducing equipment such as the dryer will help them a lot and, above all, provide people their favourite delicacy, haggard, in a much more hygienic way. Dried fish are a preferred delicacy in Kashmir valley. It is mostly consumed after being grilled evenly on a stove or barbeque to turn it crispy, which also decreases its pungency. It is mostly chopped to be served with chillies and salt."

Jammu and Kashmir: Down to the last fishermen

<https://www.fairplanet.org/story/kashmir-down-to-the-last-fishermen/>

Kashmir is facing interlocking environmental, food and economic crises as its shrinking, highly polluted lakes and rivers are being depleted of fish stocks. Fish species indigenous to the crystal clear glacial waters of Kashmir, Central Asia and Western China - such as snow trout and schizothorax - have vanished from the water bodies of Kashmir due to excessive pollution and the introduction of invasive species of high market value.

Experts claim that out of the 13-15 species of snow trout found in the water of this Himalayan region, nearly five have gone extinct, with three more on the brink of extinction. Other native fish species, such as Botia Birdi, have gone extinct in water bodies due to anthropogenic activities and the destruction of their breeding or feeding grounds.

Snow trout, locally known as Alegads, can be found in both standing and flowing water bodies throughout the valley. The five species of snow trout native to the region are *Schizothorax esocinus* (Chirru), *Schizothorax curvifrons* (Satter gad), *Schizothorax niger*, *Schizothorax plageostomus* and *Schizothorax labiatus*. The fishing sector is an important part of Jammu and Kashmir's economy, contributing 23 percent of the state's GDP alongside agriculture. However, the extinction of these fish species poses a threat not only to the environment, but also to the food industry and the livelihoods of those who work in it.

Mohammad Abbas, a 45-year-old fisherman who has been catching fish for a living since he was a child, claims that his catch has decreased by 60 percent over the years. "I used to catch around eight to 10 kilogrammes of fish, but now I only catch one kilogramme," he told FairPlanet.

Abbas said he is having difficulty running his household due to the sharp decrease in the fish population, which has impacted his daily earnings. He attributed the decline in population to unchecked pollution of water bodies that serve as fish habitats. "It would not be long before River Jhelum is reduced to nothing more than a sewage drain. The waste is heavily contaminated. More than fishes, my net is filled with empty plastic bags and polythene," he said.

He confirmed that fish such as Botia Birdi, locally known as Raam Gurn, are no longer found there and that other species have gone extinct as well. "These fish thrived in clean water, and some of them could be easily spotted in shallow waters during the summer. However, there are only a few left now," he said. He claimed that his meager earnings have discouraged his children from continuing in this trade and that he is now the family's last fisherman. "My children have already said 'no' to this line of work. I would have switched as well, but I do not know anything else," he said.

According to Owaish Iqbal Dar, an Ichthyologist, pollution resulting from human activities is causing fish populations to decline in Kashmir's water bodies. "There were around 13 species of snow trout in the past, but now there are only five, and eight have gone extinct. Of the remaining five species, two are rapidly dwindling," he told FairPlanet. Iqbal Dar explained that a variety of factors, including climate change, excessive water pollution, the introduction of invasive species and deforestation, are putting stress on local fish species and ultimately lead to their extinction. "Every organism has a role to play in the ecosystem, and if one organism goes extinct, it has an impact on the entire ecosystem," he said.

"They lay eggs in shallow water, but excessive mining has destroyed the riverbed," he added, explaining that excessive sand mining has destroyed the fish's breeding and feeding grounds.

Iqbal Dar further stated that invasive species, such as carnivorous rainbow trout, have had an impact on their population because they cannot compete with them. "The invasive species eat the eggs of these fish, affecting their population." He claimed that these invasive species are affecting indigenous species in the same way that fish species like *Talpia* have been introduced into water bodies around the world and caused indigenous species to become extinct. In Kashmir, he said, exotic species such as carp, which were introduced to the valley in the 1960s to increase fish yield, have resulted in the extinction of native species.

In the union territory of Jammu and Kashmir there are approximately 92 urban local bodies, none of which has a waste treatment plant, meaning that all municipal waste is dumped into these water bodies, polluting them. "Unfortunately, the majority of the waste is dumped either near or in these bodies of water, including rivers, lakes, and wetlands, causing water pollution," Mohammad Sidiq, an official at the Kashmiri government's Department of Fisheries, told FairPlanet. He further stated that the valley is home to a number of freshwater lakes and streams, but that they are all threatened by encroachment. "On the banks of these water bodies, residential colonies and commercial complexes are being built."

Sidiq added that even government offices are being built on these bodies of water, which he said was a wrong move. As a result, all sewage is dumped into water bodies. "For example, many hotels that have been built on the ladder stream, which is known for having snow trout and which runs through the picturesque Pahalgam, have had an impact on the fish population," he said. The valley is known for its delicious apples, but pesticides used in apple orchards have wreaked havoc on aquatic life.

"Starting in March, we spray a lot of chemical fertilizers on these apple orchards. From March to July, each orchard receives ten to fifteen sprays, and the valley receives a lot of rain. Several times, they are washed away into small streams that lead to larger bodies of water, where they have an impact on aquatic life. It is extremely dangerous." Sidiq said.

"The issue is that the government has taken no action, and no research has been conducted to determine how much pesticide is present in water bodies and how it affects the fish population." Ichthyologists and environmentalists claim that excessive use of these pesticides and herbicides causes eutrophication, which is the excessive growth of nutrients on the water surface. This results in a dense growth of algae on the water's surface, blocking sunlight from reaching the flora and fauna and making it difficult for fish like snow trout to survive.

Jammu and Kashmir: Trout, Mushkbudji processing plants to be set up in Anantnag

<https://www.greaterkashmir.com/business/trout-mushkbudji-processing-plants-to-be-set-up-in-anantnag>

"The Deputy Commissioner (DC) Anantnag, Dr Piyush Singla today held a detailed deliberation on the implementation of the One District One Product, FPOs and Kissan Bhagyadari Prathamikta campaign. During the meeting, the discussion was held on progress achieved, matters pertaining to interdepartmental coordination and the proposal for setting up 3 new blocks for the promotion of new FPOs.

Dr Singla took stock of the operational FPOs in the district. He emphasized that the concerned departments should identify areas for intervention aimed at reducing supply constraints and to focus on marketing and certification to expand the market for the produce. He said the vision behind setting up FPOs is to ensure maximum profit from value-added to the produce accrues to the farmer. Regarding Breng FPO operational in the district, the participants were informed by DDM Nabard that IGSSS is the CBBO for the FPO and have completed a baseline survey. He said that 140 farmers have been registered with the FPO and training has been imparted to them.

He said that registration of the FPO with the Ministry of Corporate Affairs also stands completed. He said they have successfully broadcasted 300 kgs of potato seed among the farmers. He said that in one year the turnover has been Rs 12 lakhs. Regular board meetings are being held and steps to increase membership were discussed.

Chief Agriculture Officer informed the chair that seeds for several exotic vegetables have been distributed and under the Parvaz scheme, modalities are being worked out for exporting the products to foreign countries. Dr Singla held a detailed discussion regarding Mushkbudji FPO. He said that the market for Mushkbudji remains underutilized. He said that the farmers can carve a niche market by selling the trademark product online thus eliminating middlemen from the trade.

A proposal to set up a processing plant was approved with the DC assuring of fulfilling any gap in funding. He said that the cost saved in transportation and processing will be accrued to the farmer further boosting production. Giving an overview regarding the Fish Trout FPO, a representative from the CBBO said a farmer club is being formed in each village in Phalagma, Dachnipora, and Khoveripora blocks. Further, marketing of the product has been started and 3 tons of trout are being shipped to Mumbai and Pune for sale. Dr Singla said that a trout processing unit is being set up in the district. He said that farmer mobilization for Fisheries FPO should be expedited.

Jammu and Kashmir: Drastic decrease of fish in the wetland, which left countless fishermen jobless

<https://www.thecitizen.in/index.php/en/newsdetail/index/14/21821/sos-from--hokersar-wetland->

"Two years ago, Abdul Majeed, 38, left every day at 6AM, towards Hokersar wetland to fish and earn his livelihood. However, he is not a fisherman anymore, and now runs a small shop in his neighbourhood. "Once, I used to sell 10-15 kg fish in the market everyday. My family was sound financially. I wanted to send my children to a good private school, but since Hokersar wetland turned dry, my dreams have been shattered," said Majeed. The family's finances are going from bad to worse.

Just ten kilometers away from Srinagar city, the Hokersar wetland, a refuge of thousands of migratory birds, is now dying silently. "For the last three years, the wetland has been pushed to the brink of extinction due lack of manpower by the concerned department," said Ali Mohd, 45, a local.

Known as the 'queen of wetlands' in Kashmir, Hokersar was declared as a Conservation Reserve under the Jammu and Kashmir (J&K) Wild protection Act 1978. It was declared as a bird sanctuary under the Indian national wetlands conservation programme. According to official data, the active area of Hokersar has shrunk from 14 square kilometers to less than six square kilometers in the last 10 years.

As soon as winter begins in Kashmir, Hokersar attracts millions of migratory birds which come from northern cooler regions and spend the season in this marshy wetland. Birds like Eurasian coots, diving ducks, and egret pintails, thrive in the wetland. However, that too has changed. "The wetland has been ignored since the devastating 2014 floods in Kashmir, and it is now close to devastation," said Mohammad Yaseen, 27, who lives near the wetland. Yaseen recalled that till seven years ago, the wetland recorded many migratory birds. For the first time in Yaseen's life, he saw merely 60,000 migratory birds this year. However, Ifshan Dewaan, 37, Kashmir's wildlife warden (wetlands) told The Citizen that though the number of migratory birds is less, efforts are on to address the issue, "our department is on its toes to increase the number. We are hopeful."

Locals who live nearby wetland told The Citizen that for the past three years, the flood and irrigation control department has dredged the upper parts of the wetland. "After the devastating floods in 2014, it was necessary to do so. However after the dredging was completed, the silt was

not removed. That blocked the main tributary of the wetland and a large chunk dried up,” said Yaseen.

As the Hokersar is shrinking rapidly, people who live around it are taking undue advantage of its dry bed. Some local residents have started illegal constructions there. Some are discharging domestic waste into the wetland. This has led to excessive weed growth, and eutrophication, both of which pose a serious threat to aquatic life of the wetland.

Majeed Ahmad, 34, a resident of Gund hassi Bhat, said, “for the last two years, hospital waste and solid waste was dumped in Hokersar on the Zainakote side. It's toxic for aquatic organisms.”

Wetland officials who wished to remain anonymous told The Citizen that fishes and migratory birds in the Hokersar Wetlands were affected due to the 2014 floods. The floodwaters also deposited silt in the wetland and several varieties of fish and other aquatic organisms vanished from the lake. “No doubt that People are also taking advantage of its dryness, we are trying our best to remove their encroachments,” he said. He said that the department was making pools that will let fresh water in, and this can help save aquatic life of the wetlands. The department is also working to remove solid plastic and other waste from the area.

An official of the Flood control Department added that they will set up special gates at the entry and exit points of Hokersar wetland to regain the water level. To encourage migratory birds to return the department will construct a deep channel in the wetland.

The wetland was known as habitat of different varieties of fish. But now locals claim that not a single fish was seen in the Hokersar. Syed Arbeen, 34, an environmentalist, told The Citizen that the influx of sewage and solid waste from the flood spill channel of Doodh Ganga led to deterioration of the wetland. “The bed of the wetland has been raised by around 12 feet due to heavy influx of silt. There has been a drastic decrease of fish in the wetland, which left countless fishermen jobless,” said Arbeen.

Wetland range officer Sajid Ahmed said that this year the wetland received around three lakh migratory birds. However, Majeed, added that the wetland continues to be used as a garbage dumping site by locals. “Mounds of domestic waste can be seen on the embankments of wetland which are deteriorating its ecosystem,” he said.

Divisional Commissioner of Kashmir Pandurang K Pole, recently visited the Hokersar wetland on the occasion of Wetland Day and underlined that the responsibility also lay with the locals for its protection. Ifshan Deewan a wildlife warden said that the wetland is not fenced in all the

areas, and that makes it easy for people to throw their domestic waste and disturb the habitat of aquatic life. “We are going to launch awareness campaigns about its importance. And hope that with the cooperation of people we will protect its ecosystem,” she said.”

Jammu and Kashmir: The sinkhole at Wandeval village in Anantnag had dried out Jhelum’s Brengi tributary downstream for many kilometers, killing thousands of indigenous fishes

<https://www.hindustantimes.com/india-news/outlet-of-sinkhole-traced-16km-away-in-kashmir-101649358040196.html>

“Tracer studies by a team of National Institute of Technology (NIT) in Srinagar has revealed that a sinkhole, which developed in Anantnag’s Brengi stream at Kokernag on February 11, has its discharge 16 kilometres downstream at Achabal. Brengi stream is a tributary of Jhelum river.

“90% of the water going into the sinkhole has an outlet in Achabal, which is 16 km from the sinkhole,” Kokernag sub-divisional magistrate (SDM) Sarib Sehran said after a meeting of the National Disaster Management Authority (NDMA) on Wednesday.

Anantnag deputy commissioner Piyush Singla had confirmed the development earlier this week. “Tracer studies by NIT Sgr observed-‘Sinkhole has an outlet at Achabal at a distance of 16 km from sinkhole. There could be other outlets in nearby areas,” he tweeted on April 4.

“Interesting inference from an interesting phenomenon,” he added. Sinkholes are pits in the ground that form in areas where water gathers without external drainage, according to the US Geological Survey. The sinkhole at Wandeval village in Anantnag had dried out Jhelum’s Brengi tributary downstream for many kilometers, killing thousands of indigenous fishes along the stretch.

Although district authorities had initially tried to divert the water from the sinkhole, the seepage had developed again, prompting the administration to seek assistance from NIT Srinagar to understand the phenomenon. “Based on the preliminary study and tracer studies conducted by a six-member team from NIT Srinagar, it was inferred that the phenomenon occurred due to underlying karst topography,” Sehran said.

“The district administration has filled the sinkhole with naturally graded material and crates,” he added. Besides NIT Srinagar, a multi-departmental team, including representatives from Kashmir University, geology department, fisheries, jal shakti and revenue departments is also conducting a study on the matter, the SDM said. “Preliminary studies were conducted and the decision to fill the sinkhole was taken after due deliberation with all stakeholders,” a government spokesperson said, seeking anonymity.

Ghulam Jeelani, professor and head of department of earth and environmental sciences at University of Kashmir, had earlier told HT that a sinkhole is an expression of an underground network of caves. “Anantnag, as the name suggests, means numerous springs and their discharge often is high in Achabal, Andarnag, Martand and Verinag. It means there is a lot of storage inside in the form of caves which take millions of years to form,” he said.

“South Kashmir requires mapping of this underground cavern system. Today, it happened in the stream; tomorrow it can happen in the built up area. It can be done using foreign collaboration by conducting cave diving and geophysical surveys,” he said.”

Jammu and Kashmir: In Anantnag, massive sinkhole triggers fear of potential ecological disaster

<https://www.news9live.com/india/in-kashmirs-anantnag-massive-sinkhole-triggers-fear-of-potential-ecological-disaster-161873>

"In the afternoon of February 10, fear and panic gripped the people of Wandeval village in Kokernag area of south Kashmir's Anantnag district when suddenly a loud explosion was heard and the entire water flowing into the famous Brengi River was swallowed by a colossal whirlpool forming a sinkhole in the middle of the river. The river beyond the sinkhole dried up as water drained into the sinkhole and hundreds of trout fish died and were collected by the locals present on the spot.

The Brengi River is one of the major tributaries of Jhelum formed by the confluence of three streams, Nowbugh stream, Ahlan Gadol stream and Daksum stream. The Nowbugh stream originates from the glaciers of Margan Top - Kishtwar side and Daksum stream originates from the glaciers of Sinthan in Anantnag district. Kokernag village is also popularly known as Bringi river valley.

A sinkhole is an underground depression in which rainwater collects and typically drains into the subsurface. Sinkholes are most common in what geologists call, ""karst terrain."" These are

regions where the types of rock below the land surface can naturally be dissolved by ground water circulating through them. Soluble rocks include salt beds and domes, gypsum, limestone, and other carbonate rock.

When rainfall moves down through the soil, these types of rock begin to dissolve. This creates underground spaces and caverns which pull the surface down due to the lack of support.

South Kashmir is an area largely underlain by limestone and is highly susceptible to sinkholes. However, there is no database of sinkhole collapses for south Kashmir. Renowned geologist and Head of the Department of Earth Science, Professor Ghulam Jeelani said that the entire south Kashmir is vulnerable to sinkholes and already many similar sinkholes have formed over the course of time in different regions across Anantnag district.

""Formation of many sinkholes are not reported to authorities or news organizations, and many occur in mountainous regions where they are unobserved,"" Professor Jeelani said. Interestingly, the last reported sinkhole collapse occurred in 1995 around 27 years ago in the same stretch just 50 meters away from the current sinkhole location. The water of the sinkhole was found to be oozing out from the Achabal spring. Later the sinkhole was filled up with boulders and no study of the area was carried out later. ""There is a high chance that the sinkhole might develop again in the future course of time, and we don't know its location, it can collapse roads or residential buildings damaging life and property and can prove disastrous,"" Professor Jeelani explained. The professor said he had many times pointed out that this area is prone to losing streams which means the water is lost underground. ""There are networks of caves formed underground due to dissolving of limestone which can collapse anywhere and anytime, and we would never know until we carry out proper mapping and mark out sensitive areas. For instance, a building or a residential house stands on an underground cave which no one is aware of, and it will collapse at some point of time resulting in loss of lives and property,"" Professor Jeelani noted.

After the explosion, more of a loud boom locals rushed towards the stream to peep into the sinkhole watching the water rush and disappear. ""When the loud bang came from the river, there was panic in the village and people came out from their houses. I rushed towards the stream which is in the backyard of my shop to see what was happening. When I reached near the river, I was puzzled to see that there was no water in the river as the entire river was disappearing into the sinkhole. People were shocked to see no water in the river and fish were dying,"" said Farooq Ahmad, a local Shopkeeper. The incident was shared on social media and officials of various departments visited the site to take a look at the situation and take immediate steps to revive the river again. They also prohibited locals and media personnel from visiting the sinkhole as it can prove very fatal. The sinkhole of sizable dimension of around 12 feet in length and breadth was

consuming around 50 cusec of water which was quite a huge quantity and a point of concern-obliging officials to take immediate steps and stop water from discharging into the sinkhole..."

Jammu and Kashmir: Sets 9000 MT fish production target by the end of 2022

<https://www.thekashmirmonitor.net/fishing-goes-pro-jk-sets-9000-mt-fish-production-target-this-year%EF%BF%BC/>

"Official figures reveal that fish production in the union territory has touched 24,000 MT last year. "We want production to increase from 24000 MT to 33,000MT by the end of 2022," said an official. In Kashmir, fish production particularly trout have already witnessed an increase of more than 50 percent last year. "Our annual trout production has increased to 1400 MTs. From 650 MT. 400 new units have come up last year," said Director Fisheries department Bashir Ahmad Bhat.

He said the latest technologies including Biofloc and Re-circulatory Aquaculture systems (RAS) have been introduced for intensive fish rearing units. Latest technologies have been included to revolutionize the pisciculture in Jammu and Kashmir. Biofloc is a profitable method of fish farming. This technology helps to convert toxic materials such as Ammonia, Nitrate, and Nitrite into fish feed," he said.

Bhat said that the department is focusing on boosting trout culture through RAS technology in Kashmir. "This technology is a new entrant in pisciculture. Trout requires two parameters. The optimum temperature should be between 8 and 14 degree Celsius and oxygen 8mg/L. Under RAS technology, we are using underground bore well water, which meets both these parameters," he said.

J&K is the leading trout producer in the country and accounts for about 71% of the production. Official figures reveal that there are around 15500 fishermen in Jammu and Kashmir. As per the official data, 13.25 million trout seeds and 62.50 million carp/other seeds are also produced in Kashmir every year.

To make trout accessible to consumers throughout the country and outside, the Fisheries department is mulling to establish fish processing and packaging units across J&K. "Like any other state, Jammu and Kashmir too will start exporting fish to different states of country and abroad," an official said. Pertinently, Jammu and Kashmir is all set to introduce American and Vietnamese fishes to boost pisciculture and improve livelihood in the valley. Pangasius and Pacu

will be cultured by the department this year.

Jammu and Kashmir: Government helps unemployed girls in Anantnag to set up fish farms under PMMSY scheme

<https://theprint.in/india/j-k-govt-helps-unemployed-girls-in-anantnag-to-set-up-fish-farms-under-pmmsy-scheme/855832/>

"The Fisheries Department of the Jammu and Kashmir government is offering up to 100 per cent support to encourage young educated girls of Anantnag district of South Kashmir to set up trout fish farms under Pradhan Mantri Matsya Sampada Yojana (PMMSY).

A flagship scheme focused on the development of the fisheries sector in the country. The department of fisheries in the Anantnag and Kulgam districts has established around 210 trout fish farms and with about 20 per cent run by girls.

The unemployed educated girls of Anantnag district are taking benefit from this scheme and are presently earning a good amount of money. The farming of the commercial trout can be done with a piece of land close to a water body.

Interested people in the district are coming forward and establishing their units with the help of this scheme. Under this scheme 60 per cent of the money is being provided by the central government and 40 per cent by the Union Territory (UT) administration. Everything including the seed, feed, and construction-related work is made available to them. These youth who have been benefited from these schemes hailed the steps taken by the central government and fisheries department of Jammu Kashmir.

The Department of Fisheries has started providing all facilities including motors, nets, and feed to the farmers. Speaking to ANI, Mohd Sadiq, Assistant Director Fisheries department for Anantnag and Kulgam district said under the PMMSY scheme, the Fisheries department established 210 trout farms, in which women occupied 25 per cent.

"Farmers have a success story. there are farmers who are earning more than 20 lakh to 30 lakh annually," Sadiq said. Shaista Shakeel, the beneficiary of the scheme said it was difficult to get jobs as unemployment was increasing but the fisheries department helped and provided me with a subsidiary. "The business running well and I am happy," she said.

"I want to give a message to all those educated unemployed girls sitting at home and seeking jobs, they can apply for this and can start their own business," she added. Another beneficiary

who sought help from the fisheries department said now she is happy as she is working.

Jammu and Kashmir: A stream in Kashmir disappears into Sinkhole, kills trout in large numbers

<https://www.outlookindia.com/national/brenji-river-in-kashmir-disappears-into-a-sinkhole-kills-trout-in-large-numbers-news-183005>

"A stream in South Kashmir's Anantnag district is going into a sinkhole since February 11. It has led to the large scale death of trout fish, especially brown and wild trout downstream.

As the water is flowing into the sinkhole continuously, there is the possibility of a large network of underground cavities or water-holding reservoirs causing further anxiety among people living around.

People fear in the coming months' water will not be available for agriculture fields. They visit the sinkhole regularly.

The government has issued a statement asking the media that their reportage of sinkhole has the potential to "adversely affect law and order in the region."

The sinkhole has developed in Brenji village Wandevalgam (Kokernag) in Anantnag district, around 80 km south of Srinagar. On Feb 11, a vertical sinkhole occurred in the middle of a river bed draining run of the stream water into it leaving downstream dry, killing trout fish in large numbers. Around 50 cusecs of water is draining into the sinkhole as the water discharge remains low during the winters. From March onwards water level in the river is likely to rise after the melting of ice and snow on mountains.

Brenji stream had large scale brown and wild trout. Trout has around 122 years old history in Kashmir and it is an interesting read. The first consignment of 10,000 trout eggs sent by the Duke of Bedford to the then Maharaja Pratap Singh in 1899, perished on the way. But Maharaja did not give up. Another batch of the trout fingerlings brought to Valley a year after by the angler Frank J Mitchel survived. Mitchel owned a carpet factory in Kashmir.

Mitchel reared the fingerlings in the Dachigam stream and later released them in other streams of the Valley. Though the five varieties of fish were brought to the state, only two of them, Brown and Rainbow trout adapted to the Valley's climate. What is more, the fish has developed a better taste than its western counterpart.

Trout farming is one of the major activities of the department. The annual trout production touches 262 tonnes. After trout's introduction in the Valley's streams, it took J&K another eighty years to think of farming the trout. It was only in the early 1980s that the fisheries department, for the first time established an ambitious trout project at Kokernag with the assistance of the then European Economic Commission. It is the second-largest trout fish farm in Asia. The annual production from the farm has reached a whopping 125 tons. Officials say the sinkhole is happening at the different streams and it will not have any impact on the farm.

Teams from the National Institute of Technology, Srinagar; the Department of the Earth Sciences University of Kashmir; the Fisheries Department and the Geology and Mining Department, visited the sinkhole and conducted technical tests.

The teams reported to the administration that a sinkhole is a naturally occurring geological event, a result of the chemical weathering of rock formation. At the site of the sinkhole, the underlying rock formation in the area is soluble limestone (Triassic limestone). Dissolution over long periods creates cavities in the rocks and these may cave in gradually or suddenly. The teams say the underlying cavern is about 100m long downstream.

Locals say the Brengi stream irrigates thousands of kanals of agricultural and horticultural lands and drying up of it poses a serious threat to these areas. A lecturer of Fisheries Sciences posted on Facebook: "It's very disheartening to see a particular habitat dying a suffocating death. Imagine our homes, we live in are burning & all the oxygen available only accelerates the rate of burning but we can't take that in the breath."

The authorities warned media persons against moving close to the sinkhole. The advisory says it hasn't been ascertained the water going into the sinkhole is actually of Brengi river. "Without verification through, the administration or an expert such news reporting has the potential to adversely affect law and order in the region." "Hence all media persons are advised not to mention in their news any unsolicited and unverified reports." Another advisory from administration says it has been observed that despite restrictions being imposed on any assembly of general public or movement of individuals near sinkhole at Wandevalgam by Sub Divisional Magistrate Kokernag, a number of media personnel continue to move close to and into the sinkhole, posing threat to their own life. "This, in turn, attracts general public near the sinkhole which increases the threat to life and makes crowd control difficult for the administration," reads the advisory. "Hence all media personnel are hereby advised and warned not to violate the restrictions imposed around the sinkhole." It says action under relevant sections of law shall be

taken against anyone found violating the order.

Piyush Singla, deputy commissioner Anantnag, says on Feb 11, at around 4 p.m, a sinkhole was reported to have emerged on the Bringi Nallah at Wandevalgam in Kokernag sub-division of Anantnag district disrupting the entire flow in the stream. While immediate mitigation measures were initiated by the district administration, efforts are being made to understand the scientific cause of the event, Singla's statement reads.

“While one intervention available was to immediately fill the sinkhole and divert the stream, however, given that sinkholes are naturally occurring geological events and pose no immediate danger, it was decided to investigate into the event scientifically and ensure that the intervention is scientifically rational and is not counterproductive,” the DC says.

He says a similar event occurred 27 years ago and the same was the source of Achabal spring and it was necessary to ensure that the present sinkhole is investigated to prevent unintended drying of springs in any other part.

“A similar fact has also been recorded by Sir Lawrence in Valley of Kashmir where he mentions that Brang river which disappears in the fissures of limestone at Dewalgam is the real source of Achabal spring,” he adds.

“In the meantime, appropriate measures to fill the sinkhole and creation of another diversion is being done shortly in consultation with technical and engineering experts,” reads the statement. It says that DC has been personally monitoring the day to day unfolding of activities and a constant briefing from task force members is being taken.

Jammu and Kashmir: Traditional dry fish Hogard in great demand in Kashmir's winter

<https://www.aninews.in/news/national/general-news/traditional-dry-fish-hogard-in-great-demand-in-kashmirs-winter20220124162849/>

"With the onset of the harsh winter season in Kashmir, the local traditional dry fish 'Hogard' is in great demand in Kashmiri markets. During winter food habits among Kashmiris change and people are seen eating foods aimed to protect themselves from severe cold. Apart from that, Chilai Kalan - the 40 harshest days of winter in Jammu and Kashmir - cuts the Valley off from the rest of the world, and people are only left to consume sun-dried vegetables and fish as fresh produce food items dwindle. Kashmir valley is famous all over the world for its traditions and cultures and one of them is cooking dry fish popularly known as 'Hogard' in winter. "During winter people get running nose, dry cough and chest problems in the valley. But the consumption of 'Hogard' keeps them warm and maintains protein level", said a local. The demand has increased in the wake of COVID. Kashmiris dry fish in large quantities for at least four to five months especially for the harsh winter periods and spring season to enjoy the taste of this unique and crispy food item. "We start drying the fish from October", said Zareef Ahmad Zareef, Cultural Expert and Historian. Some selected shops of old Srinagar city and Batamaloo market are famous for dry fish. Maximum vendors sell these dry fishes on hand carts and people across the valley visit to purchase this traditional dry fish. "It's good in winters because it doesn't catch insects. People first boil it then cook it as they want", said Bilal Ahmad, a dry fish seller.

Jammu and Kashmir: Unemployed/educated youth of district kupwara chose fisheries, a viable, lucrative business

<https://indiaeducationdiary.in/unemployed-educated-youth-of-district-kupwara-chose-fisheries-a-viable-lucrative-business/>

"Determination of youth to set up business ventures for self-employment is tapped by the government through different beneficiary schemes. The proactive approach of the Fisheries Department to guide and facilitate youth, besides providing market facilities motivated them to invest in fish culture which is proving to be one of the lucrative and viable businesses. General youth, especially educated unemployed ones are opting this sector as means of earning their livelihood. Today, thousands of people are directly or indirectly engaged with this business and entrepreneurship. Kupwara, the border and hilly district of Jammu and Kashmir, bestowed with natural water resources, has a great potential for growth of Fisheries and aquaculture products. The Department of Fisheries in Kupwara employs all possible efforts to further boost the activities both at Government level as well as in the private sector to achieve the highest mark of development in the sector. A massive impetus on the aquaculture in the district has been seen due to centrally sponsored schemes including Pradhan Mantri Matsya Sampada Yojna (PMMSY) which aims to achieve the target results through sustained and focused activities.

During the last five years, the fish production of the district increased manifold with 9738 quintals production achieved during 2020-21.

Assistant Director, Department of fisheries, Kupwara Unit details that during the last 9 months of current financial year recorded 8972 quintals of production while the trout production is expected to touch 200 quintals in March, 2022. The inclination towards fish culture among the locals in Kupwara is overwhelming as the concerned department saw registration of 711 fishermen while the number of fish farmers touches to 106. In the district, this sector provides livelihood to 817 families consisting of 5000 souls. For the economic welfare of people involved in the fisheries industry, an amount of Rs.104.39 has been spent by the Department of fisheries , Kupwara during the current financial year by the concerned department which includes financial assistance of Rs 78 lakh to 60 fishermen for construction of their residential houses, while as Rs.26.39 lakh have been provided to 14 unemployed youth as financial assistance for establishment of their own Fish Units. Likewise, during 2020-21 financial year, Rs. 116.59 lakh were provided as financial assistance to 76 beneficiaries for construction of residential houses while 11 persons were also provided financial assistance for construction of fish ponds under the Centrally Sponsored Scheme PMMSY.

The Assistant Director informed that 65 Carp and 41 Trout units are functional in the district, with a minimum capacity of 4-7 quintal in Carp Culture and 7-15 quintal in Trout Culture. During 2020-21, ten trout and 01 Carp units have been constructed in the Private Sector under CSS Scheme PMMSY while in the current financial year fourteen Trout/ Carp units are being constructed in the Private Sector in the district under capex budget and PMMSY scheme. During the last 05 years, 34 units have been established which include 26 Trout units and 08 Carp units. Financial assistance to registered fishermen for construction of their residential houses motivates youth to adopt this sector as means of their livelihood. The department provided During last 05 years , that is, from 2018-19 to 2021-22, 154 deserving fishermen (21 in Karnah, 41 in Kupwara, 03 in Lolab,55 in Handwara and 34 in Langate) got financial assistance of Rs.1.30 lakh each for construction of their residential houses. During the current financial year 60 such housing units have been allotted under PMMSY Scheme in the district through ‘draw of lots’. The Department of Fisheries always keeps Stocking of water bodies, annually with quality fish seed produced at National Fish Farm Manasbal , to boost the capture fisheries and to compensate for the losses of livestock due to floods and poaching.

A large number of fishermen families get livelihood from these water bodies. The department has earned Rs.1.80 lakh as auction amount during 2021-22. As per data provided by the department, 1748937 number carp seed was stocked during the last 5 years while as 160000 Trout seed was also stocked during the same time. “The Trout Stream Mawar in Handwara

subdivision of district Kupwara is famous for trout angling. The stream is regularly being stocked with quality trout seed produced in different hatcheries of Kashmir Division especially Trout Hatchery Laribal Dachigam. The Anglers of different locations after Proper permission are allowed to catch fish. This activity is an attraction for the Tourists, especially those who are fond of Angling thus adds to the economy of the common people of the area and also becomes a source of income for the Shakarees(fishermen)of the local area, who help Anglers during fishing. During the current year 33 Anglers enjoyed fishing.

The Anglers were happy as they got a good catch of Brown Trout with weight range of 500 gms to 2 Kgs', said the A D Fisheries, adding , that was only possible because of proper watch and ward of trout streams and the department has collected a compensation of Rs.2.55 lakh from the poachers who were caught red handed during illegal fishing and mining. Sajjad further said that the department has established 03 Carp Fish Farms at Kohroo in Langate, Bohipora in Kupwara and Dewar in Lolab; likewise established 03 Trout Rearing Units at Kutlari in Mawar, Kalaroos and Sulimaan in Karnah subdivision. He said these units are functioning as innovation for fish farmers , besides providing seed. Last year 24330 Numbers of quality fish seed was provided to fish farmers of the district, besides 24000 Numbers were stocked into Irrigation Sars in the district. He said at Trout Rearing Unit Kutlari Mawar, Trout sale of Rs.7.21 lakh has been recorded during the current financial year so far as against 2.90 lakh in the year 2017-18. Likewise good sales are being recorded in other Trout Units also. He further said that for the convenience of fish farmers and the general public, a fully equipped fish sale centre has been established with the full support of the District Administration in the main market Kupwara. To conclude, the Assistant Director Fisheries said that the department is doing all best possible and sincere efforts to further boost the fisheries sector by way of increasing fish production and job opportunities in the district. He added that all the efforts become possible with the full support of Deputy Commissioner Kupwara and Director Fisheries.

Jammu and Kashmir: Fisheries Department generates employment through Trout farming

<https://www.bignewsnetwork.com/news/271702889/fisheries-department-generates-employment-through-trout-farming-in-j-k-rajouri>

"Jammu and Kashmir government's Fisheries Department is helping the unemployed youth with employment opportunities by providing Trout fish farms in Rajouri district's Thanamandi. Under Pradhan Mantri Matsya Sampada Yojana (PMMSY) scheme, the

unemployed youth of the Rajouri district have started self-employed units of Trout fish in cold regions like Thanamandi in the Rajouri district. "We have undertaken this project for the last six to seven months. The cultivation of Trout fish is benefiting us," said Salma Kouser, fish cultivator. "For unemployed people, fish cultivation can be a source of employment. We train people about how to cultivate Trout fish. This year, many people turned up. Through the cultivation of Trout fish, people can have a good source of income. We cover this under the PMMSY scheme," said Munish Sharma, Assistant Director, Fisheries department, Rajouri district.

Jammu and Kashmir: Srinagar admin holds awareness camp for unorganized workers particularly fishermen about the benefits of registering them on the e-SHRAM Portal

<https://www.risingkashmir.com/-Srinagar-admin-holds-awareness-camp-for-unorganized-workers-94440>

"The Camp was organized on the directions of Deputy Commissioner Srinagar, Mohammad Aijaz Asad by the office of Assistant Labour Commissioner in collaboration with the Fisheries Department. During the camp, scores of workers particularly Fishermen interacted with the Assistant Labour Commissioner (ALC), Arshid Ahmad Bhat and enquired about the process and benefits of getting registered. On the occasion, the ALC provided detailed information to unorganised workers particularly Fishermen about the benefits of registering them on the e-SHRAM Portal. The ALC said that special camps are being organised for the purpose through the Common Service Centres (CSC) across the district. He said Registration on the e-SHRAM portal requires Aadhaar details, bank account number linked with Aadhar card and an age limit of 18 to 59 years. He further informed the participants that it is the first-ever National Database of Unorganised Workers (NDUW) created by the Ministry of Labour and Employment to register the unorganized workers including migrant workers, construction workers, domestic help, ASHA and Anganwadi workers, Street vendors, Rickshaw pullers, Farmers, Agricultural labourers, Animal husbandry workers, Barbers, Weavers, Carpenters, Brick kiln, Quarry workers, Sawmill workers, Vegetable and Fruit vendors, Newspapers vendors, Auto drivers, Sericulture workers, housemaids and other such workers to get benefits of the Government schemes. On the occasion, the ALC informed that to date more than 14000 unorganized workers have been registered in Srinagar District and further registrations are going on.

Jammu and Kashmir: High and Dry: Wular's troubled fisherfolk reckon with a dying lake

<https://caravanmagazine.in/environment/wular-fisherfolk-reckon-dying-lake>

“Wular chu laachaar gomut”—Wular has become helpless—Mohammad Ashraf told me. Wular Lake, in Kashmir’s Bandipora district, is the largest freshwater lake in Asia. However, in the last few decades, it has shrunk drastically and lost some of its wetland functions. For fishermen like Ashraf, a flourishing Wular is now a distant memory. The lake has suffered due to illegal mining and improper waste management. This has had an impact on the fishing community, spread over more than seventy neighbouring villages, that has relied on the lake for generations. The unfortunate state of the market, an unregulated system of credit and the militarisation of the region have made the fisherfolk even more tangled in a web of poverty. As we started our journey through the lake, one evening in late June, several fishermen were in their boats under the shade of willow trees, waiting for the right time to cast their nets. “The fish mostly hide in springs underwater during the day and come out for a stroll at night,” Mohammad Akbar, a 60-year-old fisherman, told me. “During my childhood, we would catch around twenty kilograms of fish between 7 pm and 6 am, but now we get hardly four kilos in the summer and one to two kilos in the winter—and sometimes we return empty-handed.”

Jammu and Kashmir: Union MoS Fisheries visits trout fish farming project Kokernag

<https://indiaeducationdiary.in/union-mos-fisheries-visits-trout-fish-farming-project-kokernag/>

"As part of Central Government’s Public Outreach Programme, Union Minister of State for Information and Broadcasting and Fisheries, Animal Husbandry and Dairying Dr. L. Murugan today visited Trout Fish Farming Project Kokernag. During his visit, the Minister inspected the rearing units, machinery and other facilities available at the farm besides interacting with the fishers and fish farmers. He handed over PMMSY trout unit allotments to the beneficiaries and distributed certificates of excellence among the fishers. Worth to mention, under this scheme an amount of Rs. 5.50 lakhs per unit is provided to the holders. Besides, financial assistance for housing, setting up mini feed mills etc is provided to the fishers. On the occasion, the Minister was informed about the targets, achievements, production and other progress of the department.

Interacting with the growers, the Minister said the government has created a separate ministry for fisheries which befits the significance of the sector. He said adequate funds for upliftment of this sector have been allocated and various important schemes with provisions for financial assistance along with technical support are in operation. To boost the fisheries sector and related activities besides doubling the income of growers, PMMSY, a multi-component and multi-dimensional scheme was launched, said the Minister. He maintained that the government is committed to ensure its smooth implementation adding the active involvement of all stakeholders is equally important. District Development Commissioner Dr. Piyush Singla, Director Fisheries

B. A. Bhat, SSP Asish Mishra, Joint Director Fisheries South Kashmir Dr. Peerzada Irshad Ahmad, SDM Kokernag Sarib Sahran, Chief Animal Husbandry Officer Anantnag Dr. Abbas, Deputy Director Fisheries Siddique Ahmad Wani and other concerned officers besides PRI members, fish growers and farmers accompanied the Minister. At the conclusion, PRI members and growers put forth their demands like provision of proper market facilities, insurance cover etc. The Minister listened to them patiently and assured to address their genuine demands in due course of time.

Jammu and Kashmir: Govt helps unemployed youth in Handwara set up fish farms under PMMSY scheme

<https://www.aninews.in/news/national/general-news/j-k-govt-helps-unemployed-youth-in-handwara-set-up-fish-farms-under-pmmsy-scheme20210930213701/>

"The Fisheries Department of the Jammu and Kashmir government is helping the unemployed youth of the Handwara area of the Kupwara district in the Union Territory to set up their own fish farms under the Pradhan Mantri Matsya Sampada Yojana (PMMSY). PMMSY is the flagship scheme of the central government for the development of fisheries in the country. The Fisheries Department is encouraging young people to take up Trout fish farming. Around 25 Carp fish farms and 14 trout fish farms have been established in this district of Kashmir Valley, which has benefitted the unemployed youth of the region as now they are able to earn a good amount of money through their farms. The farming of trout fish can be done with a piece of land close to a water body. Under this scheme, 40-60 per cent of the money is being provided by the central government and 40 per cent by the unitholders. Youths who have gained the benefits of the scheme hailed the steps taken by the central government and the Fisheries Department of Jammu and Kashmir for their betterment. Basit Qayoom Khan, a beneficiary of the scheme, said, "I have done M.Tech and was at home for a year. But then the Inspector of the Fisheries Department encouraged me to start fish farms. It has been four to five months since I started it. I have purchased seeds of Rs 50,000 and feed worth Rs 1.5 lakhs. I expect that Rs 7 to Rs 8 lakh will be generated after a month. It is a good step for the unemployed youth. I urge the youth to take the benefits of this scheme soon.

I just had to give the land, everything else was provided by the government." "I am unemployed. I went to the fisheries department and they came to check the feasibility of my land. My unit was sanctioned and I established two units in two years. I have been working in fisheries for the last 4-5 years. I am thankful to the department of fisheries for always providing help and guidance at every step. A lot of people have joined from my area. This scheme is very beneficial," said another scheme beneficiary Abdul Ahad Wani. Nazir Ahmad Lone, the Inspector of Fisheries in the Handwara range said that two types of fish cultures--Carp and

Trout-- require completely different environments for their rearing. "Carp culture is done where we have a lot of water and land. Land should not be sandy. Trout fish grows in cold water and it is mainly reared in the upper areas," Nazir said. He said that the department gets applications from the youth, after which a survey is done for finding out the feasibility of land and water resources and units are then sanctioned for rearing. These units are given under the Pradhan Mantri Matsya Sampada Yojana (PMMSY). "Under this scheme, the Centre gives 40 per cent subsidy and rest 60 per cent investment is made by the beneficiary. However in case of Scheduled Tribes (STs) and women, 60 per cent subsidy is provided," added Nazir.

Jammu and Kashmir: DC Bandipora reviews implementation of housing scheme to fishermen community

<https://indiaeducationdiary.in/dc-bandipora-reviews-implementation-of-housing-scheme-to-fishermen-community/>

"The Deputy Commissioner (DC) Bandipora, Dr Owais Ahmad today chaired a meeting to review the implementation of housing scheme for fishermen community. It was informed that the Department of Fisheries conducted randomization to draw lots for allotment of houses to the fishermen community. Officers informed that 142 houses have been allotted during the current financial year including 30 houses in Lajerwalpora, 30 in Zurimanz, 40 in Kulhama, 40 in Sumbal and 2 in Zalwan. Assistant Director Fisheries said 553 applications were received and the selection was done randomly by draw of lots in proper independent supervision. It was further given out that 2697 new fisheries licences have been issued during the current year. The Deputy Commissioner on the occasion stressed on the officers to ensure speedy disposal of cases so that work to construction houses can be started at earliest. Meeting also discussed threadbare issues that hinder the smooth implementation of the scheme and directions were passed to remove those bottlenecks. Among others, the meeting was attended by Joint Director Planning Imtiyaz Ahmad, Assistant Director Fisheries, District Information Officer Jehangeer Akhoo, Executive Engineer R&B and other senior officers of the district.

Jammu and Kashmir: Blue revolution, produces 21,000 MTs of fish annually

<https://www.greaterkashmir.com/business/blue-revolution-jk-produces-21000-mts-of-fish-annually>

"With introduction of several schemes, Jammu and Kashmir fish production has reached 21,000 MTs annually including 650 MTs of trout fish. As per the official document, J&K produces around 21 Thousand MTs of fish every year including 650 MT of trout besides 13.25 million trout seed and 62.50 million carp/other seed every year. J&K is the leading trout producer in the country and accounts for about 71 percent of the country's trout production.

