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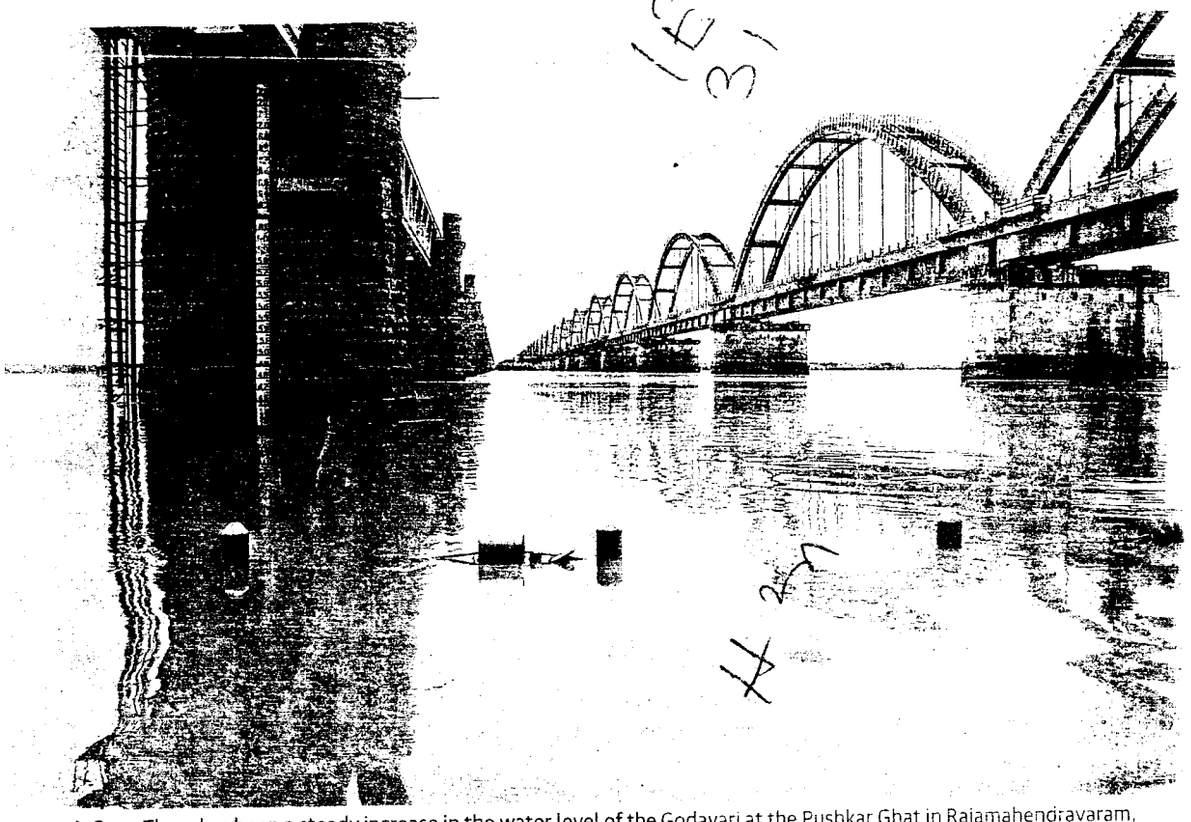
1
Covering L., YIS

On the rise



Heavy inflow: There has been a steady increase in the water level of the Godavari at the Pushkar Ghat in Rajamahendravaram, Andhra Pradesh, due to heavy rain. The water level reached 46 feet on Wednesday. • S. RAMBABU

Gujarat govt plans to relocate 15 villages hit by floods

EXPRESS NEWS SERVICE
GANDHINAGAR, AUGUST 30

THE GUJARAT government on Wednesday "in-principle" decided to relocate 15 villages severely affected by the recent flood in Banaskantha and Patan districts.

The relocation would be carried out if 75 per cent population of these villages approve of the move. The government has decided to adopt the "model of relocation" followed in Kutch after the 2001 earthquake.

"These villages are located in low-lying areas and were also affected during the 2015 flood. They will now be moved to higher ground in nearby locations," Deputy CM Nitin Patel told reporters after a Cabinet meeting chaired by CM Vijay Rupani on Friday.

Patel noted that requests for relocation have come from the villagers and sarpanches.

The idea of relocating the villages was mooted by the CM when he was camping in the two districts recently to oversee relief work. "We have to now decide whether we want to live in the same place. The (Banas) river's course got flooded in 2015 as well as 2017. Do we have to do relief work every time?. We now have to move out of the river's course. have to shift to another place" Rupani had told a gathering at Banaskantha's Kuda village.

