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1. Why tariff hikes by Airtel, Jio, Vi were inevitable

Why in News?

All three of India's leading telecom operators, Reliance Jio, Bharti Airtel and Vodafone Idea (Vi) have announced tariff hikes within hours of each other, as the companies search for a path of monetising 5G services and improving the financial health of the sector.

Jio has raised tariffs by 12-25 per cent, with the steepest hike coming in some of its more premium plans. The most active plan — 28 days validity with 1.5 GB of data per day — saw the sharpest hike of 25 per cent. Airtel has increased prices by 11-21 per cent. Vi has raised prices by 10-20 per cent.



What's behind the price rise: the ARPU target

Bharti Airtel has maintained that the mobile Average Revenue per User (ARPU) needs to be upwards of INR 300, to enable a financially healthy business model for telcos in India.

In 2016, when Jio announced the launch of its 4G services – first for free for at least a year and then at much cheaper rates than its competitors – it disrupted India's telecom sector. It led to India having the cheapest data rates of anywhere in the world, and resulted in a boom in the number of people accessing online services. However, for a while now, the industry has been calling for a gradual increase in prices which would help their financial health.

As per an analyst note by Bernstein, there was an anticipation that the telcos will raise prices post the general elections. It said that for Airtel, its ARPU should stabilise to Rs 280 by FY26 and at Rs 300 by FY27.

The beginning of 5G monetisation

With the addition of 5G services to their kitty, for which all the three major telcos spent top dollar, there was also a question on when telecom companies will make a move towards monetising their 5G services, which for a while were being offered at similar prices with no separate pricing. It appears that time has now come.

Because of low profitability, the recently concluded spectrum auctions saw a muted response by telcos, fetching just over Rs 11,340 crore to the exchequer — a mere 12 per cent of the

government's reserve price of Rs 96,238 crore. However, in 2022, the companies had spent upwards of Rs 1.5 lakh crore to acquire 5G spectrum.

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

2. What was the tussle over Covaxin IPR? What are the rules for patenting the intellectual property rights of a vaccine? Why was the ICMR not included?

Why in News?

The maker of the indigenous coronavirus vaccine, Covaxin, Bharat Biotech International Limited (BBIL), has admitted to an "inadvertent error" in patent filings to protect the vaccine's Intellectual Property Rights (IPR). One of India's leading biotechnology companies, it had failed to include scientists from the Indian Council of Medical Research (ICMR) as co-inventors in the Covaxin patent filings.



What kind of rights govern vaccine patents?

India's patent laws govern both product and process patents. Product patents grant an inventor a monopoly over, say, a drug. Process patents bar competitors from making a similar drug using the same sequence of steps.

Process of Covaxin development

Bharat Biotech said it had patented the process, namely of making a batch of vaccines from the virus strains that were provided by the ICMR-NIV (National Institute of Virology). This is the lab that has expertise in extracting viruses from blood samples, identifying its characteristics, conducting various tests to gauge its infectiousness and qualify it in comparison to related strains. However, preparing a vaccine out of this at an industrial scale is beyond the capabilities of a lab and requires a different order of facilities that only established vaccine manufacturers have.

Covaxin is an inactivated version of COVID-causing coronavirus; once injected into the body it coaxes it into producing antibodies that can potentially protect against severe disease from a coronavirus infection. To do this effectively, an 'adjuvant' is added which increases the vaccine's potency. Vaccine makers may have their own ways of bringing all of these steps together and, given the competitive nature of the field, strive to ward off competitors from imitating these processes to gain a temporary monopoly in the market and rake profits.

To be sure, while companies are free to file for a product or process patent in as many countries as they can afford, a patent is only granted after regulatory authorities grant them one or are convinced that this process is indeed novel or inventive. BBIL, as far is publicly known, hasn't yet been granted these patents.

What were the roles of BBIL and ICMR?

BBIL had collaborated with the ICMR-NIV for all the steps in developing a vaccine. The two organisations had signed an agreement that spelt out each entity's responsibilities. As ICMR is a public entity and because of the scale of the COVID crisis, there were Right To Information requests to make this agreement public. However, it was only in July 2021, that parts of the agreement were made public in Rajya Sabha.

Beyond transferring the strains and making vaccines, the agreement said, ICMR would also test these vaccines on animals — rodents to monkeys — and then on people to establish that the vaccine worked as intended. The ICMR also funded these clinical trials — ₹35 crore — and incurred costs in developing Covaxin. In return it was to get 5% of royalties that BBIL earned from the sale of Covaxin. Since the announcement of the BBIL and ICMR collaboration, it was generally accepted that both entities would contribute to the vaccine and would therefore hold "joint intellectual property rights," as was stated in Parliament.