Director Fisheries, Bashir Ahmad Bhat said: “Kashmir is abundant in natural, clean, pollution-free water resources in the form of rivers, lakes, springs, streams etc, which form the prime centers of cold water Fisheries. This water is well suited for breeding, rearing, and production of trout fishes. In view of vast Fisheries Resources and suitable climatic conditions” “The privatization of Fish culture in the UT of Jammu and Kashmir is now more than a decade old and the continuous efforts taken by the Department of Fisheries at ground level has started bearing fruits now.

Various other schemes which include RKVY/NMPS, State sector, Blue Revolution etc have resulted in an increase in fish production.” As per the official document there are around 15500 fishermen in J&K and for their welfare 3482 low cost houses have been established under the National Welfare Scheme for Fishermen. Ministry of Fisheries, government of India during the current FY released an amount of Rs 18.28 crore and revalidated an amount of Rs 7.88 crore under Pradhan Mantri Matsya Sampada Yojana and the erstwhile CSS-Blue Revolution respectively for construction of low cost houses for fishermen. “Central government also launched Pradhan Mantri Matsya Sampada Yojana (PMMSY) , a beneficiary oriented flagship scheme during the current FY under Atma Nirbhar Bharat. The Ministry of Fisheries during the current FY released an amount of Rs 5.22 crore out of an approved central allocation of Rs 12.75 crore mainly for establishment of fish units and the Department anticipates establishment of 186 trout units, 37 carp units and 7 biofloc units at an estimated cost of Rs 4.78 crore. “Establishment of biofloc units is the first of its kind in the UT as they are based on a new technological intervention wherein fish farmers can conserve feed inputs and utilize wastewater during production by letting beneficial bacterial colonies & proliferate in culture water,” it said. During last three decades, massive infrastructure in the shape of Hatcheries, Fish Farms, Fish Rearing Units, Laboratories etc have been established, besides, the establishment of Mega Aquarium at Bahu-Fort, Asia’s largest Trout Fish Farming Project Kokernag, Prestigious Trout Fish Feed Mill at Manasbal as well Hygienic wholesale cum Retail Fish Market at Jammu.

Jammu and Kashmir: Govt frames action plan for conservation of wetlands

<https://www.greaterkashmir.com/todays-paper/front-page/govt-frames-action-plan-for-conservation-of-wetlands-in-kashmir>

"The Jammu and Kashmir government has come up with an Integrated Management Action Plan for conservation of wetlands in Kashmir with a proposed budgetary outlay of Rs 46.70 crore. “An overall budget of Rs 46.70 crore is proposed for implementation of the Integrated Management Action Plan for all the Wetland Conservation Reserves of Kashmir Region over a period of 5 years (2022-27),” copy of Action Plan reads. “Rs 18.93 crore has been allocated for the overall investment, followed by Rs 13.15 crore for Biodiversity Conservation

and Rs 7.49 Crore have been apportioned for the Education Awareness and Eco-Tourism, besides, Rs 0.80 crore for the Sustainable Resource Development and Livelihood Development and Rs 6.33 crore for Institutional Development,” it reads. “The management planning framework will seek a balance between ecosystem conservation for ensuring ecological integrity of all our wetlands and ensuring livelihood security to the communities. “It will also seek to ensure an effective institutional mechanism that harmonizes planning at various levels with participation of all concerned stakeholders to achieve the objectives of integrated conservation and livelihoods.

“In order to achieve the above, management planning has been organized along five subcomponents, viz. land and water resources management, biodiversity conservation, ecotourism development, livelihood improvement and institutional development.” The Action Plan states that increasing population around all these Wetland Conservation reserves has resulted in the conversion of vast areas of the immediate catchment to agricultural land. “The increasing demand for fire wood has brought a vast area of these wetlands for willow and poplar plantations by the local people. The plantation of these species has also been done in the wetland periphery. The areas of wetlands near habitations are under constant threat of encroachment. “At times, there are clashes between departmental staff and encroachers as such attempts are thwarted. During the last two decades human settlements have come up very close to the perimeter of the Wetlands particularly Hokersar wetland. “The solid waste is also a challenge as the inhabitants of settlements around wetlands have a tendency to throw solid waste into the wetlands. Such waste from homes and urban areas around wetlands can get into the wetlands due to irresponsible behaviour of individuals.

“The use of agriculture fertilizers and pesticides, insecticides, fungicides, etc. in the catchments of Hokersar, Hygam, Mirgund and Shallabugh have affected the water chemistry. The fishery is seriously affected and many species of fish forming a good portion of food to birds are already declined. “Catchment degradation, deforestation and other anthropogenic activities have accelerated soil erosion resulting in floods. These floods increase sedimentation rate. These wetlands are fed by many perennial and seasonal water channels which are directly or indirectly linked to the River Jhelum basin or its offshoots, which bring water to these wetlands for their sustenance. “However, they bring along with it a huge amount of silt. In Hokersar, much of the siltation has occurred at the entry points of these feeding channels i.e. Soibugh to Hajibagh. ""In Shallabugh Wetland, the feeding Anchar Nallah has brought Sangam Beat under heavy silt while as in Hygam, Ningli Flood Channel and Baal Kul are responsible for siltation in the wetland. Siltation has occurred to such an extent that during summer one can walk easily across these wetlands at different places. ""The negative impact of this massive inflow of silt is manifesting into three fields. Firstly, the silt is getting deposited in the beds of wetland making it less

shallow. Secondly, it is resulting in the gradual decrease of the water spread within the wetland area, and thirdly, due to siltation there is shift in macrophytic community,” the Action Plan for conservation of wetlands reads.

Jammu and Kashmir: 40,000 Trout fish seed stocked in Warwan, Marwah area

<https://www.5dariyanews.com/news/340415-40000-Trout-fish-seed-stocked-in-Warwan-Marwah-area>

"Director Fisheries Jammu & Kashmir, Bashir Ahmed Bhat stocked about 40,000 trout fish seeds in natural water bodies /trout streams of Warwan and Marwah area during his three day tour of District Kishtwar.He was accompanied by Joint Director Fisheries (Chenab Valley) M. A. Derzi,Joint Director South Kashmir M. M. Bazaz; Assistant Director Fisheries Kishtwar Bharat Bushan; besides concerned field staff accompanied the Director during a special drive of stocking. The Director Fisheries stated that in its endeavours to promote fish breeding in natural water bodies, Department of Fisheries have stocked 40 thousands Trout seeds in Marsudar, Guzar, Bata and Daswal trout streams of Warwan & Hajka nallah in Marwah area in presence of PRI and DDC members. He said the department has been taking regular management measures of natural water resources by augmenting these water bodies with quality, disease resistant varieties of fish seed both in Trout waters as well as in Carp waters. ""Under this programme the Fisheries department has already stocked Dul Hasti reservoir with Indian Major Carp and exotic carp seed and today stocking of various trout streams of Warwan and Marwah area with fingerlings of Trout seed was done,"" he added. ""Stocking of natural water bodies is an ongoing regular programme which is being undertaken by the department throughout the Union Territory of Jammu & Kashmir as per the feasibility and existing fish biomass"" he maintained.He further stated that the fisheries department has constructed 5320 Low Cost Houses till 2020-21 and has settled 234 insurance claims of Mahigirs (Fishermen), besides it has also taken this step for development of famous trout streams to attract more and more anglers/tourists to the area.Meanwhile, he inspected the ongoing works of under-construction Trout Rearing Unit at Bata Warwan and directed the Assistant Director to take up the matter with executing agency- Executive Engineer Marwah to expedite construction works.

Jammu and Kashmir: Photo Essay: Learned this process the hard way from ancestors': How water chestnuts from Wular Lake sustain families

<https://www.freepressjournal.in/photo-gallery/learned-this-process-the-hard-way-from-ancestors-how-water-chestnuts-from-jammu-kashmirs-wular-lake-sustain-families-see-photos>

"Wular Lake is more than a popular destination. It houses the stories of many who depend on it for their livelihood. One of the largest freshwater lakes in Asia, it is located in the north of Kashmir. Around 5-7 thousand fishermen earn their livelihood from the lake, says a report published by the Department of Ecology, Environment and Remote Sensing, Government of Jammu & Kashmir. The lake contributes more than 60 per cent of the fish production in Kashmir. Abdul Rahman Kawaa, a fisherman, works 11-12 hours a day at the lake to survive his family. ""We're fishing too, for our livelihood, but as of now, the major focus is on water chestnuts,"" says Kawaa. Overall, more than thirty villages located on the periphery of the pristine lake are associated with the chestnut trade with youngsters leading from the front. Mafooza and Kulsuma who are friends drive a boat full of water chest nuts at Wular Lake in Bandipora, Jammu and Kashmir. The families with low economic status are involved in the chestnuts business. The villages taking pride in water chestnuts businesses include Lankrishipora, Kehnusa, Kunzpora, Saderkoot, Zurimanz, Ashtangu, Garoora, Banyari, Kunzpora, Kanibathi, Bakhchibal, Kulhama and Laharwalpora. The buyers at the banks of Wular Lake document sales before procuring it in the market. Usually, water chestnuts cost INR 50 (\$0.67) per kilogram. ""We have learned this process the hard way from our ancestors. It's good to keep this tradition alive, but at the same time, things have changed rapidly,"" says Saleema Begum who collects water caltrops along with selling fishes to feed a family of four. The Lake, which acts as a natural flood reservoir for the River Jehlum, has shrunk to about a quarter of its original size largely due to siltation from rivers feeding into the lake and human encroachments. Due to human interference, there has been severe depletion of some important endemic and endangered plants. Wular Lake looks more like a flat marshy plain than a large lake now because it is silting up rapidly due to run-off from its denuded catchment.

Jammu and Kashmir: Fish farm in Ganderbal damaged by cloudburst

<http://www.uniindia.com/fish-farm-in-ganderbal-damaged-by-cloudburst/north/news/2463913.html>

"A fish farm has sustained substantial loss due to a cloud burst in central Kashmir district of Ganderbal, officials said on Saturday. A private fish farm at Gutlibagh, in Ganderbal, was damaged due to the cloudburst and lost all fishes, they added. However, there was no report of any loss of human life in the incident. Meanwhile, the Private Fish Farm owners have appealed to the Government, especially Principal Secretary to Government, Agriculture Production & Fisheries Department, and also Director Fisheries J&K to consider an Insurance scheme for private fish farms, to safeguard, against damages due to natural disasters, including floods.

Himachal Pradesh and Jammu and Kashmir: Cloudbursts, flash floods in Himachal, J&K kill 22; IMD issues alert for North India

<https://www.indiatoday.in/india/story/cloudburst-landslide-rain-alert-warning-imd-jk-ladakh-himachal-delhi-punjab-uttarakhand-1833936-2021-07-29>"

A series of flash floods and cloudbursts claimed 22 lives in parts of the country on Wednesday. Teams of the National Disaster Response Force (NDRF) have been deployed to carry out rescue operations and assess the damage. In Maharashtra, the death toll from rain-related incidents climbed to 213. Raigad, one of the worst-affected districts, accounted for 95 of the reported fatalities. Other districts reeling under massive landslides include Satara and Ratnagiri, while floods have claimed lives in Kolhapur and Sangli. The Indian Meteorological Department (IMD) has also sounded an 'orange alert' for the national capital, warning of incessant downpours. An 'orange alert' accompanies a prediction for extremely bad weather and possible disruption of commuting owing to water logging as well as cuts in power supply. Flash floods claim 9 lives in Himachal Pradesh. Flash floods wreaked havoc in parts of Himachal Pradesh on Wednesday, claiming as many as 14 lives. Four people are still presumed missing. READ: Woman, 4-year-old son swept away in flash floods in Himachal Pradesh's Kullu. Addressing the media on Wednesday, Himachal Pradesh chief secretary Anil Khachi said seven districts in the state remain affected by flash floods. Lahaul-Spiti, Kullu and Chamba are the worst affected, he added. Seven people died in the Lahaul-Spiti flash floods triggered by a cloudburst over Tozing Nullah in Udaipur, State Disaster Management Director Sudesh Kumar Mokhta said. A hydro project official and a tourist from Delhi were among those feared dead in Kullu district. Two more fatalities have been reported in Chamba. The Shimla Meteorological Centre has issued a "red" weather warning, indicating extremely heavy rain.

Meanwhile, traffic has been suspended on the Manali-Manali-Leh highway and the Gramphu-Kaza highway. Multiple landslides have also blocked the Kalka-Shimla highway and the Chandigarh-Manali highway. Cloudbursts in J&K, Ladakh: 8 dead, 17 missing. The twin union territories of Jammu and Kashmir and Ladakh were struck by a series of cloudbursts on Wednesday. Dacchan and Boujwa areas in J&K's Kishtwar district witnessed the most damage. The bodies of seven people, including two women, have been recovered from Dacchin. Another person drowned in the swollen Saktoi nallah in Rajouri district on Wednesday. At the same time, 17 people were rescued from the area in a joint operation by the police, Army and the State Disaster Response Force (SDRF). Seventeen people are still reportedly missing. Cloudbursts were also reported from the holy cave shrine of Amarnath in south Kashmir and Aloosa village in Bandipora in north Kashmir. Meanwhile, floods disrupted normal life in Machail, Paddar and Bunjwah in Kishtwar district on Wednesday. In Ladakh, cloudbursts affected Sangra and Khangral areas of Kargil in Ladakh, damaging nearly a dozen homes, several bridges and even a mini-hydro power project. Reports of damage are also coming in from Khangral village on the Srinagar-Leh national highway.

Heavy rain lashes Delhi, Haryana, Punjab Heavy spells of rain lashed Delhi and Haryana's Gurugram on Wednesday. According to the Safdarjung Observatory, the national capital has received 386.3 mm of rainfall this month so far. Waterlogging led to traffic snarls in a number of areas, including Vasant Kunj, Laxmi Nagar, Mubarakpur, Malviya Nagar, Dwarka sector 1 and 8, Mahipalpur, Nangloi and Uttam Nagar, among others. A portion of a road also caved in near India Gate following heavy rain on Wednesday morning. Gurugram in Haryana was also affected by waterlogging in low-lying areas. Gurugram received 91.8 mm of rain on Wednesday, as per the weather department. In Punjab, a fresh spell of rain lashed Ambala, Amritsar, Bhiwani, Chandigarh, Hisar, Karnal, Narnaul, Patiala, and Rohtak. The IMD predicts light to moderate rain at most places in Haryana and Punjab on Thursday.

IMD issues warning for South Bengal, Uttarakhand Predicting heavy rainfall for North 24 Parganas and South 24 Parganas in West Bengal over the next two days, the Met Department has warned of a rise in water levels of rivers in South Bengal. Other parts of the state likely to receive heavy downpours include Purulia, Bankura, Paschim Medinipur, Jhargram, Purba Bardhaman, Kolkata, Nadia and Murshidabad. READ: Konkan region, Goa to witness heavy rainfall, IMD issues orange alert for July 30-31 In Uttarakhand, extremely heavy rainfall is expected to continue in Uttarkashi, Nainital, Dehradun and Pauri. The director of the IMD's regional centre in Uttarakhand, Bikram Singh, advised people to avoid travel fearing landslides. Multiple landslides triggered by heavy rains have already blocked the Gangotri and Yamunotri national highways at a number of points. As many as 20 link roads also stand blocked owing to landslides.

Jammu and Kashmir: Promoting Blue Revolution

<https://www.dailyexcelsior.com/promoting-blue-revolution-in-jk/>

"India possesses 2.4 per cent of the global land area and sustains 17.74 per cent of the world population. In India fish farming is a flourishing sector and a very important economic activity. This sector engages over 14.50 million people at the primary level. This sector transformed from traditional to commercial scale and has led to 17- fold increase in just six decades i.e. from 7.5 lakh tonne in 1950- 51 to 125.90 lakh tonne during 2018-19. This sector registered an overall annual growth rate of about 4 per cent. This sector has contributed around 1.1 per cent to the National Gross Domestic Production (GDP) and 5.15 per cent to the agricultural GDP. Besides meeting the national protein demand and livelihood, fisheries also earn foreign exchange to the tune of Rs.47, 620 crores in 2018-19. This justifies the importance of this sector on the country's food, economy and livelihood security. India constitutes about 6.30 per cent of the global fish production and 5 per cent of global trade. India has attained the second largest fish producing

and second largest aquaculture producing nation in the world. This sector has been named as the “Blue revolution”.

Considering the limited scope of the capture fisheries from coastal waters and natural inland waters like rivers and estuaries, emphasis on aquaculture and culture based fisheries from reservoirs and floodplain wetlands has been given to mitigate the increasing requirement of fisheries. Major objectives of blue revolution is to fully tap the total fish potential of the country both in the inland and the marine sector and triple the production, to transform the fisheries sector as a modern industry with special focus on new technologies and processes, to enhance the income of the fishers and fish farmers with special focus on increasing productivity and better marketing, post-harvest infrastructure including e-commerce and other technologies and global best innovations.

The Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying & Fisheries has accordingly restructured the scheme by merging all the ongoing schemes under an umbrella of Blue Revolution, to provide focused development and management of fisheries, covering inland fisheries, aquaculture and marine fisheries including deep sea fishing, mariculture and all activities undertaken by the National Fisheries Development Board (NFDB). Integrated fish farming is the combination of two or more separate farming systems where the waste from one subsystem is utilized for sustenance of the other. For example, fish-pig/poultry/ducks farming. The system provides considerable potential and scope for augmenting production and also offers an enormous scope for employment generation and rural economy. The country possesses significant water bodies both in Himalayan region and Western Ghats, which hold large populations of both indigenous and exotic cultivable and non-cultivable cold water fish species.

Important food fishes in the region are Mahaseers and Schizothoracids among the indigenous species and Trouts among the exotic varieties. Increasing per capita fish availability from the present level of only 8 kg to 11 kg (as recommended by WHO) is the primary challenge before the country. Considering the scope of the capture fisheries from coastal waters and natural inland waters like rivers and estuaries, emphasis on aquaculture and culture based fisheries from reservoirs and floodplain wetlands should also be given to meet the targeted fish requirement. Research and development efforts in the last five decades have greatly improved average fish yields in the country making carp culture an important economic activity. Indian Major Carps (IMC) Rohu (*Labeo rohito*), Catla (*Catla catla*), Mrigal (*Cirrhinus mrigala*) were the principal species cultured in ponds since ages. Species like *Labeo calbasu*, *L. gonius*, *L. bata*, *Puntius pulchellus*, *P. sarana*, *P. bolus* and *Cirrhinus cirrhosa* are considered to be important species due to their production potential, high market price and consumer preference. Catfishes have great

commercial importance. Magur (*Clarias batrachus*) and Singhi (*Hetero-pneustes fossils*’) are the two air-breathing candidate species for culture. Several other non-air breathing catfishes like *Mystus seenghala*, *Pungasiuspungasius*, *Wallago attu*, *Ompak pabda* are also being cultured in view of the high consumer preference.

The giant freshwater prawn, (*Macrobrachium rosenbergii*) is the largest and fastest growing species among freshwater prawns. The development of hatchery technology for *M. rosenbergii* and later, for Indian river prawn, *M. malcolmsonii* has opened up new possibilities of freshwater aquaculture. Fisheries is a growing sector in the Union Territory of J&K. This sector is considered as an emerging venture which possesses a potential to contribute immensely to the economy of J&K. This sector provides nutrients and is helpful in generating employment and income especially for the rural youths of J&K. The number of fishing license holders in J&K are increasing annually and many new farmers are coming forward for fish farming. There is a big gap between the demand and supply in fisheries sector in J&K. Fish is a valuable source of diet for the local people. Fisheries sector in J&K has made significant strides during the last decade. During the year 2018-19, J&K produced about 20.7 thousand metric tones of fish. The demand of fish in J&K is 1.5 lakh tones.

In J&K about 93,000 people depend on fisheries for their livelihood. There is a lot of biodiversity in fisheries flora and fauna in J&K. Technical know-how and exposure visits for the fish farmers of J&K can create interest and passion towards this sector. There is need to increase production and productivity of fisheries in J&K so that the increasing demand of fisheries can be mitigated. Union Territory of Jammu and Kashmir serves a congenial habitat for a variety of fish species due to large number of cold water resources. J&K is blessed with the Rivers like the Chenab, Indus, Jhelum along with lakes like Dal lake, Wular lake, Manasbal lake and Mansar lake. In J&K the first batch of 10,000 eggs of trout arrived from the United Kingdom in the year 1899 but all of them perished. Department of Fisheries was created in 1903 in J&K to promote the fish farming. J&K produces more than 20.00 thousands tonnes of fish production because of adoption of modern aqua cultural practices. Kashmir region produces more than 80 per cent of the fish production and Jammu has also emerged as a major producer of animal protein. The fish production data of four decades reflects increasing trend of production in all commercially important species of both the provinces.

Union Territory of Jammu and Kashmir is known as the tourist destination due to its munificence of blossoms and magnanimity of resorts. This UT is holding huge water spread area of around 57000 hectares out of which about 24000 hectares are in the shape of lakes, marshy areas and reservoirs and 23000 hectares in the shape of river systems. Temperate and sub-tropical zones of J&K offer a potential resource for the development of cold and warm water fisheries including

Trouts, Schizothoracines, Indian major carps and Chinese carps. In Jammu region Jammu district leads in fish production (approx.6657 qtls.) followed by Kathua (approx.4481 qtls.) and Udhampur (approx.4195 qtls.). In Kashmir region Baramulla district leads in fish production (approx.42770 qtls.). J&K has immense potential in fish farming. There is need to upgrade the technical knowledge of fish farmers and modern technologies on fish farming should be provided to them. Blue revolution can open new avenues of income and employment for the rural youths of J&K.

Jammu and Kashmir: New riverbed-mining permissions may be final straw for Kashmir's fish

<https://www.thethirdpole.net/en/nature/riverbed-mining-kashmir-permissions-final-straw-for-fish/>

"In 1838, German biologist Johann Jakob Heckel published a book, *Fische aus Caschmir*. In it, he documented the presence of 16 fish species in Kashmir, 12 of which were of the snowtrout genus *Schizothorax*. "Only five of them could be found now," said Feroz Ahmad Bhat, an assistant professor and head of fisheries resource management at the Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST). "Even these remaining fish are under stress and their numbers are progressively declining." The past 40 years have been particularly brutal for the riverine ecology in this region of northwest India, as pollution, encroachment and water diversion have increased, adding to longer-term problems such as the introduction of non-native species. In recent years a new threat has emerged: riverbed mining. Stone crushers spring up in Jammu and Kashmir. The Veshav River in south Kashmir is a major tributary of the Jhelum. Its waters are home to native snowtrout, as well as brown and rainbow trout, which were introduced to Kashmir.

Along a 35-kilometre stretch of the Veshav, there are six points where boulders and gravel are taken from the river and crushed. "Two of these stone crushers are along the 15-kilometre stretch of the stream from Aharbal [a hill station] where trout thrive," said Shabir Ahmad, an inspector in the Jammu and Kashmir Department of Fisheries whose job is to monitor the Veshav. "And four others are located along the stretch populated by *Schizothorax*, which also need trout-like habitat to breed." *Schizothorax* and trout depend on gravel and boulders to feed and breed. The extraction of these materials threatens their long-term survival. "Trout need cold, fresh waters and a food of aquatic insects and crustaceans, which is largely found on the rocks," said SKUAST's Bhat. "Ditto for *Schizothorax*. Rock crushing will not only damage the habitat but also pollute the waters, both detrimental to fish survival." There are three stone-crushing machines on the banks of the Bringi, another major river in the area, said Shabir Ahmad. And

Lidder, a river said to be home to the finest trout in the world, has two crushers, now a familiar sight across the region's rivers and streams.

New rules open the door for stone crushers The regional government has recently permitted the establishment of more stone-crushing plants. According to a list seen by The Third Pole, between October and December 2020 the region's Department of Fisheries issued No Objection Certificates (NOCs) for around 130 additional stone crushers, 70 of them in the Kashmir Valley. In late February, the administration created new rules for stone crushers and 'hot and wet mixing plants' (where stones and gravel are processed), dispensing with the previous requirement for a licence. The rules simplify the process of establishing a unit by reducing the requisite clearances to just two documents: Consent to Operate (CTO) from the region's Pollution Control Board and an NOC from the relevant district administrator.

Moreover, the issuing of NOCs has been brought under the J&K Public Services Guarantee Act, 2011, making it mandatory to issue the document within 30 days. This leaves little time for due diligence, much less an assessment of the environmental impact of the proposed stone crusher, which means assessments may be being done on paper only. Riverbed mining is on the rise globally, with up to 50 billion tonnes of sand and gravel being extracted every year. This is driven particularly by growth in the Asia Pacific region, and the booming construction industry. **An impending ecological catastrophe** "The NOCs would encourage deployment of heavy machinery to extract boulders and gravel," warned A R Yousuf, a former member of the National Green Tribunal, India's environmental court. "Imagine what this would do to the streams if the mining goes unchecked." Raja Muzaffar Bhat, a Right to Information and environmental activist, said the NOCs for stone crushers should be repealed, and mining prohibited along the trout streams. "The rock crushing and the other kind of mining will despoil and destroy trout streams," Bhat said. "After having protected trout streams over the last century, how could the government be a party to their destruction?" Makhdoom Mohiuddin, deputy director of the Department of Fisheries, told The Third Pole that his department is taking every care to maintain the health of the trout streams. **Impact of undermining Jammu and Kashmir's special status** Commentators trace the relaxation of environmental regulations in Jammu and Kashmir to the undercutting of Article 370 in August 2019.

This Article in the Indian Constitution allowed the local government to retain certain rights, such as limiting mining contracts to locals of Jammu and Kashmir. Now this is open to people from outside the region. "There have been rushed approvals for the mining contracts in water bodies," said Bhat, the RTI and environmental activist. "As a result, little attention has been paid to the environmental fallout of the new contracts." A potential enabling factor in the current permitting boom may be the lack of implementing regulations in the 2018 Fisheries Act that replaced the

Jammu and Kashmir Fisheries Act, 1903. “Though a new fisheries act is there, the rules that would have defined circumstances for its implementation are yet to be issued,” said Mohammad Hussain Wani, a fisheries scientist, who has now retired from the department. “This has created scope for violations.” The situation, Wani added, is unlikely to improve unless the government takes a more serious view of the situation. Mohiuddin, from the Department of Fisheries, said he wants the rules to be defined to give “clarity” to the implementation of the 2018 act. “Our staff on the ground bar illegal mining and any violation of the contract by the stone crushers,” Mohiuddin said, adding: “We have fined and filed cases against the violators.” But, for now, the government is encouraging mining of Kashmir’s water bodies. This is made easier because of a lack of forceful environmental activism in the Kashmir Valley. Bhat wants to end the silence, but the constricted political space in Kashmir stands in the way.

Even before 2019 civil society activism was difficult in the region; it has since become harder. After Jammu and Kashmir’s special status was removed, the government jailed politicians and civil society activists. Last year, the office of the J&K Coalition of Civil Society, a Srinagar-based civil liberties group, was raided. Mining adds to existing pressures. Over the past century, there has been a decline in native species like snowtrout in the Kashmir Valley. The International Union for Conservation of Nature lists a number of *Schizothorax* species as vulnerable or critically endangered on its Red List of threatened species. Experts cite the introduction of non-native trout and carp in the Kashmir Valley over the past century, rising pollution levels, encroachment and diversion of water as reasons for these declines. In particular, the introduction of brown trout in the early 1900s affected the breeding success of *Schizothorax* species. “The trout, being a carnivorous fish, started eating the eggs and the fingerlings of *Schizothorax*,” said Imtiaz Ahmad Khan, a faculty member in the Department of Zoology at the University of Kashmir. “It also grew faster and in larger numbers, thus crowding out the local fish.” Populations of brown and rainbow trout are now in turn threatened in Kashmir – not by other exotic fish, but by increasing human intervention, facilitated by the government. Fishers’ livelihoods in jeopardy .

The livelihoods of thousands of people is at stake. In the section of the river populated by *Schizothorax*, there are around 450 fishers registered with the fisheries department. “They catch around 150 tonnes of fish annually,” said Ahmad, the Department of Fisheries official. Over 600 tonnes of trout is produced annually in the Kashmir Valley across government-established hatcheries and the private sector, making Kashmir one of the largest sources of the fish in South Asia. This excludes wild trout, a big draw for the tourists to the Kashmir Valley. The Veshav attracts around 250 anglers a year, each catching an average of 3-5 kilogrammes of fish a day. “There’s an urgent need to put a check on indiscriminate mining,” said activist Bhat. “We are losing *Schizothorax*. And if stone crushers are not prevented from ravaging the habitat of trout,

we might soon start losing exotic fish too.”

Jammu and Kashmir: Flash floods hit Kathua, Samba, 1 dead in Rajouri

<https://www.hindustantimes.com/cities/chandigarh-news/flash-floods-hit-kathua-samba-1-dead-in-rajouri-101626119989688.html>

"Rain drenched Jammu and Kashmir on Monday, triggering flash floods in some areas and bringing down temperatures. The rain and the mild cloudbursts triggered flash floods in a few areas of Jammu division and Kashmir valley's Ganderbal district. The weather office said that Jammu district saw the highest rainfall (150mm) in the region in the past 24 hours till 8.30am, followed by 76mm in Katra and 28mm in Kashmir's Khanbal. Flashfloods were reported across Jammu, Samba and Kathua districts. Several localities were marooned and a vital bridge was damaged disconnecting densely populated Gadigarh area in Jammu city. One person was killed when a retaining wall of Government Medical College collapsed on Sunday in Rajouri due to heavy rainfall. Nine families were evacuated from Kalka Colony of Jammu city after their houses were partially damaged in flashfloods.

A police post in Gadigarh and government primary health centre and tubewell were also submerged. "In a major rescue operation in Jammu city, around nine families were shifted to safer areas when their houses were inundated at Kalka Colony," said deputy commissioner, Jammu, Anshul Garg. Janipur, Domana, Gadigarh, Kalika Colony, Bhagwati Nagar, New Plot, Amphalla, and other places in Jammu City also reported waterlogging. However, the water level receded after rainfall subsided before noon. In Kathua district, three women at Shabe Chak were rescued from the flooded Ujh river by the Raj Bagh Police and SDRF teams in an operation. "In some of the areas, the water level had increased in low-lying areas and Ujh and Tarna Rivers had also crossed danger level. However, there was no loss of life," said the deputy commissioner, Kathua, Rahul Yadav. Some people were rescued from the Ghati area by the SDRF. "Ten buffalos were also caught in a flash flood at Chabe-Chak and two mud houses were also damaged," he said. Eleven people were rescued following flash floods in Kathua where heavy rains disrupted normal life and inundated several areas, officials said. People belonging to a nomadic community were stuck in flash floods in Ujh river in the Rajbagh area and were rescued by police and SDRF personnel, they said. The district administration in Kathua and Samba sounded a flood alert. Traffic movement was disrupted on the Pathankot-Jammu highway.

Himachal Pradesh and Jammu and Kashmir: 71 dead in lightning strikes, flash floods

<https://economictimes.indiatimes.com/news/india/71-dead-in-lightning-strikes-flash-floods-in-hp-and-jammu/articleshow/84358074.cms>

"Heavy rains triggered flash floods in parts of Himachal Pradesh and the Jammu region disrupting normal life on Monday even as the deaths due to lightning strikes in several states climbed to 71, including 42 in Uttar Pradesh. Union home minister Amit Shah spoke to Himachal Pradesh chief minister Jai Ram Thakur on Monday to take stock of the situation arising from floods in several districts of the state and assured him of all possible help from the Centre. The National Disaster Response Force (NDRF) has rushed three teams to conduct rescue-and-search operations in the flash flood-affected regions in Kangra. The India Meteorological Department has issued an orange alert for Rajasthan and Jammu and Kashmir, and yellow alert for Himachal Pradesh, Uttarakhand and Uttar Pradesh for Tuesday with warning of heavy rains. In Himachal Pradesh's Dharamshala, flash floods triggered by heavy rains swept away cars and two buildings, videos of which were widely shared on the social media. The flash floods also damaged several buildings, including one housing a government school, as bad weather led to the closure of the Kangra airport at Gaggal.

Jammu and Kashmir: Govt schemes aid in creating fish farm in Anantnag

<https://www.sify.com/news/govt-schemes-aid-in-creating-recreational-facilities-fish-farm-in-j-ks-anantnag-news-national-vhidahhjbggh.html>

"With the aim to inspire the youth in Jammu and Kashmir, a man named Bilal Ahmad Khan has started a mini amusement park, a boating site and a fish farm in Anantnag. While speaking to ANI, Khan said, ""I have started a mini amusement park, a boating site and a fish farm in Anantnag. I aim to provide other recreation services in the region as well."" Anantnag is a place with abundant water resources which provide opportunities to the people to invest in fish farming, agriculture, horticulture and other activities. Many successful entrepreneurs in these fields have emerged in the district with Bilal Ahmad Khan, a postgraduate being one of them. While talking to ANI, Bilal Ahmad Khan said, ""Coming from a village with surplus water supply, I decided to utilize the available water and land resources for making my livelihood.

Assisted by the Fisheries Department through Prime Minister's package, I set up a private fish farm in 2007 and have been rearing carp fish (common carp, grass carp, and silver carp) in it.

Encouraged by initial gains, I diversified the activities at the farm and built a small pond and an amusement park for children by its side."Khan purchased pedal boats and other equipment from Kolkata and started providing boating and recreation services that is 'first of its kind in South Kashmir', he informs. Today, Bilal Ahmad Khan provides jobs to scores of people in his village. He has opened an amusement park, a boating site and a fish farm in his village. Requesting the government to help him develop the site as a tourist spot, Bilal urged the people to send their children to the place and also asked unemployed educated youths of South Kashmir to avail benefits from Central and UT government schemes instead of roaming for Government jobs."I urge the unemployed youths of the valley to avail benefits of schemes provided by Central and UT governments", he said. The visitors hailed this step taken by Bilal Ahmad Khan by setting up a mini amusement park as they can take their children to this mini amusement park to enjoy and reduce stress level due to the COVID-19 pandemic.Zainab Muzaffar, a visitor told ANI, "I really enjoyed coming to this amusement park. I hope many people visit this amusement park in the near future."

Jammu and Kashmir: J-K: Pradhan Mantri Matsya Sampada Yojana helps Jammu farmers boost their income

<https://www.aninews.in/news/national/general-news/j-k-pradhan-mantri-matsya-sampada-yojana-helps-jammu-farmers-boost-their-income20210630153522/>

"After the launch of Pradhan Mantri Matsya Sampada Yojana (PMMSY), fish farming has gained popularity among farmers in Jammu.Farmers from Ghou Manhasa area have started pisciculture along with traditional farming to boost their income. According to Mohammad Ashraf Darzi, Joint Director Fisheries (Jammu), under PMMSY, a subsidy of 40 per cent to 60 per cent is being given by the Department of Fisheries to the farmers who want to start fish farming."We also provide seed and feed for one year. Also, special training is given to the farmers who are starting pisciculture," he said.Kulbhushan Verma, Regional Development Officer, Department of Fisheries (Jammu) informed that earlier, the department was only training the farmers in fish farming, but now they are also being educated about broodstock management and hatcheries."Under PMMSY, we give on-site training to the farmers and also take them off-site locations across India. This way they learn about new techniques and improve from others experiences," he said"Under the scheme, the government not only provides fish seeds to farmers for their personal ponds but also provides free of cost seeds for community ponds in the villages. At the end of the year, fish from the community ponds are auctioned and money is given to village panchayat. The landless farmers are also given a licence to catch fish from

public lakes and rivers,"" Varma added. As per Deepak Singh, a farmer who started fish farming under PMMSY, pisciculture is not only easier than traditional farming but also far more profitable. "I am a former Army officer. After retirement, I tried all sorts of options on my land. I tried poultry farming and agriculture but I got maximum profit from fisheries. Fish farming is easier and more profitable. There is also demand for fish in the market. I thank the Prime Minister for bringing the scheme as it's very profitable for farmers,"" said Singh. Another farmer Aswini Sharma said the scheme could help them double their income. "Earlier, I was doing traditional farming like my father and forefathers. Then, I tried something new and found fish farming very profitable. This is also easier and can be done by anyone. The government also helps in its establishment initially,"" said Sharma. "I wish more would farmers to come forward and try fish farming as it will be highly profitable for them. This will be a milestone for doubling farmers' income,"" he added.

Jammu and Kashmir: Fisheries Deptt stocks 4 lakh Carp Fish seeds in Dul Hasti reservoir

<https://indiaeducationdiary.in/fisheries-deptt-stocks-4-lakh-carp-fish-seeds-in-dul-hasti-reservoir/>

"Director Fisheries UT of Jammu & Kashmir, Bashir Ahmed Bhat today stocked about 4 Lakh Carp fish seeds in natural water body i.e Dul Hasti Reservoir, Dool during his two day visit to District Kishtwar. He was accompanied by Joint Director Fisheries (Central) M. Manzoor Wani, Assistant Director Fisheries Doda Joginder Lal , Assistant Director Fisheries Kishtwar Bharat Bushan, Hq. Officer Fisheries Department Jammu Mohd. Shabir besides concerned field staff remained present during special drive of stocking. While speaking on the occasion, the Director stated that, in its endeavor to give fillip to fish breeding in natural water bodies, the Department of Fisheries takes regular management measures of natural water resources by augmenting them with quality, disease resistant varieties of fish seed both in Carp waters as well as in Trout waters. "Under this programme Fisheries department has already stocked Ranjit Sager Dam reservoir with Indian Major Carp and exotic carp seed and now it has stocked Dul Hasti reservoir with quality seed of Indian Major Carps and Exotic Carps excepting Grass Carp." -he added. He further stated that Department of Fisheries cares not only the development of Fisheries in natural water bodies, private sector and community water resources but also undertakes measures for development of Mahigir Community by way of providing Low Cost Houses, Insurance cover to the family members associated with fishing for earning their livelihood and also provides timber for manufacture of fishing boats as well as Nylon twine for manufacture of their nets used in fishing.

"Stocking of natural water bodies is a regular programme which is being under taken by the department throughout the Union Territory of Jammu & Kashmir as per the feasibility and

existing fish biomass” he maintained. He further stated that, fisheries department has constructed 5320 Nos of Low Cost Houses upto 2020-21 and has settled 234 insurance claims of Mahigirs (Fishermen), besides it has also taken steps for development of world famous angling streams - the Trout streams of the Union Territory of J&K. Under the stocking programme the department has stocked Sharekhi Nallah and Thanalla Nallah of Baderwah area, District Doda with 15000 Nos of advanced fry (4-5 grams) of Rainbow Trout fish seed. It is pertinent to mention here that the said seed has been produced at Trout Fish Farming Project Bheja of District Doda. The Trout Fish Farming Project Bheja has been established during the years 2006-07 to 2008-09 and has six pair of raceways having maximum production capacity of 12 tonnes of fish subject to the consistency of the water source availability, as the water source is subject to seasonal fluctuations depending upon the magnitude of snow and rains.

Jammu and Kashmir: Local residents bring back a dead lake in Srinagar

<https://www.wionews.com/india-news/local-residents-bring-back-a-dead-lake-in-srinagar-391441>

"When people decide to bring change, anything is possible. An initiative started by the locals of Srinagar city's Gill Kadal area to clean a dead lake and bring it back to life has finally paid off. In the middle of the old city, Khushalsar lake was gasping for survival and had turned into a marshy land, making it difficult for locals to even breathe in the area. However, in the last four months, the locals in the area took it upon themselves to start the process of cleaning the lake. Around 1,000 trucks of garbage have already been taken out and more is being cleared out. However, the lake looks alive again. Manzoor Wagnoo started the campaign and got everyone on board. He started with the locals and later involved the government to help them in cleaning this lake. "The most important thing is that in Kashmir, most water bodies are in shambles. I took this initiative with the word Ehsaas. People were walking over the lake as it was dead. I went the next day and met with the locals to discuss the plan. People over there said that many have come and wanted to do this but no one stayed for beyond a couple of days. I literally with folded hands asked them to give me some time,"" said Manzoor Wangnoo, social worker.

"I thought it was not a small job, I sought an appointment with Div Com and he was extremely helpful. He asked me to start work the following day. We started the work in February. Just a few days ago we threw open this lake and can you believe we took a shikara ride in this lake after thirty years. The whole water body was choked. Tourists in the old days used to come to take a shikara ride in this lake and there was a beautiful bird sanctuary, the children would swim there and we had a special fish called golden fish which I will make sure is found in it again." People living around the lake had given up because they thought it would be impossible to bring it back to life. Some locals also said that in their childhood days, they would drink water from

this lake and catch fish too. "I have been living here for the last 50 years, we live right on the banks of this lake, I remember we used to fish here in my childhood and I have caught fish of 3 kgs in this lake, we used to drink this water but now you can't even touch the water. This place used to stink like anything, we would not come out in the gardens as there was so much stink," said Mohd Yousuf, a local.

The locals in the area donated money from their own pockets to clean this lake. "We have initiated this here with the help of Manzoor Wagnoo. This was in a very bad state. People had started walking over it, It used to stink and there were animals all over it. Manzoor came here and brought us all together, we all donated money for the cleaning of this lake," said Mohd Maqbool, a local. The government has been helping the locals in this initiative as well and have now started to clean the other portion of the lake called Gilsar. "In Khushalsar, the initiative was taken by the locals there, it's a lake which is a part of Dal. There were huge piles of garbage dumped over years. We managed to take out 20 trucks of Garbage every day. We, under the support of Srinagar smart city, have supported this project. After the khushalsar, we have started working on Gilsar lake too. Significant work has been done on both the lake and we are sure to bring them back to its earlier glory.

We are reviving old water channels," said Athar Amin, Commissioner Srinagar SMC. He also appreciated the locals for taking such initiatives and helping the government in reviving these water bodies. "People are taking initiative which is encouraging for us also. if these water bodies are cleaned today and people start dumping garbage again won't serve the purpose, but people are starting to take these initiatives and we are extremely happy about it," added Athar Amin, Commissioner Srinagar SMC.

Jammu and Kashmir: Fisheries Dept stocks fish seed in Dal

<https://www.indiablooms.com/news-details/N/72770/jammu-and-kashmir-fisheries-deptt-stocks-fish-seed-in-dal.html>

"On the occasion, Director Fisheries said that eight lakh quality fish seed of Common Carp (*Cyprinus carpio*) produced at National Fish Seed farm Manasbal was stocked in the Dal Lake to augment the fish biomass. "The world famous water body, Dal Lake is used by more than 1500 fishers living on the periphery of the lake who are registered with the department, besides recreational fishing by locals and tourists," he said. Explaining, he added that the stocking of the Dal lake is done annually to maintain the fish dynamics of the lake and round the clock watch and ward is ensured by strict enforcement of Fisheries Act. "Fishing licenses are being issued on an annual basis and fishing gears are regulated as per Fisheries Act. The offenders are booked under the relevant provisions of the Act," he said, adding that the

department is working tirelessly for upliftment of the fishermen community through implementation of centrally sponsored schemes particularly Pradhan Mantri Matsya Sampada Yojana (PMMSY).

Jammu and Kashmir: Equal scope of fish production in both regions: Navin Choudhary

<https://www.crosstownnews.in/post/63305/equal-scope-of-fish-production-in-both-regions-of-jak-navin-choudhary.html>

"Principal Secretary, Animal Sheep Husbandry and Fisheries Departments, Navin Kumar Choudhary, today convened a meeting to review functioning of these departments. The meeting had a detailed review of CAPEX budget, funds released, expenditures incurred under centrally sponsored schemes for 2020-21 besides deliberating on action plan of UT Capex/Revenue budget for the year 2021-22. Besides, Cattle Feed Production Scheme, Integrated Poultry Development Scheme, Fodder Development Scheme, Integrated Poultry Development Scheme and other related schemes were also assessed during the meeting. While reviewing performance of Animal Husbandry Department, Principal Secretary directed the officers to plan and submit a detailed project report for setting up of multifunctional animal husbandry hospitals at three different locations in Jammu division besides revamping the existing hospital at R S Pura under 'Augmentation of Animal Healthcare Infrastructure in Jammu' initiative.