The state government has decided to form three committees for this purpose. The state-level committee would be headed by the CM. The other two would be district-level committees. The one in Banaskantha would be headed by Shankar Chaudhary, the state minister for health, while committee for Patan would be headed by Dilip Thakore, minister for disaster management.

FOUR DROWN IN SWOLLEN RIVERS

Vadodara, Rajkot: Four persons drowned in swollen rivers and streams in Chhota Udepur and Rajkot districts of Gujarat on Wednesday. Two persons drowned in Hiran river in Chhota Udepur district. In Saurashtra region, a youth drowned while swimming in the flooded Aji river in Rajkot city. **ENS**

WHEN IT POURS

Monsoon continues to be misunderstood, flood governance is still about ad hoc relief measures. This needs to change

IN APRIL, THE India Meteorological Department's first long-range forecast predicted a "normal" monsoon. The department reiterated this forecast in early June. But the monsoon this year has been all about inordinate amounts of rainfall. Parts of Assam, Bihar and Gujarat are submerged in historic levels of floodwater. On Tuesday, Mumbai was lashed by 315 mm of rainfall — its worst deluge since the catastrophic floods of July 26, 2005. Two weeks ago, Bengaluru experienced its heaviest downpour in 120 years. The Karnataka capital, though, was back to normal in two days and the Met department has said that the worst is over for Mumbai. The total rainfall in the country, this year, might also vindicate the department's forecast of a "normal" monsoon. But the weather patterns during the rainy season — days of intense downpour sandwiched between spells of dry weather — raise questions about our understanding of the monsoon, as well as about the ways in which we prepare for and deal with floods.

More than 100 districts have received over 100 mm of rainfall in a day. This means that people in these places have had to contend with a fortnight's rainfall in a day — and at places much more than that. Mount Abu, for example, got over half its annual rainfall in two days. Bengaluru got about 30 per cent of its monsoon rainfall on one day. Chandigarh received nearly 15 per cent of its annual rainfall in a few hours in the third week of August. Climate scientists have been issuing warnings about such extreme rainfall for more than a decade. A 2013 Intergovernmental Panel on Climate Change report warned that Mumbai remains vulnerable to rainfall of the kind that led to the 2005 floods. "About 2.8 million inhabitants in Mumbai are exposed to coastal flooding, but this figure is projected to increase to 11 million by 2070 with exposed assets growing from $ 46.2 billion to $ 1.5 trillion in the same period," the report noted. It pointed out that the indiscriminate destruction of wetlands — sponges that soak up excess rainfall — has compromised the city's capacity to deal with floods. That holds true for Bengaluru, Guwahati, and several other cities of the country.

There has been little inclination to place the restoration of wetlands at the centre of flood control programmes. Flood governance in the country has not gone beyond ad hoc relief measures and building embankments. The floods in Assam and Bihar this year have shown — for the umpteenth time — that embankments are no bulwarks against the raging rivers. Of course, what is true for Assam and Bihar may not be so for Mumbai or Bengaluru. But it's also clear that we require fresh thinking on how to prepare for the monsoons and deal with floods.

Covering L... YIS

News item/letter/article/editorial published on 31/8/17 in the

Hindustan Times
Statesman
The Times of India (N.D.)
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Tribune
Hindustan (Hindi)
Nav Bharat Times (Hindi)
Punjab Keshari (Hind')
The Hindu
Rajasthan Patrika (Hindi)
Deccan Chronicle
Deccan Herald
M.P.Chronicle
A.a. (Hindi)
Indian Nation
Nai Duniya (Hindi)
The Times of India (A
Blitz

and documented at Bhagirath(English)& Publicity Section, CWC

Après le déluge

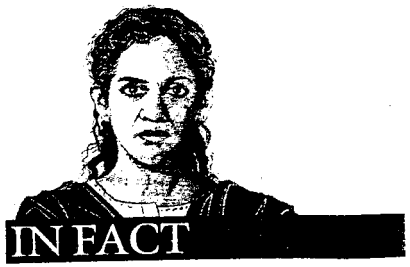
Mumbai's flood shows the need to improve infrastructure and protocols in urban centres