However, BBIL made a distinction between the rights governing the making of the vaccine and the rights over the data generated from clinical trials. The ICMR hadn't invested in the actual making of the vaccine and so wasn't included in patent applications. However, a day after the matter became public, BBIL said it had made a mistake, and that it would be making amends by filing fresh applications that listed ICMR personnel as inventors. It is unclear what prompted this.

Why does being cited as an inventor matter?

IPR is a vast, complex domain and spans the minutest parts of the product invention process. As the development of pharmaceutical products involves a wide range of expertise, it is hard for single firms or entities to develop everything in-house.

Just like the BBIL-ICMR collaboration, companies may enter into several licensing agreements — BBIL for instance had a technology licensing agreement with Virovax for the adjuvant — with other companies. If a single product thus involves multiple entities and collaborators, being listed as an inventor has a bearing on the sharing of intellectual property rights, royalties and even determining how a product can be used. There is no field of human activity that is untouched by disputes over IPR. In patent filings, not listing out all the inventors — in the U.S especially — could even lead to patent applications being rejected.

Relevance: GS Prelims & Mains Paper III; Economics

Source: The Hindu

3. What is holding up the Teesta treaty?

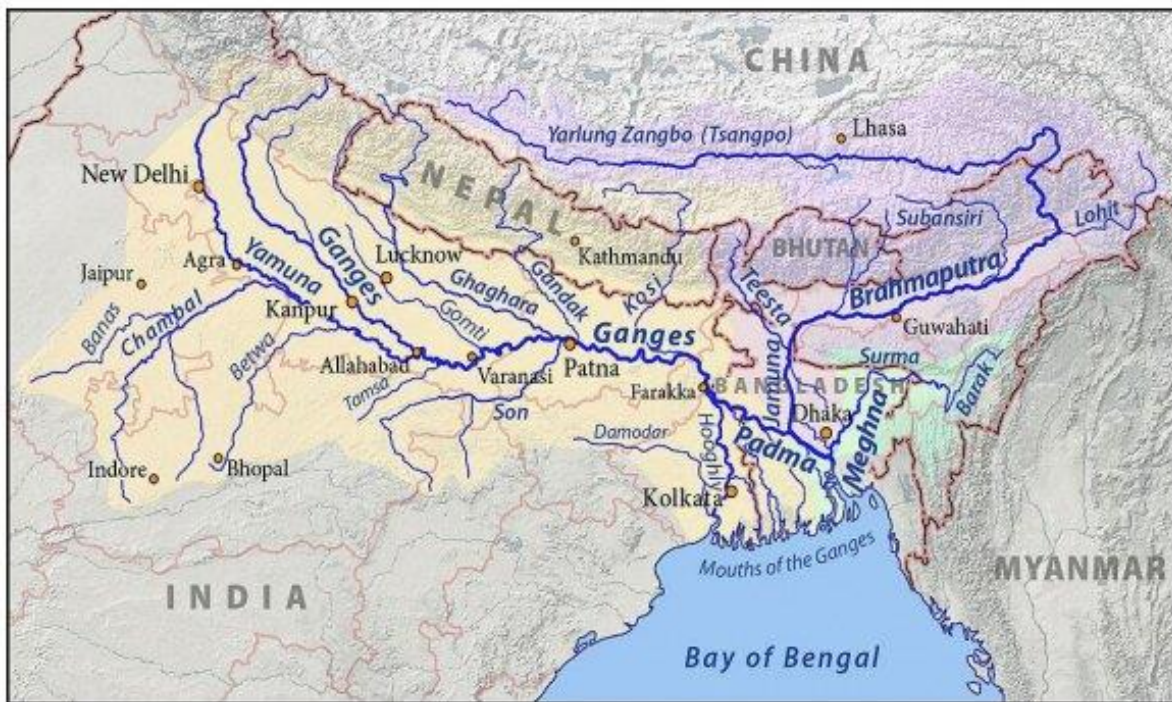
Why in News?

During the recent state visit of Sheikh Hasina, Prime Minister of Bangladesh, to India, Prime Minister Narendra Modi on June 22 said: "A technical team will soon visit Bangladesh to discuss conservation and management of the Teesta River in Bangladesh." The remark triggered fresh speculation about the Teesta water sharing treaty with Bangladesh, a key bilateral agreement that has been pending between the two countries for over a decade.