Principal Secretary asked the Director Animal Husbandry Kashmir to get the expenditure under Integrated Poultry Development Scheme audited. He said that the department needs to adopt a competitive approach to compete with the open market. He also asked the Animal Husbandry Directors from Jammu and Kashmir divisions to cross verify past purchases of equipment against stock registers. While discussing Mobile Veterinary Clinics, Principal Secretary emphasized that factors like geographical location, topography and road connectivity be considered before allocating any number of ambulances in any particular district to facilitate remote areas of J&K. Principal Secretary also set deadlines for making animal husbandry hospitals at Baramulla and Kulgam fully functional. He stressed on the need to strengthen district and sub-division hospitals and directed the department to prioritise district hospitals of Bandipora, Ganderbal and Shopian. He also had a detailed discussion on Integrated Sheep Development Programme of Sheep Husbandry department. Principal Secretary highlighted the fish production potential at Verinag and Ganderbal in addition to other areas of Kashmir region and asked the Director to facilitate massive fish production in these areas.

He also discussed fish production in district Anantnag under the One District One Product. Principal Secretary also expressed concern for fish production in Jammu region and directed the officers to identify region-specific species of fish and start new projects in this regard. 'There is

equal scope of fish production in both regions of the UT, said the Principal Secretary asking the officers to 'give equal preference to both'. Those present at the meeting included Director Animal Husbandry Jammu, Vivek Sharma; Director Sheep Husbandry Jammu, Dr Sanjeev Kumar; Director Fisheries J&K, Bashir Ahmad Bhat; Director Finance Animal Sheep Husbandry Department and Technical Officers from Animal Sheep Husbandry Department while Director Animal Husbandry Kashmir and Director Sheep Husbandry Kashmir participated through video conference.

Jammu and Kashmir: Five trout fish farming units established in Ramban District

<https://indiaeducationdiary.in/five-trout-fish-farming-units-established-in-ramban-district/>

"To enhance the fish production in the district, the Department of Fisheries, Ramban has established five Trout Fish Farming Units of 50 cubic meters each under Pardhan Mantri Matsya Sampada Yojana (PMMSY) at an expenditure of Rs. 27.50 lakh including central and beneficiary share. As per Assistant Director, Fisheries, Fayaz Ahmed, the scheme is being implemented with 40% central assistance for general category and 60% assistance for SC category. The PMMSY is a recently launched economic package of Government of India (GOI) under Atma Nirbhar Bharat Abhiyan initiative for fisheries sector to bring "Blue Revolution" through sustainable and responsible development of fisheries under the nomenclature Pardhan Mantri Matsya Sampada Yojana (PMMSY), added. The main objectives of the PMMSY is to create direct employment opportunities, double the income of Fish Farmers besides addressing critical gaps in the Fisheries Sector and to increase Fish production through sustainable and responsible Fishing practices.

The Scheme focuses on creating critical modernization and strengthening of the value chain & improve the availability of certified quality Fish seed/ feed. It was informed that with the completion of 5 raceways, the production would be enhanced upto 3-4 tons per annum in the district. The department is also propagating fish farming in the private sector which will provide employment avenues to educated un-employed youth. It is worth mentioning here, that about 225 professional fishermen of the district earn their livelihood from natural water resources on a nominal average license fee of Rs. 400 per annum. Under the Government sector, the Department has also established 2 Trout rearing units at Karol Ramban and Chunna Gool, while 1 Trout Rearing unit is under construction at Kharkote, Banihal. Besides enhancing fish production, assistance was also provided to 24 fishermen' under PMMSY and 7 families under Blue revolution during the current year for the construction of houses.

Jammu and Kashmir: Trout farming opens new doors to businesses and tourism in Jammu and Kashmir; emerges as important source of income

<https://www.firstpost.com/india/trout-farming-opens-new-doors-to-businesses-and-tourism-in-jammu-and-kashmir-emerges-as-important-source-of-income-9484911.html>

"Kashmir's trout is in demand, with states in India seeking its eggs to rear the Union Territory's (UT) famed fish breed. Just this year, in January, 500,000 trout ova were dispatched from its famous Kokernag farm in the Anantnag district to Arunachal Pradesh, Nagaland and Uttarakhand. Then, in February, another 2,00,000 trout eggs were sent to Sikkim through the Directorate of Research Centre, Bhimtal (ICAR) in Uttarakhand. The 700,00 trout ova sent to these states were airlifted so the progeny reach the respective destinations safe and unharmed. "The Kashmir trout is believed to be healthier and genetically improved than its counterparts in other states. It also grows fast and accepts pellets (fish feed) easily, which is why it is so popular, both within the state and outside," says Mohd. Muzaffar Bazaz, Joint Director,

Fisheries (Kashmir division). Incidentally, both varieties of trout found in Jammu & Kashmir – brown and rainbow – are successful immigrants to its cold waters. Their origin story dates back to over 100 years ago, according to the website of the J&K fisheries department. Although an indigenous variety, the snow trout, existed, the noted angler and owner of a carpet factory, Frank J Mitchel convinced the then state's ruler, Maharaja Pratap Singh, to ask the British for more varieties. The first shipment of 10,000 trout eggs arrived from the UK in 1899, courtesy of the Duke of Bedford but the batch perished en-route to Srinagar. The second shipment of trout eggs arrived from Scotland in 1900 and also included 1800 fry (fingerlings). Of these, 1000 were released in Panzagam Dachigam (Harwan), about 24 km from Srinagar, and the rest were reared by Mitchel at Baghi Dilawar Khan on his private premises. Later, they were released into streams around the Valley. The brown and rainbow trout adapted well to their surroundings and have since flourished in Kashmir. Mitchel also established the first trout hatchery at Harwan in 1901 and trained locals. The successful introduction and subsequent establishment of trout in the Valley led to the establishment of the Department of Fisheries in 1903. It was known as the Department of "Game Preservation" at the time and its activities remained confined to sport fishing and conservation of natural water resources. In 1978, the department was re-organised and over time, the focus slowly shifted to acquiring requisite infrastructure, training manpower and adopting modern fish farming technology. Since then, it has gone on to develop carp and trout farms, hatcheries, rearing units, sale centres, laboratories, angler lodges, and aquarium and awareness centres in Jammu, Kashmir and Leh. Go with the flow "The trout found in Kashmir is less spongy than its western counterparts. It is easy to clean, has fewer scales and tender bones. The freshwater from the streams adds to its taste.

It is also easy to rear and resistant to diseases. So much so that 583 private and state-assisted units in J&K produced 500 tonnes of trout in 2020,” says Bazaz. Kashmir has two types of fisheries, warm and cold water. “To survive, trout needs temperatures between 0 to 20 degrees Celsius. It cannot flourish in standing water and must have access to perennially flowing waters. It also migrates annually to the upper reaches to breed. In the wild, brown trout can be found in Lidder River, Brengi River and streams such as Madhumati and Ferozepur, among others,” says Shah Malik, a wildlife researcher. Brown trout attracts anglers, particularly foreigners, to J&K’s high-altitude lakes and numerous snow-fed freshwater streams, making it an important part of the tourism industry. Unfortunately, a blend of pollution, human intervention and climate change has resulted in a decline in the brown trout’s population. So, it is now also reared in state-run farms and introduced into streams and rivers to keep them populated. Stock management Rainbow trout is predominantly blue, green, yellow and silver in colour, and glistens in various shades of the rainbow. It is rich in protein and is said to boost immunity, another reason for its popularity. But it faces threats when raised in open water sources. “The breeding of the rainbow trout is disturbed due to mineral extraction and other activities. That is why it is now reared in ponds, with a defined entry and exit of running water,” says Malik. In June 2018, Anantnag district was declared as ‘Trout district of India’. Several fish farms have been established here with government support. Kokernag is home to Asia’s largest trout farm.

It has fast emerged as one of the leading producers of rainbow trout in the world. The farm was set up in 1995 with support from the European Economic Committee and started with a single hatchery. Today, it supplies millions of eyed ova and rainbow and brown trout seeds to beneficiaries, including private fish farmers. “Eggs are obtained from trout fish between November and February every year. It has a breeding period of 51 days,” says Malik. The fingerlings are given feed first in tanks and then taken to water reservoirs. “It takes 12-15 months for the trout to grow over 250 grams. These are then ready for sale to trout farms, where they grow up to three kg before being sold in the market,” he adds. Today, trout rearing units/hatcheries have been established in almost all the districts of the UT. Trout culture is undertaken under modern technology of breeding and rearing to ensure better survival at different stages of the fish and to produce sufficient quality of table-size trout. The fisheries department also undertakes broodstock management to achieve better fertilisation during spawning. “Even the pandemic had no effect on production. We generated Rs 183 lakh in revenue in 2019-20 and 2020-21 has already seen revenue cross Rs 175 lakh,” says Bazaz. Local support Trout farming has also emerged as an important source of income for farmers in the Kashmir region.

It received a major thrust in 2020 with the launch of the Pradhan Mantri Matsya Sampada Yojana (PMSSY). Farming of commercial trout can be done on a piece of land close to a water

body. Locals can establish their units with the help of this scheme, under which 60 percent money is provided by the Union government and 40 percent by the UT administration. “Around 200 units have so far been set up under the PMSSY. It is open to anyone interested. We conduct a feasibility survey to see if trout can successfully be reared at the location. If for any reason it can’t, we provide assistance to the locals to farm carp instead,” says Bazaz. Better revenue from trout farming has led some locals to move from agriculture to aquaculture. Abid Amin from Kulgam is one such individual. “Rearing trout started off as a hobby, but it offered better returns than any farming that could be done on this land. So, I decided to venture into it full-time. I started off with two fish farms and after learning the ropes, sought assistance under the PMSSY to establish two more. Rearing trout is easy, profitable and the government provides all possible support to us,” he says.

Jammu and Kashmir: Trout swims to success

<https://india.mongabay.com/2021/03/trout-swims-to-success-in-jammu-and-kashmir/>

"Kashmir’s trout is in demand, with states in India seeking its eggs to rear the Union Territory’s (UT) famed fish breed. Just this year, in January, 500,000 trout ova were dispatched from its famous Kokernag farm in the Anantnag district to Arunachal Pradesh, Nagaland and Uttarakhand. Then, in February, another 200,000 trout eggs were sent to Sikkim through the Directorate of Research Centre, Bhimtal (ICAR) in Uttarakhand. The 700,00 trout ova sent to these states were airlifted so the progeny reach the respective destinations safe and unharmed. “The Kashmir trout is believed to be healthier and genetically improved than its counterparts in other states. It also grows fast and accepts pellets (fish feed) easily, which is why it is so popular, both within the state and outside,” says Mohd. Muzaffar Bazaz, Joint Director, Fisheries (Kashmir division). Incidentally, both varieties of trout found in Jammu & Kashmir – brown and rainbow – are successful immigrants to its cold waters.

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Jammu and Kashmir: Kulgam produces 49 tons of Trout fish this year

<https://indiaeducationdiary.in/kulgam-produces-49-tons-of-trout-fish-this-year/>

"The District Kulgam has produced 49 tons of Trout fish this year and this was revealed during a meeting held here to review implementation of PMMSY/Blue Revolution in the district. The meeting was convened under the Chairmanship of District Development Commissioner (DDC) Kulgam, Dr. Bilal Mohi-Ud-Din Bhat. While briefing the chair, the Assistant Director Fisheries Shabir Ahmad (Member Secretary PMMSY) informed that the PMMSY/Blue Revolution Scheme is a flagship programme that has been launched to augment the fish production, create employment avenues, and look after the welfare of the fishers and fish farmers. The scheme also includes the establishment of Housing for Fishers. During the meeting, a draw of lots was conducted for selection of beneficiaries that happen to be registered and bonafide fishermen of the district. It was also given out that a total of 48 beneficiaries were selected through a draw of lots so far for establishment of houses under PMMSY/Blue Revolution Scheme. It was also informed that 23 trout units have been established during the

current fiscal in the district. The meeting was attended by, Assistant Development Commissioner Kulgam, Ex Engineer Jal Shakti, District Agriculture Officer Kulgam, District Lead Bank Manager Kulgam, and other members.

Jammu and Kashmir: Fishermen community stages protest against Fisheries Department in Sopore

<http://www.knskashmir.com/fishermen-community-stages-protest-against-fisheries-department-in-sopore-67580>

"Fishermen community on Wednesday stages protes against the Fisheries department Sopore in north Kashmir's Baramulla district. The protesting fisherman said, authorities had failed to control the illegal poaching in wular lake thus affecting the livelihood of fishermen community badly. They alleged that, due to the corruption, some officers are hand in glove with poachers who are using fishing nets during nights. Meanwhile when contacted to Asst Director Fisheries Sopore Mohammad Shafi, told to ""KNS' that the department is working tirelessly to keep the vigil. We had also framed a team who would take a strong note against the poachers illegally involving in such crime, he added.

Jammu and Kashmir: Shadow fishing in Kashmir

<https://www.thehindu.com/news/national/shadow-fishing-in-kashmir/article34060250.ece>

"'Tchay-e-gard Shikar' is a traditional form of fishing in Kashmir. The historical practice is also known as Shadow fishing. It is specifically associated with Anchar Lake in the Soura area of Srinagar. The fishermen set out on wooden boats equipped with harpoons. They hide under cloth or makeshift umbrellas on the nook of the boat. This causes a shadow on the water that attracts fish. The fishermen strike the approaching fish with their harpoons. This technique of fishing is usually carried out during winter. This is when fish that remain beneath the water surface due to the cold swim towards the shadows for feeding.

Jammu and Kashmir: FreshToHome partners Kashmiri startup to market Himalayan rainbow trout

<https://www.livemint.com/companies/news/freshtohome-partners-kashmiri-startup-to-market-himalayan-rainbow-trout-11615445295556.html>

"Online meat and fish startup FreshToHome has partnered with Zarin, a Kashmiri startup to market the Himalayan rainbow trout, a fish species similar to the Atlantic salmon in taste and colour. "To add to the exotic list of products, consistent with our 100% fresh, 0% preservatives

vision, we have made an agreement with Zarin to introduce the Himalayan Rainbow trout. Through this deal, the Himalayan species hiin nutritional value, will soon be popularized and explored by fish lovers in other parts of the world,"" said Shan Kadavil, co-founder and chief executive officer, FreshToHome. Zarin was founded by Syed Faayiz Qadri and Rifat Amin from Kashmir and Saurav P. Satish from Bengaluru, when the trio was doing a course in entrepreneurial leadership in Kashmir and noticed the hurdles faced by fish farmers in reaching customers. With the deal, FreshToHome will empower fishermen in Kashmir to sell their produce in other parts of the country. Rich in protein, potassium, essential amino acids and other vitamins, the fish is initially planned to be introduced in Kerala. "Thanks to Central Institute of Fisheries Technology, which was instrumental in getting the association with Zarin, we are able to introduce this product to our discerning consumers all across India,"" said Mathew Joseph, co-founder and chief operating officer of FreshToHome. Last year, FreshToHome expanded its footprint to Coimbatore, Hyderabad and Jaipur. The company already has an active presence in the UAE and popular Indian markets, including Delhi/NCR, Bangalore, Mumbai, Pune, Kerala, and Tamil Nadu.

Jammu and Kashmir: The Last fishermen of Kashmir

<https://foreignpolicy.com/2021/02/28/kashmir-lake-anchar-fishing-jobs/>

"On one evening in February, 40-year-old Nazir Ahmad Kondoo returned from Anchar Lake to his single-story house in Srinagar, the capital of Indian-administered Jammu and Kashmir. Exhausted, he hauled his fishing equipment—a net, a Panzar (a type of rod), and a fishing basket—with him. But no fish. This was not the first time that Kondoo was unable to catch anything. But it was the third consecutive day he had to come home empty-handed—and that was unusual. Kondoo, who learned the art of fishing from his father, has been in the business ever since he dropped out of school at age 15. In those days, he would accompany his father to Anchar Lake, which is situated about 5 miles from the capital. They would mostly catch a kind of fish commonly called Kasheir gaed, and they earned a good amount of money—\$12 to \$15 a day, which was enough to feed their family of 10 people. "My father raised us solely with the fish business," Kondoo said, recalling the crystal-clear water of the lake in the 1990s, when it was the main source of income for thousands of fishermen.

"But look at the condition of this lake now. It is difficult for me to even meet the ends." Once 12 square miles in 1893–94, now the lake is only about 3 square miles, a relatively small dot on a map. Anchar Lake is not alone. According to research by the International Journal of Fisheries and Aquatic Studies, Kashmir's water bodies have been defaced by extensive pollution, siltation (when water becomes choked with silt and clay), and encroaching development since 1990. All

of that has slowly diminished fish biodiversity. In 2019, at a two-day national conference on fisheries and climate change at Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir (SKUAST), Nazeer Ahmad, a professor at the university, said 93,000 people in the region are still dependent on the fishing sector. But it is hard to know how long they'll be able to get by. Many fishermen have opted out of the business, unable to meet their families' daily expenses. Among them is 64-year-old Ghulam Ahmad Shalbab, who was a fisherman for 30 years but quit as profits declined. His wife, 60-year-old Sondree, said he would go to Anchar Lake every day with the hope of a good catch but always came back disappointed.

“For a very long time, he would tell me that he should do some other work, but deep down, he couldn't as he thought that he won't be able to do some other work,” Sondree said. One day, he woke up and simply decided not to go to the lake. Shalbab found it difficult to support his family, so his wife found work. Sondree now wakes up early in the morning to join a group of women who sit on the banks of Anchar Lake, peeling the skin off kaanis (sticks used to produce decorative wooden baskets and other pieces). She earns about \$4 a day. “I cannot afford sitting at home. I have to work hard now that my husband is not working. How else can I feed my family? This is the reason that I don't mind working here in the middle of a pile of garbage,” she said, pointing to the lake, which is spotted with floating piles of trash. She said she still sees men heading out with their fish catching equipment each day. “I remember how my husband used to wake up with enthusiasm, but in the end, he realized catching fish is going to be the toughest job in Kashmir.”

As she spoke, several men made their way down to the water and unlocked their boats. “These men you see, they are all fishermen, fellows of my husband, but he is no more a fisherman now,” Sondree added with a grin. Minutes later, another group of men came with nets and Panzars. Within 30 minutes, the two groups, including Kondoo, joined in the center of the lake, making what looks like a flotilla of almost 50 fishermen on the hunt for the few fish that still live in the water. Feroz Ahmad Bhat, who is an assistant professor and head of fisheries resource management at SKUAST, believes agriculture is the main reason fish are harder to come by. He said pesticides used in agricultural activities ultimately leak into Kashmir's lakes and prove hazardous. “When the environment is not viable for the breeding of the fish, how can you expect that there will be an increase in the production?” he said, adding that four decades ago, the periphery of Dal Lake in Srinagar was sandy and apt for fish breeding. Now, due to waste and pollution, the shallows are no longer a good breeding ground. Dal Lake, the second largest lake in the region, is also situated a few miles from the capital.

A study conducted by the University of Kashmir found that Dal Lake has also lost about 25 percent of its area in the last 157 years due to unregulated changes in land use and land cover. To

address these problems, the regional government formed the Lakes and Waterways Development Authority (LAWDA) in 1997 as a self-ruling organization to oversee and conserve the region's water bodies. LAWDA estimated that nearly 176,400,000 pounds of silt, 68,343 pounds of nitrates, and 8,818 pounds of phosphates are added yearly to Dal Lake. LAWDA said about \$150 million have been spent on improving the lake's condition since the 1980s. Even after that immense sum, though, the condition of the lake shows no improvement. Meanwhile, Kashmir's Fisheries Department said it is building fish-raising units for the fishermen community and young people. The department said it has created over 1,000 fish farms, which it touts as a good source of employment. However, Kondoo and his community feel the man-made farms are a hoax. And even if they do help younger Kashmiris, he believes the old fishermen community is not seeing any benefits.

And anyway, "the natural water bodies are obviously better than man-made," Kondoo said. Back in Anchar Lake, Kondoo has yet to catch any fish, but he's still hopeful. He sits patiently, how he passes every day. And one day, he might get a good haul. Kondoo is afraid not every fisherman is as hopeful as he is. He said he has seen many people quit this profession. "This is the last generation of fishermen, and with our death, we will get finished like fishes in the Kashmir waters," he said. He may well be right.

Jammu and Kashmir: Wetlands Threats and Management

<https://www.dailyexcelsior.com/jk-wetlands-threats-and-management/>

"The unique climatic conditions of the Union Territory of Jammu and Kashmir support numerous wetlands. These wetlands offer socio-economic and ecosystem services in the form of water supply, commercial fisheries, agriculture, energy resource, wildlife habitat, recreation, tourism, cultural heritage, water purification, flood control, water supply, environment restoration etc. Indeed, the most parts of the region are entirely dependent on wetlands for food, domestic, agricultural and industrial requirements. They also serve as a means of livelihood for rural population and are greatly valued by many cultures. The term "wetland" is composed of two independent words namely 'wet' and 'land' which primarily gives the idea of a land absorbed with water and supporting a great variety of flora and fauna. The wetland world encompasses all areas with water covered periodically, seasonally, or on a permanent basis such as flood prone areas located near river banks, rice paddies, swamps or lakes.

The wetlands can also be explained as land transitional between terrestrial and aquatic ecosystem where the water table is usually at or near the surface or the land is covered by shallow water. Further, wetlands facilitate in regulating global climate change through sequestering and releasing a major portion of fixed carbon in biosphere. These wetlands also play a pivotal role in

resolving the water crises worldwide. One of the most important benefits that wetlands provide is their capacity to maintain and improve water quality. Accordingly, healthy wetlands have a rich natural diversity of plants and animals that act as filtering systems, removing sediment and pollutants from water. However, the role of wetlands to sustain and improve water quality is under threat due to excessive human interface having a significant impact on water flows, nutrient balance and biodiversity.

Kashmir popularly known as Paradise on Earth for its beauty is replete with diverse types of fresh water bodies and bestowed with large number of impressive wetlands like Haigam Rakh, Mirgund, Shalbug etc. These wetlands not only help in decreasing the probability of floods but are extremely useful in removing pollutants from water, protect shorelines, habitat for wildlife etc. Sadly, the famous wetlands of the valley including Dal Lake, Anchar, Wular, Haigam, Malgam, Hokersar and Kranchu lakes etc. face a serious threat from anthropogenic activities like increasing human settlements, urbanization, siltation, expansion of agricultural fields and the expansion of roads. The major wetlands of Jammu and Kashmir include: Hokersar: The Hokersar wetland in Kashmir popularly known as the “Queen of Wetlands’ was recently in news for being on the brink of extinction due to encroachment activities. This wetland is filled with the migratory birds who prey on fish and insects in this protected territory. Hokersar is an important shelter for migratory species during winters. Hokersar plays a vital role by performing as a flood controlling pools. Sadly, all kinds of waste generated by the people are dumped into this Wetland. Also, the encroachments result in the change of mud flats and grasslands into the agricultural lands thereby, dividing the habitat into small portions which affects the population of birds in the wetland.

Furthermore, discarding domestic waste into the wetland has resulted in the excessive weed growth. Gharana: Gharana wetland is located along the border in RS Pura tehsil of Jammu district about 30 kms from Jammu near Gharana village. Gharana wetland is a ‘Border Tourism Site’ nestled between the India-Pakistan. It has been the winter destination for Siberian birds. It is also known as “the bird- watchers’ paradise” The most of the inhabitants around Gharana belongs to economically poor section. Their main occupation is agriculture. The local residents bath and wash their cattle in the wetland water. The major problems faced by this wetland are dumping of solid waste, sewage etc. The use of fertilizers and manures in fields ultimately finds way to the wetlands and result in eutrophication. Further, fuel wood harvesting poses a greatest threat to the tree diversity of this wetland. Also, the woes of world famous Gharana wetland remained unaddressed even after numerous directions from the State. Manibugh: Manibugh is situated near Pampore district of Kashmir and is the breeding ground and the meeting point of many birds.

This wetland is identified as low water levels since they are surrounded by cultivation areas which wash organic and inorganic constituents in wetland. **Mirgund:** Mirgund wetland of Kashmir is a shallow temporary wetland. Sukhnag and other adjacent channels are the rich source of fresh water supply used to irrigate the adjacent paddy fields. This wetland is extremely useful for harvesting grains and other livestock. Further, this wetland has not only fluvial type of fresh water origin but also promotes a rich aquatic culture. Regrettably, humanity is losing this pool to farming expansion. **Hygam:** Hygam is one of the famous wetland areas in district Baramulla in Kashmir. Hygam Wetlands has dense settlements and the people in this area are dependent on fishery business. This wetland is of strategic significance for the national and international tourists for habiting rich source of natural beauty in the waters. The lush green grass under blue sky and waters with the snow capped mountains have an alluring impact on the tourists. Besides, Hygam wetlands have the rich source of aquatic culture attracting photographers. **Surinsar-Mansar:** Mansar Lake is situated 62 km from Jammu. This wetland is revered through ages due to its religious importance and scenic beauty. It is rich in micronutrients which turns it an attractive habitat, breeding and nursery ground for migratory birds. The migratory breeding birds visiting this wetland during winters include Night Heron, Grey Heron, Indian Coot, Indian White Wagtail, Rufous Black Shrike etc.

A number of trees like *Pinus roxburgii*, *Acacia nilotica*, *Mangifera indica*, *Calotropis*, *Morus nigra*, *Solanum nigrum*, *Adhatoda vesica* and ornamental plants like *Vinca rosea*, Bottle brush, *Thevetia*, *Tradescantia* etc. add to its beauty. However, illegal occupation of wetland areas by unauthorized persons has resulted in the shrinking of these wetlands. The water body is slowly poisoned by the use of pesticides in the surrounding farmland, direct influx of untreated sewage water and solid waste generated by eateries and hotels. The plastic bottles and polythene bags litter the lake at several places and fishes and freshwater turtles can be seen scavenging on the plastic waste. Presently, the wetland ecosystems are under tremendous stress due to massive land system changes and infrastructure development, as well as intensification of agricultural and industrial activities. Henceforth, there is a growing voice that draws the attention of the Government leading to adoption of various policies and approaches for conservation, protection, and management of wetlands.

Therefore, devising safe and effective science-based and technologically sound strategies for by the state and territory Governments' primary plays a vital responsibility for maintaining adequate quality wetlands with the support of jurisdiction-specific guidelines, regulations, policies, processes and standards. However, the various approaches to maintain and/or improving the quality of wetlands include: regulating high value wetlands through environmental assessment, legislation and processes to review potential developments, monitoring and assessment to determine whether the condition of wetlands is improving or declining, effective management

such as on-farm nutrient management and salinity management aimed at reducing water quality pressures, rehabilitation and restoration of wetlands etc. Significantly, therefore, the preservation of these wetlands calls for efforts by the UT Government and other stakeholders including local residents, researchers, academicians, NGO's etc. in the following ways: * Research and/ or academic fraternity can contribute significantly by raising awareness, capacity building events and activities encouraging the protection of these wetlands. * The local residents also play a pivotal role in collecting and analysing data pertaining to the existing conditions of the wetlands and biodiversity supported by them. * Setting up of eco-development community across different districts at state level. Thus, local residents can be held responsible for conservation and management of these unique biodiversity hotspots. * The members of the community should develop a scientific acumen enabling them to counter the environmental challenges. * Reducing the use of chemical argo chemicals/ fertilisers in the field around the wetlands. * Further, Government interventions play a central role in building awareness in developing scientific citizenship behaviour for attaining sustainable success of wetlands. * The Government should impose strict regulations and thus, local residents should be held liable for illegal practices i.e. filling, cleaning or disposing off wastes in the wetlands. The Government should restore the encroached areas of wetlands. Development of the appropriate forum responsible for resolving the conflicts on wetlands issue must be set up. * The State Government must allocate appropriate funds towards the preservation of these wetlands. * Restoration strategy calls for collaboration with the Government, researchers, and other stakeholders should set principles for establishing priorities and decision making for effective long term conservation strategy. Further, these restoration goals require intensive planning, leadership, funding and active involvement from all the stakeholders. * Directing the Pollution Prevention Programme through environmental awareness programme. On the basis of the foregoing discussion, it may be inferred that wetlands are among the most productive life support systems in the world and are of immense socio-economic and ecological importance to mankind. They are critical for the maintenance of biodiversity and perform a pivotal role in the biosphere. The wetlands are also termed as "Earth's kidneys" as they provide almost similar functions of sustaining the balanced and healthy ecology by absorbing wastes and sustainable management of water and sanitation for humanity.

Jammu and Kashmir: Kashmir trout swimming to success in other states

<https://www.greaterkashmir.com/news/business/kashmir-trout-swimming-to-success-in-other-states/>

"In a positive development, Kashmir's famed trout fish breed is becoming quite famous among other states as many governments are seeking its seeds from the Jammu and Kashmir

government to replicate its production in their respective places. According to officials of the fisheries department, several governments has exported trout fish breed from Kashmir. “It is from Kashmir that trout were spread to other parts of the country like Kulu, Kangra, Shimla, Nainital, Shillong, Nepal, Ootacamund etc. In the second week of January 2021 about 5 lakh eyed ova were sent to Nagaland, Arunachal Pradesh and Uttarakhand. In February, the department of fisheries supplied another 2 lakh trout seeds to Sikkim through Directorate of Research Centre, Bhimtal (ICAR),” said Muzaffar Bazaz Chief Project officer, Trout Farming project Kokernag. He said that they have been receiving requests from many states who are seeking trout seeds.

“It is mainly due to the efforts of the Principal Secretary, Navin Kumar Chowdhary who has played a pivotal role in incorporating Anantnag as “one district one product” for trout fish as region specific which is highly appreciable. Giving the details about the trout, he said that rainbow trout is a cold water fish which could be domesticated under natural conditions between 0-20 degree Celsius. It easily accepts pellet feed, fast growth rate and is resistant to diseases. This is the reason that DCFRI, Bhimtal recommends Kashmir trout more than other places where it is produced. The first efforts to venture the trout in Jammu and Kashmir dates back in 1899 introduced by F.J Mitchell where a consignment of eyed-eggs of brown trout from England were imported. In 1984 rainbow trout were reared at trout farming project Kokernag on commercial purpose with the assistance of European Economic Community under scientific techniques. Director Fisheries, Bashir Ahmad said that the trout farming project is managed and maintained by experienced staff as a result of which it has shown significant growth.

“Seed production has shown good amounts of growth, we are supplying trout seeds to governments outside J&K and private and departmental units.” A few Assistant Directors deputed by the Department of Fisheries, Government of Karnataka are presently undergoing one week training program on Trout breeding, seed production, management, Feed production etc. Moreover The district Development Commissioner Anantnag Anshul Garg visited Trout Farming Project Kokernag yesterday and appreciated the employees for putting their best efforts in the development of Fish and Fisheries in the district.

Jammu and Kashmir: Fish sales up as Kashmir faces mutton, chicken shortage

<https://thekashmirwalla.com/2021/02/fish-sales-up-as-kashmir-faces-mutton-chicken-shortage/>

"Amid the scare of bird flu and the shortage of mutton in Jammu and Kashmir, people nowadays prefer to eat fish. People from different areas while talking to a local news agency, Kashmir News Observer (KNO), said that due to scare of bird flu, they left eating poultry

products as a precautionary measure. They also said that due to issues between government and mutton dealers over rates, there is a shortage of mutton in the valley. “In the absence of poultry products and mutton, people nowadays are preferring to eat fish,” they said. Shakoor Ahmad, a fish dealer in Pulwama district, said that due to bird flu scare and shortage of mutton in the market, his sales have increased by more than 20 per cent in the last two months. He said people usually eat fish in winter as compared to summer, however, people this year preferred fish more due to bird flu scare and shortage of mutton. Rajesh, another fish dealer from Anantnag said that usually, he was selling around 200 kgs per day but this season he has sold even more than 300 kgs per day. Officials in the fisheries department also said that their sales have increased from the last one or two months due to bird flu scare and shortage of mutton. Athar Reshie, who is the president of fisheries employees association and in charge of two fish farms in south Kashmir said that they sold over 20 per cent fish in the last two months.

Jammu and Kashmir: Kashmir’s Trout fishery in troubled waters

<https://www.earthisland.org/journal/index.php/articles/entry/kashmirs-trout-fishery-in-troubled-waters>

"Naristan is a 49 kilometer-long, meandering snow-fed trout stream in the Indian administered part of Kashmir Valley. In April last year, the regional government approved a gravel and boulder-mining project on 2.69 hectare block of the stream that is a critical part of the local trout habitat. Naristan isn't the only stream in the Kashmir Valley being threatened by development and extraction activities. Other major trout streams in the valley, like Lidder, Bringhi, and Arin, where such mining projects have been approved as well, face similar fates. This threatens the survival of the valley's thriving trout fishery that relies heavily on fish that were brought to Kashmir over a century ago from Scotland by the then-ruler Maharaja Hari Singh. Today, Kashmir's trout fishery is a key part of the local economy. The two imported varieties — rainbow and brown trout — found a perfect home in the Kashmir Valley's cold fresh water streams. The rainbow trout was reared in government farms and brown trout was stocked in the wild, in the streams like Naristan and Bringhi. Now 40 streams in Kashmir with a total length of 500 km teem with these trout. Similarly 12 high-altitude lakes located at 8,000 feet to 12,000 feet above the sea level are home to the fish as well.

Additionally, the region's fisheries department has 59 trout rearing units and hatcheries. Kashmir is now the largest producer of trout in India, with an annual turnover of 600 tons of the fish. In recent years, the local government has been encouraging small-scale trout farming projects. Kashmir now has 533 privately-owned trout-rearing units. The fishery was thriving until August 5, 2019, when India withdrew Article 370 of its constitution that granted Kashmir a semi-autonomous status. The extension of rules for mining of minor minerals for India that replaced

the stricter Kashmiri laws offer no special protection to trout streams. The rules have for the first time thrown open the mining contracts in Kashmir to outsiders. In fact, over the past year, the majority of mining contracts for minor minerals in the region's streams and rivers have been cornered by out-of-area companies and individuals, depriving thousands of local miners of their livelihood and breeding in its wake a deep resentment at the new state of affairs. At the same time, there's a growing public concern over the impact these new mining rules will have on the environment. And extraction of boulders and gravel from the trout streams has, in a sense, come to symbolize this exploitation. Already, the Indian government has issued a spate of permits allowing the establishment of stone-crushing units along many of Kashmir's streams. According to the Kashmir fisheries department data, no-objection certificates (NOC) have been issued to 130 such crushers over the past few months.

This enables the certificate holders to not only set up the units close to streams but also extract boulders from the streambeds. "Such extraction leads to erosion of the streambed and banks, increase in stream's slope and the consequent change in its morphology," said a senior official at the region's department of fisheries who didn't want to be identified fearing a government reprisal. The official said that not only survival of trout is threatened but also that of other aquatic life in the snow-fed streams, including catfish and the five remaining indigenous snow trout species, which have already been in steady decline over the past century due to the introduction of nonnative rainbow and brown trout as well as common carp. (When Austrian biologist Jakob Heckel catalogued 12 species of snow trout.). The extraction of boulders and gravel will destroy the feeding and breeding ground of trout and the other local fish, says Dr Feroz Ahmad Bhat, senior assistant professor at Faculty of Fisheries at Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir. "Trout build a nest, also called redd, in the gravel of the freshwater stream. A female trout lays her eggs in these nests which are fertilized by a male," Feroz explains. "Similarly, trout feed on insects, crustaceans, mollusks, snails, and worms which thrive in the small cave-like spaces created by the by boulders. Some of this food is available on the boulders.

So, imagine what will happen once more and more gravel and boulder is extracted?". Over the past few months, the Indian government has also issued three new laws that threaten to irreversibly damage the region's renowned natural beauty. They are Control of Buildings Operations Act, Development Act, and Minor Minerals Concession, Storage, Transportation and Prevention of Illegal Mining Rules. Under the first two acts, any area within Kashmir can be notified as a "strategic area" where the Indian Army can carry out unhindered construction and the other related activities. There are 600,000 Army personnel stationed in Kashmir to fight the ongoing separatist insurgency that is aided in part by neighboring Pakistan, which claims the region as its own. The Army camps are already present all over Kashmir, including at famous

tourist spots, ecologically fragile places, even on the path to a major Hindu pilgrimage, Amarnath. The new laws now give the military a carte blanche to take over any area it wishes, without having to go through the rigmarole of seeking permission from the Kashmir government.

In September 2019, a month after the August 5 move, the Indian government diverted 243 hectares of forest land for use by the Army. According to a government estimate, Indian armed forces are already in occupation of 53,353 hectares of land in Kashmir. Now, under Control of Buildings Operations Act and Development Act Army is free to grab more land. Similarly, the new minor minerals rule has made mining, extraction of minerals easier, removing essential environmental safeguards like not allowing stone-crushing operations near streams and forbidding mechanized mining. There is now a relaxed environmental regime. The miners who have received contracts have been largely operating without otherwise mandatory environmental clearances. At Ranbiara stream in south Kashmir, excavators can be seen in action on the banks daily, loading boulders on to the waiting trailers.

Under the circumstances, there is little that can be done. Kashmir currently is being directly ruled from the Indian capital, New Delhi. Democratic rule that is in operation in other parts of India has been suspended in this region. The Indian administration is thus not amenable to local grievances. The local political parties have no say, nor do the local civil society organizations. “Going by the manner they are being implemented, the new rules betray a sinister political agenda,” says Khurram Parvez, a noted human rights defender in Kashmir. “They are primarily designed to promote the control of the local resources by the outsiders. There’s thus no concern for the local environment.” The mining permissions to outsiders and the Indian Army’s freedom to occupy more land, including in fragile high-altitude areas like along the route to Amarnath, lend credence to these fears. The pilgrimage located at 12,000 feet above sea level has two routes: one through the famous tourist resort of Pahalgam in Southern Kashmir and another through Sonamarg, also a tourist spot, in central Kashmir.

Both routes fall along snow-bound hills that are home to many of Kashmir’s glaciers that feed its water bodies including the trout streams. Recent years have witnessed a conspicuous receding of these glaciers including Kolahai, the largest of them all. According to a recent study, glaciers in Kashmir are receding at “a significant rate” due to climate change and human intrusion into these high-altitude areas, especially interventions like the annual Amarnath pilgrimage that attracts a million people from across India. Some of the biggest glaciers like Kolahai have shrunk by 23 percent in the past six years. This is reducing the freshwater discharge into the region’s rivers and streams and that further threatens local fish habitats and impacts the region’s agriculture too. Climate change and human activity are the “gravest threats” to the valley’s waterbodies, says Dr Shakil Ramshoo, the head of the Department of Earth Sciences at the University of Kashmir.

“This calls for striking a balance between development and environment. But this time we are making everything subservient to development”. For now, trout and other aquatic life, and Kashmir’s trout-based industry seem to be the first victims at the receiving end of this approach. This only compounds the challenges to the survival of this exotic fish already reeling from ecological degradation in its habitat. A study by the agriculture university in 2016 had blamed the “the use of biocides (pesticides, insecticides, herbicides, fungicides, etc) and other chemicals in the horticulture and agriculture activities” for contamination of Kashmir’s water resources including trout streams. The study had also listed the heavy deforestation, construction of houses along the trout streams that together has led to the flow of sewage and sedimentation in the streams.

Jammu and Kashmir: Kashmir sees increased demand for traditional dry fish ‘hoggard’ during winters

<https://www.aninews.in/news/national/general-news/kashmir-sees-increased-demand-for-traditional-dry-fish-hoggard-during-winters20210210142755/>

"With the Kashmir Valley enveloped in snow, demand for local dry fish called 'hoggard', a savoury winter delicacy, has increased. The valley witnesses heavy snowfall from December to February every year. As the temperature falls, people in the valley tend to consume food items that keep them warm, and 'hoggard' is one such source. People consume dry fish during the three four months of winter and spring season. ""We consume it during the winter season. It is beneficial for cold-related problems,"" Adil Ahmad, a local hoggard seller said. ""There are 7-8 varieties of 'hoggard' available here,"" he said. ""Since old times, 'hoggard' has been used as the remedy for the chest pain,"" Zareef Ahmad Zareef, a cultural expert told ANI. ""The roasted dry fish is consumed by the people along with rice and qawah tea when they suffer chest pain,"" he added. More than a necessity, eating hoggard during winters is a part of Kashmir's age-old tradition nowadays.

Jammu and Kashmir: 200,000 trout ova dispatched to Sikkim

<https://www.hindustantimes.com/india-news/200000-kashmir-trout-ova-dispatched-to-sikkim-101612781360950.html>

"The trout farm at Kokernag in south Kashmir, one of the largest in Asia, has dispatched two lakh trout ova to Sikkim for rearing, officials said. The department of fisheries supplied a consignment of 200,000 eyed ova of rainbow trout to Sikkim on Saturday through the Directorate of Cold Water Research Centre, Bhimtal (ICAR). “The rainbow trout is a cold water fish which could be reared for commercial purposes under natural conditions between 0-20 degree celsius, easily accepts pelleted feed, has fast growth rate and is resistant to diseases,” said

chief trout farming project officer at Kokernag, Mohammad Muzaffar Bazaz. “This is the reason that the directorate of Bhimtal recommends Kashmir trout more than any other place where it is produced,” he said. This is the second time this year that the Kashmir trout has spread to other parts of the country. In the second week of January, 500,000 trout ova were dispatched to Arunachal Pradesh, Nagaland and Uttarakhand for rearing. Brown and rainbow trouts are cold water fish that were introduced in Kashmir over 100 years ago.

The farm at Kokernag uses scientific methods and modification in feed formulation along with technical knowhow of the staff for raising the fish from green ova to table sized fish and then produce brood used for seed production. “The techniques and equipment used for rearing trout fish are unique,” said another official, Syed Manzoor Ahmad. Spread over 20 hectares, the farm was set up in 1985 with support from the European Economic Committee. It started with a single hatchery which has now been upgraded to three hatcheries that supply millions of eyed ova and seeds to beneficiaries, including private fish farmers. Kashmir has two types of fisheries - warm and cold water. “For trout culture, the temperature shouldn’t exceed 20 degrees Celsius. Brown trouts are in abundance in the upper reaches,” Bazaz said. Kashmir is also known as an anglers’ paradise. Tourists, particularly foreigners, head for high-altitude water bodies as brown trout is found in high-altitude lakes and streams.

Jammu and Kashmir: 12 Fishermen selected for financial assistance under PMMSY at Kupwara

<https://indiaeducationdiary.in/12-fishermen-selected-for-financial-assistance-under-pmmsy-at-kupwara/>

"As many as 12 fishermen were today selected for financial assistance under Pradhan Mantri Matsya Sampada Yojana (PMMSY) scheme during a draw of lots conducted at D.C Office here. The draw of lots was organised by Fisheries Department Kupwara under Blue Revolution scheme for selection of fishermen to be covered for providing financial assistance to construct their own low cost houses. The function was presided over by Additional Deputy Commissioner Kupwara, Nazir Ahmad Lone in presence of members of District Level Committee for selection of the beneficiaries. Meanwhile, 33 fishermen from Kupwara, Langate and Karnah participated in the draw of lots for financial assistance. On the occasion, the ADC directed the concerned officers to monitor the activities involved in the process and ensure that farmers get the benefits in a time bound manner. Among others, ACD Kupwara, Mehraj-u-din Shah, Chief Agriculture Officer, Lead Bank Manager and other concerned officers, besides farmers were present on the occasion.

Jammu and Kashmir: Kashmir’s Dying Ramsar Sites

<https://kashmirreader.com/2021/02/03/kashmirs-dying-ramsar-sites/>

"The two Union Territories of the erstwhile Jammu and Kashmir State have about three-thousand six-hundred and fifty-one big and small wetlands spread across all twenty-two districts of both J&K and Ladakh. Of these wetlands, four are of international importance and of greater importance than those in all other Indian states and Union Territories. Among these four wetlands three are in J&K and one in Ladakh. Of the three located in J&K, two wetlands including Hokersar and Wular Lake are in Kashmir valley. Both have been declared as Ramsar sites by the Ramsar convention on wetlands. Ramsar convention is an intergovernmental environment treaty established in year 1971 by UNESCO. It provides for national action and international cooperation on conservation of wetlands and wise sustainable use of their resources. Ramsar identifies wetlands of international importance especially those providing waterfowl habitat. For years, Hokersar and Wular Lake have been an attraction for tourists from across the world. At the same time, they support livelihood of local communities in multiple ways, such as fishing, farming, and jobs related to tourism. These water bodies also provide safe habitats to lakhs of migratory and endangered birds during their annual migration from various parts of the world and these sites also provide safe refuge to native vegetation and wild animals. Unfortunately, both these Ramsar sites are declining due to gradual siltation, steady encroachment, increasing pollution and lack of conservation measures by the government.