The return of the deluge to Mumbai and the paralysis suffered by the city bring up the question of why Indian cities are unable to improve their resilience to extreme weather events. As the nucleus of financial activity, Mumbai's losses naturally have national implications. The flooding reduced trading volumes in the stock market, and thousands had to stay on in their offices after the workday. All this brings back memories of the disaster of 2005 caused by over 99 cm of rainfall in a 24-hour period leaving hundreds dead. There has been distressing loss of life this time too, but on a lower scale. Beyond the political wrangling on bad management, such extreme weather events trigger valuable research and analysis on developing better prediction and management systems. Researchers at the Indian Institute of Technology in Mumbai have, for instance, provided pathways for nearly 450 sq. km of the city to better prepare for monsoonal floods, using the worst-case scenario of a dozen years ago as the baseline. There should naturally be an inquiry into whether the reforms proposed over time, ranging from clearing of drainage channels and removal of encroachments to the creation of holding ponds to temporarily store large volumes of water, gained any traction. Over time, mangrove wetlands in the eastern fringes and drain paths in the north-west of the city have lost much of their capacity owing to unplanned development. The latest downpour underlines why loss of urban wetlands should be halted and compensatory lakes created.

Learnings from Mumbai are important for other cities as well, to prepare for a future in which scientists think there will be more days of short but intense rain spells. Numerical weather prediction has consistently improved. Researchers from IIT Gandhinagar published a forecast on social media warning of 100 mm-plus rainfall for the region on August 29, four days ahead. These remarkably accurate models open up possibilities for authorities to evacuate vulnerable sections early, residents to stock up on essential supplies and disaster management authorities to review options. Indian cities are poorly planned and managed, exposing them to cyclical weather havoc; it is imperative that civic bodies produce flood risk maps and restrict development in the areas. Given that monsoon flooding is inescapable, citizens and communities need to prepare. Putting new constructions on stilts, retrofitting houses to locate electrical installations high above, and creating a first response protocol are all important. Introduction of insurance cover for householder losses will provide financial protection and, crucially, require city administrations to provide professional management. If there is a single priority that every city needs, it is to reopen the veins of natural drainage that have been callously built over. Mumbai this year and Chennai's disastrous flood of 2015 underscore that lesson.

Covering L. YIS

July 2005 deluge was followed by much planning, Tuesday shows city still cannot deal with heavy rain



IN FACT

BY KAVITHA IYER

EXPRESS EDITORS INTERPRET

TUESDAY'S RAINFALL was only one-third of the rainfall that caused the deluge of July 26, 2005. Yet flood waters did not recede hours after the rain stopped, just like in 2005. And the reasons remain much the same.

The old lot of Mumbai's municipal engineers often said that the giant underground drain or sewer in which a murderous Amitabh Bachchan is chased and fatally shot by his police inspector son, also Bachchan, was inspired by real South Mumbai drains, wide enough to accommodate several gun-toting men, framed by masonry walls. That was colonial engineering dating back to 1860-1900, some of it continuing to serve Mumbai's flood waters, but limited to South Mumbai.

The suburbs, where the bulk of Mumbai's millions live, are served mostly by roadside drains and the nullah system, open drains in which hundreds of tonnes of garbage are chucked each year by citizens, to be removed in an ever-inadequate pre-monsoon 'desilting' exercise. Much of these nullah networks also have long routes, flowing several kilometres through congested localities before discharging into the sea, often through outfalls located below mean sea level. This simply means tidal flow rushes into the city, and if it's raining heavily when the tide is sufficiently high, then drainage is impossible.

But Tuesday's highest tide had subsided by evening, and flood waters in many places — railway tracks, areas near the Mithi and Dahisar rivers, near large nullah systems — did not recede even past midnight. Notwithstanding the BMC's and Railways' claims, this is evidence of inadequately declogged drains. Dozens of de-watering pumps for localised relief also suffered technical glitches, as conceded by the municipal commissioner.

Planned, unplanned

Planners with a long-term view have also said part of the problem is that Mumbai's flood waters are simply discharged in the Arabian Sea through gravity. There are international examples of balancing reservoirs and deep tunnel systems for underground storage of flood waters to be pumped out later when the tides are low. Best practices also involve adopting and conserving rainwater within a catchment area itself, through local storage and recharging alongside filtration systems (Mumbai's flood waters are among the dirtiest).

While Mumbai's drains had an average capacity of 25 mm of rain every hour, the system was augmented to tackle 50 mm of rain per hour — in theory at least. And yet experts, including members of a fact-finding committee set up after the July 2005 deluge, have conceded that at least major roads and traffic junctions should have drainage systems capable to tackle floods with a once-in-100-years probability.

