



तकनीकी पत्रिका विषय-सूची

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(Technical Journals)

(A Monthly Current Awareness Service from Technical Journals)

Vol.4 No.01, January, 2020

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Down to Earth, Vol.28 No.14, 1-15 December 2019

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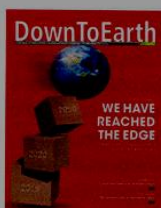
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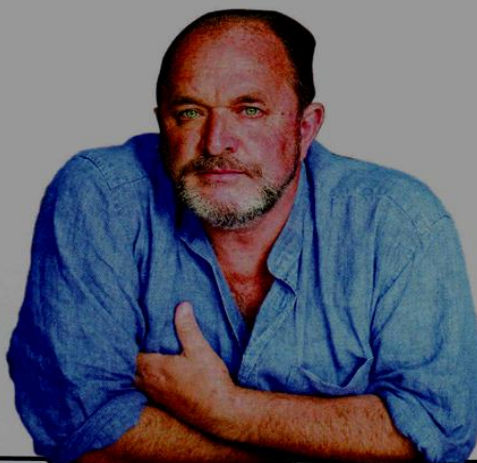
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DESIGN
Ajit Bajaj, Vijayendra
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Sorit Gupto and
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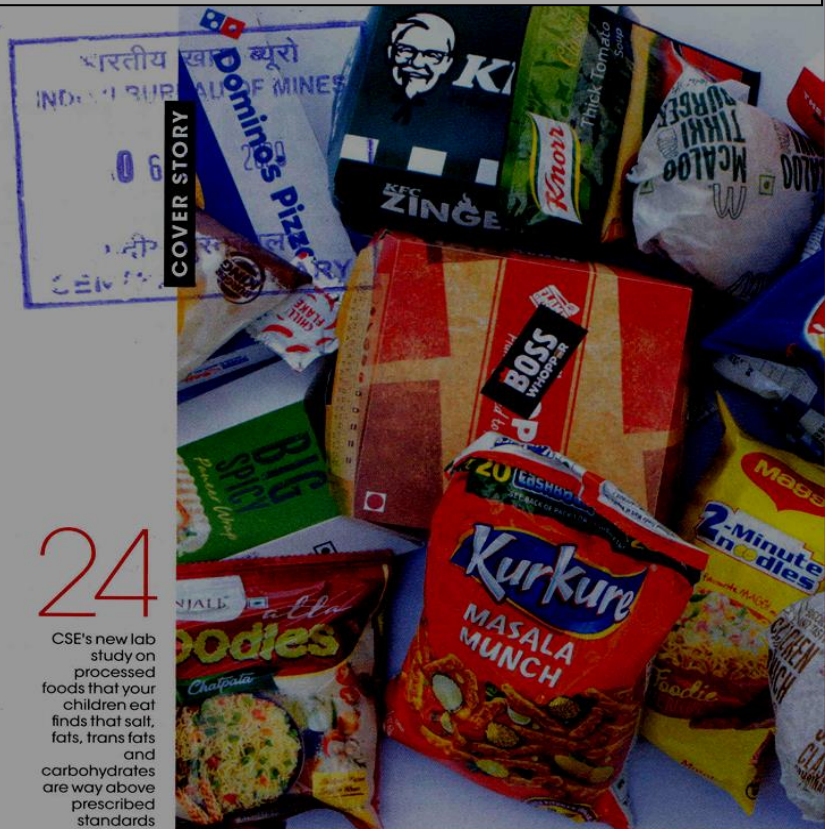
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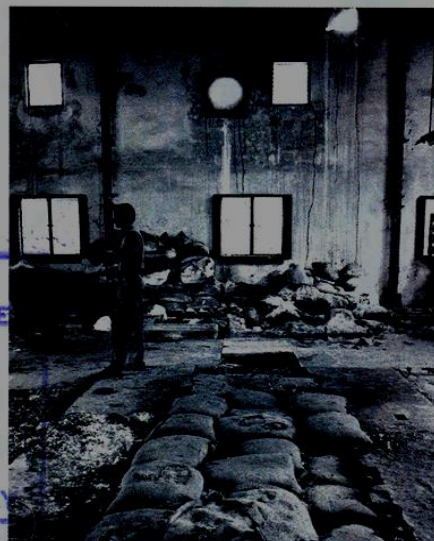


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Climate Change and Crop Yields

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Burden of NCDs

To counter the growing risk posed by non-communicable diseases, a drastic overhaul of the health system as well as behavioural changes is required. **page 45**

Student Deaths a National Loss

- 7 Suicides of young students from marginalised and minority sections point to a national failure.

Democracy under Surveillance

- 8 The direct threat of surveillance to civil and human rights is a global concern.