The World Wetlands Day is observed every year on 2nd of February and this is high time to start worrying about the state of these two Ramsar sites in Kashmir valley. The conservation challenges, if left unattended, could sound the death knell for these wetlands of international significance. Let's take a look at the health of the ecosystem and conservation challenges in the Hokersar and Wular Wetlands. Shrinking Hokersar Lake Hokersar Lake, which is also known as "Queen of all wetlands of Kashmir", was recognised as a Ramsar site in 2005 but is shrinking at an alarming speed. It is situated about 10 km north of Srinagar. The Hokersar Wetland comprises a lake and a marshy area and is spread over an area of more than 7.6 square kilometres. It attracts migratory birds from various parts of the world. More than seven-thousand households are dependent on it as people fetch grass and other useful material from the wetland. Tens of thousands of different species of birds, including ducks and geese like tufted duck and graylag goose visit this wetland every year. Most of these birds move temporarily from various central Asian destinations and Siberia to breed here.

This "protected" is facing threat from massive encroachments and the authorities in the Union Territory are still drawing up plans to preserve the wetland for many years. According to the official figures, the wetland has been subjected to encroachment in over 208.6 acres (1,669 kanals) in the past 25 years. Experts claim that owing to heavy turbidity, several varieties of fish

have vanished from the wetland and its size has shrunk from 18.75 square km to 12.7 square km. The wetland received tonnes of silt through its various tributaries during the 2014 Kashmir floods which has badly affected its ecosystem. From officials to common people, everybody is guilty of encroachment and this has decreased the number of migratory birds who used to visit from as far away as Siberia, Europe, China, Philippines and Kazakhstan between September and April annually. Siltation increases pollution load which adversely affects the aquatic life in the wetland, and causes eutrophication (excess of dissolved nutrients that stimulate the growth of aquatic plant life, usually leading to oxygen depletion) which eventually leads to a decline in the number of fishes. Besides, it also results in weed infestation which impacts the growth of hydrophytic plants, on which the migratory birds feed. Unfortunately no progress has taken place for its conservation despite mounting public concerns, claims of government action, and judicial intervention.

Owing to the water shortage in the wetland, tens and thousands of migratory birds are dying every day. If the higher authorities do not take immediate action regarding the worsening condition of the wetland, then the day is not far when people will have to say “Hokersar Wetland was”. After the September 2014 floods, authorities have not done anything to improve the deteriorated condition of this ecosystem. No doubt, dredging was started to remove the silt but it has failed to deliver results. Negligence of authorities has pushed the Hokersar wetland on the brink of extinction. Dying Wular Lake Wular Lake was once known as the largest freshwater lake in Asia. It is shrinking day by day and in my opinion it is no longer the largest freshwater lake in Asia. Wular Lake lies 40 km to the northwest of Srinagar. It plays a significant role in the hydrographic system of Kashmir Valley by acting as huge absorption basin for annual floodwater. The lake and its surrounding extensive marshes have rich natural wildlife.

The rivers Bohnar, Madamati and Erin from the mountain ranges and the rivers Vetasta (Jhelum) and the Ningal from the south bring hundreds of tonnes of silt into the lake every year. This rampant siltation and human encroachments have had devastating effects on the lake. In recognition of its biological, hydrological and socio-economic values, the lake was included in 1986 as a Wetland of National Importance under the Wetlands Programme of the Ministry of Environment and Forests, Government of India, for intensive conservation and management purposes. Subsequently in 1990, it was designated as a Wetland of International Importance under the Ramsar Convention. Wular Lake is a sustainable wintering site for a number of migratory waterfowl species such as Little Egret, Cattle Egret, Shoveler, Common Pochard and Mallard. Birds like Marbled Teal and Pallas’s Fish-eagle are species listed in the Red List of IUCN. Many terrestrial bird species observed around the lake are Short-toed Eagle, Little Cuckoo, European Hoopoe, Monal Pheasant and Himalayan Pied Woodpecker. Wular Lake is

also an important habitat for fish and contributes about 60 percent of the fish yield of Kashmir Valley.

The dominant fish species found in the lake are: *Cyprinus carpio*, *Barbus conchoni*, *Gambusia affinis*, *Nemacheilus* sp., *Crossocheilus latius*, *Schizothorax curvifrons*, *S. esocinus*, *S. planifrons*, *S. micropogon*, *S. longipinus* and *S. niger*. More than 8,000 fishermen earn their livelihood from Wular Lake. Increasing pollution from fertilisers and animal as well as human waste, the conversion of vast catchment into agriculture land, the hunting pressure on waterfowl and migratory birds, and the dumping of Municipal Solid Waste (MSW) on the banks of Wular Lake are the biggest challenges which this wetland faces. Importance of Wetlands Wetlands have in many cases made human civilisation possible. Human beings have traditionally benefited from the crucial role of wetlands in agriculture. Bird dropping and sedimentation have brought fertility to the soil. It is the habitat of freshwater water and the fish themselves are an abundant food source. Grasses and reeds are used for weaving baskets and mats. Citizens' Role As freshwater becomes an increasingly rare source, it is important that we preserve these wetlands because they help river systems and recharge groundwater and also help at times of floods. The consequences of their destruction will be nothing short of disastrous. What is needed is the will of people to protect these valuable landscapes. Wake up before it is too late.

Jammu and Kashmir: The great highland fishes of Kashmir, gone forever in the abyss of human depredation

<https://kashmirreader.com/2021/01/20/the-great-highland-fishes-of-kashmir-gone-forever-in-the-abyss-of-human-depredation/>

"Found only in the crystal-clear, cold mountain waters of Kashmir, central Asia, south and western China, a genus of fishes called *Schizothorax* comprises such famous species as are known in Kashmir as Snow Trout, Niger, Chush, Khront, Churu, and many others. Most of these, tragically, have lost their habitat in Kashmir due to water pollution, extraction of minerals from rivers, use of pesticides and fertilisers for agricultural purposes that drain along with water in lakes and rivers, and other such human activities. These fishes are very sensitive and the pervasive water pollution has poisoned them. Many of the native fishes of Kashmir have already become extinct. Raja Begum, a Kashmiri fisherwoman who sells fish on the banks of Dal Lake, told Kashmir Reader, "I have been selling fishes for the past 28 years and Kashmiri people as well as outsiders love to eat Kashmiri fishes (*Schizothorax* fishes). These fishes had heavy demand in the market in the past and fish sellers would earn their livelihood easily, but now it's very hard due to lack of Kashmiri fishes." She added, "Eight years ago I saw a dead Kashmiri trout floating on Dal Lake and I realized that it's not possible now to see these fishes again. People as well as the authorities are responsible for the extinction of these Kashmiri fishes.

Use of machines and chemicals for cleansing the Dal has resulted in these fishes dying and disappearing. These fishes lay eggs in weeds and the machines remove the weeds from the lake along with the eggs.” Many Schizothorax fishes are, or were, native to Kashmir and attracted anglers from around the world. Kashmiri fishermen would export them to other countries as part of a once flourishing trade. Jameela Begum, 65 years old and a resident of Srinagar, says she loves to eat “Kashir gaad” (Kashmiri fishes). Besides, her doctor says that these fishes are very healthy and loaded with many vitamins. She rues that the fishes now do not taste as they once did. “It’s hard to find Kashmiri fishes these days in the market. You will find only Punjabi fishes,” she says. “In the past every Kashmiri during summers would dry the Kashmiri fish and in winter the most famous dish was “haggard” (dried fish) which Kashmiris loved to eat. But now everything has changed.” Abdul Salaam, another resident of Srinagar, said, “In the past when you cooked a Kashmiri fish, the smell would spread to the entire village. The fishes now do not have that fragrance. Nowadays the taste of fish is very different from what it was. I miss that taste which was to be found in the fish we cooked in our homes.”

Experts have been consistently warning about the rising pollution in water bodies, emphasising that the local fish species are most sensitive to pollutants. Their larvae or juveniles are poisoned by the water pollution and most fishes die at a young age. Manzoor Ahmad, who works in the Fisheries department, told Kashmir Reader that the high level of pollution in the Dal Lake has caused a sharp decline in the presence of Schizothorax fishes. The machines which are used to clean weeds in the lake are another reason for the extinction of these types of fishes, he said. “The machines remove the weed which also contains the eggs of native fishes, due to which many fish species in the lake have gone forever,” he said, adding, “Now some of the Schizothorax fishes are found in the upper reaches of the tributaries, which are the breeding ground for these native fish.” Assistant Director at the Fisheries department, Abdul Ahad Mir, said that Schizothorax fish were to be found in good numbers in the Dal Lake, but “due to the present situation of the lake”, they are almost fully extinct. “There are many other reasons for the extinction of these fishes, but the main reason is the pollution of the water, as they can only survive in fresh, clear water,” Mir said. Bashir Ahmad Bhat, Director of the Fisheries department, told Kashmir Reader that lakes and rivers in Kashmir valley have all become too polluted for Schizothorax fishes to survive. “Irrigation schemes, PHE schemes, etc, which are all picking through the natural water bodies, have put too much stress on aquatic life. The extraction of minerals in rivers where these fishes feed and breed is another reason for the extinction of many fish species.” He added, “Many researchers are trying their best to save these fishes, but till now they have not achieved much success. They cannot even find the feed formula for breeding these fishes artificially.”

Jammu and Kashmir: Four fishermen selected for construction of LCH at Handwara

<https://indiaeducationdiary.in/four-fishermen-selected-for-construction-of-lch-at-handwara/>

"The Fisheries Department, Kupwara today organized a draw of lots function under PMMSY scheme for construction of low cost houses (LCH) for underprivileged fish farmers. The function was organised under the chairmanship of Additional Deputy Commissioner (ADC) Handwara, Nazir Ahmad Mir and on the occasion, four fishermen beneficiaries were selected through a draw of lots. The ADC said that the government is committed to uplift the people belonging to poor sections of the society. The District Fisheries Officer informed that the department has already provided the assistance to 50 BPL fishermen beneficiaries under the scheme and more assistance will be provided to the needy persons under the scheme.

Jammu and Kashmir: 'Fisheries dept. ready to provide all help to young entrepreneurs'

http://risingkashmir.com/home/news_description/371595/Fisheries-dept-ready-to-provide-all-help-to-young-entrepreneurs

"The Department of Fisheries would be setting up 250 units of trout farming in the year 2021 to give a boost to private enterprise. 200 units would be meant for the general category and 50 units for other categories. Besides this, the department would also establish 50 carp farms out of which 35 are meant for the general population and 15 for categories. This information was given by Director Fisheries, Bashir Ahmad while talking to Rising Kashmir. "So far the department has established 581 trout farms and 1079 carp farms. These farms would give a boost to private entrepreneurs and would act as a source of income to the youth," the Director said. According to figures from the Department, the production of trout through farming has amounted to a total of 500 tonnes and with the intervention of entrepreneurs, the production can increase to 800 tonnes. ""There is a trout farming unit coming up at Kangan through one of the entrepreneurs who is using Recirculatory AquaCulture System technology.

Through this technology, they will use common water sources like bore-wells and store this water and maintain oxygen and water at a level meant for trout farming. The production through this unit can go as high as 800 tonnes."" He added that another similar unit is coming up at Awantipora, although at a smaller scale. ""Young entrepreneurs are showing real interest in this venture." He said that the Government is also providing strong support so the youth should avail it. "The ratio of providing financial support for hatchery or similar other initiatives is fixed as 40:60, that is 40 percent is borne by the Government of India and 60 percent has to be borne by the beneficiary." The department is also taking up several other initiatives, which includes establishing bio flock units. ""These are circular tanks meant for carps with height of two and a half meter and diameter of 4 meter,"" Bashir said. To help people flourish in this industry, the

department has started privatisation back in 2004. "The scheme is most useful for people who have good water supply and land. The government provides financial assistance for construction and also helps in technical aspects," Bashir added.

Jammu and Kashmir: Fisheries Department Efforts Halt Mining In Trout Streams

<https://kashmirilife.net/fisheries-department-efforts-halt-mining-in-trout-streams-255438/>

"With the reading down of Article 370 on August 5, 2019, the non-locals mining circuit has acquired riverbed mining rights for the first time. Some of the streams on which the riverbed mining rights were given were earlier protected because of the sensitive trout and other fish species. The miners have not waited for the environmental clearances and have started mining. In most of the cases, they have used machinery in the streams, leaked official documents suggested. Kashmir, mostly in the northern belt, has around 144 kilometres of trout fish streams where sand extraction was being discouraged for decades. Post-August 2019, however, all these streams are being mined for sand and boulders. Even the officials have put on record the costs that the ecosystem will have to pay for the relentless mining, documents leaked on social media suggest. The crisis complicated as the miners resorted to the mechanical extraction skipping the use of skilled labour force.

Documents posted on the social media revealed and that on July 8, the Fisheries Department raised its concerns in a letter to the principal secretary of the government's Department of Fisheries. "The illegal, unscientific and rampant extraction of bed material like sand, Bajri, boulders etc. from these natural water bodies have also led to annihilation, extinction and extermination of fish biota from these habitats due to ecological imbalance without consideration of Environmental Action Plan, the letter signed by Mohammad Amir Mir, director of the fisheries department had written. The letter says that "trenches /pools created by mechanical extraction acts as mortality ditches in which the fish particularly the juveniles get trapped and thus cause substantial damage to the existence of fish species. The human interference through the extraction of materials has played havoc on the life cycle stages of valuable Fish species and also hampered their reproductive capacity due to ecological imbalance. The unabated extraction from water bodies also disturb the aquatic food chain and has thus destroyed the aquatic flora and fauna. The letter mentions the names of the Construction Company, M/S Kasana Brothers (Contractors), and Sharp Constructions Limited which were granted permission by district mineral officer for dredging/removal of sand deposits from nallah Papchin Arin in Estate Gundqaiser.

The department of fisheries plays an important role in generating employment by establishing the fish rearing units for which quality water resource is prerequisite. "Jammu and Kashmir

produce 20,000 tonnes of fish each year while 93,000 people depend on fisheries for their livelihood in the state, Outlook Magazine reported. But the extraction of bed material according to the letter cause the destruction of breeding grounds of native ichthyofauna inhabiting the streams will prove a disaster for the livelihood of fishers. According to Jammu and Kashmir's Fisheries Act, 2018, all rivers, streams, lakes, ponds, springs, reservoirs canals, aquaria belongs to UT, as such department of Geology and Mining should consult the Fisheries department before issuing such mining and extraction orders, as per the act. Developmental activities should not be carried out at the cost of environment, the letter complains. "It is requested that the contract allotted by the Geology and Mining Department for extraction of sand from Nallah Papchan/Arin –the world famous Trout Stream be withdrawn for the safeguard of aquatic ecology in general and Fish diversity in particular, the letter mentions.

Trout (snow, brown and rainbow) and other important fish species such as carp are found in streams like Lidder, Sindh, Ferozpur Nallah, Madhumati and Kishenganga Nallahs where mineral extraction is rampant. The Fisheries Department continued raising the issues with the higher-ups. On October 6, in a complaint letter addressed to District Development Commissioner, Bandipora, MA Wani, Assistant Director Fisheries, noted that they traced a JCB extracting the bed material in Madhumati stream at Sonawari. When interrupted by the department officials, the contractor informed them that he has obtained permission from district administration to carry out mining besides depositing royalty with Geology and Mining department. "The permission for lifting bed material from stream be banned from stream be banned particularly in the Trout waters as notified in the Fisheries Act, Wani wrote, adding it poses danger to aquatic flora and fauna of stream. Taking cognizance of the issues raised by the Fisheries department, on August 31, an order from Assistant Commissioner (Revenue) Bandipora, constitutes a team of officials who are mandated to take all necessary steps to prevent all sorts of illegal mining of all minerals in Arin Nallah viz, Bajri, Muck, Boulders, etc. A senior officer posted in Bandipore said that their campaign has led in cancellation of at least one contract. "We had pleaded before an adviser as well and eventually the administration halted the process, the officer said. "Many people have given their bids to the new blocks which were advertised but for some reasons, these bids have not been opened yet. The officer said the NHPC people had also interrupted in the eco-system at some level but it has been stopped.

Jammu and Kashmir: Private fish farming has emerged as an interesting means of livelihood for several youths

<https://in.news.yahoo.com/private-fish-farming-thrives-j-173935141.html>

"Private fish farming has emerged as an interesting means of livelihood for several youths in Jammu and Kashmir. The fishing industry has greatly increased at a large scale with hundreds of

people finding employment in fisheries across the Valley with help from the union territory government. In Anantnag, three brothers have started a private fish farming business after reaching out to the Department of Fisheries for help. Ashiq Hussain, owner of a trout fish farm said they received a lot of help from the department in terms of construction, feed and equipment. "My brothers and I completed our studies but were still unable to find jobs. We approached the department of fisheries and they taught us how to cultivate fish in this way.

We received subsidies under the Centre's Rashtriya Kissan Vikas Yojna (RKVY) for construction, feed, and equipment," Hussain told ANI. He further informed that their fishery also employs six workers, thus generating employment for several others as well. The avenue is particularly useful for those who already have a good water supply and a small piece of land for the farm. Mohamad Sharief, the Fisheries Inspector of the department told ANI, "Fish is good for health and for building immunity. The department has started this initiative to help people prosper in this industry. The scheme is most useful for people who have good water supply and feasibility." "The government gives money for construction and also helps in technical aspects," he added.

Jammu and Kashmir: Along with dead fish, hundreds of strips of medicines were found floating in different parts of the Neeru River

<https://www.sentinelassam.com/national-news/hundreds-of-fish-died-as-covid-19-medicines-were-dumped-in-a-river-in-j-k-514924>

"As many as hundreds of fish were killed in a hospital supply of Jammu and Kashmir. Medicines worth lakhs of rupees were found dumped at several places, along the Neeru River in Bhaderwah area of Jammu and Kashmir's Doda district. The medicines, which were dumped along the and in the river Neeru, were meant for the distribution among the COVID-19 patients. The officials said that people of the area noticed several fish under mysterious circumstances, floating lifeless in the river near Parnala, Atal Garh area and Gupta Ganga Temple. The Additional Deputy Commissioner of Bhaderwah, Rakesh Kumar said that they have taken serious note about the issue. They have also constituted a fact-finding team, who will do a further inquiry on the incident. Kumar also said that whoever is found guilty will be severely punished. However, the concerned hospital's authority said that they even dispose off the expired medicines in front of the senior officers every month. They said that medicines are not just thrown anywhere.

The lifeline of Bhadarwah district of J &K, Neeru river is the source of potable water in the district. It provides water supply to various trout fish farms. It also is a source of income for local fishermen. A resident of Atal Garh area, Neeraj Singh Manhas said that they found a lot of strips of different medicines floating in different parts of the river. The medicines included hydroxychloroquine, azithromycin, betamethasone, paracetamol, zinc tablets, having an expiry date of 2022. The medicines were meant for the patients affected by the deadly virus. However, the reason behind the dumping of the medicines in the river Neeru is yet to be known.

Jammu and Kashmir: On World Fisheries Day, a dive into the aquaculture of J&K

<https://kashmirreader.com/2020/11/21/on-world-fisheries-day-a-dive-into-the-aquaculture-of-jk/>

"Each year on the 21st of November World Fisheries Day is celebrated to highlight the importance of the human lives involved in this sector and the water bodies that sustain aquatic lives. This day explores solutions to the increasingly inter-connected worldwide problems to work out a sustainable model. This day also sets future goals and milestones, bringing together not just the fisheries department but many other departments which are correlated with fisheries, under one roof. The day serves as an important reminder of the need to change the way we manage the fisheries sector in order to maintain stocks and healthy aquatic ecosystems. Fish diversity, apart from being a crucial source of food and livelihood, determines the health of water bodies. Fisheries occupies a very important place in the socio-economic development of the country. This realm has been recognised as a powerful income and employment source of cheap and nutritious food, besides being a source of livelihood for a large section of economically backward population of UT of J&K. One in 10 people on the planet rely on fisheries and aquaculture to support their livelihood. In J&K, 93,000 people are associated with the fisheries sector. The fisheries sector in J&K is considered as an emerging sector as the domain has an immense potential in to become a world class industry, with a water area as huge as 50,000 hectares. The production from this vast water area is just 20,000 tonnes per year while the requirement is 1.5 lakh tonnes, which can be easily achieved, provided that ample scientific techniques in culture and capture are used.

Even though the total fish production in J&K has increased a bit, as per a research conducted by a research scholar, Rather Tajamul, the fish production in Kashmir has decreased over the years. The percentage share in total fish production from Kashmir declined from 84.18% in 2000 to 73.21% in 2018, which is a 10.97% decrease in fish production. The decreasing pace of growth of fisheries sector seems to be consistent with the decline in the fish production. The deterioration of the fisheries sector is due to less government attention than it calls for, in terms of investment and creating of infrastructure. The indigenous fish species of Kashmir are at high

risk. Out of 13 species, 8 are extinct while remaining are waning. The code of conduct formulated for fisheries is not even being followed by licence holders who have been given permission for fishing. People are using chemicals like bleaching powder and dynamite to kill fish, although it is an offence under J&K Fisheries Act 1960. The department of fisheries is not able to put a check on all these offences due to lack of manpower. J&K department of fisheries is left with just a handful of employees (around 1,800 for all the districts and projects in J&K), out of which many are on the verge of retiring in a couple of years. Also, the punishments under J&K Fisheries Act 1960 are lenient.

As per this act, if a person is found fishing in a prohibited area, he/she will be fined Rs 100 or undergo a jail term for 2 months or both and if a person is found using dynamites to kill fish, he/she will be fined Rs 50 or imprisoned for a month or both. This act was formulated way back in 1960 and the punishments (as well as their implementation) are so less that offences could be committed repeatedly. In June 2019, K Skandan, the then advisor to the Governor, speaking at a two-day conference on Fisheries and climate change in SKUAST K, mentioned that a massive fisheries and aquaculture programme has been undertaken by government to boost the fisheries industry in J&K. However, till date we have not seen an iota of development coming out of that massive programme. The need of the hour is to overhaul the fisheries sector completely by recruiting technical staff, using scientific techniques, and coordinating with other concerned departments and academic institutions. Sher e Kashmir University of Agricultural Sciences and Technology has established a separate faculty for fisheries which produces more than 50 fisheries graduates and post graduates every year who are technically sound and trained with scientific aids. The government must take steps and utilise the services of these experts for the upliftment of fisheries sector in J&K.

There is an urgent need to sharpen the awareness of the people and to encourage them towards aquaculture, while putting a stop to the pollution of water bodies. A comprehensive plan for giving boost to the fisheries sector is needed in J&K. Fishing in the breeding season should be banned. New legislation which ensures stringent punishment to people for mass killing of fish is needed. The officers of the department should frequently visit villages located near rivers, nallahs and streams to create awareness among the local people about the misuse of bleaching powder. The social activists from environmental NGOs also have a great role to play in putting an end to the mass slaughter of fish. Until official measures are implemented in letter and spirit, the restoration, let alone growth, of fisheries sector in J&K will remain an unfulfilled dream.

Jammu and Kashmir: Trout production reaches 35 tons in Kulgam

<https://www.indiablooms.com/finance-details/12924/jammu-and-kashmir-trout-production-reaches-35-tons-in-kulgam.html>

"On the occasion breeding procedures were conducted in presence of DDC Kulgam. He also enquired about the seed production and distribution of seeds among the private and other farms. The Assistant Director Fisheries, Shabir Ahmad informed the DDC that the hatchery is producing about 2 lakh fingerlings per annum and the quality seed is distributed among the private entrepreneurs of the district besides the government established trout farms. He said that the quality seed is also used to stock natural water bodies to augment/increase fish production as a whole in district adding that the district has produced 35 tons of trout fish till date. The Assistant Director said that under private sector 39 units are functional and stocked with 1.4 lakhs of trout seed. He said that recently procured seed from Denmark is being raised to the brood stock size to overcome the genetic depletion and to replenish the brood stock. Among others, ADDC Kulgam Riyaz Ahmad Sofi and other officers were present on the occasion.

Jammu and Kashmir: 15 houses approved for fishermen community in Bandipora under PMMSY

<https://indiaeducationdiary.in/15-houses-approved-for-fishermen-community-in-bandipora-under-pmmsy/>

"The District Administration Bandipora on Wednesday approved 15 Houses and discussed a plan of Rs 14.50 Crore under Pradhan Mantri Matsya Sampada Yojana (PMMSY) aimed at to uplift the fishermen community of the district. The administration finalized the components of the scheme that include measures to improve the socio-economic condition of the fishermen community. It was informed that a project of Rs 7.50 cr has been formulated for procurement of motor boats to be provided to fishermen community on subsidized rates. It will help them in hassle free transportation of the fish besides boosting the tourism activities in the Wular Lake. Rs 1.11 Cr have also been kept reserved for livelihood and nutritional support to socio-economically backward active traditional fisheries families for conservation of fisheries resources during fishing ban/lean period while an insurance scheme has also been approved for the fishermen community in which the entire premium amount will be paid by the government. Under this scheme, Rs 5 lakh will be paid in case of death or permanent/ total disability, Rs 2.50 lakhs against permanent partial disability and Rs twenty thousand against accidental hospitalization. The meeting among others was attended by Joint Director Planning, Chief Agriculture Officer, Assistant Director Fisheries, District Lead Bank Manager, Senior Scientist KVK besides representatives of fisheries faculty from SKUAST.

Jammu and Kashmir: Fish species on decline, experts warn of extinction

<https://kashmirpatriot.com/2020/11/06/fish-species-on-decline-in-jk-experts-warn-of-extinction/>

"The Valley's fish species are declining in Jammu and Kashmir as out of 13 species, eight have got extinct while two among the five available fish species are also waning. Experts here have warned of extinction of remaining fish species very soon if proper steps are not taken well on time. Dr. Imtiaz Ahmed Khan, a well known Ichthyologist and Senior Assistant Professor Zoology University of Kashmir said that out of 13 Schizothorax (Kasheir Gaed), eight species became extinct very early and among five species left out, the number of two is declining at present. He said that out of five species mainly found in river Jhelum, the number of two species is declining. He said that two carp species mainly found in stagnant water Common Carp (*Cyprinus carpio*) and Grass Carp (*Ctenopharyngodon idella*) are also threat to the existing species because of their abundance. He said the license holders who have been given permission to catch fishes are also not following the fishery code of conduct. Moreover, the construction of dams due to which the fishes are unable to migrate are also disturbing the number of fishes, he said, adding that there is a need to aware people and encourage them towards the aquaculture and stop polluting water bodies.

Dr. Imtiaz Ahmed Khan further stated that January-April is breeding time of fishes and catching fishes in this period must be banned so that their number would increase and won't face any extinction threat. "Illegal poaching, nets and chemicals being used by local fishermen is endangering aquatic life and no one is bothered to look into the matter, another expert said, adding that steps must be taken to save the fish species. He said that growing water pollution is posing a serious threat to the existence of indigenous fish species in Kashmir. "For the last few years, the production of Schizothorax (Kasheir Gaed) has shown a steady decline in Kashmir, he said. "A comprehensive plan for giving boost to the fisheries sector is needed in J&K, he said, adding that some exotic species especially the common Carp (*Cyprinus Carpio Specularis*, *Cyprinus Carpio Linnaeus*, and *Cyprinus Carpio Linnaeus* and *Cyprinus carpio ccommunis*) have adopted well in Kashmir. "The local species find it difficult to cope up with the problem of eutrophication in the water bodies, he added. Director Fisheries, Muhammad Amin said that aquatic resources have to be free from pollution and encroachment, so that it would be possible to save the existing species. He said that the human interference has led to the decline of fish species in J&K. "This year, we have produced near about 32 tonnes of fish across Jammu and Kashmir including 20 tonnes mainly trout in Kokarnag, Asia's largest fish farm in South Kashmir's Anantnag district, he said(KNO)

Jammu and Kashmir: COVID-19 medicines dumped in river kill hundreds of fish

<https://kashmirpatriot.com/2020/11/06/fish-species-on-decline-in-jk-experts-warn-of-extinction/>

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Jammu and Kashmir: New technology to boost fish farming

<https://www.tribuneindia.com/news/j-k/new-technology-to-boost-fish-farming-in-jk-153922>

"The J&K Administration is introducing biofloc technology (BFT) to boost fish farming in the potential areas across the union territory, a senior government official has said. Navin Choudhary, Principal Secretary, Fisheries, Animal-Sheep Husbandry, Agriculture, Horticulture and Cooperative, said the department planned to promote the novel technology among the farming community and unemployed youths for adoption as an income-generating fish farming unit. Considered as a new "blue revolution in aquaculture, Biofloc is a profitable method of fish farming and has become very popular all around the world as an alternative to open pond fish farming. It is a low-cost way in which toxic materials for the fish such as ammonia, nitrate and nitrite can be converted into feed. The principle of this technique is to recycle nutrients. "In view of the multiple benefits of the BFT system over the conventional pond fish culture system and to demonstrate this high-yielding intensive fish farming to farmers, it is being introduced in J&K, Choudhary said. Choudhary, who recently visited the Hunters Ranch at Meluri Jagir Bajalta here for inspection of the Biofloc unit established in private sector by Col Sunil Singh Sambyal (retd), said this technology had already been adopted in many states and the units were reportedly running successfully.

Jammu and Kashmir: No more sale of fish at Govt sale outlets

<https://kashmirobsrver.net/2020/09/14/no-more-sale-of-fish-at-govt-sale-outlets/>

"Principal Secretary, Animal, Sheep Husbandry and Fisheries Department, Navin K. Choudhary, reviewed implementation of Pradhan Mantri Matsya Sampada Yojana (PMMSY) here today. The meeting was attended by Director Fisheries, Mohammad Amin, Director Finance, Imtiyaz Ahmad Wani, Director Planning, Girdhari Lal and all Joint Directors of Fisheries Department. Navin Choudhary asked the officers to give wide publicity to Pradhan Mantri Matsya Sampada Yojana to build entrepreneurship in the sector besides addressing critical gaps in fish production, productivity, quality, technology, post harvest infrastructure management, modernization and strengthening of value chain and traceability. The scheme focuses on doubling fish farmer's income and fish production, sustain growth of 9% in fisheries sector, increase fish productivity from 3 tons to 5 tons per hectare in addition to introduction of new technologies like Recirculatory AquaCulture System and Biofloc Aquaponics, he added.

The Principal Secretary asked Director Fisheries to seek more funds under beneficiary-oriented components of the scheme besides laying focus on creation of market infrastructure and fish packaging especially value addition to promote trout exports. The Principal Secretary asked the officers to provide benefits to maximum farmers and entrepreneurs besides focusing on establishment of Fisheries FPO's to promote collaborative cooperative models in the Fisheries Sector. He said the District Level Committee constituted under the scheme shall dispose of cases in a limited timeframe and the benefits shall be extended on a first come first serve basis. He also

asked the officers to extend the KCC facility to 100 per cent fish farmers before the end of September 2020. Principal Secretary directed officers to stop sale of fish at Departmental sale outlets and promote marketing of fish through private entrepreneurs after following all financial norms in vogue as the primary mandate of the Fisheries Department is genetic up gradation of local fish, socio economic development of fish farmers and building of entrepreneurship in the sector.

It was also informed in the meeting that financial assistance for construction of 1563 low cost houses has already been approved by GoI and shall be extended to Fishermen of UT of J&K soon. It was informed in the meeting that Rs. 50 crore Action Plan has been framed by the Fisheries department for submission to Government of India after approval by UT Level Approval and Monitoring Committee. It was also apprised that scheme envisages Financial Assistance to Fish farmers, Fishers, SHG's, JLG's, FPO's Private entrepreneurs/Firms and can be implemented in convergence with other schemes like RKVY, PMKSY, MNREGA, NRLM and KCC. Regarding several complaints received about irregularities in price fixation of trout fish by the Fisheries Department for private entrepreneurs, the Director clarified that price fixation is only for Departmental sale centres and private entrepreneurs are free to sell their produce as per market forces of demand and supply.

Jammu and Kashmir: 'Blue Revolution' through fish farm creates haven for gamblers and drug addicts

<https://kashmirreader.com/2020/09/02/blue-revolution-through-fish-farm-creates-haven-for-gamblers-and-drug-addicts/>

"A fish rearing unit, funded under the centrally sponsored "Blue Revolution scheme, has turned into a gambling den, a safe haven for drug addicts, and a garbage dumping site for locals, here in Wanpora area of Qazigund in Anantnag district. An initiative by the department of Animal Husbandry, Dairying and Fisheries of the Government of India, the 'Blue Revolution' was supposed to increase fisheries production and productivity from aquaculture and fisheries resources, both inland and marine. Under this scheme, in 2009, 16 kanals of land were identified in Panzeth, Wanpora area of Qazigund, to set up a fish rearing unit, which would have modernised the fisheries sector in Kashmir and aided in increase in production. The water source of the farm is the Panzeth spring, one of the most famous fresh water springs in Kashmir valley, which was expected to improve the quality of fish at the farm. "25 lakh rupees were spent in one go to construct a rearing house, followed by expenditure in lakhs to construct race courses (channels for the fish to swim in), a source in the Fisheries department told Kashmir Reader.

He said that the place was then abandoned by the department for more than 10 years, and only a month back some fish were put into three of the race courses that were constructed some years ago. “Meanwhile, the unfenced premises of the rearing unit turned into a gambling den. You come anytime during the day and you can see people gambling here, the source said. In the evening, the place turns into a haven for drug addicts, the source, as well as locals, said. “The department has been complacent in fencing the premises and has allowed it be used and abused by the gamblers and the drug addicts, the official in the fisheries department said. Besides, he said, many locals have turned the place into a trash bin. The locals and sometimes even the government functionaries have been seen dumping the garbage into the land meant for this fish rearing unit.

“The project has been delayed and I don't know why, but the place should have been protected from gamblers and drug addicts. The authorities have allowed the people to turn the premises into a cesspool and a haunt for criminals, the official said. Kashmir Reader tried talking to Director Fisheries, Muhammad Amin, who did not answer his phone. Joint Director of the department, Bashir Ahmad Bhat, termed reports of the farm only starting to function recently as a “rumour. “The farm has been functioning since a long time. I don't remember from when but it has been a long time, Bhat said. He acknowledged that there was no fencing to the complex and blamed lack of funding for that. “There has been a lack of funding for the project. But the premises are clean and no one is dumping any garbage there, Bhat said. He, however, did not answer the question regarding use of the premises by gamblers and drug addicts.

Jammu and Kashmir: Sand mining threatens Kashmir's trout industry

<https://www.thethirdpole.net/2020/08/18/sand-mining-threatens-kashmirs-trout-industry/>

"Fisheries experts from Kashmir have warned that unabated mineral extraction from the valley's rivers, streams and other water bodies poses a grave threat to its important fish industry. The Kashmir valley and its Himalayan rivers are famous for trout, Mahaseer and many other fish species, which support a thriving industry and tens of thousands of jobs in the former Indian state of Jammu and Kashmir. “The government may have to soon declare the famous trout fish an endangered species if immediate steps aren't taken to stop the unabated extraction of minerals from the rivers and streams of Kashmir, said Mohammad Nazir Bhat, a resident of Pulwama district in the southern Kashmir. Bhat, who lives near Rambhara, a tributary of the River Jhelum in Tahab, in the west of the state, said he sees people extracting truckloads of minerals from the river nowadays.

Similarly, in central and north Kashmir, contractors are using heavy machinery to extract mineral deposits from the rivers and streams, destroying important fish habitat and breeding grounds.

Sand mining gold rush Since February, the state government has been auctioning large stretches of riverbeds in Kashmir for mineral extraction. For the first time these contracts have been given to non-local companies, and without proper environmental clearance. This makes the mining illegal. But instead of stopping that, on July 30 the government ordered the “fast-tracking of environmental clearance. On August 5, 2019, the Indian government fundamentally altered the aspects of autonomy granted to the disputed region and split the state into two union territories: Jammu and Kashmir and Ladakh. Laws under Article 370 of the Indian Constitution had previously barred non-locals from leasing and renting the mineral blocks in the Indian-administered region. In the past year the majority of bids on blocks to mine sand and minerals have gone to outside companies and mining has surged.

Fish under threat This large-scale riverbed mining poses a big threat to the aquatic life and ecosystems of rivers and streams across Kashmir. Excessive sand mining can disturb river channels, food systems and fish populations. It can even alter the riverbed, force the river to change course, erode banks and lead to flooding. Fisheries experts warn that outside contractors reportedly use heavy machinery to extract the minerals, destroying fish-breeding grounds and disturbing ecosystems. Before the revocation of the region's special status, Kashmiri labourers would extract minerals manually, while non-local contractors have reportedly used machines including JCBs. “Unchecked/unplanned exploitation of land resources in J&K may have far-reaching consequences on our water resources and fish biodiversity, which are very important for maintaining good human health, said M.H. Balkhi, dean at the Faculty of Fisheries, Sher-e-Kashmir University of Agricultural Science and Technology (SKUAST) Kashmir. Balkhi said that development schemes must go hand-in-hand with biodiversity conservation in rivers that are home to fish, including commercially important snow trout.

“Each such scheme must have an Environment Impact Assessment component for safeguarding aquatic resources and fish biodiversity to maintain a healthy ecosystem, Balkhi said. Mining destroys fish-breeding grounds and reduces fish populations. It also leads to water pollution, which affects the quality of food for the fish, said Balkhi. F. A. Bhat, an associate professor at SKUAST-Kashmir, said the Kashmir snow trout and other trout species need crystal-clear water and are very sensitive to any kind of pollutants. “Most of the fish of Kashmir are bottom feeders and lay eggs on the bottom [of rivers and under boulders]. Mining will surely affect the feeding and breeding grounds of these fish, which will ultimately affect the production of fish, Bhat said. Bhat, who is a snow trout expert, claims that the fish are already getting smaller because of environmental constraints.

“Three to four decades ago snow trout would reach up to 10 kg, now it is a maximum of 2-3 kg, he said. **Fisheries department helpless** On July 10, the Fisheries Department of Jammu and

Kashmir raised its concerns in a letter to the principal secretary of the government's Department of Fisheries. In the letter, which The Third Pole obtained a copy of, state officials wrote: “The illegal, unscientific and rampant extraction of bed material like sand, Bajri, boulders etc. from these natural water bodies have also led to annihilation, extinction and extermination of fish biota from these habitats due to ecological imbalance without consideration of Environmental Action Plan. Moreover, the trenches/pools so created by mechanical extraction acts as mortality ditches in which the fish particularly the juveniles get trapped and thus cause substantial damage to the existence of fish species.

Mohammad Amir Mir, director of the state's fisheries department, said it has not yet received a response from higher officials. Livelihoods hit According to a news report, Jammu and Kashmir produces 20,000 tonnes of fish each year while 93,000 people depend on fisheries for their livelihood in the state. The state department of fisheries plays an important role in generating employment by establishing fish-rearing units, which require high-quality water. According to the department, 534 trout units have been established in the private sector. On top of this, 17,398 families earn their livelihood by catching fish. However, fishers say widespread riverbed mining has destroyed breeding grounds and will prove disastrous for them. “We are very worried, mining will definitely hit our business, said Mohammad Shaban, a fisherman from north Kashmir's Bandipora district. Mir, the director of fisheries for J&K, claimed that around 1,500 new trout farming units will be established in the next four years under Pradhan Mantri Matsya Sampada Yojana, a scheme to boost fish production and generate employment opportunities. But this scheme will be greatly affected if riverbed mining activities are not restricted, he said.

According to reports, Ferozpora Tangmarg stream in north Kashmir – where 26 private trout units are operating – is also being auctioned out to sand mining companies. Trout (snow, brown and rainbow) and other important fish species such as carp are found in streams where mineral extraction is rampant. This includes the Lidder, Sindh, Ferozpur Nallah, Madhumati and Kishenganga Nallahs. Illegal activities Under the Jammu and Kashmir Fisheries Act, 2018, all rivers, streams, lakes, ponds, springs, reservoirs, canals etc belong to the union territory. The act says the department of geology and mining has to consult the fisheries department when issuing permission for mineral extraction. This has not happened, according to the state fisheries department, in its letter of complaint to the principal secretary. Even after the revocation of special status and subsequent extensions of central laws in J&K, the fisheries act remains in place. “The act didn't change [with the union territory status] because we informed the government that we have cold water here in the valley and for that we have our own laws, Mir said.

Jammu and Kashmir: Jhelum's Existential Threat: A dying history

<http://risingkashmir.com/article/jhelums-existential-threat--a-dying-history-6124.html>

"River Jhelum is a tributary of Indus River. Jhelum has an old history recorded in the literary source of Rigveda, Tarikh-e-Hassan and in Nilamata Purna. The Rigveda has mentioned Jhelum as one of the major rivers and it is called 'Vitasta'. River Jhelum is known by a different name in Kashmir also that is 'Vyeth'. Verinag water spring is considered as the chief source of river Jhelum. The spring was built by Mughal Emperor Shah Jahan in 1620 A.D. River Jhelum is joined by many famous tributaries such as Lidder, Neelum and Sind rivers. Jhelum flows from south to central and finally to north Kashmir before it enters Pakistan. Jhelum provides livelihood to thousands of people in Kashmir. Many fishing communities earn their livelihood by catching different types of fishes locally known as Sattar, Chhurru, Khont, Chush, Ale and Punjabe Gad. These fishes are well known for health benefits and are widely consumed across Kashmir but gradually the quantity of fishes have decreased due to the pollution, poaching, improper use of resources, illiteracy and poverty among people and negligence of government. The production of these fishes has decreased which affected the fishing communities and resulted in the shifting of their profession.

River Jhelum is currently facing tremendous problems due to dumping of materials like plastic, expired medicines, glass, polythene bags, surgical items, metals, dead bodies of animals and cloth materials which has degraded the quality of water and damaged the aquatic life. Tons of biodegradable and non-biodegradable substances from different locations are dumped every day that reduces the number of fishes, flow and the quality of water which needs the conservation quickly. As a resident and an angler of Khanabal area of Anantnag, I always see the dead bodies of animals, the materials such as plastic, and polythene etc. floating on the surface of river Jhelum that really disturbs the peace of my mind. In morning and evening hours, most of the residents living by the Jhelum banks throw heaps of various types of garbage into it. The throwing of these garbage bags from the banks or top of the bridges makes a sound like that of a bomb blast. It ache my heart when I hear such sounds of garbage bags being thrown into it. Throwing garbage in it has not only ruined beauty of the river but there is also an existential threat to river Jhelum as well.

The poverty, illiteracy, and non-awareness among the people have added to the woes of Jhelum. Many chemicals used as fertilizers in agriculture as well as waste from livestock and humans has contaminated and damaged the aquatic life of this beautiful river. Our ancestors used to tell us

that only four or five decades ago the water of river Jhelum was used for drinking, cooking, washing and bathing etc. but with the passage of time and rapid urbanization on the both sides of river banks has impacted and resulted in the contamination of water. The assurance of state governments to develop river Jhelum into a water transport system was also a fake promise. Jhelum has an enormous potential of water transport as it could be used to provide services across the Kashmir valley. It has also the potential to carry heavy and bulky goods. The failed policies of respective state governments are responsible for the mess Jhelum presently is in. The officials of Fisheries Departments of Kashmir especially of district Anantnag are always found absent from their duties. It gives an impression that the said department does not care about the aquatic life. The poverty and illiteracy among locals and fishing communities have impacted the quality of water and depleted the fishing resources as well.

Way forward Government should introduce strict policies and punish those who dump their garbage in the river Jhelum; the Awareness programs and campaigns should be launched by involving local communities and aware them about the current situation; people should use the social networking to aware the masses; dustbins should be setup around the river so that people could use them instead of throwing the garbage in river; government should construct high embankments on both sides of river. Building such walls helps in preventing floods; and government should start to work on water transport system as it will generate employment and will reduce the pollution and traffic jam. All such steps cannot be achieved within days. The government and people should go hand-in-hand to cooperate with each other and to save this beautiful river from the current crisis.

Jammu and Kashmir: Trout fish farming booms in Srinagar

<https://www.dnaindia.com/india/video-trout-fish-farming-booms-in-srinagar-2826966>

"The trout fish pisciculture is flourishing in Jammu and Kashmir's Srinagar due to favourable weather conditions and timely breeding. Water level increased after Kashmir received enough snow this year. Lakhs of eggs were produced following breeding operation which ended in month of March. Video is available at: <https://www.dnaindia.com/india/video-trout-fish-farming-booms-in-srinagar-2826966>

Jammu and Kashmir: Environment, Conflict And Sustainability: The Fisherwomen Of Kashmir

<https://feminisminindia.com/2020/06/04/environment-conflict-sustainability-fisherwomen-kashmir/>

"Fisheries has been a growing sector in Jammu & Kashmir economy which has been registering consistent growth during the past decades. Fish production and the agricultural activities in the Himalayan region contribute 2% of the GDP. However, persistent poverty and deteriorating economic conditions have forced many women from poor rural households to work outside their homes who ventured into varied economic activities while at the same time continuing to perform their traditional household duties. Daily Struggles Of The Fisherwomen In Kashmir Women traditionally have been known to play significant role in fisheries sector, yet their roles remain unarticulated and unrecognised. Fisherwomen, known as Gadhi-wajni in Kashmiri, are one of the prime and oldest entrepreneurs of Kashmir – who retained their individuality even when modernisation ruled the roost. Traditionally, in the fishing community, men would catch the fish at night, while women would sell them through the day. Image Source: The Kashmir Walla These women usually, on the days of declared normalcy, sit on the pavements and roadsides to sell the fish, during the summers or harsh winters.