In the aftermath of the 944-mm deluge, the state and civic agencies undertook a series of projects, key among them being the decision to finally implement the Brimstowad (Brihanmumbai Storm Water Drainage) project, whose cost had more grown manifold since being proposed in the 1990s. Resources were spent on measures such as standard operation protocol for disaster management units, better-equipped disaster cells and control rooms, better forecasting systems, etc.

Yet, incredibly for a city by the sea, a range of long-term measures, accepted in principle, were never undertaken or were left incomplete. Recommendations to protect the Sanjay Gandhi National Park within the city limits, construct detention basins for flood water, demarcate flood-prone zones on Development Plan sheets, were never undertaken. An initiative to prepare contour maps for flood modelling system remains incomplete — civic officials confirm that contour maps for drains were prepared, not for the rest of the city. (This means in heavy rain, municipal engineers know which drains' contours will allow for retention of water longer, but no scientific information exists, for example, on which direction the Mithi river's flood waters will rush out). Other recommendations to empower the Maharashtra Pollution Control Board to ensure compliance of environmental regulations by municipalities, a Mumbai Watershed Council to advise all agencies on planning for days like Tuesday, etc were never undertaken.

The rivers

River floods are different from floods caused by undue, sudden pressure on local drainage networks. By Tuesday evening, it emerged that the Dahisar and Mithi rivers were in spate. The arterial Western Express Highway and Lal Bahadur Shastri Marg were both inundated partially because of the overflowing rivers. Mumbai and its immediate suburbs are home to at least four separate river systems. The Mithi runs nearly 18 km, the Dahisar about 12 km, Poisar and Oshiwara nearly 7 km each. Each of these is now little more than a mother drain for suburban nullah networks, extensive encroachments reducing their width to barely a couple of metres in some places.

In fact, one of the key recommendations of an extensive report submitted by a fact-finding committee after the 2005 deluge was to restore degraded rivers and river-banks, to probe pollution and encroachment problems for each river, identify specific boundaries for each river, establish buffer zones, etc.

In reality, a grand plan for the rejuvenation of the Mithi, responsible for the worst destruction in the 2005 deluge, has been abandoned midway. A holistic revival of the river systems and early warning systems for those living along their banks have been long ignored alongside other related recommendations on reviving or upgrading hill slopes, lakes and ponds.

Response

Casualties were fewer than in July 2005, and it was apparent Tuesday that the state's response has come a long way since then.

The depth and reach of social media have made Twitter, Facebook and WhatsApp critical tools for dissemination of advisories and real-time situation updates. Mumbai's Doppler radar-based weather forecasting system was recommended after the 2005 deluge, and installed. Various agencies, connected via hotline after 2005, coordinated effectively.

But advisories to stay indoors came too late, only after the trains had slowed due to submerged tracks and after the first visuals of cars and people stuck in knee-high waters emerged. Also, the CCTV camera network, installed after the Mumbai terror attack, can now monitor areas of traffic congestion and rising floods. It's unclear yet how well or how early on Tuesday this infrastructure was used to manage the traffic chaos.

Early warning advisory systems the world over are built on the understanding that lead time available for gauging the intensity of an impending disaster and disseminating information is a very small window. For Mumbai, flood warnings based on the intensity of rain in any 15-minute duration are easy to build. The tougher challenge will be drafting detailed but precise advisories that are accurate, localised, accessible to everybody including the millions not on Twitter and disseminated in a well-practised drill.

kavitha.iyer@expressindia.com

Leaving their submerged home in Assam

ELSEWHERE THIS MONSOON

ASSAM

1141 MM, 157 DEAD

Over 55 lakh affected in 3 successive waves, crops lost over nearly 4 lakh hectares, nearly 30,000 houses damages. Prime Minister Narendra Modi announced a Rs 2,000-crore package for various flood-mitigation measures in the Northeast. Among other states, Mizoram has received 2,553 mm, Meghalaya 2,109 mm, Arunachal 1,386 mm (48 deaths), Tripura 1,554 mm (6 deaths), Nagaland 1,091 mm (19 deaths) and Manipur 596 mm (22 deaths)

BIHAR

806 MM, 514 DEAD

Crops over 63.67 hectares damaged, over 1.71 crore people affected, 293 animals dead. The Prime Minister has announced Rs 500 crore for the state.

GUJARAT

723 MM, 247 DEAD

Crops worth Rs 867 crore damaged over 10.98 lakh hectares, 6.44 lakh farmers affected. Rs 500 crore announced by PM Modi.

