



BASAI News Updates

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India is on its way to be a global leader in fisheries

Fisheries play a crucial role in development. Considered a sunrise sector, it envisages bringing in great potential in an equitable, responsible, and inclusive manner. The sector employs approximately 28 million fish farmers and fishers, and almost twice the number along the value chain.

In December 2014, Prime Minister (PM) Narendra Modi called for a "blue revolution" and took several measures to harness the potential of fisheries. Some key measures include: The creation of a separate ministry of fisheries, animal husbandry and dairying; the formation of the department of fisheries with an independent administrative structure; bringing about policy reforms initiatives; and the creation of a fisheries and aquaculture infrastructure development fund in FY 2018-19 worth ₹7,522.48 crore. So far, proposals worth ₹4,923.94 crore have been recommended to states and Union Territories (UTs), including 20 fishing harbours and 16 fish landing centres and 25 proposals from private beneficiaries worth ₹120.23 crore.

The Government of India (GoI) has also launched its flagship scheme, Pradhan Mantri Matsya Sampada Yojana (PMMSY), with the highest ever investment of ₹20,050 crore in the fisheries sector. PMMSY was launched by the PM, on September 10, 2020, under the *Atmanirbhar Bharat* (self-reliant) package, aiming to double the incomes of small and artisanal fish farmers. It aims to transform the sector holistically, focusing on production and productivity growth, increased domestic consumption and export earnings, and reduced post-harvest losses. To enhance fish production and reduce post-harvest losses, the uptake of modern aquaculture, capture fishing, and post-harvest management practices are essential. For this, PMMSY lays special focus on skill and capacity-building.

Across the country, the scheme has got overwhelming responses from all states and UTs, and in the last two years, the department has sanctioned projects worth ₹8,562.72 crore for sectoral development. It is inspiring to share that fish production has increased from 141.64 lakh tonnes during 2019-20 to 162.53 lakh tonnes, as of date. On the other hand, India's fisheries exports stood at an all-time high of ₹57,586.48 crore. The Indian export market is dominated by shrimps, particularly *L. vannamei*. To achieve the target of exports worth ₹1 lakh crore under PMMSY, the department has been focusing on

diversifying the export basket by increasing the production and quality of tilapia, trout, pangasius and other species. The activities and projects sanctioned to date have generated employment for around 350,000 people directly, and over 970,000 across the value chain. The central assistance of ₹3,000 per beneficiary per year has provided livelihood and nutritional support to a total of 677,462 marginalised fish farmers and their families during the fishing ban/lean period.

To augment and replenish fish production, promote sustainable fisheries practices, and support bio-conversation, PMMSY has introduced a sea and river ranching programme. PMMSY aims to emphasise interventions where fishing vessel insurance, promoting sustainable aquaculture, extension support services, technology infusion, integrated aqua park building, and fisheries cooperatives are some of the components. PMMSY gives special emphasis on employment generation for women, Scheduled Castes, and Scheduled Tribes by providing alternate livelihood opportunities such as seaweed cultivation, ornamental fisheries. PMMSY provides 60% subsidies to women beneficiaries, including benefits to women entrepreneurs. Projects worth ₹1534.05 crore have been sanctioned for women, supporting 37,576 women beneficiaries.

Encouraging private sector participation, PMMSY has earmarked a separate fund of ₹100 crore under the entrepreneur models and urges young entrepreneurs to offer solutions through technology interventions. To facilitate access to institutional credit and meet working capital requirements, the GoI has extended *kisan* credit card (KCC) facilities to fish farmers from FY 2018-19. KCC national campaigns are being organised with the finance ministry and state departments. The national fisheries development board (NFDB), the nodal agency for PMMSY, has been organising fish festivals, culinary seminars, and exposure visits. The department released a book named *Fish & Seafood – a collection of 75 gourmet recipes* on August 10. Along with these interventions, the GoI has been making efforts to develop Indian fisheries towards becoming a global leader in the sustainable fisheries and aquaculture sector.



**Parshottam
Rupala**

Parshottam Rupala is minister of fisheries, animal husbandry and dairying. The views expressed are personal.

[HT INTERVIEW] BILL GATES, CO-CHAIR, BILL & MELINDA GATES FOUNDATION

'Improved seeds best way to offset climate-induced food crisis'

The Bill and Melinda Gates Foundation's report was released late on Monday India time, and showed that the pandemic has had an impact on progress towards the UN sustainable development goals, with almost all being off track. The report also touched upon the food crisis and the climate crisis, two issues that pose a significant challenge to policymakers. Ahead of the release, Bill Gates spoke to *Hindustan Times* on how he sees the response to these challenges evolving. Edited excerpts:

Do you think the pandemic has intensified the food crisis? That the disruptions caused, largely on account of the pandemic, make it difficult for countries that were not self-sufficient in terms of their own food production?