What is India's stand?

After Mr. Modi's comment, Foreign Secretary Vinay Kwatra told the media that the discussion "between the two leaders was less about water sharing per se, and more about the management of the water flows within Teesta". West Bengal Chief Minister Mamata Banerjee took issue with the Centre's stand. On June 24, she wrote a letter to Mr. Modi conveying her strong reservation that no discussion on the sharing of Teesta waters should be taken up with Bangladesh without the involvement of the State.

The Ganges-Brahmaputra Basin



Why is Bengal upset?

Ms. Banerjee pointed out that if Teesta's water is shared with Bangladesh, lakhs of people in north Bengal will get severely impacted. This is not the first time she has voiced her opposition to the proposed water sharing agreement of India with Bangladesh. In July 2019, the Trinamool Congress chairperson admitted that Bangladesh is hurt because the Teesta waters could not be shared and added, "If I had the ability, I would have definitely shared Teesta waters with them." In 2017, the Chief Minister had also referred to an alternative proposal of sharing waters of the Torsa, Manshai, Sankosh and Dhansai rivers but not Teesta.

In all, 54 rivers flow between India and Bangladesh and sharing of river waters has been a key bilateral issue. India and Bangladesh agreed on the sharing of waters of the Ganga in 1996 after the construction of the Farakka Barrage and by the 2010s the issue of sharing of the Teesta came up for negotiation. In 2011, during the United Progressive Alliance-II government, India and Bangladesh were close to signing an agreement on the Teesta but Ms. Banerjee walked out of the deal, and since then, the agreement has been pending.

What is the proposal?

In 2011, when the proposal for sharing Teesta water was drawn up, it was said India would get 42.5% and Bangladesh 37.5% of the river water from December to March.

A tributary of the Brahmaputra, the Teesta river originates from the Tso Lhamo Lake at an elevation of about 5,280 metres in north Sikkim. The river travels for about 150 km in Sikkim and 123 km in West Bengal, before entering Bangladesh from Mekhligunj in Cooch Behar district; it flows another 140 km in Bangladesh and joins the Bay of Bengal. Teesta is Bangladesh's fourth largest trans-boundary river and its floodplain covers an area of 2,750 square kilometres in Bangladesh. But 83% of the river's catchment area lies in India and the remaining 17% is in Bangladesh, supporting 8.5% of its population and 14% of its crop production.

What are the political considerations?

While the Awami League government in Bangladesh is facing questions from the Opposition about the delay in inking an agreement on the Teesta, the dams for hydro-electric power generation in Sikkim and the Teesta Barrage Project at Gazoldoba in West Bengal is making the flow of the river erratic in Bangladesh, leading to either floods or scarcity of water. The visit of a technical team from India to discuss conservation of the Teesta in Bangladesh also comes amid the backdrop of China proposing major dredging work on the river and building reservoirs and embankments in 2020. The Bangladesh government has put the proposal on hold for the past four years.

Soon after returning to Bangladesh, Prime Minister Hasina announced that her country would accept India's proposal to develop the Teesta River basin. Ms. Banerjee raised questions about the health of the Teesta river after the construction of a series of hydropower projects in Sikkim, deforestation in upper catchment areas and impact of climate change. She expressed surprise that no concrete steps have been taken by the Ministry of Jal Shakti to restore the river to its original form and health on the Indian side when a bilateral cooperation between India and Bangladesh for restoration of Teesta in Bangladesh is being proposed.

Environmental activists have also been raising questions on the ecological impact of hydro-electric projects on the river. In October 2023, a glacial lake outburst triggered floods in the Teesta basin that claimed hundred lives and destroyed the Teesta III hydroelectric dam.

Sharing of waters of transboundary rivers have been mandated by international laws including The Helsinki Rules on the Uses of the Waters of International Rivers in 1966. Article 253 of the Indian Constitution gives powers to the government to enter any transboundary river water-related treaty with a riparian state.

Why is Bengal talking about Ganga treaty?

The Ganga water sharing treaty with Bangladesh completes 30 years in 2026 and a renewal of the agreement is on the cards. The Trinamool Congress chairperson has pointed out that water sharing with Bangladesh has changed the Ganga's morphology and affected lakhs of people in West Bengal owing to river erosion.

"Lakhs of people have been displaced from their habitation rendering them homeless and also leading to their loss of livelihood. The reduced silt load in Hooghly has impeded the nourishment of the Sundarban delta," she wrote in the letter to the Prime Minister.

Relevance: GS Prelims; Economics

Source: The Hindu

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