Part of their struggles would be to fight with the municipality for the lack of space and no designated fish market. In addition to that comes the question of the dignity of labour, which forms one of the reasons why they do not want their children to continue in this business. The major constraints faced by women in fisheries also include limited control over resources, knowledge, training, finance, tools, little or no influence on the decision-making process especially in the public sphere, lack of proper infrastructure and support facilities for marketing and processing etc. Many scholars would like to believe so and this is not far from truth. However, this is not entirely the truth and certainly not a complete story. The overarching dynamics do certainly flow from two more significant variables environment and politics! The Fragile Ecosystem, Economic Sustainability and Politics Kashmir valley which is located in the heart of the Himalayan ecosystem, is a very fragile ecosystem. Any minor disturbance affects environment and has deep consequences for the question of sustainability. The entire economy around fisheries is not immune from the same.

Directly or indirectly, it has telling effects on the community of fisherwomen. The water bodies and the change in its natural course, the lake which has been their source of livelihood has suddenly turned out to be monstrous for this community. However, this change is not sudden as one might like to believe. The lake is increasingly becoming a cesspool and the fishes are vanishing at a growing speed from the water-bodies. According to a commonly cited study, the

total fish production in Dal Lake registered a negative compound growth of -2.89% for the period of 2000-2010 and that for the Wullar lake showed a negative compound growth rate of -8.87% from 2000-2011. These women usually, on the days of declared normalcy, sit on the pavements and roadsides to sell the fish, during the summers or harsh winters. Part of their struggles would be to fight with the municipality for the lack of space and no designated fish market. In addition to that comes the question of the dignity of labour, which forms one of the reasons why they do not want their children to continue in this business.

The factors responsible for the same are as follows: negative externalities of tourism; excessive fertilisation of vegetable crops on floating garden that lead to algal bloom and the spike in pollution due to the dumping of waste in the lakes, along with over fishing and encroachment. This has led to a persistent decline and destruction of the breeding grounds of the local fish species *schizothorax*. If one is to single out these factors to club it under two distinct subheadings one will be the political climate in the valley, the other will be the environment. Political climate due to which the tourism takes a hit, hence the negative externalities of tourism and the rest of the factors can be studied under environment and question of sustainability. Not only that, but whenever the political turmoil scales up, the curfew, shutdowns and strike imply jeopardizing the market. Thus no substantial economic activity can be recorded during those periods. This in other words imply, that on the days of declared normalcy, while the fisherwomen can sit on the roadsides to do their business, on the days of lockdowns and curfews, their movement too stands suspended.

It is yet to be seen, how this Covid-19 pandemic additionally has affected this community, while Kashmir continues to reel under double lockdown. If one is to single out these factors to club it under two distinct subheadings one will be the political climate in the valley, the other will be the environment. Political climate due to which the tourism takes a hit, hence the negative externalities of tourism and the rest of the factors can be studied under environment and question of sustainability. Not only that, but whenever the political turmoil scales up, the curfew, shutdowns and strike imply jeopardizing the market. Thus no substantial economic activity can be recorded during those periods. Further, it has been recorded that the annual consumption of fish stands at 25000 tons, the production stands at 20000 tons per year, of which Dal Lake produces no more than 5000 tons a year. This has taken a direct hit on the very question of sustainability and existence for the fisherwomen community. There are more than 2000 families that depend on fishing in the Dal Lake for their livelihood. The livelihood far from being decent is declining over a period of time; many people from this community therefore would opt for jobs other than this, hence jeopardizing the business of selling fish. While this once again accentuates the symbiotic relation between environment, the people, the nature and the economy, the women are again the ones to suffer doubly. The loss of livelihood would not only mean a

shift in the nature of the jobs being taken up, but also could imply the loss of financial independence to some extent, if not in its entirety. It is to be reiterated again, that these women would go out to sell the catch, not because it is a choice, but out of a compulsion, given that the nature of work, men had to catch the fish during the nights.

One wonders, now that this business is no longer profitable, would the public sphere be rendered inaccessible to these women for the time? The Question That Needs Urgent Attention The authorities are not oblivious of this reality. While measures have been taken to rectify the wrongs, and despite spending a huge chunk of money for the protection of the lakes, certain set of study concludes that the ecologically unsound management practices have led to the failure in the conservation efforts. The state authorities like LAWDA (Lakes and water development authorities) and pollution control board have often come under criticism for not taking scientists and experts on board while formulating the policies. While official apathy is one of the reason for this, the question of environment being pushed on the backseat, one wonders if the plight of the fisherwomen community exclusively has ever even made to the agenda table of the authorities while discussing conservation strategies for the water bodies. The efforts of the civil society and NGOs while have been innumerable when it comes to the question of environment and conservation, fall silent and fails to address directly the plight of these fisherwomen.

Jammu and Kashmir: 25 ton trout feed provided to fish farmers during lockdown: Dir Fisheries

<http://risingkashmir.com/news/25-ton-trout-feed-provided-to-fish-farmers-during-lockdown-dir-fisheries->

"Director Fisheries on Wednesday called news item circulated in media regarding non-availability of pelleted Trout Feed as "baseless and fabricated, and added hassle free and regular supply of the feed was ensured in J&K during lockdown for optimal growth of fish. In an official clarification issued here, the Director clarified that 42.42 tones of pelleted feed has been manufactured at Trout Feed Mill Manasbal and stands distributed to various units including private fish farmers. From 18th March 2020 to 20th April 2020, 25.24 tons was made available to the private fish farmers out of 42.42 tons, he said. The director said on average the consumption of Trout feed in the private sector was calculated to be approximately 12.50 tons. Contrary to this, during the 33 days of lockdown the 25.24 tons of pelleted Trout feed has been supplied to the fish farms, which is almost double the average distribution. He said ample fish feed ingredients are available in the departmental stores of Feed Mill Manasbal and Feeding manufacturing is going on continuously. He said that the department had put in place a proper mechanism to ensure supply of fish feed to every farm, including private farmers. He said the heads of various projects and districts were already instructed to take up the matter with the

concerned District Magistrates (DM) for issuance of movement passes for intending beneficiaries.

The passes were issued by the DMs whenever required for the transportation of the fish feed, and the Extension Officials of each district were also directed to accompany the vehicles required for transportation of feed from Manasbal to different places, the Director said. He said it was done to ensure each and every unit both Government and private sector receives the required quantity of fish feed well in time. He added fish feed has also been delivered at the doorsteps of fish farmers. The Director informed that sufficient quantities of fish feed ingredients are available at Trout Fish Feed Manasbal. He said for the smooth functioning of Feed Mill during the lockdown and restrictions due to the prevailing situation, the staff for the Feed Mill was augmented by utilizing the services of the officials residing in the adjoining to the Feed Mill. He assured that if there is any problem with regard to the shortage of feed or seed to any fish farmer, he can approach the concerned district officer or any field functionary, who will address the issue immediately.

Jammu and Kashmir: Indian Army spreads awareness about COVID-19 among fishermen community at Wular Lake

<https://www.indiatvnews.com/video/news/indian-army-spreads-awareness-about-covid-19-among-fishermen-community-at-wular-lake-602937>

"Indian Army is reaching out to marginalised groups to spread awareness about COVID-19. Troop of Chinar Corps spread information among fishermen community at Wular Lake. Video is available at: <https://www.indiatvnews.com/video/news/indian-army-spreads-awareness-about-covid-19-among-fishermen-community-at-wular-lake-602937>

Jammu and Kashmir: Braving all odds, fisherwoman keeps decades' old tradition alive

<https://kashmirobsver.net/2020/03/12/braving-all-odds-fisherwoman-keeps-decades-old-tradition-alive/>

"Amid honks of hundreds of vehicles that pass through the busy Amira Kadal bridge in the heart of Srinagar, Mogli Begum sells fish on the footpath, which otherwise is meant for the smooth passage of pedestrians. Mogli reaches the bridge early in the morning with dozens of fish in a small tin-made box filled with small amount of water. She has been doing it since past five

decades to support her family. Unmindful of the odour that dozens of fish produce from the box that remains in front of her Mogli tries her best to lure customer to buy fish from her. Wearing a traditional gown (pheran), Mogli shouts loudly, “zinda gade ha che (my fish are alive) just to attract customers. Mogli, a resident of Hazrat-bal area of Srinagar, is a cheer-ful woman, struggling hard to make her both ends meet. Some call her Mogal masi or Moghal mouj, she is a widow and lone bread-earner for her family comprising three daughters and a son. “I want my son and all three daughters to study, that's why I am here, she says, amid a gentle smile on her face. “All of them are studying and I don't want them to discontinue. Mogli comes to her workplace to face more problems at hands of police officials who tell her to leave the place where she has been working all these years. “Unless, government provides us alternate space to sell fish, we won't shift from this place, she yells.

“If we stop, selling fish here, we will be left with no op-tion other than to beg. This is only source of our livelihood and we are here since past over five decades. Besides Mogli, there are doz-ens other fisherwomen, who have their own tales to tell. Mo-gli says, she earns enough to feed herself and her children. “Due to my old age, I am not able to go to colonies other city outskirts like her other colleagues, she says. “I have at least 50 committed cus-tomers, who won't buy fish from anyone else. I will continue with this job till I am alive. We are born for this thing only. She gets almost 15 kgs of fish from a relative every day and reaches Amira Kadal Bridge in the morning and stays there till she empties her box. “This is our tradition and culture. Kash-miris have been fond of eating fish since so many decades. We are keeping this tradition alive. Otherwise, who would go into the river to catch fish? People of Kashmir doesn't have that much time, she said (KNO)

Jammu and Kashmir: DDC G’bal flags-off 20 Progressive Fish Farmers under ATMA

<http://www.knskashmir.com/DDC-G-bal-flags-off-20-Progressive-Fish-Farmers-under-ATMA-40778>

"District Development Commissioner (DDC), Ganderbal, Shafqat Iqbal, today flagged off 20 progressive fish farmers including a women entrepreneur on exposure visit under Agriculture Technology Management Agency (ATMA), here today from the premises of Mini Secretariat, DC Office Complex Ganderbal. Assistant Director Fisheries, Ganderbal, Ghulam Jeelani Pandith, District Information Officer, Ganderbal, Riyaz Fazili, and other concerned

officers were present on the occasion. On the occasion, the DDC Ganderbal interacted with the farmers and urged them to expand their units and promote fish culture in the district. He assured the farmers that the district administration will provide every facility including marketing facilities to boot the sector. The tour will enable the farmers to get acquainted with the latest fish farm techniques, he said and urged the farmers to make best of the training and demonstrations. It was informed that 108 private fish farming units including 55 Trout units and 53 Carp units are operative in the district. Under the Blue Revolution Scheme, the department provides rupees 80 thousand for construction of Trout unit and Rs one lakh input cost for feed, seed and equipment while for construction of carp unit 42 thousand are provided as construction cost and rupees nine thousand as input cost. On the occasion, the AD Fisheries said that the touring farmers will be visiting the Trout Fish Farm Laribal, Trout Farm Harwan, Fish Farm cum demonstration center Pandach and other progressive units in Srinagar.

Jammu and Kashmir: Around 200 fish found dead in Mansar Lake

<https://www.thedispatch.in/around-200-fish-found-dead-in-mansar-lake-in-jammu-and-kashmir/>

"Around 200 fish found dead in the largest freshwater lake in the Shivalik Mountain range of Jammu and Kashmir. Moreover, the wildlife department has claimed the investigation started to ascertain exact reason behind the dead fish. The dead fish have been floating on the banks of lake since past one week which is spotted by locals and the tourists. MK Kumar, Regional Wildlife Warden, Jammu, blamed the cold weather for the deaths. "Fish may have died due to the intense cold and other natural factors, resulting in the decrease of dissolved oxygen in water, M K Kumar told The Tribune. Kumar said they had taken preventive steps and a scientific probe had been initiated. "We are closely monitoring the situation. Locals and environmentalists, however, doubt the official explanation about the continued deaths. They blame pollution and increase in the number of carp fish by the government about three decades back for the mess, which is leading to slow death of the lake. "It is surprising that the cold weather alone will be responsible. The lake is slowly being poisoned by pesticides used in surrounding farmland, influx of untreated sewage water as the construction of a treatment plant was never taken up, said Bushan Parimoo, an activist working for the preservation of water bodies in the Jammu region. There was a plan to relocate the carp fish but it was never implemented. "Carp fish is not native to the lake. They were introduced after native fresh water fish died mysteriously in mid 1990s. Their number has increased fast, which has overwhelmed the water bodies, said Ajay Kumar, who lives near the banks of the lake. Locals said the government should take preventive steps and improve the infrastructure along the water body and construct sewage treatment plants and remove the excess fish.

Jammu and Kashmir: Fish Farming A sunrise sector

<http://news.statetimes.in/fish-farming-a-sunrise-sector-in-jk/>

"India possesses 2.4 per cent of the global land area and sustains 17.74 per cent of the world population. There is huge potential of aquaculture, inland and marine fisheries in India. In India fish farming is a flourishing sector and a very important economic activity. This sector engages over 14.50 million people at the primary level. This sector transformed from traditional to commercial scale and has led to 11- fold increase in just six decades i.e. from 7.5 lakh tonne in 1950- 51 to 107.95 lakh tonne during 2015-16. This sector registered an overall annual growth rate of about 4 per cent. This sector has contributed around 0.91 per cent to the National Gross Domestic Production (GDP) and 5.23 per cent to the agricultural GDP (2014-15). Besides meeting the national protein demand and livelihood, fisheries also earn foreign exchange to the tune of US\$ 5.51billion (2014-15). This justifies the importance of this sector on the country's food, economy and livelihood security. India constitutes about 6.30 per cent of the global fish production and 5 per cent of global trade. India has attained the second largest fish producing and second largest aquaculture producing nation in the world.

This sector has been named as the "Blue revolution. Considering the limited scope of the capture fisheries from coastal waters and natural inland waters like rivers and estuaries, emphasis on aquaculture and culture based fisheries from reservoirs and floodplain wetlands has been given to meet the targeted fish requirement of 8.3 million tons by 2020. Jammu and Kashmir serves a congenial habitat for a variety of fish species due to large number of cold water resources. The state is blessed with Rivers like the Chenab, Indus, Jhelum along with lakes like Dal Lake, Wular Lake, Manasbal Lake and Mansar Lake. In J&K the first batch of 10,000 eggs of trout arrived from the United Kingdom in 1899 but all of them perished. Department of Fisheries was created in 1903 in J&K state to promote fish farming. The state produces more than 20,000 tonnes of fish production because of adoption of modern aqua cultural practices. Kashmir region produces more than 80 per cent of the fish production and Jammu has also emerged as a major producer of animal protein.

The fish production data of four decades reflects increasing trend of production in all commercially important species of both the provinces. Jammu and Kashmir is known as the tourist destination due to its munificence of blossoms and magnanimity of resorts. The state is holding huge water spread area of around 57,000 hectares out of which about 24,000 hectares are in the shape of lakes, marshy areas and reservoirs and 23,000 hectares in the shape of river systems. Temperate and sub-tropical zones of the state offer a potential resource for the development of cold and warm water fisheries including Trouts, Schizothoracines, Indian major carps and Chinese carps. In Jammu region Jammu district leads in fish production (approx.6657

qtls.) followed by Kathua (approx.4481 qtls.) and Udhampur (approx.4195 qtls.).In Kashmir region Baramulla district leads in fish production (approx.42,770 qtls.).

Major objectives of blue revolution is to fully tap the total fish potential of the country both in the inland and the marine sector and triple the production by 2020, to transform the fisheries sector as a modern industry with special focus on new technologies and processes, to double the income of the fishers and fish farmers with special focus on increasing productivity and better marketing, post-harvest infrastructure including e-commerce and other technologies and global best innovations. The Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying and Fisheries has accordingly restructured the scheme by merging all the ongoing schemes under an umbrella of Blue Revolution. To provides focused development and management of fisheries, covering inland fisheries, aquaculture and marine fisheries including deep sea fishing, mariculture and all activities undertaken by the National Fisheries Development Board (NFDB).

India is blessed with varied potential resources in the form of rivers and canals, floodplain lakes, ponds and tanks, reservoirs and brackish water. The marine fisheries resources are estimated at 4.41 million metric tonne and their activities spread along the country's long coastline of 8118 km contributed by nine coastal states, Andaman & Nicobar, Lakshadweep islands with 2.02 million square km Exclusive Economic Zone (EEZ) after declaration of the EEZ in 1976 and the continental shelf area of 0.53 million sq.km. With sovereign rights on the EEZ, India has also acquired the responsibility to conserve, develop and optimally harness the marine living resources within this area. The average marine fish catch during the last 4 years (2012-13 to 2015-16) is 3.499mMT. According to the National Marine Fisheries Census 2010, the marine fishermen population in India is estimated at 4.0 million, of which 0.99 million are active fishermen. In terms of revenue, some of the high value species such as Tunas that occur in the oceanic waters are yet to be optimally harvested.

The marine fisheries development has its major thrust areas on research on biology of commercially important species and monitoring their stocks for proper management; judicious exploitation and conservation; conducting exploratory surveys and mapping of the productive fishing grounds, locating new areas and resource through the application of remote sensing and carrying out environmental studies related to fisheries, better harvesting technologies including the design of various fishing crafts, gears, fishing techniques, methods of handlings and post-harvest processing and utilization. Further, the use of mechanical fishing accessories, ancillary fishing equipment and electronic testing devices of practical value in fishing operation were added to improve the catch per unit effort (CPUE). National Policy on Marine Fisheries, 2016 (NPMF) recommends that the overall strategy of the NPMF, 2016 will be based on the pillars of

sustainable development, principle of subsidiarity, partnerships, intergenerational equity and precautionary approach.

Research and development efforts in the last five decades have greatly improved average fish yields in the country making carp culture an important economic activity. Indian Major Carps (IMC) Rohu (*Labeo Rohito*), Catla (*Catla catla*), Mrigal (*Cirrhinus mrigala*) were the principal species cultured in ponds since ages. Species like *Labeo calbasu*, *L. goniuis*, *L. bata*, *Puntius pulchellus*, *P. sarana*, *P. bolus* and *Cirrhinus cirrhosa* are considered to be important species due to their production potential, high market price and consumer preference. Catfishes have great commercial importance. Magur (*Clarias batrachus*) and Singhi (*Hetero-pneustes fossilis*) are the two air-breathing candidate species for culture. Several other non-air breathing catfishes like *Mystus seenghala*, *Pungasiuspungasius*, *Wallago attu*, *Ompak pabda* are also being cultured in view of the high consumer preference. The giant freshwater prawn, (*Macrobrachium rosenbergii*) is the largest and fastest growing species among freshwater prawns. The development of hatchery technology for *M. rosenbergii* and later, for Indian river prawn, *M. malcolmsonii* has opened up new possibilities freshwater aquaculture. Integrated fish farming is the combination of two or more separate farming systems where the waste from one subsystem is utilized for sustenance of the other. For example, fish-pig /poultry/ducks farming. The system provides considerable potential and scope for augmenting production and also offers an enormous scope for employment generation and rural economy.

The country possesses significant water bodies both in Himalayan region and Western Ghats, which hold large populations of both indigenous and exotic cultivable and non-cultivable cold water fish species. Important food fishes in the region are (Mahaseers) and Schizothoracids among the indigenous species and Trouts among the exotic varieties. Increasing per capita fish availability from the present level of only 8 kg to 11 kg (as recommended by WHO) is the primary challenge before the country. Considering the scope of the capture fisheries from coastal waters and natural inland waters like rivers and estuaries, emphasis on aquaculture and culture based fisheries from reservoirs and floodplain wetlands should also be given to meet the targeted fish requirement of 8.3 million tons by 2020. J&K has immense potential in fish farming. There is need to upgrade the technical knowledge of fish farmers and modern technologies on fish farming should be provided to them. There is urgent need to build a roadmap to mitigate the fish requirement.

Jammu and Kashmir: Co-management of fish resource: Prospects and Feasibility

<https://www.greaterkashmir.com/news/opinion/co-management-of-fish-resource-prospects-and-feasibility/>

Fish is an important food source worldwide and its demand is increasing due to increase in world population. According to Food and Agriculture Organization (FAO) of the United Nations (1997), fish provides approximately 16 per cent of protein consumed by the human population, and furthermore one billion people worldwide rely on fish as their primary source of animal protein (FAO, 2000). The aquaculture industry has a pivotal role to play in meeting one of the greatest future challenges, i.e. to nourish and feed around 9.6 billion human population by 2050. Although, efforts have been made in the past thirty years to increase the productivity of fish in order to meet the demands of a growing population, there has been less progress to provide a holistic way for sustainable fisheries management. The problem lies in the fact that we have not been able to address the problems such as reducing wastage of fish resources, increased competition for natural resources, and other issues related to the community involved in the fish industry.

As different approaches have been suggested in recent decades for the sustainable use and management of fisheries, the co-management is seen as a future holistic approach for achieving sustainable fisheries goals. In essence co-management is a realistic way of involving different stakeholders in fisheries management systems, and sharing the responsibility between the government and users. The co-management of fisheries is not only shared responsibility between different stakeholders, but also commitment and power for achieving ultimate goals. The other perspective of co-management is the interconnection of three main components, i.e. human resource, aquatic ecosystem and fisheries resource. It must be emphasized here that our goal of sustainable fisheries management cannot exist if ecological systems are showing deterioration and fisheries resource does not exist.

Therefore, there is need that the major principle governing interaction between human communities and fisheries management need to be deeply understood. The primary reason for introducing and implementing co-management of fisheries (CF) is based on the fact that it is an eco-centric way of fish management which holistically includes all the stakeholders. In addition, CF emphasizes more on local and traditional knowledge which is then integrated with the latest know how. The co-management of fish resource is also essential to maintain the balance with respect to the role played by the state and the community. In order to start co-management regime, it is to be kept in mind that every stakeholder should be given equal and balanced representation for the success of this important endeavour.

The main stakeholders or key parties in establishing co-management include fishermen, government, community members, fisheries traders, non-governmental organization, universities and research institutions. The selection of different stakeholders depends on various factors including their expertise, interest and level of collaboration. It is also important for authorities to unravel the interest or influence (positive or negative) on the fisheries resource. The choice and role given to the stakeholders are an essential step when initiating a co-management regime. The sustainable management of fish resource is key issue in the North West Himalayan region. As fish and aquatic resource is losing its ground due to various factors, there has been calls from various quarters to start innovative ways for the rehabilitation and management of aqua fauna. There is a great feasibility of co-management of fisheries in our region as our field setting is ideal for the operation for this endeavour. As co-management is another name of co-operation and collaboration, there is need of deeper understanding of this concept among different agencies.

Three pronged approach is to be adopted while initiating co-management of fisheries. In the beginning, various departments and institutions, including universities dealing with fisheries in J&K should discuss various ways by which community, especially fish farmers can be fully integrated with the co-management. In the second stage, the framework can be formulated for the assignment of various common objectives and implementation of these objectives. In the third stage, various agencies, including NGO's should be tied up with the proposed plan and thereafter there should be an intention to fully implement the objective of co-management of fish resource. It is pertinent to mention that co-management of fisheries divided into types according to the role of different stakeholders. These include consultative, cooperative, instructive, advisory and informative. Co-management of fisheries (CF) has many potential advantages over the traditional management regimes.

The first and foremost advantage of CF is that there will be more transparency in the process between different stakeholders who are participating in the co-management. This integrated fishery management will pave the way for the more participation of community and thus will lead to decentralized management. This endeavor will enhance responsibility among different resource users, which has been lacking in our society till date. In addition, CF will integrate and maximize local and scientific information for the sustainable resource management. Apart from advantages, there are also loopholes which hinder the progress of co-management. In ecological terms, co-management if not managed in an organized way may lead to free access and unrestricted demand for a limited fish resource that may further lead to over exploitation. The paucity of funds can halt the co-management regime as it requires huge investment. This concept cannot be applied in the communities which lack organization, leadership and cooperation. In some cases, new management strategy can be disadvantageous due to various local factors. Therefore, it is important to understand various pros and cons of co-management system before giving a nod to its implementation.

Jammu and Kashmir: Trout farming picking up

<https://www.greaterkashmir.com/news/jammu/trout-farming-picking-up-in-jk/>

Introduced by a Scotsman in Kashmir 118 years ago, Trout farming has become a major economic activity with the establishment of 533 units in the private sector apart from trout beats set up in 142 rivers, streams and lakes of the state. Jammu and Kashmir (J&K) has recorded nearly 600 tons of trout production in the last financial year. “J&K has setup 533 units of trout farms in private sector. There are 59 trout rearing units and hatcheries”, Director, Fisheries department of J&K, R N Pandita said. Not only this, trout farming has been practised in over 142 rivers, streams and lakes in Jammu and Kashmir. “There are about 150 fishing beats spread over 40 streams with an aggregate length of 500 km, besides, there are 12 high altitude lakes ranging from 8,000 feet to 12,000 feet above the sea level having Brown Trout,” Pandita said. The first batch of Trout ova of 10,000 eggs arrived from the UK in 1899 with the courtesy of Duke of Bedford, to whom the Kashmir Maharaja presented an excellent Kashmir stag trophy through Sir Adelbert Talbot, British Resident at Srinagar. “Kashmir’s trout fisheries history goes back to 1898 when Mr Mitchel, a Scotsman, introduced trout for the first time in Kashmir with the help of Pandit Sodhama Miskeen and Khwaja Gafarjoo.

The fish seed was obtained from England. Half of it perished in transit because there were no airplanes those days and sea route was the only option,” environmentalist and former educationist B L Koul said. He said from Mumbai (then Bombay) the seed had to be carried first by rail up to Rawalpindi and, then by bus to Srinagar in containers of water. “The water had to be changed frequently. The first attempt failed but subsequent attempt in 1900 to breed trout succeeded,” Koul added. The Maharaja of Kashmir was then approached and a Department of Fisheries with Mitchel as director and Pt Sodhama as an inspector came into existence. The initially seed farms in Kashmir were established and trout beats were established in streams such as, Lidder, Sindh, Ferozpur nullah, Madhumati, Kishenganga nullahs, Chenab and other streams of Jammu province. Many lakes and springs like Gangabal, Verinag were also used to stock trout fish.

The trout fishing of Kashmir had become a great tourist attraction by twenties and thirties of the last century, the Maharaja of Kashmir was requested by many princely states to supply seed and expertise to them for the introduction of trout in their fast running streams-a precondition for trout to thrive, Prof Koul said, “Thus, Pt Sodhama travelled to Nilgiris in the South and Himachal (then part of Punjab) and UttaraKhand (then part of Uttar Pradesh) and Muree (now in Pakistan) to introduce trout fish there”, he said. The department undertakes brood stock management to achieve better fertilization during spawning. “These two projects have the capacity to produce more than 3 million eggs per year. The department has established a net work of 59 trout rearing units and hatcheries across the state and, more units are coming up”, Pandita said. The beautiful geographical variations of Jammu and Kashmir, along the course of

each river and lake, offer endless possibilities for anglers, he said. “The various waterways, crisscrossing the state, are important fishing retreats rich in trout. The state of Jammu and Kashmir is known as a paradise for fishing enthusiasts”, he said.

Jammu and Kashmir: Scientists open fish hospital after warming waters kill trout

<http://www.seattleglobalist.com/2019/04/24/kashmir-scientists-open-fish-hospital-after-warming-waters-kill-trout/83425>

In 2013, Abdul Rashid Ganai gave up his job as a tailor to farm fish. He built a concrete tank in front of his home in the village of Dara, filled it with 600 fry – baby trout – and kept watch over them until they were big enough to sell. Ganai’s son suggested the new job after seeing others make a profit off raising trout, one of the most widely consumed fish in Indian-administered Kashmir. Within two years, Ganai says, his annual sales averaged 120,000 Indian rupees (\$1,734). That’s a substantial salary in this rural region. But Ganai’s business started falling apart about eight months ago, when his fish began to die. Other farmers in the area were losing their fish, too, and no one knew why it was happening. To find out, the Sher-e-Kashmir University of Agricultural Sciences and Technology opened a fish hospital in May 2018. Since then, 300 trout farmers have had their fish diagnosed and treated for various fungal, bacterial and parasitical infections.

These problems first arose because atmospheric temperatures in the region have gone up, workers at the fish hospital say. Fish farmers and others who work in the industry worry that their jobs will disappear as temperatures rise, but the fish hospital’s staff say they’re developing treatments to keep that from happening. Nearly half the fish and seafood the world consumes comes from farms. Fish farming in Indian-administered Kashmir is growing, with 513 trout farms now operating in the state of Jammu and Kashmir, according to the state’s Department of Fisheries. Thousands of people make a living from freshwater fishing. Some cast their nets off the shores of Dal Lake, the second-largest lake in the state and home to around 17 different fish species. Total fish production in the state was 20,700 metric tons in the 2017-18 fiscal year, according to the Department of Fisheries. That’s a small piece of India’s total fish production, but for landlocked Jammu and Kashmir, it’s a sizeable industry. But water bodies in the state are getting warmer, says Khurshid Tariq, an assistant professor of zoology at Islamia College of Science and Commerce in Srinagar, a major city in Indian-administered Kashmir.

Across the board, the annual maximum temperature in the region is increasing at a rate higher than the annual minimum temperature, according to research published in January by Shakil Ahmad Romshoo of the University of Kashmir, as well as other researchers. Cold-blooded fish, including trout, experience stress in warm waters, causing them to become vulnerable to bacteria, pathogens and water-borne parasites. One of those parasites is Trypanosoma, according to Tariq’s research. Trypanosoma is most typically found in wildlife in regions of the world with a

tropical climate. Now that temperatures in Kashmir's water bodies are getting warmer, the parasite has found its way there, too. Lab technicians at Sher-e-Kashmir University's fish hospital say they've found the parasite in fish brought there for diagnosis. Generally, parasites don't kill fish, says Sumiyah Rasool, who works at the hospital and researches aquatic diseases. But they do weaken their hosts by destroying their tissues. That makes the fish vulnerable to secondary infections, she says. Bacterial infections, on the other hand, have the potential to kill their hosts within a week or two.

Each year, fish farmers around the world lose 30 to 40% of their fish to disease outbreaks caused by bacteria, says Feroz A Shah, manager at the Division of Aquatic Animal Health Management. Since May 2018, more than half of the state's 513 trout farmers have reported fish deaths. Those outbreaks happen for a variety of reasons, but they are most frequently associated with poor water quality and changes in atmospheric temperature, Shah says. Many of the fish Rasool has treated were infected with *Aeromonas hydrophila* bacterium, which is commonly found in aquatic ecosystems, she says. That includes Ganai's fish. Before his fish died, Ganai noticed that they had developed lesions on their skin. "I had no idea what was happening," Ganai says. "I contacted the people from the [Division of] Aquatic Animal Health Management and they came here, took samples of the diseased fish."

Hemorrhagic lesions on the skin, lethargy and abnormal swimming patterns are all signs of an *Aeromonas hydrophila* infection, Rasool says. Depending on the infection or disease fish have, Rasool prescribes either antibiotics or anti-fungal medications to the farmers. Both can be injected multiple times a week or mixed into the water at the farm, she says. Some farmers administer the treatment themselves. In other cases, hospital workers visit the farms to do it. The length of time for treatment also depends on the type of infection or disease, she adds. The hospital's services are free of charge, but farmers are responsible for covering the costs of the medicine, which ranges from 100 to 900 rupees (\$1.45 to \$13), Rasool says. Ganai says doctors came to his farm to administer treatment. Thanks to that, his business is slowly going back to normal. Now, he's earning up to 10,000 rupees (\$145) a month.

Jammu and Kashmir: KVK organises training on "Fresh Water Carp Culture"

<http://news.statetimes.in/kvk-organises-training-on-fresh-water-carp-culture/>

With an aim to attract more rural youths towards fish culture, National Fisheries Development Board(NFDB)-Hyderabad sponsored three day training programme on 'Fresh water Carp Culture' for the youths/fish farmers of district Doda, which commenced here on Tuesday. The training programme was inaugurated at KVK-HQ Bhadarwah, under the guidance of Directorate of Extension Education, SKUAST-J with the aim to attract youths towards this economic venture. About 50 participants including 22 women from 15 villages of district Doda, made their active presence.

The programme was inaugurated with welcome address by Dr. Ravneet Kour, Sr. Scientist & Head, KVK-Doda in presence of Zia-Ul-Haq, Inspector/Fish Farm Manager, Gatha Fish Farm and the Scientists of KVK-Doda. Dr. Kour after a brief lecture on mandates of KVK and importance of this NFDB sponsored training programme, handed over the programme to Dr. AS Charak, KVK Scientist, who briefed about the schedule of the programme and introduced the role of NFDB in national fisheries development. Inspector/Fish Farm Manager, Gatha Fish Farm, Zia-Ul-Haq speak on status and potential of fisheries in Doda district, different types of ponds & culture practices, Fisheries Department's activities and the Govt. supports/schemes for the fish farmers, etc. Dr. GN Jha, Fisheries Scientist of KVK-Doda & Course Coordinator of the NFDB programmes ensured that the programme will fulfill the aim of the NFDB-Hyderabad, Govt. of India sponsored programmes in fisheries development.

Jammu and Kashmir: The plight of our wetlands

<https://thekashmirimages.com/2019/03/08/the-plight-of-our-wetlands/>

Nearly two decades ago, our wetlands and other water bodies were not only pristine but rich with fish. Thus, these water bodies were a big source of food and also great sight to see and picnic around while some would love the typical Kashmiri style of fishing. Fishing, apart from the fishermen community who did it for earning their livelihood, was more of enjoyment and fun than anything else. Catching fish in wetlands between dense cattail and other aquatic vegetation was quite a fascinating experience. People living in villages would prefer fishing in shallow waters during summers and autumns. Even the same was done in spring season as well when water levels would be high in these water bodies. During spring, fishing was done with indigenously made fishing rods. The fish were neither eaten alone nor sold but distributed among neighbors and relatives as well. Thus, the distribution of fish among relatives and neighbours was adding greatly to our old social bindings.

Young and old, irrespective of gender, people used to catch fish through different indigenous methods. Women mostly used old bottomless wicker baskets and men used a typical locally made instrument called Naarutch (a bunch of short Spears fitted in a long wooden handle). Even children would go fishing with bare hands in shallow streams. During springs and early summers when water levels used to be very high, teenage boys used those typical indigenous fishing-rods attaching earthworms as bait to attract the fish. Rich as well as poor had a passion for it and we were sometimes reprimanded by our parents and elders for this hobby of ours as it would waste a lot of our precious time which we would be expected to spend on our studies. Though the practice is still alive but it is confined to a particular community only. Even many tourists are seen fishing on the banks of rivers but we have lost those traditional ways which were full of pleasure and adventure.

With the use of weedicides and the chemical fertilizers, the production of fish in our water bodies has considerably shrunk and decreased. Excessive usage of these chemically made fertilizers has not only reduced the production of fish in our wetlands but it has made many harmed several aquatic species go extinct. Nadru and Pumb were abundantly found in many ponds and wetlands, but now these special vegetables are almost on the verge of extinction. We have not only lost an inexpensive and free of cost food item with tremendous nutritious value but a centuries old tradition and legacy as well. Fish has been our favourite cuisine since ages for its nutritional value which mutton, chicken or beef lack and is preferred over various other foods. Our fathers and forefathers would receive this special gift free of cost but our greed and so-called modernization has snatched from us this legacy. Though every Kashmiri would taste the fish multiple times in a year particularly during cold season but the decreased production has deprived us from a cherished food that is suffering due to the increased pollution levels in our water bodies. If not checked in time, we may have no more fishes here and would need to import fish like chicken and mutton from the coastal areas.

Jammu and Kashmir: Aquaculture to woo qualified manpower in future

<https://kashmirreader.com/2019/01/29/aquaculture-to-woo-qualified-manpower-in-future/>

The state in near future will need a qualified manpower to manage its ever-growing aquaculture in private sector that is now being eyed by leading business houses in the state. This was disclosed by the Joint Director Projects, Bashir Ahmad Bhat while inaugurating a 25-day skill development tanning course here, for youth having degrees in Bio-sciences from different districts. He said that given the fact that government sector of fisheries in the state, over the years, has developed an infrastructure that has been boosting the private sector providing inputs to farmers to set up carp as well as trout farms, “the need of the hour is to train youth who not only could carve a carrier out of fish rearing or utilise their skills in the growing private sector”, adding that fisheries were now eyeing investment from major business houses in the state that may need significant manpower to manage the farms. Joint Director Fisheries Territorial, Muhamamd Amin Mir while interacting with the participants said that aquaculture offers ample opportunity for employment and income generation to youth.

He said that entry of highly qualified youth “will certainly help to grow the sector on professional lines”. Referring to his own induction to the department in 1986, he said that the department in those days had begun its journey after separating from the forest department and “once it began functioning independently it over these decades has managed to grow significantly”. “The same now needs to be replicated in the private sector for which highly qualified educated youth must be acquainted,” he said. One of the participants, Junaid Yaseen, who has done masters in Zoology hailing from Bijbehera area Anantnag district, said that given that many trout-rearing units have come up in his area, he hoped that the training would prove useful to him. “Once I get know-how, I could make my mind on to set up this venture as our

place has a sufficient supply of cold water to raise a trout unit at my village,” he said. Earlier the co-ordinator of the programme and Chief Project Officer, Gagribal, MM Bazaz told Kashmir Reader that twenty five highly qualified youth have been selected for this almost month-long training conducted by the Regional Fish Farmers Development Agency, Kashmir division programme and sponsored by the National Fish Development Board.

He said that aim of the programme is to educate these youth not only the proper rearing of fish but their management and marketing as well. Bazaz said that given the good returns one gets from fish rearing, he hoped that these youth could not only generate employment for themselves but employ more youth. He hailed the efforts put in by the Director Fisheries, R N Pandita who ensured that this programme was started at the earliest. He added that the department over the years is not only importing trout seed to neighbouring states and north-eastern regions in India, but has also imported it to Bhutan. “Recently a batch of trout seed was dispatched to Directorate of Cold Water Fisheries Research Centre, Bhimtal, Uttarakhad,” he said. The programme was also attended by several assistant directors and officials including Zahoor Ahamd, Nahida Akhtar, Ghulam Jeelani Pandith.

Jammu and Kashmir: In a first in India: JK imports genetically modified Trout fish seed from Denmark after 119 years

<http://www.5dariyanews.com/news/258323-In-a-first-in-India-JK-imports-genetically-modified-Trout-fish-seed-from-Denmark-after-119-years>

In a first in India, J&K state imported genetically modified Rainbow Trout Seed from Denmark after 119 years to boost annual production from 500 to 5000 tonnes over next five years. Principal Secretary Animal, Sheep and Fisheries Department Dr Asghar Hassan Samoon shared the information after inaugurating the hatchery meant for rearing of genetically improved Rainbow Trout Fish today here at Beerwah Budgam. On the occasion, Dr Samoon said that the seed will be reared up to brood in the facility and then it will be distributed among fish farmers and other hatcheries of the department. “We can now produce table size fishes of this variety within 12 to 14 months in comparison to 24 months earlier. It will boost the production and revenue of farmers. J&K state is blessed with abundant fresh water resources which is favorable for rainbow trout fish. It is our endeavor to tap the local potential for lessening the import bill of state on food products,” he said. He added that genetically modified rainbow trout will have more muscle mass and will increase efficiency of aquaculture in the state.

A consignment of 2.25 lakh Eyed Ova Rainbow Trout imported from Billud in Denmark Rever Roheamger were successfully put in for production of brood stock in the state, he said. He also said that he is hopeful that with the introduction of Rainbow Trout fish, more and more entrepreneurs will get attracted towards the fish farming due to its high returns. Dr Samoon also directed the officials to create awareness regarding the high returns of fish farming among the

youth. “We will provide the marketing support to the aspiring entrepreneurs, besides providing them subsidy on seed and feed so that they can successfully run fish rearing ventures,” he said. He also called for proper maintenance of the hatchery which gets constructed at an approximate cost of Rs 42 lakh. Meanwhile on the occasion, Dr Samoon also distributed three auto rickshaws for fishermen of District Srinagar and Ganderbal for efficient marketing of their fish produce.

He also gave Rs one lakh cheque each to two beneficiaries as accidental insurance. Dr Samoon also laid foundation stone of District Laboratory, Operation Theater cum indoor facility complex at Budgam which would be constructed at a cost of Rs 95 lakh. The facility will cater to existing cattle population of 1, 42000 of the district. Later in the day, the Principal Secretary also distributed Broiler Day Old Chicks (DOCs) and feed among the beneficiaries of district Bandipora, under Innovative Poultry Productivity Project (IPPP-Broilers), National Livestock Mission 2018-19 here at Directorate of Animal Husbandry Kashmir, Gaw Kadal Srinagar. Director Animal Husbandry Department Kashmir Dr. M. Y. Chaproo was also present on the occasion. Under IPPP-Broilers, 600 Broiler DOCs per beneficiary along with requisite feed was distributed among the beneficiaries. On the occasion, Dr. Asgar Hassan Samoon also released a manual, written in Urdu language, for prevention of scheduled diseases in livestock.

Jammu and Kashmir: gets first hygienic fish marketing complex

<https://www.greaterkashmir.com/news/jammu/jammu-gets-first-hygienic-fish-marketing-complex/308540.html>

The first hygienic retail and wholesale fish marketing complex was on Friday thrown open for fish lovers here at Narwal. Principal secretary animal, sheep and fisheries department, Dr Asgar Hassan Samoon inaugurated the market. Jammu municipal commissioner, Pankaj Magotra; director fisheries, RN Pandita and other officials of fisheries department, district administration and JMC, besides fish traders and customers were present on the occasion. Dr Samoon said the market is equipped with all latest facilities like deep freezers, air conditioning etc. He said this market will cater to the need for sale in an organised way for the private entrepreneurs, as well as the fishermen community. Dr Samoon had a detailed tour of the facility and asked for its optimal utilization. He stressed on providing best and satisfactory customer service besides providing best facilities including ice plant for preservation of fish stocks to the sellers. Saying that hygiene shall be priority, Dr Samoon asked for regular monitoring of material being sold at the market. “We will ensure that a dedicated team under the supervision of JMC health officer will check the food items being sold here on daily basis.

Public health is our priority and it will be maintained as one of the well-organised and well-maintained fish markets in India,” Dr Samoon told officials. He asked officers for segregation and disposal of waste on scientific lines at the facility. The JMC commissioner assured the

principal secretary of full support in dealing with the waste and other issues at the facility. DrSamoon also asked for diversifying the role of the market for ease of customers and making it model one-stop facility of food items with the introduction of meat, eggs, cheese and chicken in wholesale and retail here. “A diagnosis laboratory will also be setup at the facility,” he said. He asked officials and fish traders to keep different varieties of fish including famed trout fish of Kashmir for fish food lovers. Fish traders’ delegation thanked DrSamoon for the facility which would help the sector and boost economy of the people associated with the trade. A large number of prospective buyers had also come to buy fish on the inauguration day.

Jammu and Kashmir: Conserve Anchar, Khushalsar, Gilsar water-bodies

<https://www.greaterkashmir.com/news/srinagar-city/-conserve-anchar-khushalsar-gilsar-water-bodies/307942.html>

Union Ministry of Environment, Forest and Climate Change has expressed concern over condition of Anchar, Khushalsar and Gilsar lakes here and asked the state government to take measures for conservation of these water bodies. “Water bodies in Srinagar like Anchar, Khushalsar, Gilsar are in deteriorated condition and need immediate intervention,” the ministry states in a communique to state government. “Based on the pre-feasibility report submitted for management of Anchar, Khushalsar and Gilsar lakes, the state government was informed to submit an integrated sewerage plan for the entire Srinagar city, as pollution from untreated sewer is a major factor for deterioration of these water bodies,” it adds. The union ministry in its communiqué states that central government provides financial assistance in which the state government has to contribute its own share from the conservation of water bodies. The ministry is implementing a centrally sponsored scheme namely, National Plan for Conservation Aquatic Eco – systems for conservation and management of identified wetlands in the country on cost sharing basis between central government and state government.