Money Bills and the Future of the Rajya Sabha

- 10 The Supreme Court's recent constitution bench judgment in *Rojer Mathew v South Indian Bank Ltd* has rightly cast doubts on the correctness of the interpretation of Article 110(1) of the Constitution.

—Alok Prasanna Kumar

Directly Elected Mayors: Democratic Urban Governance

- 12 The introduction of directly elected mayors can change the landscape of urban local body governance and the nature of citizens' participation in the management of their cities. —Niraj Kumar

The Judiciary and the Stressed Assets Resolution

- 16 The outcome of the challenge to the judiciary-led resolution processes designed by the Reserve Bank of India for lenders and borrowers in the past and the recent judicial intervention are examined. —M K Datar

The Impossibility of 'Dalit Studies'

- 20 The meaning and implications of the presence of "Dalit studies" in the pedagogical content of higher education in India need to be analysed. —Ankit Kawade

Sustainable Development through Diversifying Pathways

- 32 In order to move beyond modernising development pathways linked with grave unsustainability challenges, plural pathways structured around caring and cooperative (human-nature) relations may be required in each field. —Saurabh Arora, M Vijayabaskar, Divya Sharma & Andy Stirling

Climate Change and the Productivity of Rice and Wheat Crops

- 38 The seasonal trends in climate variables and their impact on rice and wheat yields in Punjab are assessed using daily data of temperature and rainfall by district from 1986 to 2015. —Sunny Kumar, Baljinder Kaur Sidana

Non-communicable Diseases, Affluence, and Gender

- 45 Whether the burden of non-communicable diseases has shifted to older men and women, and whether it varies by marital status and affluence of the household have been examined based on the 60th and 71st rounds of the National Sample Survey for 2004 and 2014. —Pratima Yadav, Veena S Kulkarni, Vani S Kulkarni & Raghav Gaiha

Aggregators, Driver-partners and the State

- 55 By reviewing the ground realities with regard to aggregator companies' blogs, their promises, and six different policy drafts aimed at regulating Uber and Ola, the need to see beyond and question the discourse of scientific rationality that frames their operations is highlighted. —Chhavi Sharma

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One Year of Ayushman Bharat

With shortcomings plaguing Ayushman Bharat's implementation at multiple levels, there is a need to align the scheme with the universal health coverage framework to see to its success as a social security net. **page 13**

The Life of a Chowkidar

Instead of appropriating the "chowkidar" as a political tool, policy priority should be to ensure the job security of the real chowkidars, whose financial and working conditions are deplorable. **page 15**

Workings of the *Gram Kachahary*

The *gram kachahary* system in Bihar is an innovative dispute resolution system conducting arbitration and reconciliation at the village level, but is faced with financial, administrative, infrastructural and personnel-related challenges. **page 29**

Approaching Kashmir through Theoretical Lenses

- 10 The National Democratic Alliance government's Kashmir policy can be analysed through the lenses of security studies and peace studies.
— *Ali Ahmed*

Ayushman Bharat: Hurdles to Implementation One Year On

- 13 Taking into consideration the model of Ayushman Bharat, some valid questions regarding the operationality and feasibility of the scheme are examined. — *Shah Alam Khan*

The Real Chowkidars of India: Lives behind the Metaphor

- 15 The deplorable work conditions of chowkidars (watchmen) are studied and a case is made for ensuring their job security instead of appropriating them as a metaphor for political gains. — *Sarthak Gaurav, Rayees Ahmad Sheikh*

Avitourism in Uttarakhand

- 18 It is argued that avitourism has the potential to counter park-centric and tiger-centric tourism. However, there are many challenges to it due to the lack of sound practices and policies. — *Neha Pande, Arun Kumar Sharma*

Issues of Compliance in GST: Reflecting on the CAG's Report

- 22 Debates on compliance audits of the goods and services tax will have to move beyond mere "invoice matching" to more holistic approaches for data reconciliation. — *Sacchidananda Mukherjee*

Gram Kachahary in Rural Bihar

- 29 How the judicial institutions in rural Bihar work, the challenges they face while settling disputes, and the ways these challenges could be met are examined. — *Mahi Pal*

Review of Urban Affairs

Six articles provide a social and ecological analysis of the increasing urban crisis of waste and pollution.