UTTAR PRADESH

493 MM, 103 DEAD

Nearly 27 lakh affected, crop loss estimated at over Rs 98 crore

बाढ़ का कहर और सब्र का बांध

उत्तर प्रदेश के एक बड़े इलाके में सूखा तो नहीं, पर लगभग हर साल बाढ़ जरूर आती है और भुक्त भोगियों के अलावा सबको खुश कर देती है।

राय की राय

विभूति नारायण राय
पूर्व आईपीएस अधिकारी

साहब खुश हैं। नई तैनाती पर आते ही अच्छी बाढ़ मिल गई। मेरे सामने बैठे वे बाढ़ की वजह से रात-दिन की अपनी व्यस्तता के किस्से सुना रहे हैं और मैं उनकी आवाज से छलकती खुशी पकड़ने की कोशिश कर रहा हूं। पी साईंनाथ अपनी किताब *एवरी वन लव्स अ गुड ड्राउट* में ऐसे सूखे का जिक्र करते हैं, जिसका नेता, दलाल और अफसर, सभी बेसब्री से इंतजार करते हैं। यहां सूखा तो नहीं, पर लगभग हर साल बाढ़ जरूर आती है और भुक्त भोगियों के अलावा सबको खुश कर देती है।

चित्रांकन: सुदर्शन मल्लिक

दियारे में पसरे बीसियों गांव इस बार भी बाढ़ के पानी से घिरे हुए हैं। पिछले कुछ वर्षों की तरह इस साल भी मैं गांव आया हुआ हूं और इस बार भी कॉमरेड हरमंदिर पांडे बाढ़ का प्रकोप दिखाने ले जाते हैं। साथ में एक्टिविस्ट हिना देसाई हैं, जो डूबे हुए बहुत से गांवों में घरेलू हिंसा और पितृ सत्ता के खिलाफ काम कर रही हैं। उनके काम का असर ही है कि इस पिछड़े इलाके में उनको कार ड्राइव करते देख लोग अचकचा कर खड़े नहीं हो जाते।

हमारी कार महुला गढ़वल बांध पर धीमी रफ्तार से चल रही है। बांध हर साल डूबे गांवों के उजड़े परिवारों को शरण देता है। उसकी सड़क की दोनों पटरियों पर गृहस्थियां बस जाती हैं। चूल्हे सुलग रहे हैं और भीगी लकड़ियों को फूंक-फूंककर आग जलाने के प्रयास में औरतों की आंखें धुंवठ रही हैं। अधनंगे बच्चे बांध पर ही खेल रहे हैं, लड़-झगड़ रहे हैं और उनमें से कुछ शौच के लिए बैठे हैं। हमारी कार उनके बीच से रास्ता बनाती हुई गुजर रही है और हम सभी उदास नजरों से बांध के दामन में बसे और एक-एक कर पीछे छूटते दाम महुला, सहबदिया, बरामदपुर, गांगेयपुर, मठिया, सहनूपुर, हाजीपुर, राजा [illegible], चक्की [illegible], इस्माइलपुर, हैदराबाद को देख रहे हैं। 10-15 गांव पिछले दो-तीन दशकों में नदी में बह गए और उनका नामोनिशां तक मिट गया। बांध पर खड़े एक बुजुर्ग उंगली के इशारे से याद दिलाते हैं- महाजी, औघड़गंज, शिवपुर, रसूलपुर, शंकरपुर, इब्राहीमपुर, हैदराबाद, रोशन इब्राहीमपुर, रोशनगंज उर्दिहा, देवारा इस्माइलपुर... आज जिन गांवों में हम जिंदगी चलती-फिरती देख रहे हैं, क्या वे भी कुछ दशकों में स्मृति मात्र रह जाएंगे?

रास्ते में बाढ़ राहत चौकियों के नाम पर थोड़ा-बहुत सरकारी तंत्र दिखाई देता है। हमारे कार रोकते ही पीड़ित इस उम्मीद से कुछ न मिल पाने की शिकायतें करते हैं कि शायद हम राहत बांटने वाले हैं और सरकारी अमला हमें राजधानी से आए पत्रकार समझकर सफाई देने लगता है कि वे दिन-रात एक कर लोगों तक राहत पहुंचा रहे हैं, फिर भी इन्हें संतोष नहीं हो रहा है। दोनों पक्ष यह जानकर निराश हो जाते हैं कि हम तो सिर्फ तमाशबीन हैं और हमारी कोई आधिकारिक हैसियत नहीं है। इसी से यह भी स्पष्ट हो जाता है कि जितना बड़ा दुख लोगों के ऊपर टूट पड़ा है, उसकी भरपाई सरकारी सहायता नहीं कर सकती। पानी बीच-बीच में उतरता है, लेकिन वापस लौटता पानी ज्यादा कटान करता है।