The scheme covers various activities such as interception, diversion and treatment of wastewater, shoreline protection, lake front development, in-situ cleaning i.e. desilting and dewatering, storm water management, bioremediation, catchment area treatment, lake beautification, survey & demarcation, biofencing, fisheries development, weed control, biodiversity conservation, education and awareness creation, community participation, etc. A senior government official however said that the state government has not shown seriousness in conservation of these water bodies. “First step is to stop illegally constructions and development of housing colonies being established by land-filing Anchar, Khushalsar and Gilsar. Though under National Plan for conservation of water bodies funds are available but for that state government and authorities need to do ground work which is stop further encroachments and prevent sewerage inflow into these water bodies.” Gilsar and Khushalsar are two interconnected lakes which receive waters from Dal lake and gradually flows into Aanchar.

Nestled between Hawal and Zadibal areas, these lakes till few decades ago were one of the major tourist attractions and bird watching sites. However in absence of conservation measures, these water bodies have been marred by encroachments and siltation. To mention a study carried by the Department of Earth Science Kashmir University reveals that Khushalsar and Gilsar have shrunk half their size. The twin lakes of Khushalsar and Gilsar occupied almost a square km in 1965 and have shrunk to less than 0.50 sq. Km. Studies reveal that most of the zones near habitations have become dumping sites of all allochanthus and non- allochanthus materials hampering the flow of waters.

Jammu and Kashmir: Samoon inspects facilities at fish marketing complex

<https://www.greaterkashmir.com/news/jammu/samoon-inspects-facilities-at-fish-marketing-complex/307439.html>

Principal secretary animal, sheep and fisheries department, Dr Asghar Hassaan Samoon on Tuesday inspected infrastructure and civic facilities here at wholesale and retail fish marketing complex, Narwal. He was accompanied by deputy commissioner Jammu, Ramesh Kumar; Jammu municipal commissioner (JMC), Pankaj Magotra; director animal husbandry, Dr Victor Kaul; director Sanjeev Kumar and other officials of fisheries department. Representatives of fish traders were also present on the occasion. Dr Samoon had a detailed tour of the facility and asked for optimal utilization of its services. He stressed on providing best and satisfactory customer service besides providing best facilities including ice plant for preservation of fish stocks to the sellers. Saying that hygiene shall be priority, Dr Samoon asked for regular monitoring of material being sold in the market.

“We will ensure that a dedicated team under the supervision of JMC health officer will check the food items being sold here on daily basis. Public health is our priority and it will be maintained as one of the well organized and well maintained fish markets in India,” Samoon told officials. He asked officers for segregation and disposal of waste on scientific lines at the facility. The JMC commissioner assured the principal secretary of full support in dealing with the waste and other is-sues at the facility. Fish traders’ delegation thanked Dr Samoon for coming up with the facility which will help the sector besides boosting economy of the people associated with trade.

Jammu and Kashmir: Fish Farmers’s™ group leaves for exposure tour

<https://kashmirreader.com/2018/12/25/anantnag-fish-farmers-group-leaves-for-exposure-tour/>

Additional District Development Commissioner, Anantnag Reyaz Ahmad Sofi, Monday flagged off a group of 25 Fish Farmers on an exposure tour to fish farm Panzath under Agriculture Technology Management Agency (ATMA) scheme. The ADDC also distributed fish rearing equipment among four farmers and handed over an Auto Rickshaw to a member of Fishermen

community under Blue Revolution Scheme. While interacting with the farmers, the ADDC assured all possible help and guidance to them.

He added that since there is enough scope of employment in this sector, therefore, the government is very keen to develop this sector on modern lines so that more people especially the educated youth are attracted towards it and new job opportunities are created. Deputy Director Fisheries Anantnag Mohammad Ashraf Darzi said that aim of organizing such exposure tours for the Fish Farmers is to aware them about latest and scientific techniques of Fish Farming. He added that educated and unemployed youth are showing greater interest towards fish rearing and the department is providing them all sorts of awareness and training.

Jammu and Kashmir: Kashmiri™s fisherwomen live between hope and despair

<http://www.ipsnews.net/2018/10/kashmirs-fisherwomen-live-hope-despair/>

Much has changed since Rahti Begum, a fisherwoman in Kashmir, now in her late 60s, first began wandering the streets with a bucketful of fish on her head. She was 17 when her father roped her into the business that became the source of her livelihood for the remainder of her life. Living in a houseboat on Dal Lake, one of Kashmir's famed water bodies, Rahti says catching fish and selling it to people has been the sole source of income of her family for centuries. "Even when I was a child, I knew I was going to sell fish. Every one in our family does that. The lake on which we live has been fulfilling all our needs," she says. Her family belong to a tribe in Kashmir called 'Hanjis' who live in houseboats and eke out a living from the lakes and rivers the region had in abundance. A majority of the members of the tribe are involved in tourism as they take tourists in the lavishly decorated boats called 'Shikaras' to explore the beauties of the rivers and lakes. Others amongst the tribe catch fish and sell it directly to the public. Rahti belongs to the latter group.

The men during the early hours of the morning cast nets into the lake, catch fish and pass on the stock to their women who sell it by roaming around in different areas. "When my father asked me join him, I was reluctant to say yes but there wasn't anything else through which we could have earned a living. Gradually, selling fish became an integral part of my life and hence the family legacy continued," she tells IPS. However Rahti, now afflicted with ailments that come with old age, is confident that she is going to be the last woman in her tribe to sell fish. "My death will end the legacy for ever. No one wants to do this business again as the lake has all of a sudden turned monstrous for us; it is becoming a cesspool and fishes underneath its belly are vanishing with each passing day," Rahti explains. Fish production and agricultural activities in this Himalayan region contribute 23 percent of GDP and are the mainstay of the economy. According to a study conducted by researchers Neha W Qureshi and M Krishnan, the total fish production in Dal Lake registered a negative compound growth rate (CGR) of -0.34 percent for the period 1980-1990.

But for the period 2000-2010, fish production in Dal Lake showed a negative compound growth rate of -2.89 percent. Wullar Lake showed a negative compound growth rate of -8.78 percent from 2000-2011. The study blames the decline in numbers on the negative externalities of tourism, excessive fertilisation of vegetable crops on floating gardens that lead to algal blooms, and the spike in pollution due to the dumping of waste in both lakes. These have all led to a consistent decline and destruction of the breeding grounds of the local fish species schizothorax. Furthermore, the consumption of fish has outnumbered actual fish production in the region. While the annual consumption is 25,000 tons of fish, production stands at 20,000 tons per year in both lakes combined. Of this, Dal Lake produces no more than 5,000 tons a year. Rahti, who now struggles to earn enough for one full meal a day, says she vividly remembers the times when during her childhood, fish under the diamond-like transparency of the lake used to swim in shoals and flocks of ducks with emerald necks used to swim on the surface.

“Those were the days when we used to earn a decent livelihood and the lake produced no less than 15 thousand tons of fish every year. It is now a thing of a past,” she rues. Rahti, who has two daughters and a son, says the reason that her children wouldn’t go into the business of selling fish is the dreadful decline in fish production in the lake. Her daughters are homemakers and her son has a job at a local grocery store. Her earnings, Rahti says, have declined from 500 dollars a month to a mere 100 dollars a month at present. “There isn’t enough produce that I could sell and with merge income in hand, why would I push my children to the precipice of a disastrous living?” Rahti tells IPS. Another fisherwoman, Jana Begum, has similar fears. In her 50s now, Jana says her only concern is how the family would survive if the situation were to remain the same. “Our sole income is selling fish. My husband, a fisherman catches fish and I sell it. We have been doing this for 30 years but it looks like the difficult times have begun to dominate poor people like us,” Jana tells IPS. She says almost every day, her husband returns home with empty nets and a glum face as there aren’t any fish left to be caught in Wullar Lake — another famous water body located in the north of Kashmir. “Why would my daughters do this business? What is left for them to earn.

“With us, the profession shall end and we are already long dead,” says Jana. According to a study by Imtiaz Ahmed, Zubair Ahmad and Ishtiyahq Ahmad, Department of Zoology, University of Kashmir, the main reasons for the depletion of fishery resources in these water bodies are over-fishing and encroachment. It suggested that the entry of domestic sewage, solid wastes and agricultural wastes into these water bodies needs to be controlled and properly managed. “Also aquatic weeds present in these aquatic ecosystems must be cultivated and should be properly utilised because of its high nutritional values and economic values. A separate authority needs to be established to monitor the physico-chemical and biological characteristics of Dal Lake.” The director of the Department of Fisheries, Ram Nath Pandita, gives similar reasons for the decline in fish production in Kashmir’s lakes and rivers, attributing it to increasing pollution and encroachment. He says because of the dumping of waste in water bodies, fish larvae do not grow

into fry, resulting in the decline. Pandita tells IPS that in order to address the decline in fish production, the government is supplying larvae to the water bodies and is continuously monitoring the process.

“The government is keeping closer watch on the entire process of increasing the fish production in Kashmir’s lakes and besides increasing the supply of larvae, it is also ensuring that no illegal fishing is allowed,” Pandita says. He added that due to the massive floods that occurred in Kashmir in 2014, a large quantity of silt and sewage accumulated in the lakes, affecting fish production directly. Pandita said awareness campaigns are being carried out about the importance of keeping the water bodies clean and not dumping household solid and liquid wastes in them. “There are even seminars and road shows being conducted by the government in which people from cross sections of the society are educated that the fish can turn poisonous and will extinguish if water bodies aren’t protected through the unanimous efforts of the people and the government,” Pandita tells IPS. The government in February banned any illegal fishing in Kashmir’s water bodies and claims that the law will help curb the decline in fish production and help secure the livelihood of people involved in the sector. Under the new law, only those permitted by the government can fish in the water bodies and any one found violating the norm shall be liable to three months of imprisonment and a fine of 500 Indian Rupees (about 90 dollars.)

The Department of Lakes and Water Ways development authority – a government department tasked with the protection of lakes in Kashmir – reports that various plans are underway to save Dal Lake and various species that live in it. The department is uprooting water lilies with traditional methods and is de-weeding the lake with the latest machinery so that the surface of the lake is freed from weeds and fish production will rebound. However, according to a study by Humaira Qadri and A. R. Yousuf from the Department of Environmental Science, University of Kashmir, despite the government spending about USD170 million on the conservation of the lake so far, there is no visible improvement in its condition. “A lack of proper management and restoration plan and the incidence of engineered but ecologically unsound management practices have led to a failure in the conservation efforts,” says the study. It concluded that the lake is moving towards its definite end and that conservation efforts have proved to be a total failure. It adds that official apathy and failure to take the problems seriously on the part of the managing authorities have deteriorated the overall condition of the lake.

The study says a united effort is needed by the government as well as the people so that instead of turning the water bodies into waste dumping sites, they are saved for the greater common good of Kashmir. But Pandita is optimistic that the lakes can be restored to their past glory. Though, he admitted, that due to the high level of pollution in the lakes, it is feared that they may turn into cesspools. However, he said the government was working to combat this through various methods, which included awareness campaigns and lake clean-up drives. But among the uneducated communities living around the lakes, many do not understand the measures taken by

the government. When IPS spoke to local community members, all they talked about were the lack of fish. They were unaware about whether the government's efforts will bring about any change in the lake. As IPS asked fisher-person Jum Dar whether the government's measures were bringing any positive change, Dar said he has seen many government agencies taking water samples for research from the lake and but there hadn't been any visible change. His livelihood, he says, continues to remain in danger. As IPS spent an entire day with Dar, and he only caught two fish which weighed no more than half a kilogram. "See yourself the hard times we encounter everyday. How could we survive when such a catastrophe has engulfed our lives?"

Jammu and Kashmir: Mega fish farm to come up in Kishtwar

<https://www.india.com/news/agencies/mega-fish-farm-to-come-up-in-kishtwar-3376270/>

A mega fish farm funded by National Hydro Power Corporation (NHPC) is coming up at Kishtwar district of Jammu and Kashmir at a cost of Rs 4 crore. This was stated during a meeting chaired by Principal Secretary Animal, Sheep and Fisheries and Transport departments, Asgar Samoon, to discuss modalities for setting up of NHPC funded projects under Environment Management Plan (EMP), an official spokesman said. The fish farm will be setup at Pakal dul dam. Samoon directed the officials to expedite the process of its setting up the mega plant to boost the fish farming in the Chenab valley. He asked the officials of the NHPC to execute the projects keeping in view the laid down procedures and rules of the government. He also stressed on the NHPC officials to adhere to the guidelines laid down by the concerned ministries for minimum damage to the environment, flora fauna where projects are being executed by them. He also raised the issue of compensation to the Sheep and Animal Husbandry department for the disturbances caused to the Livestock due to the power generating projects.

Jammu and Kashmir: Kashmir's first fish hospital aims to reduce farm losses

<https://www.hindustantimes.com/india-news/kashmir-s-first-fish-hospital-aims-to-reduce-farm-losses/story-xZYy3UBacDAOJlwpTaOI7O.htm>

Fisheries experts from Sher-i-Kashmir University of Agricultural Sciences (SKUAST) near Srinagar heard a common complaint from farmers during a survey of fish farms in Jammu and Kashmir. The farmers would complain that species like trout were dying of unknown reasons. The problem had the experts look for the reasons for unexplained deaths. They were soon able to put a finger on it when they found pathogens like Trypanosoma had made their way into Kashmir's colder waters. The blood parasite is mostly found among fish in tropical areas. The dwindling number of fish, as a result, prompted SKUAST to open a fish hospital under the Aquatic Animal Health Management Division (AAHMD) at Rangil in Central Kashmir's Ganderbal district in May. It is second such fish hospital in the country setup on the lines of a similar facility established in Kolkata in 2015. "From the last four years, we have conducted the survey in three divisions of the state and have screened many of farms. Many farmers have been

complaining that their fish, particularly trout, are dying due to unknown reasons,” said AAHMD head Feroz Shah, a fish diseases researcher.

“Nature has provided us with abundant waters and fish. However, every year our farmers lose 30% fish to diseases and if we can control that, we could enhance the overall production by one-third,” he said. The state has some 513 trout farmers, who produce over 20,000 tonnes of fish annually. Shah said they have found the parasite in the blood of fish in Dal Lake as well. “There are apprehensions that due to global warming some deadly pathogens will invade our waters. If that happens, our fish cannot sustain those pathogens,” he said. To deal with this and other problems, AAHMD has set up 20 glass tanks and aquariums that provide different treatments to sick fish. Some tanks are used for antibiotic, antiparasitic and antiviral medications. There are quarantine tanks, too, to acclimatise the fish admitted to the hospital. An experimental fish farm is also associated with the hospital beside a cell culture facility, an aqua clinic and a pathology laboratory. There are some 122 species of fish found in streams, lakes and rivers of the state. Pollution and introduction of exotic species have been blamed for the vanishing of some of the valley’s indigenous fish including Snowtrout or Schizothorax. Nasir Ahmad, a 45-year-old fish farmer from Bandipora district, said the hospital was helping them reduce losses. He rushed to the hospital in August after his trout fish contracted a bacterial infection. “...They prescribed me medicine and I managed to save some 500 of my Frys,” Ahmad said.

Jammu and Kashmir: Kashmir’s endemic fish Snowtrout is vanishing, blame it on pollution

<https://www.hindustantimes.com/india-news/kashmir-s-endemic-fish-snowtrout-is-vanishing-blame-it-on-pollution/story-ftTPubYq1h3eOvvft1C3mM.html>

Kashmir’s endemic fish — Snowtrout or Schizothorax — is vanishing, fisheries biologists say and blame the introduction of exotic species and growing pollution for it. Experts say exotics like Common Carp and Trout, which were introduced in 1956 and 1900, have been thriving at Schizothorax’s cost. Schizothorax fish were found in abundance in snow-fed lakes, rivers, wetlands and canals until 30 years back. They have elongated and subcylindrical fleshy bodies and are known to be tastier and free of diseases. Their presence in water bodies would indicate that they were pollution free. Experts say over half of Schizothorax’s 12 species have disappeared. The Dal Lake has some Snowtrout presence while they are no longer found in polluted water bodies like Srinagar’s Khushalsar Lake. Biologist Jakob Heckel, who visited Kashmir in 1838, reported 16 fish species that he considered were new and wrote about them in his book ‘Fische Aus Caschmir’. Srinagar’s Sher-i-Kashmir University of Agricultural Sciences and Technology (SKUAST)’s fisheries department head Masood ul Hassan Balkhi said 12 of the species Heckel’s discovered were found to be those of Schizothorax.

He said researchers and the fishermen are now able to find only five of them. "...the five species, still found in waters, are also in danger," Balkhi said. Zeba, who has been selling fish in Srinagar for decades, said most of her catch is Common Carp. She had managed to catch just a single Schizothorax fish last week. SKAUST's fisheries resource management department head Faroz Ahmad Bhat said their research in 2005 found 15% of the total catch to be Schizothorax while 68% was Common Carp. "In 2015, Schizothorax's numbers reduced to 10%." Bhat said the biomass of the species has also been decreasing. One of them would grow as much as a healthy human child. Fisheries department joint director Mohammad Amin Mir said their priority has been overall fish production.

Jammu and Kashmir: To save Mansar Lake, govt plans to relocate carp fish

<https://www.tribuneindia.com/news/jammu-kashmir/to-save-mansar-lake-govt-plans-to-relocate-carp-fish/644200.html>

The wildlife department is working on a plan to relocate carp fish from Mansar Lake, one of the biggest freshwater lake in the Shivalik mountains that is facing an unprecedented threat to its existence. Carp fish, not native to the lake, was introduced about two decades back after thousands of indigenous freshwater species died due to a mysterious disease. As fishing is prohibited due to religious reasons, the number of fish has increased to an alarming level beyond the capacity of the water body to sustain the aquatic life. Villagers have great reverence for the water body considered as the abode of Shehsnag, a mythical creature mentioned in the ancient Hindu texts. Sources said the wildlife department was looking for alternative sites, especially dams and ponds, to relocate the fish to ease pressure. Experts have expressed concerns that the alien species had proved nemesis to the native aquatic life. "We are working on a plan to shift the fish. A detailed scientific study is being conducted. Locals will also be taken into confidence before anything is planned," said Neeraj Badu, wildlife officer, Mansar. The lake, at the elevation of 600 m in Samba district, nearly 60 km from Jammu, is already under pressure due to human intervention and uncontrolled influx of sewage and chemical pollutants in the water, slowly killing the Ramsar-listed site. However, environmentalists have raised doubts about the success of the project.

"The big question is that where will they shift the fish. The villagers have great reverence for the aquatic life and there is no guarantee they are not killed for consumption at other places. The real culprits are those who introduced the alien species to the lake, leading to the present mess," said Bushan Parimoo, an environmentalist. Around 1,000 people live in the area falling under Chani Mansar panchayat and in the recent years, it has become a favourite destination for the tourists, both domestic and from outside the state. "The lake water has become unsuitable for drinking. Locals too want that the government should take measures to save the water body. The problems started the day carp fish was brought to the lake," said Ajay Badyal, a local.

Jammu and Kashmir: Samoon reviews functioning of Fisheries, Sheep Husbandry Departments in Shopian

<http://thekashmirimages.com/2018/08/20/samoon-reviews-functioning-of-fisheries-sheep-husbandry-departments-in-shopian/>

Principal Secretary Animal, Sheep Husbandry, Fisheries and Transport, Dr. Asgar Hassan Samoon today visited Shopian and took stock of the functioning of the Sheep, Animal Husbandry and Fisheries departments in the district. District Development Commissioner, Shopian, Owais Ahmed, Director Sheep Husbandry, Mohammad Sharief, Director Fisheries, R N Pandita, district officers and the officers of Line departments were present. On the occasion, Samoon inspected various trout fish farms including trout stream Aharbal, trout farm at Alyalpora and other private fish farms. He said with the establishment of these farms, the production of trout fish seed will increase manifold. During his visit, Samoon interacted with the nomads and listened to their demands patiently.

He assured them that their genuine demands will be taken up with the concerned departments for early settlement. Speaking on the occasion, Samoon asked the youth to come forward and avail benefits under various centrally and state sponsored schemes. He also said there are ample avenues of employment in private sector, particularly in fish farming and sheep husbandry sector. Later he distributed free medicine kits among the Sheep breeders.

Jammu and Kashmir: Hundreds of fish killed by ‘poisoning’ in Rambiar rivulet

<https://kashmirreader.com/2018/08/10/hundreds-of-fish-killed-by-poisoning-in-rambiara-rivulet/>

Hundreds of fish have been killed after unknown persons contaminated the Rambiar rivulet with a poisonous substance on Thursday near Hirpora village of district Shopian in south Kashmir. Sources from Hirpora told Kashmir Reader that at around 1 pm on Thursday some unknown persons threw an unknown poisonous substance into the rivulet, leading to the death of hundreds of fishes. They said that scores of fishes were floating dead in the rivulet while the Fisheries Department is watching the same as mute spectators, they alleged. An official from the Fisheries Department told Kashmir Reader that the area is being protected for fish grazing under the surveillance of the department’s employees, and they were clueless as to the reason for the killing of the fishes.

Villagers from the area want a case registered against the law breakers and said that those involved in poisoning the rivulet should be strictly dealt with for their crime which not only resulted in the killing of hundreds of fish but also polluting the water on which hundreds of villages are dependent for drinking and sanitation purposes. Assistant Director, Fisheries, Shopian, Muhammed Aslam Bhat told Kashmir Reader that he has deputed a team to the area to

prepare a report on the incident. “Whoever is involved in this crime will be dealt strictly,” he said.

Jammu and Kashmir: Early warning system for flash floods can save thousands of lives at risk

<https://india.mongabay.com/2018/07/19/early-warning-system-for-flash-floods-can-save-thousands-of-lives-at-risk/>

Every time there is persistent and intense rainfall in Ladakh, the cold desert region of India’s northern state Jammu and Kashmir, the locals begin to worry. It brings back images of the 2010 flash floods that affected thousands of people in the region. This year, several low lying areas in the region were inundated following the rains, triggering rescue operations by the local administration. With an aim to prevent loss of life and extensive damage due to flash floods, the India Meteorological Department (IMD) is working on a Flash Flood Guidance System (FFGS) that will predict the possibility of flash floods up to six hours in advance and alert disaster relief forces as well as local residents. Floods, specifically flash floods, are among the leading causes of deaths due to natural disasters.

While general floods take days or even weeks to develop, flash floods can inundate vast areas within a few hours. Given this, the FFGS could be a significant tool in disaster risk reduction as it will provide alerts in advance that will help residents of the affected areas and relief teams prepare for the oncoming flash floods. India among top disaster-prone countries in the world According to the World Meteorological Organisation, some 5,000 people lose their lives each year, across the world, to flash floods, accounting for 85 percent of all kinds of floods (like riverine and coastal). India is also among the 10 most disaster-prone countries in the world, according to a report by the government of India and United Nations Development Programme (UNDP). IMD’s upcoming system is of significance, especially for India, where nearly 12 percent of the landmass is prone to floods and river erosion. In 2018 itself, several lives have already been lost across India since the arrival of the south-west monsoon which accounts for the majority of India’s annual rainfall. So far, floods in Assam, Tripura and Manipur have claimed 23 lives and displaced nearly a million (eight lakh) people from their homes in these states as the water level in the Brahmaputra rose beyond its embankment, according to this report. The southern state of Kerala has already lost 54 lives since the onset of monsoon on May 29 ? three days ahead of its normal date of onset.

According to Indian government’s Ministry of Water Resources, River Development and Ganga Rejuvenation, 107,487 human lives and 6.02 million cattle have been lost to floods and heavy rains across India during a period of almost 65 years, from 1953 to 2017. In 2017-18, cyclonic storms, heavy rains, floods and landslides claimed 2,231 human lives and 50,638 cattle deaths. They also resulted in damage to over 1.19 million houses and 38,500 square kilometres of crop

area. Technology that will save lives at risk Under the FFGS, using existing satellites and on-ground equipment, the IMD hopes to gather not just more accurate data but also predict the onset of flash floods in remote areas of the country. The system will be able to track real-time rainfall in any part of the country. Along with other data points like soil moisture, soil temperature, level of soil saturation and the topography of the land, the system will help the meteorological department officials predict flash floods up to six hours in advance. It is the soil's ability to absorb rainwater that greatly determines the probability of flash floods. Explaining the system, IMD's Director General K. J. Ramesh said, "There is something called local soil hydrology. Some moisture is retained by the soil (when it rains)."

"Once the soil gets saturated, the runoff ? outflow from the soil ? starts. Until then, whatever rain has come will be absorbed by the soil. Local hydrology will be computed on daily basis (under the new system). We are trying to sub-divide the whole of India into about 27,000-28,000 micro watersheds, each about 50-70 sq km in size. At that scale, the soil hydrology model will be run on a daily basis by which you can clearly assess the run-off potential of the soil of an area," Ramesh told Mongabay-India. Ramesh stressed that with FFGS they will be able to ascertain how temperature, soil and rainfall are interacting and "when incremental run-off starts" from the soil. According to the system, whether the run-off from the soil will lead to flash floods is something that the intensity of rainfall will decide. "But it will give some guidance that there is an evolving scenario towards possible flooding ... and then authorities have to take action," added Ramesh.

In areas like Rajasthan and Madhya Pradesh, where the soil is more absorbent, even 10 to 20 centimetres of rainfall may not cause floods, but it can be different for other terrains. In regions like Ladakh in Jammu and Kashmir, where the terrain consists of mostly loose soil, flash floods can happen with lesser rainfall. "Combined sloped terrain, raging waters from the river and torrential rain can easily run-off and cause flash floods," Sonam Lotus, director of the meteorological department in Jammu and Kashmir, told Mongabay-India. IMD's director general Ramesh, also informed that the system is being tested and will be operational across the country once completed. "The system will allow the state and central administration to prepare and reach the affected area for evacuation and rescue. Our staff is undergoing training to understand the system better. We plan to use it in full scale by next year," said B.P Yadav, a senior scientist at IMD and the deputy director general of meteorology (Hydro-Meteorology). Relief for flood prone states in sight In August 2010, Ladakh experienced one of its worst natural disasters in its history. The cold desert district received 350 mm of rain in just two days ? three and half times its annual average. As per reports, 234 people died and more than 800 went missing due to the floods.

In September 2014, Kashmir too saw one of its worst natural disasters in 50 years. Torrential rains from the South-West monsoon had gathered pace causing Chenab and Jhelum rivers to breach their embankments. Over the following days, nearly 2,600 villages in the state were

affected, 390 of which were completely submerged. Some 280 people had died and half a million people were trapped in their homes for nearly three weeks, with the city of Srinagar drowning under nearly 18 feet of water. “Our relationship with nature changed after that. We do not look at rains the same way after these floods,” said additional deputy commissioner for the Ladakh Autonomous Hill Development Council (LAHDC) Moses Kunzang. For Sonam Lotus, FFGS is a significant step ahead in technology and the forecasting prowess of IMD. “The FFGS is really required for a district like Ladakh. IMD, at the moment, forecasts on rainfall. Based on local knowledge of geographical parameters, we can somewhat predict floods. But the new system makes it all the more accurate.

The 2010 floods were beyond anyone’s imagination. No one thought Ladakh would experience something like this. But the next time it happens, we will be better prepared,” said Lotus who heads the local meteorological department. While flash floods are fairly recent in Ladakh, in places like Bihar, India’s most flood-prone state, about 76 percent of the population in the north of the state lives under the threat of flood devastation, according to the state’s Water Resources Department. A little more than 73 percent or about 68,800 sq km out of the state’s total geographical area of 94163 sq km is flood affected. The state faced major floods in 2007, 2008, 2011, 2013, 2016 and 2017. Last year, the floods took away the lives of 514 people and affected 3 million families. Using conventional methods to predict flash floods is extremely difficult, not just in Bihar but across the country, according to scientists. However, a system like FFGS can herald a new era.

“We do not have rain-gauges or flood forecasting stations in remote areas as they are not logistically possible to maintain. Besides, rains are not the only factor that can cause flash floods,” said IMD scientist Yadav. Cyclones can also cause flash floods during the north-east monsoon in south-east coastal regions of the country, while the south-west monsoon can wreak havoc in other parts. “The pilot phase is showing good results. We were able to accurately predict the floods in Mangalore this year. If things go well, we can roll out the system for the next year’s monsoon,” Yadav added.

Jammu and Kashmir: Govt frames SLAMC under Blue Revolution

<http://www.dailyexcelsior.com/govt-frames-slamc-blue-revolution/>

Government has accorded sanction to the constitution of a State Level Approval and Monitoring Committee (SLAMC) for implementation of the centrally sponsored scheme for fisheries sectors under “Blue Revolution: Integrated Development and Management of Fisheries”. According to the order issued by the General Administration Department, Administrative Secretary, Animal/Sheep Husbandry & Fisheries Department will be the chairman of the committee while Director, Fisheries, J&K will be member secretary. Besides, Dean, faculty of Fisheries, SKUAST Kashmir; Director Planning, Animal/Sheep Husbandry & Fisheries Department;

representative of Planning & Monitoring Department (not below the rank of Additional Secretary); representative of Department of Rural Development & Panchayati Raj (not below the rank of Additional Secretary) and representative of Department of Animal Husbandry, Dairying & Fisheries, Government of India will act as members of the committee. The committee will consider the respective State proposals under Blue Revolution and recommend the viable proposals/projects to National Fisheries Development Board (NFDB) along with amount of 1st installment desired in accordance with guidelines of the scheme. The committee will also review and monitor the implementation and progress on the proposals approved by it during the meetings to be held quarterly.

Jammu and Kashmir: Fishermen fall on hard times in Kashmir Valley

<https://www.deccanherald.com/special-features/fishermen-fall-hard-times-kashmir-valley-671953.html>

Traditional fish consumers in Kashmir are largely inspired by folklore that fish be consumed in months which bear alphabet 'R'. And hence, from May to August, fish is rarely consumed. "No one knows from where this logic came but our family has been following this logic of cooking fish for generations," said Rabiya, a resident of nearby Maharaj Bazar. For Zoona life goes on, but full of struggle. Dressed in traditional attire, especially her eye-catching earrings, Zoona says she grew up listening to her mother saying that selling a few kilos of fish in a day brings a plateful of rice at night. However, she hopes that her children don't have to carry on the profession of their forefathers as "there is no respect for us." "We sit on the roadside where we sell fish during harsh summer and winter months. Then we have to fight with municipal corporation workers and policemen, who force us to vacate the pavements. And even the customers look down on us.

They virtually treat us like beggars. I don't want any of my children to take up this profession, where there is no dignity of labour or assured returns," Begum rued. "If there are designated fish markets in Jammu and Delhi, why can't there be one here," she asked. Being members of one of the first professions where women stepped out of their homes to earn in Kashmir, there is a certain historical and social significance attached to these fisherwomen. Still, most of these fisherwomen don't want their children to carry forward the family trade. Jigari Begum or Jigar Mass as she is fondly called, who like Zoona sells fish in the same market, says there are only hardships for fishermen community. "There is no dignity in doing this work anymore. When the police beat us and throw away our fish, people gather to look at us as if some street show is going on. Where will we go to sell our catch? Instead of helping us, the government creates more hardships for us," she complained.

Though in 2014, the government had planned to provide permanent space for the fish market, there has been no forward movement till now. At the end of a gruelling day, all that fisherwomen

like Jigari get for their hard labour are a few hundred rupees. Jigari says she has worked hard to educate her children and if her son gets a job, she will leave her profession. “From catching to selling fish is hard work and requires a lot of stamina. My husband oen has blisters and sores due to staying in the water for long hours. We don’t want our children to suffer the same way,” she says There are more than 2,000 families that depend on fishing in the Dal Lake for their livelihood. But a majority of them live in dismal conditions in slum-like colonies along the wasteland in the interiors of As low profits, harsh winter weather, a declining fish population and lack of government support have made it a trying profession, many youth are not taking up traditional fishing as means of livelihood.

“The challenges of catching and selling fish have a deterrent effect on younger generation from carrying forward the traditional profession. If the government fails to take immediate measures for welfare and promotion of fishermen community, soon this profession will vanish in Kashmir,” says Shabir Ahmad, a young fisherman from Dal lake area. “Over last decade or so, this trade has received a setback as youth from our community have started opting for other alternatives. They don’t find fishing profitable,” he said. Zahir-ud-Din, a senior journalist in Kashmir who has been keenly monitoring fisherwomen at Amira Kadal, says he is surprised that government or even NGOs have neglected fishermen community in welfare measures. For women like Jigar and Zoona, their lives continue to be a struggle.

Jammu and Kashmir: KVK Ganderbal organises awareness prog for fish farmers

<https://kashmirreader.com/2018/05/15/kvk-gbal-organises-awareness-prog-for-fish-farmers/>

In order to acquaint fishfarmers regarding scientific farming, Krishi Vigyan Kendra (KVK) Ganderbal in collaboration with department of fisheries organised an awareness programme for fish farmers of Ganderbal district at KVK campus on Monday. Around 40 fish farmers from across the district attended the programme and interacted with different subject experts. Various KVK scientists delivered lectures covering various dimensions of the scientific fish farming and several integrated farming systems associated with fisheries, an official handout read. The farmers were exposed to various integrated farming models available at the Kendra. A scientist-farmer interaction programme was also held at the end of the programme in which queries regarding agriculture, animal husbandry, vegetable and post-harvest technology raised by farmers were responded by the experts, it further read. Programme Coordinator and Head KVK-Ganderbal, Dr Javid Ahmad Bhat asked farmers to “be in close contact with the Kendra for technical and scientific inputs from top experts available at the Kendra”. “Integrated farming system like, Paddy-Fish, Fish-Poultry, Horti-Poultry-Apiary, etc. are some of the important approaches of doubling farmers’ income with limited resources and our farmers must adopt it by utilising the services of experts,” Bhat said.

Jammu and Kashmir: Fisheries dept generates Rs 4 cr annual revenue through sale of trout fish, eggs

<https://kashmirreader.com/2018/04/10/fisheries-dept-generates-rs-4-cr-annual-revenue-through-sale-of-trout-fish-eggs/>

Minister of State for Fisheries and PHE, I&FC, Zahoor Ahmad Mir on Monday visited Trout Culture Farm Laribal Dachigam to take stock of various works undertaken by the department here. On the occasion, the minister was briefed about the development in terms of egg production, seed capacity at the farm, sale and revenue generated through the sale of trout fish. The minister was apprised about two-trout species, Rainbow trout and Brown trout fish being cultured at farm Laribal. He was informed that while Rainbow Trout is cultured for commercial production and Brown Trout is for stocking at various streams for angling purpose. The minister was informed that 4 lakh trout eggs were supplied to Sikkim from Laribal farm to meet their needs.

Earlier, the seed was supplied from Kokernag farm. According to an official handout, the production of trout has been 5.2 tons this year as compared to 4.5 tons last year besides the seed was also provided to private fish farmers and departmental units. The department generated revenue of around Rs 4 crore through sale of trout fishes, eggs to private farms and individual customers. The minister was further informed about the amount of work completed on the retail fish market at Lal Chowk and wholesale fish market at Tengpora. Discussions were also held to establish aquarium in district Srinagar, it added

Jammu and Kashmir: Wholesale fish dealers association demands fish market, stages protest

<http://brighterkashmir.com/wholesale-fish-dealers-association-demands-fish-market-stages-protest/Srinagar>

Wholesale fish Dealers Association demands Fish Market, Association hold protest in Premises Of Fisheries department against administration in Chatabal Srinagar. They raised slogans against administration for not providing a MANDEE (FISH MARKET) for dealers adding that although they are doing their trade on roads. “We are regretful that commuters, transporters etc are facing hardships with traffic jams & conjunction etc”, they said. “We are repeatedly asking for fish market but every time we came back with despair & hopeless. Although govt has provided us a land for Mandi in Tangpora Batmaloo but I don’t know why we are still suffering. “said president of the association”.

Jammu and Kashmir: DC Srinagar urges youth to avail benefits of fish rearing

<http://www.greaterkashmir.com/news/srinagar-city/dc-srinagar-urges-youth-to-avail-benefits-of-fish-rearing/274964.html>

He made these remarks during training cum awareness programme under ATMA which was organized by Department of Fisheries. Deputy Commissioner Srinagar, Syed Abid Rashid Shah today said the youth should avail the benefits of fish rearing as it offers a quick return on investment. He made these remarks during training cum awareness programme under ATMA which was organized by Department of Fisheries. On the occasion, the DC said nature has bestowed Kashmir with natural streams, springs and lakes as such it offers various opportunities to earn the livelihood. He urged to youth to come forward and avail that benefits which fish rearing business offers. He said district administration would facilitate the process for streamlining the fish rearing business in the district. The aim of this training was to acquaint the people associated with the trade with the latest know-how in fish culture, management practices, disease control and techniques to boost fish production. More than 100 fish farmers of the district participated in the training programme.

Jammu and Kashmir: After 114 years, J&K to get new Act for protection of fisheries

<https://timesofindia.indiatimes.com/india/after-114-years-jk-to-get-new-act-for-protection-of-fisheries/articleshow/62808782.cms>

More than a century after enacting an Act to preserve fisheries in Jammu and Kashmir, the state is all set to get a new legislation for the sector. The Legislative Council on Tuesday passed "a Bill to provide for the protection, conservation and development of fisheries in the state and for matters connected therewith or incidental thereto...". The bill was moved by Minister for Animal, Sheep Husbandry and Fisheries, Abdul Gani Kohli and passed with a voice vote. It was passed in the state assembly yesterday. The existing Jammu and Kashmir Fisheries Act of 1903 is more than 114 years old, which called for an updated legislation for the sector. "No person shall after commencement of this Act, carry on fishing in any trout water, reserved waters and protected waters without a license," the bill said. It further said that no person shall use any dynamite or other explosive substance in any water with intent thereby to catch or destroy the fishes.

No person shall put any poison lime or noxious materials into any water with the intent to catch fish. As per the new bill, whoever though having been granted a licence under this Act, fishes or attempt to fish in any trout (fish) water, reserved waters and protected waters between hours of sunset and sunrise shall be liable to be punished with imprisonment for a term which extends to three months or with fine which may extend to Rs 5,000 or both.

Jammu and Kashmir: Ladakh Floods: A Timeline of Disaster

<https://thewire.in/212453/ladakh-floods-timeline-disaster/>

In the recent past, Ladakh's arid, Moon-like landscape has borne many scars left behind by ferocious flooding. A statistical analysis of climate over Leh shows that, overall, the arid region has been receiving more rainfall than it used to. The Ladakh region is a cold desert in the Trans-Himalayas; on average, the daily precipitation ranges from 0.5 to 1.5 mm/day, which leaves the region cold and arid. The consequences of shifting precipitation trends are exacerbated by increasingly frequent cloudbursts, flash floods, landslides and glacial lake outburst floods (GLOFs). The region's topography is made up of granites and loose sediments that yield easily under heavy rainfall, setting off mudslides and sand flows. According to the deputy commissioner's office, the large scale destruction and loss of lives during the 2010 floods were caused by the rapidly moving volumes of water charged with sand, mud, building debris, waste, boulders, trees and other objects swept up by the flow. A recurring disaster In Ladakh, the revenue department records flooding events and evaluates them on the basis of losses incurred, of property and life. This explains the extraordinary media coverage of the 2010 floods. It also explains why catastrophic tragedies, like the floods of 2006 and 2015, didn't get much attention from the media or from the scientific community.

"The Ladakh region received more than double the average rainfall it receives in the monsoons" in 2015, according to Sonam Lotus, the director of the meteorological department in Jammu and Kashmir. In July and August 2015, unusual spells of rains and flash floods caused damage worth Rs 87.74 crore in Leh district and Rs 80 crore in Kargil. The floods destroyed irrigation canals and equipment, buried fertile land under debris, and filled clean water sources with muddy water and slush. "Our supply of irrigation water was cut off because of the floods. The crops dried out, we didn't have water to drink," Tsering Namgail, Biama village, said. In the aftermath, army tankers were dispatched to provide drinking water to villages and the government distributed rations for subsistence. Though there are no records of loss of human life, infrastructural damage caused by the 2015 floods was comparable to the floods of 2010.

"In 2015, century-old houses and generations-old orchards of our village were washed away," said Nawang Namgil of Wanla village, which was washed off. Namgil runs a travel agency in Leh and has been working closely with Nancy Chin, an anthropologist at the University of Rochester, New York, to understand the floods' impact on the region. Their work focuses on the rarely discussed subject of emotional adaptation to the effects of climate change. "Fertile agriculture lands, houses, our entire village – now under tonnes of debris. Hopefully someday a part of it can be retrieved with the help of bulldozers," he said. The residents of Rongjuk, a hamlet of Khardong village in Nubra valley, have a similar story to tell. "Ours used to be one of the most flourishing villages with orchards, agriculture fields and forests. Now it's all gone, only rocks and sand remain," Sonam Wangchok Kharzong, the secretary of the Himalayan Cultural Heritage Foundation, said. The foundation works towards conserving tangible and intangible heritage in Ladakh. Rongjuk was virtually wiped out by floods spanning over a decade. Kharzong's centuries-old house was also washed away along with most of the village during

floods in 2006. Later, most affected families moved closer to where their villages once were, trying make new lands cultivable.

“But subsequent floods, specifically the 2010 and 2015 ones, ultimately destroyed the villages and broke the will of the people. Now they are demanding [that they be settled] at a new place because there are no cultivable lands around,” Kharzong said. Understanding water In 2006, a cloudburst flooded the Gyalung Nalla, Leh, Phyang and Igu streams, destroying large parts of Phyang village. However, not much was reported or even recorded. A cloudburst is a sudden and heavy downpour over a small region of land and precipitates flash floods. “There are very limited studies on the cloudbursts of 2005 and 2006 because they did not lead to the [kind of] destruction that the 2010 floods [did],” said Renoj Thayyen, of the National Institute of Hydrology, Roorkee, and one of few scientists studying flooding behaviour in the Western Himalayan region. “But those floods were no less in intense. They were comparable to the 2010 floods. A study of Ladakh’s 2010 floods that Thayyen coauthored, stated, “Occurrences of six such flood events in and around Leh in a short span of six years since 2005, which are neither reflected in the rainfall records nor appreciated as [being of] cloudburst origin, point toward an urgent need to upgrade the monitoring network of the region.”

This study was published in 2012, after which Ladakh has witnessed a spike in flooding events. In August 2017, just four months ago, there was a flash flood in Achinathang, a modest village in Ladakh. The year 2015 has been the worst by far for the region. Before the July-August floods, the Phuktal lake in Zanzkar was flooded in May. In the same year, the apricot crop failed on a large scale because it became infested by a previously unseen moth-like insect. In 2014, a flash flood struck Gya village, close to Leh. But till date, there have been no scientific studies attempting to make integrated sense of the origins and characteristics of these events (except for the major disasters). This region has always shared a complex relationship with water, and water has always had its way.

Even the poorly recorded and ill-maintained history of Ladakh enumerates several instances of flooding, some going back more than a century. It is only in the last decade that flooding has become a recurring, almost annual, event in this cold desert, often leaving a trail of broken houses, ravaged fields, uprooted orchards and abruptly ended lives in its wake. “Floods in the Himalayan region are generated by atmospheric, cryospheric and geological processes but are also highly influenced by the topography of the area, making them extremely localised events,” Thayyen said. “But a lack of tracking and monitoring facilities and capabilities in the region remains a huge challenge, making it absolutely impossible to assess if these incidents [have been] increasing in the recent past due to climate change.” Briefs on some floods in recent years Achinathang, August 4, 2017 On a clear, sunny in August, the Achena Lungba River was unexpectedly flooded. The gushing water washed away 70-foot Bailey bridge that blocked the outlet of the stream into the Indus, thus creating a temporary reservoir. The flood damaged more than 500 meters of Khaltse-Batalik Road. Four people were washed away. Phuktal, May 7, 2015

On December 31, 2014, a massive landslide, 500-600 meters in length, blocked the Phuktal river and created an artificial lake. This dammed up water was suddenly released on May 7th, 2015 causing a flash flood in Phuktal river.