Three Moments in the Life of Landfills in Mumbai City

- 36 Waste in the landfills of Mumbai possesses an agency of its own that disrupts the social, haunting reclaimed real estate with its fugitive gaseous presence. — *Shireen Mirza*

Urban Waste and the Human-Animal Interface in Delhi

- 42 The role of urban waste in producing human-animal ecologies involving livestock and wild birds is discussed. — *Nishant Kumar, Aparajita Singh & Barbara Harriss White*

From Balmikis to Bengalis

- 48 The reorganisation of informal household garbage collection work in Delhi is analysed, as migrants from eastern states like West Bengal have begun doing manual waste work. — *Dana Kornberg*

Manual Scavenging's Reconstitution in 21st-century Bengaluru

- 55 Urban manual scavenging is shown to be an emergent application of caste power that resolves ecological impasses in contemporary sewerage.
— *Shreyas Sreenath*

Waste Picking, Data Activism, and the State

- 61 How a data-based NGO-state collaboration can provide the state with new modalities of intervention and control over informal labour and its unaccounted value chains are discussed. — *Harsha Anantharaman*

The Colonial Roots of India's Air Pollution Crisis

- 68 It is argued that the pathologisation of the Indian lung that once justified colonial-era segregation has made a troubling contemporary return.
— *D Asher Ghertner*

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- 77 *Abhishek Kumar* on how contemporary designers and architects would do well to revisit Gaston Bachelard's work; *Lakshmi Pradeep* on Ritwik Ghatak's storytelling being a reflection of society's expectation from artists; *Mukesh Manjunath* on how to keep a check on comedians who tell offensive jokes; and Last Lines by *Ponnappa*.

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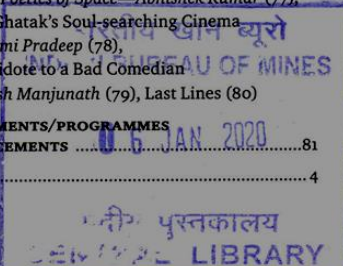
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- Literacy Achievement in India: Across the States and Over the Age Cohort
- ICDS Striving for Holistic Development: Insights from a Field Study in Uttar Pradesh

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The political plank of Hindi as the state language builds on over-reported official statistics of Hindi speakers, by bringing independent and even mutually unintelligible languages under the rubric of Hindi. **page 10**

Remembering N Krishnaji

An embodiment of simplicity, unending curiosity and principled intellect, Nidadavolu Krishnaji was perhaps the last of those polymaths who did not need institutional certification of their distinctions. **page 19**

India's Intergovernmental Transfers

Unconditional central transfers create a culture of aid dependency among Indian states, whereby the state governments use these transfers to garner political populism and hence undermine their growth effect. **page 29**

Speedy Urbanism

Rather than "fast" or "slow" urbanism, it is only a spatially sensitive combination of speed that can generate more equitable and sustainable outcomes of urbanisation, whether in the global South or the North. **page 36**

ICDS in Uttar Pradesh

Despite rapid expansion in coverage, the benefits of the Integrated Child Development Services are minimised by the poor service delivery, and lack of infrastructure and departmental coordination. **page 54**

Demanding the Wrong Kind of Justice

- 7 Why does society wait for a heinous crime to take place before it believes women?

Deepening Economic Slowdown

- 8 A strong expansionary fiscal stimulus is needed to revive aggregate demand in the economy.

Chasing the Improbable: Hindi as a Divisive Strategy

- 10 The promotion of the Hindi language as a political plank and the statistics for Hindi speakers are analysed against the framework of "state languages."
— G N Devy

The Invisible Collateral

- 13 The perspective on borrowing decisions derived from the community that emerges from India's household indebtedness survey can be used in credit risk evaluation and in policy formulation. — Silu Muduli, Shridhar Kumar Dash

Voluntary Relocation and the Violation of Forest Rights

- 17 Voluntary relocation of Adivasis from the Wayanad Wildlife Sanctuary has been going on since 2012, violating all existing legislations, including the Forest Rights Act, 2006. — Divya Kalathingal

N Krishnaji (1935–2019): An Excellent Teacher and Principled Intellectual

- 19 A principled Indian academic, N Krishnaji was a statistician whose work went far beyond his field and who gave great importance to the pursuit of knowledge.
— Chandan Mukherjee, Deepita Chakravarty, A V Jose, Nata Duvvury, Rammanohar Reddy & Thomas Isaac

P S Krishnan and IAS as an Instrument of Social Change

- 22 P S Krishnan's stint at pioneering a social movement for the Dalits and tribals among the bureaucracy is explored in this tribute.
— Raja Sekhar Vundru

Central Transfers and Tax Generation Efforts of Indian States

- 29 The impact of federal transfers on revenue collection by state governments in India in 1992–2013 is re-examined, raising serious concerns regarding the pattern of intergovernmental transfers in India. — Avijit Debnath, Nairita Battacharjee

Towards 'Slow' and 'Moderated' Urbanism

- 36 The city-building process in the global South is characterised by the production of "fast" cities, while many cities in the global North are moving towards alternative development regimes under the "slow city" movement.
— Abdul Shaban, Ayona Datta

Literacy Achievement in India

- 43 The progress in literacy among the Indian states is evaluated here from an age cohort perspective, which would be helpful to guide policymakers in targeting households for adult literacy programmes. — Vachaspati Shukla, Udaya S Mishra