हमारी नदी घाघरा है, जो अयोध्या में सरयू नाम से जानी जाती है। दक्षिणी तिब्बत के ऊंचे पर्वत [illegible] से निकल कर नेपाल में कर्णाली नाम की यह नदी उत्तर प्रदेश और बिहार के मैदानी इलाकों में बहती हुई बलिया और छपरा के बीच गंगा में मिल जाती है।

ज्यादातर इलाकों और साल के अधिकतर महीनों में इसका व्यवहार शांत और अनुशासित रहता है। अपने इर्द-गिर्द पसरे बहराइच, सीतापुर, गोंडा, फैजाबाद, अयोध्या, टांडा, राजे सुल्तानपुर, दोहरी घाट, बलिया आदि इलाकों में प्रचुर मात्रा में शाक-सब्जी, गेहूं-धान और मछली देने वाली नदी अभी भी काफी हद तक प्रदूषण मुक्त है। शायद इसके दामन में बसे नगरों का बहुत अधिक औद्योगिक विकास न होना इसके लिए शुभ साबित हुआ है। रास्ते में कई जगह इससे नहरें निकली हैं और बड़े इलाके में किसान उन पर निर्भर हैं। बाढ़ का पानी जब लौटता है, तो गोरखपुर, मऊ और आजमगढ़ की सीमाओं को छूने वाले जिस दियारे में हम घूम रहे हैं, वहां लगभग हर वर्ष विनाशलीला दिखाता है। इस इलाके में बाढ़ आमतौर से अगस्त-सितंबर में आती है, जब नेपाल की नदियां उफनती हैं।

एक जगह हमारे रुकने पर आस-पास प्राइमरी स्कूल के कुछ अध्यापक इकट्ठे हो जाते हैं। मुझे याद आता है कि इनमें से कुछ कॉमरेड हरमंदिर पांडे के साथ बाढ़ के स्थाई समाधान के लिए एक आंदोलन भी चलाते रहे हैं। पिछले वर्ष तो उन्होंने सिंचाई मंत्री को सैकड़ों लोगों के हस्ताक्षर वाला एक पत्रक भी दिया था। उनके पास बाढ़ का स्थाई समाधान है। वे बांध पर खड़े-खड़े अपने उंगलियों के इशारे से सुदूर एक-दूसरे बांध का खाका खींचते हैं, जो बाढ़ के इस पानी को दियारे में फैलने से रोकता हुआ आगे गंगा की तरफ ले जा सकता है। इससे डूब में आने वाली लाखों एकड़ जमीन खेती के लिए उपलब्ध हो सकती है।

लेकिन इसके लिए तो बहुत बड़े बजट की जरूरत पड़ेगी? मेरी इस शंका पर एक अध्यापक मुस्कराते हैं, उससे तो कम ही लगेगा, जो लखनऊ में गोमती के सुंदरीकरण पर खर्च किया गया है। कौन समझाए कि राजधानियों को सुंदर रखने के लिए कितने बड़े इलाके को कुरूप रहना पड़ता है। मैं चुप रहता हूं। बहस इस तरफ मुड़ जाती है कि इस बार तो मुख्यमंत्री इसी इलाके के हैं। उनके अपने जिले गोरखपुर का इलाका भी प्रभावित है। शायद कुछ हो जाए। इसी शायद में लोकतंत्र की सांस अटकी [illegible] वापस लौट रहे हैं और रास्ते में बोल्डर [illegible] कुछ ट्रक जा रहे हैं। हर साल बाढ़ आने पर बांध को बचाने के लिए बोल्डर डाले जाते हैं। पांडेजी का अनुमान है कि पिछले 10-15 साल में जितने बोल्डर नदी में डाले गए, उनसे तो एक समांतर बांध बंध जाता। पता नहीं कितनी सच्चाई है, पर ये बोल्डर ही तो बाढ़ को अच्छा बनाते हैं। इन्हीं का जिक्र साईंनाथ ने किया है और इन्हीं की चर्चा से साहब के चेहरे पर संतुष्टि की मुस्कान छा रही है।

(ये लेखक के अपने विचार हैं)