The breached water washed away dozens of bridges, schools and residential houses. Ladakh, July to August 2015 The months of July and August 2015 were marked with unusual spells of rains and flash floods throughout Ladakh. Residential houses, roads, agricultural infrastructure, crops and orchards suffered a damage that was estimated at 87.74 crores in Leh district and 80 crores in Kargil. Flooding caused damage to irrigation canals, and cut off streams of clean water causing a shortage of drinking and irrigation water. Gya, August 6, 2014 Gya village of Ladakh witnessed a Glacial Lake Outburst Flood (GLOF) on the midnight of August 6, 2014. Late in the night, the glacial stream of the village started to gush with muddy water that gave off a peculiar smell. Within an hour the water destroyed the farmlands, crops and a couple of houses.

Kargil, August 1, 2013 Heavy rains and cloudbursts led to landslides and flash floods at several places in Kargil town on the night of first August. Water in Suru river started flowing in excess and into township area. It also washed away a portion of the Srinagar-Leh National Highway. Ladakh, August 4 to 6, 2010 The region experienced a spate of cloudbursts and subsequent flash floods over and above a 12.8 mm of rainfall. Official figures say it claimed 255 lives. The authorities estimated that the cost of permanent restoration and land reclamation would be 117.34 crores. Uley Tokpo, August 9, 2008 A cloudburst. Rongjuk, Phyang, July 31 to August 1, 2006 Heavy rains and cloudburst flooded Gyalung Nalla, Leh, Phyang and Igu streams in Ladakh in 2006. The flood caused immense damage to the residential properties and roads. The foot bridges were also washed away.

Jammu and Kashmir: State-of-the-art fish farm comes up in central Kashmir

<https://news.webindia123.com/news/Articles/India/20180107/3246668.html>

A state-of-the-art fish farm spread over an area of over 13 kanal, having the capacity to produce 12 tons of fish, has come up in central Kashmir district of Budgam. Officials said that the 13 Kanal and 13 marla fish farm was laced with state-of-the-art infrastructure and would be further augmented with improved equipment, compound fencing and road development. "The farm would produce 12 tons of the fish once the farm is fully upgraded and functional," they said. They said that there are 500 registered fishermen in the district for which over 99 houses have been constructed in Budgam. "The annual fish production has boosted with 35 trout rearing units and 54 carp units established in the district," they said.

They said that the Government was taking several steps to ensure hassle-free entrepreneurship in the fish and poultry farming sectors. "Under the various centrally-sponsored schemes, the farmers would be provided with ex-gratia on the damage or loss of the production," they said. They said that in private sector of fish farming the government would provide feed to the farmers

on the slashed rates. "Despite inflation, in the market, the rates of the feed have been slashed to a very extent for the farmers," they said. Meanwhile, Minister for Agriculture Production Ghulam Nabi Lone Hanjura said that the Budgam district has huge potential for the fish farming. He said that youth instead of looking for government jobs should set up fish, poultry or bee colonies for better and progressive livelihood. He said by setting up these units not only they can get jobs for themselves but also for others.

Jammu and Kashmir: 40 bicycles distributed among registered fishermen in Ganderbal District

<http://kashmirreader.com/2017/11/14/40-bicycles-distributed-among-registered-fishermen-in-gbal/>

In order to boost the livelihood of fishermen, Department of Fisheries Ganderbal on Monday distributed 40 bicycles among the registered fishermen of different areas of Ganderbal district, an official press note read. According to the press note, the District Development Commissioner (DDC) Ganderbal, Piyush Singla and Assistant Director Fisheries Ganderbal, Manzoor Samoon distributed bicycles among the 40 beneficiaries, under the centrally sponsored scheme "Blue Revolution." the DDC said that the scheme was aimed to facilitate better post-harvesting handling and help fishermen widen their area of marketing, the press note read.

Speaking on this occasion, Assistant Director (AD) Fisheries said all the registered fishermen would be covered under the scheme. He said the bicycles would help the fishermen in marketing which in turn would boost their trade and to improve their livelihood. He said that the department was providing other schemes including monetary help for the construction of their houses to the fishermen. In addition, the AD said to uplift the community the department is also providing nylon twine to fishermen to fabricate their nets, financial assistance for construction of trout and carp fish pounds, the press note added.

Jammu and Kashmir: Traditional fish markets to be developed under Smart City Proposal: MoS

<http://kashmirreader.com/2017/11/01/traditional-fish-markets-to-be-developed-under-smart-city-proposal-mos/>

Minister of State (MoS) for Housing & Urban Development, Social Welfare, Asiea Naqash on Tuesday said that the traditional fish markets would be developed in Srinagar under Smart City Proposal, an official press note read. The minister said this during the distribution of bicycles to 50 fishermen of Dal Lake under Blue Revolution Scheme at Nigeen Club. The function was organized by J&K Fisheries Department. According to the press note, Asiea said that fish markets were the part of our tradition and names of different places were given on the fish culture like Gada Kocha, Gadihainzpora, Gadi Bazar, etc. "Fishermen played an important role

in our culture and government will develop traditional fish markets in the Srinagar under Smart City Proposal so that tourists are attracted towards different varieties of fishes especially Trout and also know the life style of fishermen residing in Dal Lake and Anchar Lake,” she said. J&K Fisheries Department was directed to identify appropriate places in the city for the development of traditional fish markets under Smart City Proposal.

The minister said that government was committed to distribute every welfare scheme to the downtrodden people especially fishermen. She said affordable houses were already provided to 119 fishermen of Dal Lake. For the rehabilitation of fishermen, the MoS disbursed Rs 25 lakhs under SADP (Special Area Development Programme) to the JKLAWDA (Jammu and Kashmir Lakes and Waterways Development Authority) to develop new fish market at Hazratbal with the expert guidance from J&K Fisheries Department, further read the press note. Asiea also visited Trout Fish Farm Dachigam and took stock of Rainbow and Brown Trout Fish rearing on scientific lines. During the current year, 5 lakh seeds of Carp variety were dropped in the Dal Lake at different locations which would boost the fish production in the lake, the note added. She directed fisheries department to provide each and every logistic support and welfare schemes to the fishermen so that their livelihood would be enhanced.

Jammu and Kashmir: Thousands of fish wash ashore in Kashmir’s Jhelum, trigger rumours of poisoning

<http://www.hindustantimes.com/india-news/thousands-of-fish-wash-ashore-in-kashmir-s-jhelum-trigger-rumours-of-poisoning/story-IWeU7P2weYkgDqjyP5BuDM.html>

Thousands of fish washed ashore onto the banks of Jhelum river in Kashmir on Sunday, alarming people and triggering rumours of poisoning. Sensing escalation of trouble, the district administration immediately issued a statement urging people “not to panic”. “We have taken water samples as well as the samples of fish. Most of the fish washed up ashore are not dead, suggesting that the oxygen content of the river water is low,” deputy commissioner, Srinagar, Syed Abid Rashid Shah said. The incident comes amid the chaos across the Valley due to rising incidents of braid-chopping of women. The fish — mostly Kashmir’s indigenous specie Schizothorax or Kashir gaed — floated on a 2.5 km stretch of Jhelum in the old city area of Srinagar, prompting people to crowd the banks to watch the unusual phenomenon. Many locals were seen catching the fish by hand and taking them home. Officials said that even police had to intervene in certain cases to stop people from assembling.

“The fish were alive but very docile. Some people took them home to cook. Many seemed very fearful,” said a local of Chattabal. The phenomenon, however, triggered more rumours, with some mosques announcing that the fish washed ashore due to poisoning. Kashmir’s fisheries department prima facie rejected any case of poisoning. “The fish were alive and only a single species washed ashore. If there was poisoning, every type of fish would have been affected,” said

M M Wani, fisheries deputy director, central Kashmir. He said that after they took samples, they found only Schizothorax was affected. The official said that there were three reasons that seemed to be responsible for the phenomenon. “Firstly, the level of water in Jhelum is low as there have been no rains for the past three months. Secondly, the concentration of pollutants in this stretch has been very high.

Thirdly, to top it all, an artificial barrier near Veer area in old city had slowed down the water flow which reduced oxygen level in water,” Wani said. Schizothorax, which can go up to 2.5 kg in weight and 60 cm in length, is a sensitive fish. Officials said that it normally lives in clear waters where the level of oxygen level is 4–5 ppm than 2 ppm for specie like common carp. He said that owing to the high temperatures during the day, a ‘diurnal fluctuation’ in the water made the fish restless. “The fluctuation means differences in oxygen level of water at bottom, middle and top levels of the river prompting the fish to float on surface,” Wani said. Wani said that they dismantled the artificial barrier immediately after coming to know about it. He said that they are yet to receive the reports of water samples sent to various laboratories but maintained that the water was stinking.

Jammu and Kashmir: Srinagar has been losing its wetlands over the years

<http://www.downtoearth.org.in/news/one-more-to-go-58826>

In a series of environmentally destructive projects implemented by the state government, offices, hospitals and residences have been built over wetlands in areas like Bemina, Barzulla, Hyderpora, Sanat Nagar, Rawalpora and Natipora. According to a study by the Jammu and Kashmir government’s Department of Environment, Ecology and Remote Sensing, wetlands in Srinagar reduced from 13,426 hectares (ha) in 1911 to 6,407 ha in 2004. And now, the Department of Rakhs and Farms (DRF) is fighting a strange battle to ‘save’ the sprawling Narkara wetland, of which it doesn’t even have ownership papers. Wetlands in the state are under the jurisdiction of the Department of Wildlife Protection. However, the DRF claims Narkara as its own by virtue of its foundational mandate of 1955, under which it was given jurisdiction over certain lands in Srinagar and other parts of Kashmir, like Rakh-i-Arat in Budgam and wetlands near Bandipora’s Wular lake.

Since the department has no revenue records of Narkara, the wetland, located 12 km south of central Srinagar, is being encroached slowly, with many portions on the edges being grabbed by land mafia. According to a study titled Urban Sprawl of Srinagar City and its Impact on Wetlands, published in May 2014 in the International Journal of Environment and Bioenergy, Narkara’s area was 342 ha in 1971, which shrank to 261 ha in 2010. “When we try to stop encroachers, they say how can you stop us when you don’t have ownership documents?” Abdul Rahim Samoon, Director, DRF told Down To Earth (DTE). “Recently, three of our staff received severe injuries in an assault by land-grabbers. We have lodged an FIR and have written to the

Budgam police as Narkara falls within its jurisdiction,” he adds. A letter (dated June 16, 2017) written to the Superintendent of Police (SP), Budgam, by Samoon following the assault on his employees, reads: “Such heinous activities are totally unacceptable and warrant immediate action to safeguard government property and lives of officers. It is requested that you take serious action against the criminals and help us safeguard the land.” However, when DTE contacted Budgam SP, Tejinder Singh, he said that he had not seen the letter yet.

“I will see this letter and decide about the action only after reading it.” But the greatest danger to Narkara is not from encroachments by the public but by the government itself. In Jammu and Kashmir, a wetland under the Department of Wildlife Protection means that the government cannot raise any infrastructure on it. However, since the government hasn’t officially notified it as a wetland which would give it the status of a protected area, Narkara has already been identified by the Department of Higher Education for establishing infrastructure for various projects. Budgam’s Deputy Commissioner, Mohammad Harun Malik, says that government has identified 80 ha of Narkara for a regional branch of the Indian Institute of Management, 18 ha for Krishi Vigyan Kendra and some land for other small projects. “After these projects are in place, no one can encroach there,” Malik says, smugly. What the Department of Higher Education forgets is that Narkara is an important flood absorption basin and the government’s plan to develop it could spell disaster for almost half of Srinagar.

Imtiyaz Ahmad Lone, Wildlife Warden for Central Kashmir, told DTE that wildlife officials have often taken up the issue of Narkara’s encroachment several times. “Once Narkara is gone, urban sprawls of Srinagar such as Hyderpora, Sanat Nagar, Barzulla and Bemina will be vulnerable to floods even after a brief spell of rain,” an engineer from the Department of Irrigation and Flood Control (IFC), told DTE. In a letter (dated July 27, 2017) written to the Chief Town Planner, the IFC department has argued that the 100m buffer for an important wetland, Narkara, in southern Srinagar has been shown “deep inside the wetland” and “deep inside the actual edge of the wetland” which is demarcated with “well-established bunds”. The destruction during the 2014 floods was widely attributed to housing being raised on flood basins across Kashmir’s urban areas (see ‘In a tragic state’, Down To Earth, 1-15 October 2014). No lessons learnt Despite the 2014 tragedy, authorities do not seem to have learnt their lesson and wetlands continue to be destroyed. The latest is Rakh-i-Gund Akshah, a wetland 7 km south-west of city centre Lal Chowk.

On its website, the Srinagar Development Authority terms its upcoming 304 ha housing project on Rakh-e-Gund, a “dream project”. The site had absorbed excess waters for three days in September 2014 before the flood. Most of it has been rented out by the DRF to farmers for growing paddy and other agricultural activities. Interestingly, the first Master Plan for Srinagar (1971-91), which is regarded by experts as the first comprehensive planning effort of the state government, had acknowledged the existence of flood basins on Srinagar’s east, west and south. Civil society has taken up the cudgels for Narkara. Faiz Bakshi, Convenor of Srinagar-based

non-profit Environmental Policy Group, says that his group has filed a petition in the Jammu and Kashmir High Court where it has challenged the government's decision of developing infrastructure in Narkara.

"We have argued that the government is hell-bent on destroying the local ecology despite knowing that the September 2014 flood caused more damage because we destroyed our flood basins," Bakhshi says and adds that the court has directed the government to explain its position. Syed Ali Safvi, chairperson of non-profit Bemina Development and Welfare Forum agrees. "If Narkara is destroyed, it will put our lives in danger as it absorbs rain and flood waters." Shahid Ahmad Wani, who heads the environmental science department in Srinagar's Sri Pratap College, says the city's hunger for land doesn't mean that the government should start encroaching on wetlands. "This is dangerous because wetlands are considered the earth's kidneys and also act as flood absorption basins," he says, adding that the government should not only abandon its plan to destroy Narkara, but should also notify it as a wetland so that it can be conserved properly.

Jammu and Kashmir: Fisheries minister orders probe on fish deaths

<https://www.seafoodsource.com/news/supply-trade/jammu-and-kashmir-fisheries-minister-orders-probe-on-fish-deaths>

The Minister of Fisheries in India's Jammu and Kashmir state has ordered a second inquiry into a likely poisoning incident that caused the deaths of more than 2,200 trout at a state-owned aquaculture pond in Bandipora. The Rising Kashmir reported earlier this summer that an initial investigation, conducted by the assistant director of fisheries, determined the poisoning was intentional and likely the work of four disgruntled employees of the fisheries department. However, no subsequent action was taken against the suspects. State Minister for Animal, Sheep Husbandry and Fisheries Abdul Gani Kohli announced the setting up of a second team that will probe the cause of the unnatural deaths of the fishes in government ponds. The new team that was formed will also look into the potential that other fisheries department officials are responsible for scuttling the probe, the minister said.

Jammu and Kashmir: Srinagar's coveted stream turns into dirty nullah

<http://timesofindia.indiatimes.com/india/srinagars-coveted-stream-turns-into-dirty-nullah/articleshow/60723067.cms>

The famous trout nullah in Ganderbal bordering the state capital has turned into a drain with encroachments despoiling what was once a pristine clear water body in which shikaras would float. Today, this stream is gravely damaged. A resident, Altaf Ahmed, TOI spoke to, said the trout nullah got its name from the variety of exotic fish found in it. "But unchecked construction of homes by the rivulet reduced it to a sewage drain," Ahmed said. Eighty-year-old resident Ghulam Hassan Bhat fondly reminisces of days when the trout nullah invariably brought a

variety of Himalayan fish. Sundays were meant for people to sail on their shikharas. "It's the greed of people that has destroyed this rivulet," he lamented. With the administration grappling with insurgency, basic issues of hygiene and maintenance of public spaces has suffered. "What can you expect with the weekly ritual of strikes and protests and the mindless cycle of violence?" asked a government official. Deputy commissioner of Ganderbal, Piyush Singla, held militancy responsible for the scant regard people have for the law. It's this, he said, that has turned the rivulet into a dumping ground for garbage, suggesting that the people have no respect for the law.

Singla said that the administration would start cleaning the stream under Swachh Bharat Abhiyan on October 2. Having instructed revenue officials to remove encroachments that came up over the last one decade, he said a demolition drive would be carried out once illegal structures were identified. "We will get this nallah cleaned up so that the fisheries department is able to cultivate trout fish again in the stream which flows through the main Ganderbal town," Singla said. He added that the three departments of irrigation and flood, municipal committee and fisheries would be tasked with the responsibility to revive and maintain the nallah. The cultivation of trout in the stream was disrupted due to encroachments by residents that turned the stream into a dumping ground and led to fish disappearing, said M Bazaz, deputy director of fisheries department. As soon as the district administration completes the restoration of the stream, our department will start cultivating trout fish again," Bazaz said.

Jammu and Kashmir: Poultry, Fisheries sectors have huge employment generation potential: Kohli

<https://www.kashmirmonitor.in/Details/132247/poultry-fisheries-sectors-have-huge-employment-generation-potential-kohli>

Minister for Animal, Sheep Husbandry and Fisheries, Abdul Gani Kohli who is on a 4 day extensive visit of Kargil and Leh districts on Friday said that establishment of Poultry and Fisheries sector has huge potential for employment generation. This was stated by the Minister while chairing a high level meeting to review the working of the departments under his control at a meeting held at Kargil here today. Chief Executive Councilor Kargil Kacho Ahmad Ali Khan, Executive Councilor for Animal, Sheep Husbandry and Fisheries Aga Syed Hassan Armaan Moosavi, Director Animal Husbandry Muhammad Yusuf Chaproo, Director Sheep Husbandry Muhammad Ramzan Sheikh, Additional Deputy Commissioner Kargil Barkat Ali Lone Nizami besides concerned officers were also present in the meeting.

The Minister called upon the officers to closely monitor the performance of their departments to ensure time bound delivery of services and completion of projects well in time. He also called upon the veterinarians and other officers to work with missionary zeal and lay focus on creating mass awareness regarding various developmental schemes so that maximum numbers of people

are in a position to avail the benefits of these schemes thereby raising their socio-economic status. The Minister was apprised about the steps being taken to augment these sectors in the district and measures being taken to raise livestock. It was given out that a 20 liter capacity Liquid Nitrogen Plant has been sanctioned at a cost of Rs 2.85 crore, a major project for cross breeding for conservation of yak at Rs 1.20 crore, fodder development programme at a cost of Rs 1.35 crore while as a project for Pashmina Development has been sanctioned at a cost of 8.25 crore. The meeting was also informed that projects worth Rs 2.53 crore for strengthening, up gradation and modernization of Karakul Sheep Fram Kurbathang and Development of Pashmina Wool in Kargil district at a cost of Rs. 14.2 crore under National Livestock Mission (NLM) and Revised Wool Sector Schemes under Integrated Wool Development Programme (IWDP) at a cost of Rs. 12.23 crore, fodder development at a cost of Rs 7.50 crore besides development of Zanskari horse at a cost of Rs 40 lacs stand submitted to the Central Government which are expected to be sanctioned in near future.

Officers of Fisheries Department informed the meeting that artificial trout breeding has been introduced in the district for the first time this year and 6 to 8 thousand seeds have been produced so far and with the completion of the hatchery at Damsna the production shall go up to around 1 lakh seeds. The Minister directed the officers of Fisheries Department to conduct surveys for the establishment of fish farms in Sodh, Shakar Chiktan and other areas and fixed target of one year for completion. He also directed the officers to conduct livestock census in the district and underlined the need to procure high yielding yaks from Arunachal Pradesh for hybriding purpose so as to ensure the enhancement of yak breed in the district. Kohli issued on spot directions to the officers to prepare proposal for the establishment of fish farms and stock assistants training institute and assured the CEC and EC Animal and Sheep Husbandry that proposals for creation of the posts of SDOs and LDOs shall be framed and sent to the Finance Department in due course of time. Later, enroute to Leh, the Minister also inaugurated Extension Centre of Animal Husbandry Department at village Dha Beama in Khalsi. The centre is exclusive meant for the benefits of the people.

Jammu and Kashmir: Kashmir's Dwindling Wular Lake Threatens Livelihood

<https://thewire.in/176667/kashmir-wular-lakes-livelihood/>

When 67-year-old Mohammad Subhan Dar fished in Wular Lake in his youth, fish were abundant in the expansive lake tucked in the lap of lush green mountains in north Kashmir's Bandipora district. The fish, Dar and other villagers said, have almost vanished now. "As compared to the past, fish turnout in Wular has gone down considerably," Dar told VillageSquare.in. Earlier a fisherman could catch up to 15 kg of fish in a single day. "These days if a person catches even five kg in a day, we call him the king of Wular," said Dar. For thousands of Kashmiris living on the fringes of its water bodies, fishing, besides collection of water chestnut and fodder have been their sources of livelihood for a long time. But with the water

bodies shrinking in size due to encroachment and in depth due to siltation, their livelihoods are at stake.

Water livelihoods According to a study by Wetland International, 32,000 families including 2,300 fisher households living on Wular's shores depend on it for livelihood. In Dar's village, 600 fisher families live off Wular's resources. "Kashmir's water bodies such as Wular, Mansbal, Dal lakes and Jhelum have served the people since ages as sources of livelihood and served the region ecologically," Masood Hussain Balkhi of Sher-e-Kashmir University of Agricultural Sciences and Technology told VillageSquare.in. His colleague, Farooz Ahmad Bhat said that the total annual fish production of the region is 20,000 tons. Quoting statistics of Kashmir's fisheries department, he said that more than 30,000 people are directly involved in fishing, 14,000 of them with registered licenses. Dwindling resources Bhat, however, said that fish diversity and fish production in Kashmir region has shown sharp decline over the past few decades. "Some of the local fish species have even become endangered and threatened," he said. The major causes of this decline are encroachment of water bodies, siltation and pollution. According to revenue records, Wular is spread over an area of 130 sq. km but has undergone massive siltation, encroachment and pollution in recent years. Like fish, chestnut yield from the lake has diminished abysmally, as Dar and his fellow villagers observed.

"Earlier, a person could collect a boatful of chestnuts, about 60 kg in a few hours. But, these days, one can only dream of such a good harvest," Dar said. According to him, 20 kg is the maximum a person can get now, despite toiling the whole day. Shameema Bano, 45, leaves home just after daybreak and returns in the evening. Yet she manages only 18-20 kg of chestnuts, which fetches her around Rs 280 a day. "It takes me a lot of time and hard work," Bano, who lives in Banyari village on Wular's banks, told VillageSquare.in. Lower availability "But, despite this hard work, I have no complaints except the fact that chestnut availability in the lake has gone down," she added. "The money I earn from chestnut collection enables me to fulfill my personal needs and the needs of my children even after sharing most of my earnings with my husband." People said that Wular has always fulfilled their financial needs through its produce, which have started diminishing now. Ghulam Nabi, 63, said that he has never seen such a decline in water chestnuts in his life.

"It's mainly because water doesn't stay that long in the lake these days. Now we hardly get enough rains in summers unlike in the past when it used to rain frequently," he said. Elderly people like Nabi and Subhan Dar of Saderkote recall their childhood days when Wular's water was pure and pristine. "We used to drink taking the water directly from the lake. Now we hesitate even to bathe in it because of the heavy pollution," Dar told VillageSquare.in. According to Dar, the lake has now reduced in size and vast stretches of the lake remain dry most of the year. He said that Wular looks like a lake only in spring when the rainwater and glacial meltwater flow into it. "For the rest of the year, most of it turns into pasture lands and swamps," Dar observed. "We literally haul our boats up because of lack of water in the lake." Fear of

losing livelihoods Zona Begam of Asham village at Jhelum's bank is educating her three daughters. "Until last year, my husband had a steady income as he was serving as a forest guard. Now he has retired and draws a meager pension. He goes for fishing, but returns with just one kg at times," Begam said.

"Though we manage with what we get, we fear that the fish might vanish altogether." Abdul Rashid Dar of Saderkote said, "I draw all the fodder (khor) for my two cows from Wular. The cows give me 20 liters of milk every day. I sell 18 liters and earn Rs 500 daily. I am happy with what I get as I earn money by collecting chestnuts also." But he is worried about the way the important water body is being treated by people and the government. "The government is spending a lot of money for protecting this lake. But, I somehow feel the money is not spent properly," he alleged. Shiraz Ahmad Goroo, a fisherman from Sumbal in north Kashmir's Bandipora district also complained about dwindling fish in Jhelum. He said that he is not able to catch as much as his father did. Showing his meager catch, Goroo said, "This won't fetch me enough money to feed my family. The prices of fish have gone up. I sell a kilo for Rs 200. But it's hard because the fish have vanished." His fellow fisherman, Shabir Goroo, said that a fisherman earns around Rs 300 a day.

"If it continues like this we may have to work as laborers," he said and added that sand mining in the river has also caused a decline in fish numbers. Wular, which was designated as a wetland of international Importance under Ramsar Convention in 1990, is one of the largest freshwater lakes in Asia and the largest flood basin of Kashmir. "I am worried about the future of the lake because the survival of my family is entirely dependent on it. The lake provides me the means to earn money, with which I educate my two sons," Goroo said and hoped that Kashmir's natural assets are protected. Restoration of Wular The main reason for Wular losing its erstwhile glory is the heavy siltation in the lake, said Manzoor Dar, a fisherman of Saderkote. "If the government takes steps to prevent further siltation of the lake and takes away the silt which has already settled in, I'm sure Wular will not only get a new life, but will also give livelihood support to far more people than it currently does," Dar, selling cooked fish to those visiting the lake, told VillageSquare.in.

The Jammu & Kashmir government has charted out a program for the conservation of the lake. Irfan Rasool, a forest conservator, who looks after the lake restoration work being carried out by the state government's Wular Conservation and Management Authority (WUCMA), said that the lake would soon be de-silted. There are plans to remove over two million willow trees from the lake, to achieve hydrological and ecological balance. According to elderly fishermen such as Subhan Dar and a study by Wetland International, willow plantation in the lake through government-sponsored schemes in the 1970s has led to fragmentation of the wetland, rapid siltation and deterioration in water quality. But, Shakil Romshoo of Kashmir University's Earth Sciences department strongly advises taking measures like stopping the silt at source if Kashmir's wetlands have to be conserved. "For that the government needs to start an extensive

afforestation program in the catchment areas of River Jhelum's tributaries (Jhelum feeds the Wular Lake) immediately," Romshoo told VillageSquare.in. "We are starting the work as part of the Rs 4,000 million Wular Conservation Project in September this year," Rasool said, and added confidently that WUCMA was on its way to conserving the lake "for all times to come."

Jammu and Kashmir: Floods take toll on agriculture, livestock in Morang

<https://thehimalayantimes.com/nepal/floods-take-toll-agriculture-livestock-morang/>

District Agriculture Development Office, Morang, stated that floods a fortnight ago caused loss of property worth Rs 580 million in the district. Floods have mainly destroyed agriculture and livestock in the district. Paddy, vegetables, jute, sugarcane, and banana farms, among other crops, planted in 3,458 hectare was completely destroyed. The destruction has ruined 7,950 farmers. Senior Agriculture Development Officer Manoj Kumar Yadav said 400 tonnes grain stored in houses were damaged due to inundation. According to Yadav, flood waters destroyed summer paddy planted in 2,500 hectare land in Morang. Similarly, floods destroyed vegetables worth around Rs 90 million planted in 3,107 hectare land.

The DADO stated that the flood had damaged vegetables in Dhanpalthan and Katahari rural municipalities where the Prime Minister Agriculture Modernisation Project had been implemented. Floods also damaged fisheries worth Rs 130 million in the fish zone under the PM project. Fisheries were set up in 690 hectare land in Morang. Fisheries worth Rs 160 million were destroyed in floods in Morang. Similarly, according to District Livestock Office Morang, floods caused a loss worth Rs 25 million on livestock, including cows, buffaloes, and goats. District Livestock Office Chief Sushil Adhikari said that flood and inundation would reduce the production of milk, fruits and meat by 80 per cent in the district.

Jammu and Kashmir: Cross breeding of live-stock to improve productivity, curb shortages

<http://kashmirreader.com/2017/08/29/cross-breeding-live-stock-improve-productivity-curb-shortages/>

Minister for Animal, Sheep Husbandry and Fisheries, Abdul Ghani Kohli Monday said that cross breeding of live-stock can improve productivity and curb shortages besides encouraging rural populace to adopt poultry, fish farming and dairy as an alternative source of income, a press note issued herer read. The minister said this while conducting a day long tour of Samba and Kathua districts. In Kathua, the minister visited Animal and Sheep Husbandry office, National Fish Seed Farm, Veterinary Hospital, Hiranagar, Goat Farm, Rajbagh, besides inspecting a number of cow sheds. During his visit the minister enquired about the general profile of the district including livestock population, total number of bovines, total poultry population, number of hatcheries, cattle and poultry vaccinations, milk production besides status of local as well as migratory livestock in the district.

The minister underscored the efforts of goat breeder Naresh Kumar of village Dhamal who took 25 number of Ewes from Sheep Husbandry department in the year 2012-13 and now owns 75 goats with significant improvement in his earnings. The minister directed the Assistant Director of Goat Farm, Rajbagh to ensure adequate fodder for the livestock in addition to adopting cross breeding to improve productivity. He further directed adoption of practices of flock shifting to address the problem of parasite infestation among goats. While visiting Fish Seed Farm, the minister was apprised that against the target of rearing 24.50 lakhs fish seeds, 18.50 lakh seeds were so far reared. 3.40 lakh seeds were distributed for personal rearing where as 11.50 lakh seeds were introduced in ponds and natural water bodies under department's supervision. While interacting with officers, Kohli stressed for developing cluster villages under different schemes to create distinct model of development besides achieving optimum results. Later, the minister also distributed fish seeds among 13 progressive farmers of Kathua district who were earlier trained under different schemes of the department. Earlier, the minister conducted an extensive tour of Samba district and reviewed performance of the departments.

He was accompanied by Deputy Commissioner Sheetal Nanda, ADDC Vivek Sharma, Director Fisheries, R.N Pandita, Director Animal Husbandry, Dr Parveen Gupta, Director Sheep Husbandry, Dr Kanti Kumar Sharma, Joint Director Fisheries, S S Sharma, Joint Director Sheep Husbandry, Sanjeev Kumar, CAHOs, ADs, DSHOs, LDOs and other officials of the departments. The minister visited Fish Farm Sangwal and directed PWD officials to fast track the upgradation works to promote community fish farming. He directed officials to focus on fish rearing and brooders. He said that the pond could be developed as tourist attraction and asked the officials to submit DPR in that regard. He also directed director fisheries to submit proposal for providing marketing facilities to fish farmers. He further directed DDC Samba to project more budgetary requirement for poultry and fishery sectors in CAPEX budget. The minister also visited Poultry Demonstration Centre, Vijaypur which specializes in rearing of low-tech birds of egger type and helps in establishing backyard poultry units.

He was informed that the centre has a capacity of 4000-5000 birds in one cycle and during this financial year 9000 birds have already been reared. He asked officials to ensure that regular monitoring of supplied 'poultry units' is undertaken so that it could be promoted as economically feasible activity. While visiting Veterinary Hospital, Samba and Ghagwal, the minister interacted with the staff members. He directed the district administration to submit proposals for construction of culvert and boundary wall in consultation with Rural Development Department. Several deputations called on the minister during the visits and apprised him of various problems being faced by them. The minister assured them of resolving their issues on priority.

Jammu and Kashmir: The Hush Hush Project to Save Kashmir's Wular Lake

<https://thewire.in/166233/project-to-save-kashmir-wular-lake/>

“How long will they remain hidden from the world ... the unique gems that Wular Lake holds in its depth,” wrote Muhammed Iqbal, one of the most influential 20th century Asian poets, who was of Kashmiri descent. Overlooked by magnificent mountains, Wular Lake is one of the largest freshwater lakes in Asia and the largest flood basin of Kashmir in the northern Bandipora district, 34 km north of Srinagar, the summer capital of the Indian state of Jammu & Kashmir (J&K). Almost a century after Iqbal posed his question, the gems are more hidden, because the depths of Wular have become heavily silted. But engineers at J&K’s Irrigation and Flood Control (IFC) department believe they are quietly pulling off an engineering solution which will reveal Wular’s “unique gems”. Their optimism is due to their department’s massive Wular Conservation Project. The project, they say, will usher in a long list of benefits including an increase in the lake’s size, eco-tourism, sustainable irrigation, optimum power generation in lean months in downstream hydropower projects, easy navigation and great fish and fodder production, apart from improving the quality of marshy lands surrounding the lake. “This is a step towards the ultimate conservation of the Wular Lake,” said one of the engineers who shared details of the project with thethirdpole.net on condition of anonymity.

According to revenue records the total area of the lake is 130 square kilometres, but in most years, by October the lake is reduced to only approximately 24 square kilometres, the engineer said. “This will totally change after the project is completed. We are going to maintain the water level throughout the year in the entire area of the lake.” A detailed study of the lake by Wetlands International reported that the original area of Wular Lake was actually 217.8 square kilometres, which included 58 square kilometres of associated marshes. According to the study, the area was reduced from 157.74 square kilometres in 1911 to 86.71 square kilometres in 2007. Overall, the study says, there was reduction in the lake area by 45% mainly due to conversion of parts of the lake for agriculture and willow tree plantation. The project and its promise The initial work of the project, said the engineer, was funded by the J&K government through an allocation of Rs 800 million. But he said that the major part of the project, which would run into significantly more than that, is yet to be executed. IFC, according to the engineer, had already completed a significant amount of work at Nengli-Sopore where the Jhelum river emerges from Wular Lake before meandering through the plains and mountains of Baramullah district and entering Pakistan.

The work, he said, includes the construction of a 1.5 kilometre long bund and a 112 metre long iron bridge-like structure which were constructed between 2011 and 2014, until the devastating Kashmir flood struck. “For us, that (2014 flood) was nature’s gift. It was a real blessing in disguise because we had designed the project on one-in-25-years [benchmark of] floods. But the 2014 flood forced us to design the project afresh,” the engineer said. “So, we are now carrying out extensive soil tests before finalising the DPR (detailed project report) for creating the additional infrastructure in light of the lessons we learnt from 2014 floods.” He said that Wular Conservation and Management Authority (WUCMA) is also doing the conservation work, “but

that is just like giving the first-aid to a patient who has got badly injured and fractured.” Samiullah Bhat, who teaches at department of Environmental Sciences in Kashmir University, said rampant poaching, especially of otters and water birds, have critically endangered the biodiversity of the area. Is the project violating the Indus Waters Treaty? The IFC officials believe that their project falls within the norms of the Indus Waters Treaty (IWT), which governs the sharing of the waters of the rivers of the Indus basin between India and Pakistan.

“Our project is a conservation project and a completely treaty-compliant project. We are not going to raise the water level. We will just maintain the water level,” the IFC official said, adding that it is a “conservational and recreational project”, which would be allowed as “Non-Consumptive Use”. In Article I of the IWT, clause 11 states: The term ‘Non-Consumptive Use’ means any control or use of water for navigation, floating of timber or other property, flood protection or flood control, fishing or fish culture, wild life or other like beneficial purposes, provided that, exclusive of seepage and evaporation of water incidental to the control or use, the water (undiminished in volume within the practical range of measurement) remains in, or is returned to, the same river or its Tributaries; but the term does not include Agricultural Use or use for the generation of hydro-electric power. Article III of the IWT states that India must allow the free flow of the western rivers of the Indus basin “except for the following uses, restricted (except as provided in item (c) (11) of Paragraph 5 of Annexure C) in the case of each of the rivers, the Indus, the Jhelum and the Chenab, to the drainage basin thereof Domestic Use; Non-Consumptive Use; Agricultural Use, as set out in Annexure C; and Generation of hydro-electric power, as set out in Annexure D.”

The IFC, therefore, believes that the project is compliant with the treaty. Secretive venture This confidence, though, is belied by the secretive way the project is being pursued. Asked about the project, the chief engineer of IFC, Imtyaz Ahmad Dhar, said, “I can’t tell you what we are doing in Wular because we are not doing anything,” and refused to talk further. On August 27, 2012, a year after the project was started, unidentified gunmen attacked the pillars raised off the embankment and beat the labourers who were camping near the project site and asked them to demolish the pillars. But the project work went on after a paramilitary camp was established at the site to provide security. Interestingly, a three-member delegation of Pakistan’s Indus Water Commission, which had visited Kashmir in May 2013 to inspect the water levels in river Jhelum and the status of the Tulbul Navigation project, had not been taken to the IFC project site. The Wular Conservation project of IFC is hardly one and a half kilometre upstream of the Tulbul Navigation Project. A former engineer, who was among the hosts, told thethirdpole.net on condition of anonymity that the team was not shown the work carried out by IFC at Ningli at the mouth of Wular.

“Even if we keep saying that we are just raising the infrastructure to maintain Wular’s water level, they would have certainly challenged our work given the history of water and political disputes and the suspicions about the Tulbul Navigation Lock,” he said. Tulbul Navigation

Project trumped? When relations between India and Pakistan touched a new low last year following militant attacks on Indian security forces in J&K and exchanges of fire at the Line of Control (LoC), India's Prime Minister Narendra Modi said that "blood and water cannot flow together". Ever since, India has made efforts to fast-track hydro power and irrigation schemes in J&K. Official sources in Jammu & Kashmir Power Development Corporation (JKPDC) told thethirdpole.net that they have received inquiries from the central authorities about Tulbul Navigation Lock (project) as well in recent months and efforts are being made to revive the project abandoned earlier. A top official of JKPDC told thethirdpole.net, "I told the central authorities that the IFC department has already carried out a lot of work. So, there is no relevance of the earlier Tulbul Navigation project which is some 1.5 kilometres downstream of the current project of the IFC." But he added that a final decision on formally abandoning the Tulbul Navigation Project is yet to be taken. Meanwhile, the work that was previously done has suffered.

A senior citizen living in the area, Sheikh Ghulam Mohammad, joked that all those people who live around the Tulbul Navigation Project site have become rich now. "They stole all that iron and copper. There is literally nothing left," he said. India had started construction for the Tulbul navigation project in the 1980s and had envisaged controlled release of water from the lake so that it maintains water level in Wular during the lean months from October to February for easy navigation and tourism, contending that IWT has such provisions for non-consumptive use. India also contended that the project is in Pakistan's interest as well. But Pakistan contested it by saying that the storage and control of water by India has serious implications for Pakistan. The two countries have held several rounds of talks over the issue since 1990s, but have never arrived at a consensus. Conservation work by WUCMA Irfan Rasool, a Forest Conservator who oversees the WUCMA project, told thethirdpole.net that WUCMA has already finished the first phase of the conservation project and is about to start the second phase.

In the first phase, Rasool said, WUCMA carried out dredging, afforestation in catchments of the lake and demarcation of the lake's boundary from 2012 to 2016 with an Rs 600 million budget. He said that the catchments of the lake were treated by planting one million trees in 1,200 hectares apart from demarcating the entire area of 130 square kilometres of the lake with boundary pillars. Dredging was also carried out in one square kilometre area of the lake. According to Rasool, the second phase of the conservation work involves an Rs 4 billion project which will be started in September this year. Through this project, Rasool said, more than two million willow trees, which had been planted in the lake area through a government policy in the 1970s for energy and industrial needs, will be removed (34,000 willow trees have been removed during the first phase) apart from de-silting five square kilometres of the lake area and creating embankments on the 34 kilometre periphery of the lake. The willow plantation had led to fragmentation of wetlands, rapid siltation, water quality deterioration and social conflicts, says the Wetland International report.

“We are hopeful that this work will not only help restoring the glory of the lake, but would also attract tourists as we are planning to convert the embankments into boulevards in the third phase,” Rasool said. Samiullah Bhat of Kashmir University said that the improvement in water-holding capacity of the lake will certainly give a huge boost to fish production and other important species of fauna and flora. “Apart from increasing fish, chestnut and fodder production, it is going to help water birds which visit the lake and thrive on it.” According to him, conservation of Wular is crucial as unabated shrinkage of the lake has already started causing environmental and livelihood related problems. “For example, people whose livelihood depends on fish catch have complained in recent years about dwindling fish production,” Bhat said. However, Bhat is not sure as to what extent maintenance of water level in Wular can benefit downstream Pakistan. “If we say that it can provide environmental benefits to Pakistan, I think Jhelum is already doing that because it never goes dry, even if water levels recede from October until spring. But, it can help Pakistan in terms of power production during the lean months of October to February from its power projects downstream. Water would be released from Wular in lean period for power generation in Uri power projects. But it depends upon how and when the water is released.” So far, though, it is unclear if Pakistan will see this as a win-win, unlike the Tulbul Navigation project it had objected to so vociferously before.

Jammu and Kashmir : Fisheries Deptt starts stocking of Fingerlings in Ranjit Sagar

<http://www.dailyexcelsior.com/fisheries-deptt-starts-stocking-of-fingerlings-in-ranjit-sagar/>

The Department of Fisheries started stocking of Fingerlings in Ranjit Sagar Dam reservoir to increase the fish production. The Joint Director of Fisheries Department Jammu , Shanti Saroop Sharma along with a team of Fisheries Department inaugurated the stocking fish seed in the Dam. Nearly one lakh finger lings of five species like Rahu, Katla, Mrigal, Gross Corp and silver corp was put into the reservoir of Dam at Satwain near Basholi. While talking to media person Shanti Saroop Sharma said that under the mission Fingerlings , the department has target to stock nearly 18 lakh of fingerlings in the RS Dam reservoir and nearly two lakh in community ponds of Kathua district . He said that we are producing nearly 91 tonnes of fish in Ranjit Sagar Dam yearly and getting the revenue of Rs 39 Lakh.

He added that nearly 300 people are getting the employment directly and indirectly in Kathua district through profession of fishing and depa-rtment is putting all efforts to increase the production of fish to fullfill the requirement of Jammu province. Even the consumers of Kashmir also would like the fish of Ranjit Sagar Dam. He said the National Fish Seed Farm a Kathua is one of the biggest farm in North India producing more than 23 lakhs of Fingerings of six species in which three are Indian and three are Chinese. The Department is putting all efforts to full fill 60% demand of the State in which Jammu and Kashmir divisions are working on various Fish Projects .

Jammu and Kashmir: Dir Fisheries to probe fish deaths at Bandipora: Minister

<http://risingkashmir.com/news/dir-fisheries-to-probe-fish-deaths-at-bpora-minister>

After the death of over 2000 fish due to alleged poisoning at the government owned fisheries farm in Bandipora, Minister for Animal, Sheep Husbandry and Fisheries, Abdul Gani Kohli Sunday said a departmental team led by Director Fisheries would probe the cause of death of fish. “A team of fisheries department led by Director Fisheries would be sent to fish farm at Bandipora to probe the cause of death of fish. We would also look into the reasons due to which the Directorate fisheries, Kashmir didn’t initiate an inquiry into the case after a report was submitted to him by the assistant director fisheries,” Kohli told Rising Kashmir. “I will see why no action was taken in the matter when a report was submitted by the assistant director,” he said. The minister said the letting off the main accused and his accomplice by police will also be investigated. On July 19, over 2200 trout fish were found dead in Government farm Guzarbal Bandipora. They had died after sprinkling of bleaching powder at the fish farm by a disgruntled employee to settle scores with authorities, who had initiated an inquiry against him. Meanwhile, sources said Director Fisheries has attached two inspectors of the department for their alleged involvement in deaths of thousands of fish.

Deputy Commissioner Bandipora has ordered an inquiry into the matter. Earlier, the water samples were collected by the specialist for analysis. The expert had declared that the mass killing of fish had occurred due to consumption of poison-like substance or bleaching powder. Meanwhile, police have allegedly set free the main accused and his accomplice even after registering a case and arresting four suspects. The initial investigation in the case had revealed that a Deputy Inspector of the Fisheries department facing multiple inquiries had sprinkled bleaching powder in the fish farm after an inquiry team found illegal extraction in the restricted trout zone maintained by him. Sources said the official has been facing many inquiries. “Recently the Fisheries department had constituted a committee to investigate the allegations of corruption and illegal extraction against him.”

Jammu and Kashmir: To counter Dal fish depletion, fisheries stock lake with carp

<http://kashmirreader.com/2017/07/23/counter-dal-fish-depletion-fisheries-stock-lake-carp/>

To replenish the Dal Lake’s fish stocks, which are depleting due to the lake’s increased pollution levels and prevalent, illegal fish-catching methods, the department of fisheries has carried out stocking its waters with common carp. More than five lakh carp were introduced in the Dal waters, aimed at augmenting the fish stock in the lake and thereby maintaining fish supply from its waters. Talking to Kashmir Reader, Chief Project Officer, Gagribal, MM Bazaz said that common carp have been naturally breeding in the waters of this lake, but due to climatic changes, increased pollution and fishermen’s use of gill nets and other fixed gear, natural breeding in the waters has got hit. To counter this impact and maintain a healthy balance of these

fish, the department annually stocks the waters with carp. Bazaz said that even though common carp (*Cyprinus carpio*), an exotic but hardy species, grows well in this lake and has acclimatised to the climatic conditions of the Valley, yet pollution is taking a toll on its breeding. He said that if sufficient stocks are added annually to maintain balance in these waters, it “does help the local fishermen improve their catch and therefore their earnings”.