Well, the number of people in hunger today — you know, this CARE report talked about it going up to 800 million, and they also highlighted that this was particularly acute for women, actually a pretty big imbalance where women and children are suffering the most. We've got a combination of things that have all been bad for food availability. We have climate change, which is hurting crop production, sooner than we expected. We have the Ukraine war that hurt food availability, but probably worse, it's making the price of fertilizer be substantially higher,

which means that the poorer farmers won't have access, and so their yields in the years ahead will be dramatically less.

During the pandemic, grain prices went up. They went up more at the start of the Ukraine war, but they've come back down some. In the long run, unless we make better seeds, we have a real problem because you want to feed more people, you want richer diets, and climate change can cut productivity dramatically, so you know, the only thing that offsets that is improved seeds. So you know, it's what the Green Revolution did, but this time, it's understanding the environmental constraints and tuning the new crops so that they can work even under these much hotter and higher drought conditions that are coming faster than most predicted.



PICK OF THE DAY

One of the things that's becoming clear is that, given what's happening with the climate crisis, there has to be a change in how people farm. It's becoming clear that the primary focus

has to be on science, right? I mean, we need to find climate-resistant seeds, we need to find techniques to offset the impact in some way. How far down that road do you think we are?

Well, the system that creates new seeds, public domain seeds is called the CG system (the Consultative Group of International Agricultural Research) and sadly, we've gotten complacent about

food availability, and so the world has been underfunding that CG system. Now we're trying to get that increased, particularly as people realize the climate-induced challenges.

In India, you have Department of Biotechnology, and Department of Agriculture that's helping look at seed innovation, making sure that we do the right things for Indian farmers even in the face of climate change. And monsoon variability sadly, is going up quite a bit.

We also need better advice to farmers. The foundation helped fund a Digital Green effort, where you use digital platforms to have farmers share advice with each other, and that's been quite successful to scale up new practices, because as you said, if you just stick with the traditional way you've done farming, where farmers are conservative, that's very common, and they won't be adapted to the changes they need to make.

And so, although it starts with seeds, the advice system and the credit system all need to get engaged so that, ideally, India stays self-sufficient in food, and Africa is a huge net food importer, which is kind of tragic. They should actually be a net food exporter if they'd get modern seeds and good advice.

Some scientists have always been saying this, but I think there has been greater realization among many others who are not in climate science, that whatever our models predicted, the change is coming faster,



Bill Gates is co-chairman of Bill & Melinda Gates Foundation. AFP

which probably means that we have underestimated this problem of the climate crisis to a very, very significant extent. Do you think we are doing enough? What are the one or two things you'd like to see countries change in how they approach this?

Well, with climate, we have climate adaptation, and the key thing there is investing in these seed and livestock systems. And so, I'd put on top of the list that we're underinvesting in that. We need to use all the innovation possible, and we need to invest more in it. For climate mitigation, that's going to take decades, of course, to get the emissions to zero. And the realization that the closer you are to the equator, the more of these absolute temperatures are

the emissions reduction, which is called climate mitigation.

The big complaint that developing countries, including India, have is of course regarding climate finance. Do you think there will be a resolution on that front?

Well, the budgets of all countries are particularly under stress because they spent a lot of money during the pandemic, domestically, and now, with Ukraine war, the cost of electricity and food, fertilizer, and the need to have defense budgets and refugee costs. So, it's a very difficult time. Overall, if you look at sustainable development goals, when those were set, we didn't anticipate the pandemic or the Ukrainian war. And so, we're behind on all of those.

And so, yes, my call is for the rich countries to be more generous, but the complex tradeoffs they're having to make with these multiple crises, it's not clear that either climate finance or just basic aid will stay even as generous as it was before the pandemic.

Calling out how far behind we are and even that we've gone backwards on some things, like the number of kids being vaccinated, I think, using this General Assembly week where we can say, okay, we're halfway through the period till 2030, and here we find ourselves behind, it's really a call to make sure those investments don't get cut, which is a serious risk with all those other priorities because of the pandemic and the war.

Do you think that when it comes to the Sustainable Development Goals (SDGs), that progress has slowed, or do you think there's an actual risk of regression?

Well, from the year 2000 until the start of the pandemic, it's a very, very positive story — childhood deaths cut in half, all the major diseases, global fund that works on HIV, malaria, TB, saving over 44 million lives. So, it was incredible.

When the pandemic came, we did go backwards. On almost every indicator, we went backwards. Now, there's a few things like digital bank accounts and women's access to digital bank accounts went forward. And countries like India used that tool very effectively during the pandemic, but most of the indicators went backwards.