The fisheries department introduced common carp, originally from China, into Kashmir’s waters in 1956 and is constantly improving their stocks. Bazaz said that they have been obtaining the seeding stock from the National Fish Seed Farm, Manasbal, where these fish are bred in a scientific manner. He said the farm also supplies stock to farmers in the private sector. The department, according to Bazaz, is trying its best to end the menace of the use of gill and fixed gears in the Dal waters that add to the depletion of carp stocks. Equipment used by some mischievous fishermen is confiscated, and even fines are imposed. Bazaz called for an appropriate management practice of catching fish so that the breed is maintained naturally in these waters.

Jammu and Kashmir: Youth show little interest in fish farming

<http://www.tribuneindia.com/news/jammu-kashmir/j-k-youth-show-little-interest-in-fish-farming/422031.html>

Over the years the youth here have not shown any interest in fish farming and look for establishing small businesses in the state, which does not offer corporate openings and have only limited government jobs. The Department of Fisheries’ claim that various Centre-sponsored schemes are absorbing youth in different jobs proves hollow as many schemes have not even started. The state government’s recent directive to the department to explore viability of using various waterlogged areas for fish farming and other tourism-related activities has not been adhered. Denying allegation, Director, Fisheries, RN Pandita said the department was identifying abandoned ponds in rural areas to use them for fish farming. “Though in urban settings, most of the ponds either have been filled up or encroached upon, but those in the rural areas are being taken up by the department for fish stocking by giving the authority of their upkeep to village committees. Besides, earnings made by selling the produce also remain with the panchayat that distributes it to workers engaged from the village,” said RN Pandita. Pandita said in the rural areas of Jammu, the work was in progress, but in the Valley, it could not be taken up due to many “unavoidable” circumstances.

Anil Sharma, sarpanch, Jindrah, 35 km from here, said the village had small and big ponds that remain full with water throughout the year, but were not being used for fish farming. As per the department, besides many schemes for promoting fish farming and trading, the blue revolution is about integrated development of fisheries. “This scheme is purely based on breeding of trout in Kashmir and carp in Jammu. 58 ponds and water bodies have been identified in the state to

promote the scheme wherein a national scheme of providing low-cost housing to fishermen has been included,” said Rajiv Bhushan, Deputy Director, Planning, Department of Fisheries. Bhushan said the proposal of the scheme, which would run on 80:20 funding from the Centre and state, had been submitted to the Central government and the approval was expected within 15 days.

Jammu and Kashmir: Exotic Predatory Fish Killing Native Species

<http://www.kashmirmonitor.in/Details/124466/exotic-predatory-fish-killing-native-species>

Social media carried pictures of fish seed being poured in Baghliyar Dam reservoir by the Department of Fisheries last year. Inquired about the specie being introduced got on the expected lines no response. The purpose was to inquire whether any mandatory studies have been carried to evaluate the direct and indirect ecological impacts of such reservoirs before introducing. State has already faced disastrous impact by the callous unscientific approach of the authorities by introducing exotic predatory species in the blue waters of the state. This wiped out almost entire fish fauna approximately 150 species and eliminated native biota ruined. Depriving affordable source of nutrients and livelihood and affect local biodiversity bestowed upon by Nature. Almost one year detail research spot verification interaction with the cross section of the society gave anxiety moments about the approach of the concerned department. Even the Wildlife Protection Department under Wildlife (Protection) Act of 1972 amended 2002 which has a mandate under law to accords protection to all forms of biodiversity has been negligent of towards it . University of Stirling, University of East Anglia, and Smithsonian Tropical Research Institute have carried studies on compositional changes in biological communicates, and functional connectivity between upper and lower reaches of watersheds of hydro power dams.

”Loss of species was studied between less than one year and more than 90 years. They could include “conducting wildlife inventories and environmental impact assessments before reservoir filling, creating new habitats such as wetland zones within the reservoir system, and conservation offsets such as strictly protecting land both within and surrounding reservoirs,” Fish is not just a food that fills the stomach. For centuries, fishermen in the state have harvested it. Fish fauna is a protein rich valuable element of human diet. Fishing and Fish farming has a tremendous promising potential to play its role in supplementing the surging demand for food due to population growth. Some see it as the best hope to feed an increasingly over-populated planet. An avenue to provide supplementing the income and providing meaning full employment to weaker section of the society as Kashmir province is cent per cent fish eaters. While worldwide fish production and consumption is touching high with every passing year, state is on base line in availability and consumption of fish. India has set target to double per capita availability 15 kg of fish by 2020 consumption.

Despite of the Fact State have enormous resources to be one in fish production in the north India. Within reach of a commoner in plentiful at an affordable cost. Fish is imported Instead of export. Every day a large number of Trucks loaded with fish are brought in from neighbouring states to meet the demand. Mighty rivers Jehlum, Sindh, Chenab, Ravi, its numerous tributaries, dozens of Tawis in Jammu province such as Tawi of Poonch, Tawi of Rajouri, Tawi of Akhnoor and Tawi of Jammu also. In the first instance we have Tawi as the ancient name of Poonch river. Rajouri Tawi ,Munawar Tawi ,Bharakh Tawi to mention a few . Famous Lakes, wetlands the fish stock had dewinled to a bare manimum. Readers may like to know Mangla Dam at Mirur on river Jehlum is producing Mahaseer to its optimum capacity it reaches up to uri even beside other connecting river lines. In 2010, the Poonch river , its tributaries and their beds were designated as Poonch Mahasheer National Park, -- a hatchery for the Golden Mahasheer fish in Murli Nullah near Kotli Conservationists . Mahasheer is the largest fresh water fish on earth found in many of the rivers originating from Himalayas culinary experts believe it is the best tasting one. Jehlum had its own specie of Mahasheer.

There are half a dozen Dams and barrages yet Fish stocks are a wishful desire, Ranjit Sagar Dam where stae has 65% share of water sheet, it is whisked away by Panjab in connivance. Unlike Green Revolution and operation white flood which had inherited limitation due to constrain of land and scarcity of fodder, state has no such constrains whatsoever. For tapping all season unhampered fish harvesting avenues. Its natural riverine in the forms of rivers, reservoirs, lakes and ponds, streams and flood plains, wetland fish species provide ideal environment opportunities to thrive. In all the three agro-climatic zones, from tropical Jammu division, temperate Kashmir valley and cold arid zone of Ladakh. These waters possess great potential for development of varied types of fisheries like cold water fisheries, warm water fisheries, sport fisheries, reservoir fisheries etc. Operation Blue Waters is need of the hour. State of Jammu and Kashmir has been known and admired for its rich diversity of Fish. State is known to harbour about 175 indigenous species.

Valley is said to have has about 42 species of its own . There are about 39 kashmiri names for the local fish in kashmiri. Nine native species of trout found in Gilgit Baltistan in a recent survey. And jammu dTivision has about 125 species of its own. Kashmir water abounds with the below listed varieties of fish. 1) Charri Gad, 2) Kront Gad, 3) Pekri Gad, 4) Sattar Gad, 5) Ail Gad, 6) Das, 7)Tet or Tetur 8)Harj, 9) Chas Gad, 10) Ramh Gad, 11) Unyour Gad, Fish at serial Nos,1,4,2,9,8, usually weigh about half seer. Those at serial Nos 5,6,10, 7 and 11 are small types and do not weigh more than 1-2 chitaks. Pekri Gad is the largest and the heaviest and weighs anything from 8 -16 seers a piece. Tet Gad when very small is called as Tet Gordu. All the fish are found in the Jhelum waters. The Parim Gad or Mahsir is usually fished in summers only while the remaining varieties are found throughout the year. Gurran is the smallest variety if fish found in various streams and morasses.

Chari Gad and Ail variety are found in Dal waters. All small types are fished by hook, the heavier ones by net. Wullar Lake and Sindh River has plenty of Chari, Sattar and Chas types. Pekri Gad is frequently caught by spearing. The tamed fish of springs in Mattan and Verinag are referred to as Nag Gad without any distinction of their species. Fishermen using net are called Zail Haenz and those who use hook and line are called Wail Haenz. Sometimes the line extends as far as 1000 yards with hooks attached at intervals of a yard or so. During winter catching worms are usually used as baits but in summer mostly it is the barley flour balls. According to Vigne Kashmir has a fish he termed as Himalayan Trout but it is unlike the true trout of Europe. The Himalayan Trout is sluggish to fly and rarely rises above water. Fish from the river are considered better than those which inhabit the lakes. However, fish from springs is sacred and forbidden for eating. A white mullet of India has been reported to abound the waters in Zynagir Karewah. Vigne also mentions the presence of great many fish in Kishanganga river. However, the variety of Roe from this river is considered poisonous and he has recorded that one of his servants who consumed this fish fell alarmingly sick. Lastly there is another type of fish native to Kashmir called Aniur. It is similar to American cat-fish. Cardinal blunders by the department have almost wiped out indigenous species or considerable reduced the number.

Introduction of exotic species fast growing species, common carp cyprinus carpo caused sharp decline Scale carp, mirror carp and leather carp in 1956 has wiped out indigenous Schizothoracine fish Grass carp silver carp loss of diversity. Although the Department has grown both horizontal and vertical too phenomenally. But its deliverance proved an utter depressing in geometrical progression. Lack of vision, about Fishing and Fish farming, political will has killed in degrees the potential of blue waters. Department of Fisheries has established plus 63 Fish Farms and rearing units. Except one little farm on stream Anji at Sula, Reasi Anji for Mahasheer, not a single a single local species numbering 175 has been protected and developed. Out of 63 Fish farms 42 are for Trout which is a sport fish other are Exotic Fish. Out of which Trout Farms are numbering to 42 valley has 33 falls, 4 in Leh Division and 5 in jammu division. Break up arrived at is as Anatnag-9, Baramullah-4, Bandipora -3, Ganderbal-2, Kupwara-3, Kulgam-4, Pulwama-2, Srinager-2 and Shopian-2. Beside under Crap development there are about 19 units. Baramula, Srinager, Badgam, Pulwama, Bandipora has one each.

Kupwara has 2 units Leh division has 2 units while as Kathua, Ramban, Rajouri, Samba, Poonch has one unit each while as jammu has 3 and Reasi. Mansabal 2. Manasbal and Kathua has two National Fish Farm. All these farms except one at Anji Reasi where local Mahasherr seed id produced. .Rest all others indulge in exotic ones .Barring Trout, others proved detrimental of our local species. Foster who visited valley in 1763 found inhabitants used it extensively in dietary items. Dr Adams refers in 1854 to a regular fish market in Srinagar. Richness and diversity of fish in the valley has been intensive scientific investigation some of species found here were new to scientist. Although Day(1876a&, 1876b) is credited to have detail survey of fish in the state .There is ample undisputed reference of work carried much before him. Hechel mentioned as far

back 1838 about sixteen species described new to science in Kashmir. Which he upgraded with a minor changes in 1844. McClelland 1839, commented on Hechels species of Kashmir. Ichthyofauna of Kashmir classified by Stein Dancher ,1866, Gunther ,1868, Chuadri 1949 and Hora and Silas 1852a &b. Several references are of Ross 1916 ,Michel 1918, .

Every was taken not to introduce any alien species. But to preserve local species .Which will prove detrimental to local ones or not compatible with what nature has bestowed here? Called natural selection. Except Trout in cold waters of Kashmir in 1900AD. a few years later later in privacy British introduced American Cyprinoo Ganibusia affinis holbro Girad at Khadanyar Baramullah Trout after a number of failure succeeded to hatch at Harwan by Mr Frank Mitchell. Ova was. Trout was allowed to be introduced on the request by the British Government. Who were Trout Angling will allow them to add more fun. English brown approach by his subjects to utilize Holidays in Kashmir apart from Hunting sports, Day(1876a&, Owing to successful, introduction and subsequent establishment of trout in the valley of Kashmir in 1900 AD, the Department of Fisheries was created in 1903 AD and was known as Department of Game Preservation .Every care was taken not to introduce any alien species. Which will prove detrimental to local ones or not compatible with what nature has bestowed here?. Except Trout in cold waters of Kashmir in 1900AD. a few years later in privacy British introduced American Cyprinoo Ganibusia affinis holbro Girad at Khadanyar Baramullah.

Jammu and Kashmir: Kohli inaugurates Rs 1.69 cr Anglers Lodge at Dandipora

<http://www.risingkashmir.com/news/kohli-inaugurates-rs-169-cr-anglers-lodge-at-dandipora>

Minister for Animal, Sheep Husbandry and Fisheries, Abdul Gani Kohli, today inaugurated Anglers Lodge worth Rs 1.69 crore on Brenghi stream Dandipora in Anantnag district. Minister of State for Forest, Environment, Animal, Sheep Husbandry, Fisheries and Cooperative, Mir Zahoor Ahmad and MLA Kokernag Abdul Rahim Rather were also present on the occasion. While saying that Anantnag district has huge potential of trout fish farming, Kohli stressed on focused attention to boost the trout fish culture here. He stressed for establishment of more fish ponds in the district to generate employment opportunities for the unemployed youth of the State. Later, the Ministers inspected Trout Fish Farm, Kokernag and took stock of its functioning. They also inspected Hatchery Unit and Feed Mill there. On the occasion, they were apprised that Kokernag Project is not only catering to the trout fish seed demand of departmental units but is also supplying fish seed to the private fish units of the State. It was given out that during the year 2016-2017, as many as 415 anglers visited the Trout Resorts of the district and had an enjoyable angling.

In addition to it, the department had also conducted Anglers competition in Brenghi stream to boost the angling industry in the State during 2012-2013, the Ministers were apprised. It was also given out that Kokernag Fish Farm is producing 40 lakh fish seed annually which is supplied to

department and private units of the State for rearing and sale purposes. The department has also established a Mini Trout Hatchery at Panjath and 9 Trout Rearing Cum Sale Units in district Anantnag and is producing 40 tonnes of trout fish,” It was also informed that 138 units of Trout and Carp under Private sector are producing 140 quintals annually in the district. The Minister also asked the officials to develop the premises of Dandipora by landscaping and beautification and also instructed them to construct protection bunds on stream Brenchhi. He called upon the authorities concerned to come up with the innovative ideas and plans for growth of fisheries, Animal and Sheep Husbandry sectors in the State. Terming development of fisheries and poultry as priority of the Government, the Minister said that various schemes have been introduced to promote the sector and need of the hour is to implement these schemes strictly for the benefit of farmers.

Mir Zahoor Ahmad impressed on the officers to work with more dedication and zeal for strengthening of animal, sheep and fisheries sectors in the State. He asked them to adopt modern technology and scientific methods to maximize livestock population for bringing white revolution in the State. The Minister also enjoined upon the officers for making farmers aware about latest techniques and methods of fish, cattle and sheep rearing. Earlier, the Ministers convened a meeting with the officers of fisheries, animal and sheep departments and reviewed the pace of progress of different works carried by these Departments in the district Anantnag. It was informed in the meeting that presently nine Sheep First Aid Camps are functional in the district at different places for first aid treatment of migratory live stock. It was also informed that there are 2.15 lakh cattle, 2.33 lakh sheep and 24000 goat populations in the Anantnag district. Mr Kohli directed the concerned Officers, to furnish a detailed report of actual minimum medicine required for live stock population for the current year and submit the same to the administrative department for scrutiny. Among others, Director Fisheries, R. N. Pandita, Director Sheep Husbandry Kashmir Mohammad Ramzan Sheikh and other Senior Officers of various departments accompanied the Ministers during the tour.

Jammu and Kashmir: Annual fish production crosses 20-lakh ton mark in Kashmir

<http://dailykashmirimages.com/Details/138518/annual-fish-production-crosses-20-lakh-ton-mark-in-kashmir>

Annual fish production has crossed 20-lakh ton mark in the Kashmir valley and is on increase due to stocking of quality seed and assiduous efforts of the Fisheries Department. This was stated today at a meeting chaired by Divisional Commissioner Kashmir, Baseer Ahmad Khan, to review functioning of the Fisheries Department. Joint Director Fisheries, Deputy Director Fisheries, Assistant Directors and other concerned attended the meeting. The meeting was informed that 20.08 lakh ton of fish is being produced annually against an approximate demand of about 25 lakh tonnes in the Valley, while as 4 lakh tonnes of fish is being imported annually. For the Development of the sector, it was said that under Prime Minister’s Employment Package,

Rashtriya Kissan Vikas Yojana (RKVY) and other centrally sponsored schemes 706 private ponds have been established, so far, out of which 293 are for rearing trout fishes and 413 for Carp fish sector. The Divisional Commissioner was also briefed about the progress made under various schemes and projects like PM's Package for creation of Employment opportunities, Fisheries Training and Extension, National Welfare Scheme for Fishermen; Construction of Low cost Houses, Group Insurance Scheme for active Fishermen, Providing of Tool Kits and Nylon Twine and RKVY.

He was further told that for the welfare of the fishermen, 1533 low cost houses with a unit cost Rs 75000 have been constructed for fishermen in the Kashmir division. While as Boats, Bicycles and Auto Rickshaws were provided to registered fishermen for efficient marketing delivery system to enhance their economic profile. On the occasion, the Divisional Commissioner said that the State possesses enormous potential of angling due to its location and abundance of such streams. He stressed that if tapped properly, this can attract high-end tourists to the State. But he cautioned that adequate measures should be put in place to keep a check on illegal poaching at angling sites. In order to boost angling sports, he directed the Department to submit a DPR for renovation of rest houses at all fisheries farms in the valley so that these can be developed on modern lines for national as well as international angling sport lovers. He further directed the officials of Fisheries Department to stop crushing of stones near the streams mapped by the Department immediately and asked them to deal with violators strictly according to the law. The Div Com also directed the Srinagar Development Authority officials to provide suitable space at Sangarmaal Complex to Fisheries Department for opening of a fish retail outlet there. During the meeting, the Divisional Commissioner directed the Fisheries Department officers to make a comprehensive plan so that trout fish can be supplied to outside State.

Jammu and Kashmir: Water Bodies in Kashmir

<http://www.greaterkashmir.com/news/opinion/water-bodies-in-kashmir/246483.html>

Half of the water bodies in and around Srinagar have disappeared over the last century under the pressure of rapid and badly managed urbanization. When toxic substances enter Lakes, streams, rivers and other water bodies they get dissolved or lie suspended in water or get deposited on the bed. This results in the pollution of water whereby the quality of water deteriorates affecting ecosystem. Pollutants can also seep down and affect ground water. The city sewage and industrial waste are major contribution to water pollution. Very less percentage of waste water generated is treated and the rest is discharged as it is in water bodies. Agricultural runoff or water from fields that drain into rivers is another major pollutant as it contains fertilizers and pesticides...

Jammu and Kashmir: Training workshop on fish farming held at Bandipora

<http://kashmirreader.com/2017/03/27/training-workshop-fish-farming-held-bandipora/>

A training programme on fish farming organized by Fisheries Department Bandipora was held today at ShokBaba fish farm under centrally sponsored Agricultural Technology Management Agency (ATMA) scheme. Additional Deputy Commissioner Khursheed Ahmad Sanai presided over the function which was also attended by Assistant Director Fisheries, Nodal officer ISM, Experts and a good number of progressive farmers of the district. During the programme, various experts acquainted the participants with latest practices and innovations about fish farming for increase in fish production.

They were also sensitized about the existing schemes of the Department launched for the welfare of fish farming community. On the occasion, the ADC appealed unemployed youth to avail benefits of the various welfare schemes of the Government and said that fish farming sector can provide employment and entrepreneurship avenues to youth. Earlier, a detailed presentation highlighting progress of the fisheries Department under ATMA scheme was made before the audience. It was said that the Department established 58 carp and trout units in private sector under RKVY, while as under newly launched blue revolution scheme Fish units were setup, besides bicycles and auto-rickshaws were provided to fishermen of the district.

Jammu and Kashmir: Fish farming training at Bandipora

<http://dailykashmirimages.com/Details/134224/fish-farming-training-at-bandipora>

To acquaint progressive fish farmers about latest practices and innovations, a training programme on fish farming was held at trout fish farm Shokbaba, Bandipora today. Held under the supervision of Assistant Director Fisheries, Bandipora, the farmers were imparted necessary training on scientific methods of fish Farming. During the workshop, participants were made aware about the feeding methods, rate of feeding, sampling of livestock and about conditioning methods, and fish hygiene. It was said that last year, trout sale of more than 2.5 tons of biomass has been recorded at the departmental sale units at Shokbaba and Guzarbal in the district.

Jammu and Kashmir: Fish production in Budgam touches 6000 Qtls

<http://www.kashmirreader.com/2017/03/19/fish-production-budgam-touches-6000-qtls/>

Budgam District has become self sufficient in producing Trout fingerlings. The Trout Hatchery farm at Khag, has a capacity to produce 1.50 lakh fingerlings annually. This was revealed at a function organized to mark the beginning of fish farmer's exposure visit, which was flagged off by the Chief Planning officer Budgam, here today. A Large number of fish farmers and concerned officers of the Fisheries Department were present on the occasion. During the exposure visit, the fish farmer's would be taken to various fish farms of the District including Bassantwooder, Arizal, Beerwa and Khag to acquaint them with the latest fish farming techniques. Speaking on the occasion, the Chief Planning Officer called for the introducing

modern techniques and scientific technology among the fishermen for commercial exploitation of the fish farming to create avenues to unemployed youth.

He said that the fishermen and other unemployed youth would be provided all possible assistance and technical knowhow to enable them to take up pisciculture as means of their livelihood. The Assistant Director Fisheries Budgam informed that the Rs. 80 lakh under construction modern Trout Rearing Farm at Nowhar, Chadoora shall be completed during the current year. The rearing farm shall be a demonstration unit and will also cater the fish requirements of the whole area. He said during the current fiscal 10 new fish ponds were established in private sector including 3 Carp and seven Trout ponds. He further said that the fish farmers were provided Rs 29.75 lakh under Blue Revolution and RKVY scheme for construction of these fish ponds. He said about 80,000 Brown Trout fry were stocked in Nallah Doodganga, Nallah Sukhnag and Nallah Shaliganga this year to boost trout fish production in the district.

Jammu and Kashmir: Training Programme on Hygienic Handling of Fish organized

<http://dailykashmirimages.com/Details/133612/training-programme-on-hygienic-handling-of-fish-organized>

The Department of Fisheries, Reasi organized one day Training Programme on "Hygienic Handling of Fish" at Mahaseer Fish Farm Anji Reasi with the assistance from National Fisheries Development Board (NFDB). A batch of 25 fishermen/Fish farmers from the district attended the training programme. Assistant Director Fisheries, Bharat Bushan while speaking on the occasion informed that the main aim of the programme was to train the stakeholders about good practices of handling fish so that the shelf life of the fish catch can be enhanced as fish is highly perishable commodity. He said that the training would help the fisherman to fetch good price of their fish catch/produce as hygienic handling of fish plays important role to prevent the spoilage by bacterial and enzymatic action. During the programme, Munish Sharma, Resource person from the department while delivering a detailed lecture regarding various fish handling techniques said that proper handling is the only way to make the fish reach market in time.

The trainers were acquainted about the latest techniques of fish preservation with demonstrations on personal hygiene, equipment hygiene, hygienic method of icing etc. The progressive farmers of the area shown keen interest and shared their experiences and briefed the gathering about the achievements and benefits accrued from this avocation. The proceedings of the programme and practical demonstrations was conducted by Naresh Kumar, Inspector Fisheries, Reasi and Bansi Lal, I/c FDA Reasi. Sudha Misra, who delivered two baby girls on November 4 last year – contended she could not deposit her old currency notes by December 31 because of her premature delivery.

Jammu and Kashmir: Fisheries Deptt stocks 60000 brown trout seeds in Bandipora

<http://dailykashmirimages.com/Details/132509/fisheries-deptt-stocks-60000-brown-trout-seeds-in-bandipora>

Fisheries Department today stocked 60000 brown trout seeds in two major streams—Arin and Madhomati in Bandipora to boost the trout fish production. Assistant Director Fisheries Sajjad Hussain said the step has been taken to increase the fish production in these streams and to draw both domestic and foreign anglers to the district which will add to the economy of Bandipora. He further informed that the Department has launched 'Blue Revolution' scheme under which nine fish ponds including seven trout ponds would be established in the district. He said the scheme aims at to provide employment opportunities to the educated unemployed youth on 100 percent subsidy basis, besides incentives like provision of Auto Rickshaws and bicycles to the fisherman community will be provided under the scheme. The Assistant Director said that the Department has established 58 fish ponds including 16 trout ponds under Rashtriya Krishi Vikas Yojana in the district since the inception of the scheme, so far.

Jammu and Kashmir: SKUAST for promoting fish culture in Kashmir

<http://www.greaterkashmir.com/news/business/story/240645.html>

Prof Nazeer Ahmed, Vice Chancellor, SKUAST-Kashmir has stressed for promotion of fish culture in Kashmir. Speaking at the valedictory function of 3-day training programme organized by faculty of fisheries, SKUAST-K, the VC urged the scientists to redouble their efforts in empowering unemployed youth of the Valley for earning their source of livelihood through fish culture. The programme was organized by faculty of fisheries, SKUAST, Rangil, Ganderbal in collaboration and with financial support of National Fisheries Development Board (NFDB), department of Animal Husbandry, Dairying and Fisheries, government of India, Hyderabad. The Vice-Chancellor advised the scientists to work towards bringing externally funded projects to overcome the deficiencies of equipment in laboratories. He called for conducting special training for value addition of fish and about health management aspect. Tariq Hussain Ganai, DDC, Ganderbal who was Guest of Honour on the occasion, lauded the efforts of the Fisheries Faculty for imparting training to the needy.

Jammu and Kashmir: Fisheries in Kashmir: Shrinking Breeding Grounds, Declining Production

<http://www.greaterkashmir.com/news/opinion/story/236812.html>

Fish and Fisheries sector occupies a very important place in the socio-economic development of the state. It has been recognized as a powerful income and employment source of cheap and nutritious food, besides being a source of livelihood for a large section of economically backward population of the country. The total fishermen population in the State as per livestock census 2003 was around 31,000. It is presently estimated around 93000. The 27781 Km. length

of rivers/streams facilitate farming of more than 40 million tonnes of fish. As against this, the State has only 0.07 lakh hectares under reservoir area. There is a big gap between the demand and supply of fish. Fish is a valuable element of diet of the local people throughout the year. There is also a demand for fish from the defense personnel and tourists. There are 1248 lakes, including water bodies, and water is spread into 0.40 lakh hectares area which gives an indication of the potential for fisheries in the State. The Dal and Wular lakes produce 70% of the total fish production in Jammu and Kashmir.

In addition to introduction of carps, negative externalities of tourism, excessive fertilisation of vegetable crops on floating gardens leading to algal blooms have all led to a consistent decline and destruction of the breeding grounds of the local fish species schizothorax. Schizothorax being native fish of Kashmir and bone of fisheries in the valley is perhaps taking its last breath due to the negligence of the Government as well as common man. Both breeding and feeding grounds have been destroyed directly or indirectly. Unfortunately Schizothorax known for its taste throughout is declining day by day. The introduction of the carp species of fish in Dal lake and heavy siltation in Wular lake have led to a consistent decline in the production of fishes in general and schizothorax in particular. Besides this, negative externalities of tourism such as excessive growing of vegetable crops on floating gardens leading to algal blooms, have all led to a decline and destruction of the breeding grounds of the local fish species. The problem of fisheries in Kashmir lakes is a double-edged sword and has arisen due to the dilemma created due to differential objectives by the Department of Fisheries and the Department of Tourism.

While on the one hand the fisher folk, who derive primary income from lake fishery, are in favour of schizothorax fishery, they also want to increase total fish production from the lakes to meet the ever-increasing demand of the local consumers irrespective of the species. Though fish production in absolute terms may be increasing in the Dal lake, the rate of growth of even carp fish production is declining. The restoration of schizothorax fishery in the lakes of Kashmir on an even keel will ensure growth in socio-economic-cultural terms and the sustainability of fishery. The population of Schizothorax in lakes of Kashmir is on decline owing to increased carp fish production. Now, the Dal Lake is more of a tourist delight than a source of livelihood for local fishers. The Lakes and Waterways Development Authority (LAWDA) of Kashmir has not involved itself in saving a puny fish that the locals would do well to sacrifice. Fisheries form an important component of the economy of Jammu and Kashmir, which along with agriculture contributes a significant 23% to its Gross State Domestic Product (GSDP).

Besides being an important allied activity to agriculture, it contributes significantly to the agricultural economy and also generates self-employment. The need of the hour is to overhaul fisheries completely by developing hatcheries to increase the count of schizothorax fish species in the lakes, develop ranching programmes, which include herding or aggregating fish of one species at one place and harvesting them. Make concerted efforts to reduce the dominance of carp, and encourage institutionalisation of lake fisheries of Kashmir through establishment of

suitable end to end supply chain arrangements. Until measures are not implemented in letter and spirit, the case of restoration of lake fisheries will remain a dream which may not be fulfilled.

Jammu and Kashmir: Kashmir's Wular Lake worth more restored

<http://www.voanews.com/a/kashmir-wular-lake-restore-india/3593260.html>

Tucked within Kashmir's Himalayan foothills sits a freshwater lake that was once one of Asia's largest. Long an inspiration to poets, beloved by kings, Wular Lake has been reduced in places to a fetid swamp. Just the sight of it makes Mohammed Subhan Dar feel sick. He admits he's partly responsible. Dar was among dozens of villagers employed in the 1950s by the regional government to plant millions of water-sucking willows in the crystalline lake. The goal had been to create vast plantations for growing firewood and timber for construction and cricket bats. The result was the accidental near-destruction of the lake, as trees drank from its waters and their tangled roots captured soil, building up land. 'It used to be so beautiful' The lake, now less than half its former capacity, no longer churns and heaves with high waves, but meanders across mossy swamps and trash-strewn backwaters.

Children long ago stopped playing in the water. Families no longer use it to cook. "It used to be so beautiful, so clear you could see the bottom," said Dar, whose family has lived lakeside for seven generations. Needing a job, he alone planted at least a hectare (2 acres) of what is now a full-blown willow forest. "I feel ashamed every day." As Wular lost its appeal, its value declined. Poverty rates in the 31 surrounding villages shot up to around 50 percent — five times the state average. Kashmir and New Delhi officials now want to repair some of the damage by felling millions of trees and dredging parts of the lake. But restoring an enormous alpine lake is no simple thing, especially with climate change threatening the Himalayan glaciers that feed Wular's waters, and deforestation still unleashing soil to again clog it up. Lake sits in violent region Restoring a lake in Indian-controlled Kashmir, where a decadeslong violent conflict often supersedes all other government plans, may be near impossible. In the seven decades since India and Pakistan won independence and began fighting over Kashmir, a prolonged separatist conflict has erupted and tens of thousands have been killed.

Today hundreds of thousands of Indian troops patrol the mountainous region. Razor wire snakes across the landscape. Wular's surface lies flat, lifeless and in some spots stagnant, teeming with mosquitoes. The water trickles in from the Jhelum River and meanders some 16 kilometers (10 miles) before emptying through a dam on its way toward Pakistan. The name Wular itself means "stormy" in the Kashmiri language, and once described the lake's strong winds and choppy waters. For centuries, it was considered a paradise by writers, nobles and travelers who camped along its banks. Mohammed Azim Tuman remembers a boyhood spent steering his houseboat by moonlight over towering waves. "My heart would be racing as I clung to the railing to keep from

falling into the water,” said Tuman, the elderly proprietor of a tourism business. “When a storm hit, the water would splash so high I thought, ‘My god, the boat will be swallowed whole.’”

The surface and surrounding marshlands have shrunk from 216 square kilometers (83 square miles) in 1911 to 104 square kilometers (40 square miles) in 2008. Villagers impoverished Along the fringes, impoverished communities tend rice paddies and in autumn harvest wild water chestnuts from the lake shallows. The ornately carved wooden houseboats that once surfed Wular’s waves are gone. “It’s typical throughout India, not just in Kashmir. The critical balance between ecology and economy that is missed,” said Anzar A. Khuroo, assistant professor of biodiversity at the University of Kashmir in Srinagar. Since 1990, the planet has lost 75 percent of its wetlands as communities drained the water and built on the land. That often comes with economic losses, because wetlands provide services including water filtration, flood control and wildlife support. In 2008, Wetlands International came out with an \$82 million plan to restore Wular’s ecology, estimating the costs could be recouped within 12 years from timber profits, improved fish stocks and an expected 40 percent boom in ecotourism.

A plan is born The Indian government was intrigued. Some experts suggested it could be done more cheaply. In 2011, India’s parliament approved a \$26 million budget. Officials began talking about water sports, five-star hotels and riverside parks. If only it had been so easy. A host of players needed to get on board: individuals, villages and several state government bodies including forestry, farming, fisheries, pollution control and the army. It took years just for them to agree on the lake’s boundaries. The project was again re-evaluated. The budget dropped to \$2 million. By the time the first willows were chopped down, it was 2015. Only half the budget was allocated, and those in charge knew it wasn’t enough. Still, they chopped and dredged.

They removed about a million cubic meters (1.3 million cubic yards) of silt — or 200,000 truckloads — before federal funding expired. Big budget, big job Whether the project can survive is debatable. Any further work will need a new proposal, environmental assessment and much more money. The program’s manager Rashid Naqash estimates it’ll cost about \$280 million. As much as that is, it’s just more than a third of what India budgets for a single month of security and military deployments in Kashmir. Even with the money, there’s more to it than just removing the willows. Lake-clogging soil and silts are being loosed from newly deforested lands far upstream, and scientists also warn that climate change is upsetting Himalayan rainfall patterns. “I don’t think the government has an understanding of how difficult this work would be,” said Himalayan geologist and glaciologist Shakil Romshoo.

Jammu and Kashmir: Pulwama fish market on anvil

<http://www.greaterkashmir.com/news/business/pulwama-fish-market-on-anvil/232249.html>

Minister of State for Fisheries, Mir Zahoor Ahmad, today inspected the proposed site for Fish Market in the district. Deputy Commissioner Pulwama Muneer-ul-Islam and senior officers of

district administration accompanied the Minister. The Minister directed the concerned to prepare a DPR for establishing the fish market on modern lines in Pulwama and “submit it to the concerned quarters so that the funds could be arranged for the purpose,” an official handout said. In his interaction with the officers of the department, the Minister was apprised of the activities related to fisheries in the district. Zahoor said that the need for establishing of a hygienic and scientific fish market with all the modern facilities was much felt in the district and directed the concerned to take necessary steps so that work on it could be started soon. He also directed the officers to identify sites for establishing fish farms in the district.

Jammu and Kashmir: Budgam has tremendous potential in fish farming, says Government

<http://www.kashmirilife.net/day65-budgam-has-tremendous-potential-in-fish-farming-says-govt-117885/>

The constant efforts of Department of Fisheries Budgam in boosting the fish production of both carp and trout have started reaping dividends. As per the data received, the department during 2015-16 has yielded a production of 1034.83 Qtls of Carp fish and 3817.16 Qtls. of trout fish, besides 96910 number of carp fish seeds and 62450 numbers of trout fish seeds were hatched during the same period, registering a manifold increase. Presently, the department is producing trout fish at three units located at Khag, Beerwah and Basant Wudar Khan Sahib. Of these 3 units, the pond at Khag has vast capacity to produce high quality trout. The unit at Khag is also being used for raising seed stocking to next level so that these seeds could be distributed in the micro fish units, an official spokesperson said Sunday evening.

The construction of modern Trout Rearing Unit at Surisyar Chadoora is in full swing. The indoor facility for trout fish rearing is being created at Beeru Tehsil under Centrally Sponsored Scheme RUVY. The district tremendous potential of fish farming and the efforts are afoot to identify the feasible locations to establish more fish ponds to give further boost to fish production in district. In other parts of the district, the department has also invited private players participation wherein the interested parties would be provided requisite financial assistance and technical support from the department in establishing own fish farms.

The department would extend financial and technical assistance in terms of loan and subsidy and guidance to fish farmers, besides health cover and accidental insurance would also be provided to them and their family members to instil confidence in them. The Deputy Commissioner Budgam, Mir Altaf Ahmad stressed the need for organizing awareness camps to sensitize people particularly educated youth about the schemes launched by the department for establishing fish rearing units. He said that the educated youth should take advantages of the schemes and establish fish farms which are a lucrative business. He said that there is great demand of fish in local, national and international markets where they can sell their produce hassle-free.

Jammu and Kashmir: 5 fish development projects taken up to increase production: Kholi

<http://dailykashmirimages.com/Details/119747/5-fish-development-projects-taken-up-to-increase-production-kholi>

To enhance the fish production in the State, the Government has taken up 5 Fish Development Projects in Chenab, Jhelum, Kishanganga, Suru and Sindh rivers. In this regard, the National Hydro Power Corporation (NHPC) has provided Rs16.25 crore as compensation of affected water bodies in these rivers. The information was given out in an officers meeting of Fisheries Department which was chaired by Minister for Fisheries, Animal and Sheep Husbandry Department, Abdul Gani Kohli, here today. Minister of State for Fisheries, Animal and Sheep Husbandry, Mir Zahoor Ahmad Mir was also present in the meeting. The meeting was informed that construction of these fish projects would help compensate the losses of fish production caused due to the erection of barrage across the rivers for hydroelectric projects undertaken by the NHPC.

Briefing the Minister about the progress on these fish projects, it was said that construction work on Fish Development Project Salamabad, Uri has been taken up at a cost of Rs 6.35 crore, construction work of Fish Development project at Wanpora, Gurez and Atwathoo, Bandipora at a cost of Rs 6.31 crore, besides work on Fish Development Project Chutak in Kargil at a cost of 1.80 crore, work on Nimmo-Bazgo in Leh taken up at a cost of Rs 1.19 crore, while as work on Fish project Sewa-II and Kathua was taken up at a cost of Rs 60 lakh. It was given out that the Department is also contemplating to construct three more Fish Development Projects at Baglihar, Rattle and Karthai hydro electric projects to compensate the losses in fish production and has forwarded DPRs of Rs 17.62 crore to the NHPC for sanction of funds. It was informed that release of funds for the purpose are under active consideration of NHPC authorities and once the approval of funds is received from the concerned Corporation the necessary work would be also taken up. Reviewing the progress of the Department, Abdul Gani Kohli underscored the need for increase in fish production in the State, adding that fish is alternate for mutton and poultry and is beneficial for good health.

He said fish rearing is fruitful to increase the economy of weaker sections and the department should encourage such people to opt for this profession. The Minister asked the officers to ensure strict implementation of welfare schemes meant for fishermen community and stressed for setting up of fish rearing units in far-off areas of the State. He directed the concerned to make a thorough survey for establishment of modern hatcheries in watered areas for rearing high quality fish seeds. The Minister also directed the functionaries to work in tandem and achieve the targets well in time, which he said would also help in income generation for the department. Secretary Animal, Sheep Husbandry and Fisheries, Director Fisheries, Joint Director Project were among senior officers who attended the meeting.

Jammu and Kashmir: 1885 fish ponds to be developed in state under MGNREGA: Abdul Haq

<http://www.greaterkashmir.com/news/business/story/225928.html>

Minister for Rural Development, Panchayati Raj, Law and Justice, Abdul Haq today said his department will develop 1885 fish ponds this year in convergence with Fisheries Department by utilizing MGNREGA funds with an aim to provide job avenues to unemployed youths of the state. The minister, according to an official statement, said this after convening a meeting with Minister for Animal, Sheep Husbandry and Fisheries, Abdul Ghani Kohli. Ministers of State, Zahoor Ahmad Mir and Syed Farooq Ahmad Andrabi were also present in the meeting. The meeting was also attended by Secretary, Animal Husbandry, Director, Animal Husbandry Department and Director Rural Development Department, Kashmir. Abdul Haq said there is a huge potential of fish farming in the state and the same can be utilized for generating job opportunities by construction of fish ponds.

He said the department will go for convergence of funds under MGNREGA with Department of Fisheries to construct fish ponds wherein the youths have to contribute only 10 percent of the total cost. The Minister said the aim of MGNREGA is to provide employment to the unemployed youths besides creating community assets in the villages and that creation of fish ponds will serve both purposes. He said convergence will also help this high-return industry to get a boost with the help of MGNREGA besides providing job opportunity to the local youths. Let the Fisheries Department come up with plan for construction of fish ponds, we will provide labor budget under MGNREGA for the same,” he said. Giving details, the Minister said 930 ponds will be constructed in Kashmir while 955 will be constructed in Jammu division. He said there is huge demand of fish in the market but the supply is low and unemployed youths can contribute in production besides providing job opportunity for themselves and for other people too.

Jammu and kashmir: Wetlands in Kashmir turn wastelands

<http://www.greaterkashmir.com/news/kashmir/wetlands-in-kashmir-turn-wastelands/217011.html>

The sprawling wetlands in Kashmir have long served as nature's first line of defense against an outbreak of violent floods the valley is so prone to. But the marshes are shrinking fast, increasing fears of a looming disaster similar to what it witnessed in 2014. The decline has also robbed millions of Central Asian, Chinese and European winged visitors of their winter homes and habitat, posing an existential threat to the Valley's fragile ecosystem. According to official records, the wetlands have largely fallen prey to paddy cultivation, plantation, and residential complexes. Official records reveal that nine Kashmir wetlands, despite being protected legally, have shrunk a great deal over the last 50 years. Mirgund on the Srinagar-Baramulla highway towards the north of the valley had a total area of 100 acres. Some 20 acres encroached already. Shalbugh, on the border of Srinagar and Ganderbal districts, was 250 acres. But land sharks have already grabbed 12.

Haigam in north Kashmir's Sopore was over 1,812 acres and nearly 252 have been usurped. In Pampore, towards the south of the valley, four small wetlands had a total area of over 178 acres. But official records show only 150 have remained. Similarly, Malgam wetland in north Kashmir Bandipore district was once spread over 1,125 acres. But today it is only 775 acres now. Thirty percent of the once vast marsh has been filled. And this famed Hokarsar wetland was nearly 14 sq km. And today, it has shrunk to just 5-6 sq km only. According to the records, the depth of its waters has also substantially reduced from 12-14 feet to only a few inches now. High pollution levels and blatant encroachments have wreaked havoc with its natural vegetation, leaving thousands of farmers in the lurch. The growth of unwanted weeds, accumulation of silt, human and solid waste has drastically affected the growth of fish, water nuts and vegetables like lotus stems, officials said.

Imtiyaz Ahmad Lone, a wildlife warden, who looks after Hokarsar, blamed Jhelum flood basin for the "the devastation" because it "brings heavy volumes of silt and pollutants". Besides, "some industry houses have also been found dumping waste" on the wetland peripheries which have become permanent grazing sites for cattle and "dumping ground for household and industrial trash", he said. Lone noted that his department tried its "best" to restore the "lost glory" or at least preserve what is left of it. "It needs a lot of resources, consistent government support," he said, adding the support has not been forthcoming. The official said he personally has been persistently seeking a dredging machine to clear unwanted weeds. "I have been requesting the government to give me the machine for a few months. Got a negative response," Lone said. He claimed the department has been acting tough against encroachers and, so far, more than 400 cases have been registered. He would not comment on a prosecution rate.

Jammu and Kashmir: Fishermen protest against illegal netting in Wular lake

<http://www.greaterkashmir.com/news/kashmir/story/215840.html>

Scores of registered fishermen on Tuesday staged protest outside the office of the Deputy Commissioner Bandipora against what they said illegal netting rampant in Wular Lake. The protestors alleged that Fisheries department officers in Bandipora were allowing illegal netting while taking commission from few chosen people who were not even registered as fishermen in the department. They said that Illegal netting in Wular lake was posing a serious threat to fish resources in this breeding season. "Illegal netting by some outsiders who are hand in glove with fisheries officials is posing threat to livelihood of thousands of registered fishermen in the area," alleged Abdul Karim Dar. He also said that due to illegal netting also destroys fish seed in the current breeding season. The protestors said that they had raised this issue before Deputy Commissioner and fisheries officials but nothing concrete happened on ground. The protestors raised slogans against the Deputy Commissioner and fisheries officials alleging they were hand in glove with these illegal encroachers.