So now, as the worst of the pandemic is ending, we say let's get caught up and get back on that very positive track we were on. Now with the Ukraine war coming, that's going to be far more difficult than we expected it would be. And so, reminding people that these things really count, and they shouldn't lose sight of the fact that we're behind on these things, that's super important.

The reason I remain optimistic is that I know the innovation pipeline, whether it's vaccines or drugs or seeds, for all of these areas, I know there's a lot of innovation coming that will help us solve these problems. But I do worry, the next five years, if we don't keep a very high priority on these things, we won't catch up

and get back to where we were before the pandemic and get on that positive track. Although I'm an optimist about these things, I'd say the realities are tougher in the near term than at any time in the history of the foundation.

Moving track completely, do you think the pandemic is mostly over? Do you think we're all right now?

Well, there's still people dying, but the chance of a really bad variant that would push the death rate back up, fortunately, we think is quite low, but we don't absolutely know that for sure. There were a lot of miraculous things, like India got out over two billion vaccines and your vaccine coverage of adults is actually one of the more impressive in the world. And our partners, Ministry of Health, DBT, the president's science advisor, there was a lot of good work done during the pandemic. India focused on health and I hope that focus on health continues.

Although the pandemic was a tragedy, I think we learned a lot of lessons during that. And I don't think we'll have another acute phase, but there's always a risk. And then someday, there will be another pandemic. And so, we can't be complacent about how we invent tools and how we do surveillance. People now know to add that to the risks, right up there with war and drought, earthquakes and other things. The dialogue about making sure we finish this one off well and that, at a global level, we're ready for the next one, there's still a fair bit of work to do there.

Disease hits cherry trees in Shimla; Nauni team to visit affected areas

TRIBUNE NEWS SERVICE

SHIMLA, SEPTEMBER 13

Cherry growers in upper Shimla are a worried lot. An unknown disease has surfaced in the cherry growing areas, mainly in the Baghi belt, that is drying up cherry trees.

"I have around 800 trees and half of them have been affected by this disease. First the leaves turn brown and then the entire tree dries up," said Surjan Singh, a cherry grower in Baghi.

Considering the seriousness of the situation, University of Horticulture and Forestry, Nauni, is sending a fact-finding team to the area on September 15.

"We have constituted a team under the chairmanship of Head, Plant Pathology. The team will visit the affected area and suggest a remedy to the growers. At first sight, it seems to be foliage disease as the soil appear healthy," said UHF, Nauni, Vice Chancellor Rajeshwar Chandel.

According to the cherry growers, the disease was first noticed last year. "We thought we will be able to control it with regular pesticides. Unfortunately, it hasn't happened. The disease returned post harvesting this year and is spreading very fast," said Raj Kumar Bhinta, another orchardist from Baghi.



A tree affected by an unknown disease. TRIBUNE PHOTO

DWARF DISEASE DAMAGES RICE CROP

- Dwarf disease has damaged 20-50 per cent of the rice crop in Sirmaur district
- About 10 per cent shortfall is expected in the paddy production in the state
- The virus is transmitted by white-backed plant hopper in a persistent circular and propogative manner and the crop turns yellow and leads to stunting
- Infected plants having shallow roots can be easily uprooted
- Last year, the paddy production in Sirmaur was 15,000 MT



"The orchards above 7,500 feet are the worst affected, but the disease is spreading downwards too. If this is not controlled in time, cherry growers will be in huge trouble," said Bhinta.

Another farmer said this disease appeared in the past two years and suspected that some foreign virus might have sneaked in with the foreign planting material. "We had planted imported plants two years back. It's possible

that the disease came along with these," he said.

Deepak Singha, president of the Plum Growers Association, said the situation was alarming and the Horticulture Department might need to quarantine the areas where the disease is spreading.

"The disease needs to be contained as it could spread to nearby cherry growing areas and cause damage there too," he said.

Amid health concerns, states told to promote fortified rice

VIBHA SHARMA
TRIBUNE NEWS SERVICE

NEW DELHI, SEPTEMBER 13

Amid controversies and health concerns surrounding fortified rice, the Centre has directed states governments to make people aware of the benefits of the grain blended with micro-nutrients like iron, folic acid and vitamin B12 through awareness campaigns.

Officials said fortified rice would be promoted while elucidating concerns among some sections vulnerable to thalassemia and sickle cell anaemia. The Department of



Helps in preventing cretinism, goiter, IHH and brain damage

Food and Public Distribution has asked Gujarat, Maharashtra, Chhattisgarh, Madhya Pradesh, Jharkhand, Telangana, Rajasthan and Kerala to organise workshops.

"Only 0.01 per cent of the population may face health risk due to consumption of fortified rice, particularly those ailing with thalassemia major," an official said, adding it helped in preventing cretinism, goiter, IHH (thyrotoxicosis) and brain damage.



Biological Agri Solutions Association of India