ICDS Striving for Holistic Development

- 54 Drawing on findings from field surveys administered in nine districts in Uttar Pradesh and data from 90 anganwadis, the constraints to the effective functioning of the Integrated Child Development Services are revealed.
— Nomita P Kumar

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Aporetic Nationality

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Veracity of Child Nutrition

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Benefits of Identity-based Voting

The welfare benefits captured through identity-based voting can outstrip the gains of reduced agency costs such that the need for parochial voting is never eliminated. **page 43**

Alternative Subservience

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- 7 The Citizenship (Amendment) Bill opens up multiple fault lines that would undermine the diverse basis of Indian society.

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- 8 Poor and migrant labour pays the price for India's "enterprising" cities.

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- 10 The Reserve Bank of India's guidelines on compensation for top management of banks address an important lacuna in the existing guidelines: non-inclusion of stock options in variable pay. — *T T Ram Mohan*

ASHAs' Health Services: Social Service or Care Work?

- 12 The intrinsic commitment of the accredited social health activists towards the well-being of the community is unduly exploited by the state in the name of "volunteerism." — *Rochana Kammowanee*

Child Undernutrition in India: A Tale of Two Surveys

- 15 Does the substantial decline in child undernutrition estimates revealed by the Comprehensive National Nutrition Survey, 2016–18 data, point to an anomaly in data or estimation? — *Sunny Jose*

Neglect of Household Biomedical Waste

- 19 While India has had a biomedical waste management rule since 1998, which was modified for ease in 2016, household biomedical waste has been neglected. — *Aarthy Ramasamy, Sambit Dash*

The Citizenship (Amendment) Bill, 2016 and the Aporia of Citizenship

- 28 Two contradictory tendencies are represented in the National Register of Citizens making citizenship contingent on conditions of descent specific to each state, and the Citizenship (Amendment) Bill, 2016 making religion a principle of distinguishability in the creation of bounded citizenship. — *Anupama Roy*

Micro-level Price Setting Behaviour in India

- 35 The evaluation of stickiness in price adjustment by using the Consumer Price Index for Industrial Workers data suggests that the monthly frequency of price changes is greater for the food group and finds evidence of exogenous versus menu cost-driven pricing behaviour. — *Shesadri Banerjee, Rudrani Bhattacharya*

Jati, Local Public Goods and Village Governance

- 43 Using data from rural India, it is established that identity-based voting, driven by membership in social and informal networks, will lead to enhanced participation in welfare programmes, which in turn leads to increased consumption growth. — *Raghbendra Jha, Hari K Nagarajan & Anirudh Tagat*

School Choice in Rural India: Perceptions and Realities in Four States

- 51 The study across four states in rural India suggests that perceptions of teaching–learning, discipline, and safety of children in schools determine school choice among parents. — *Rahul Lahoti, Rahul Mukhopadhyay*

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- 61 *Saumya Agarwal* explores the critique of exclusionary politics and the apocalyptic telos in *Sacred Games*; *Vandana Dhoop* on finding integration as the answer to conflicts in the workplace; *Neethu Parvathy* and *A Balasubramanian* offer a peek into women's safety among the Mullu Kuruma, a tribal community in Wayanad; and Last Lines by *Ponnappa*.

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- 8 Rallying around for commitment to the Constitution has become imperative and urgent.

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—Alok Prasanna Kumar

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- 12 The rise in the unemployment rate in the recent years along with its convergence across states could be an indicator of a positive change in the economy, but this must not undermine the larger issue of employment creation, which has been a matter of great concern since long.
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- 17 The history of the political patterns in Haryana is traced and the ground realities of the changing electoral moods in the region are brought to the forefront. —Surinder S Jodhka

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- 25 The ways in which international trade policy could support climate policy achieve the goals of the Paris Agreement on climate change are examined here.
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- 31 The emergence of capital-infected cities and heterotopias is explored along with differential claims to urban “city”zanship using an interface with the Indian city as a context. —Apala Saha

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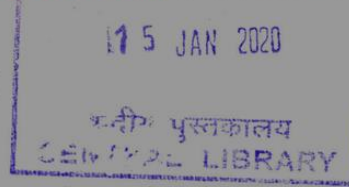
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The 2019 legislative assembly election results in Maharashtra revealed the transforming voting patterns that reasserted the significance of the role of caste. **page 33**

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- 8 Shrinking fiscal space in a decelerating economy is the novel threat to GST revenue compensation.

India's Grand Strategy Needs a Second Act

- 10 A confluence of disruptive factors has now made the business-as-usual approach simply unsustainable. — *Zorawar Daulet Singh*

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- 13 Forced immobility of women is a consequence of the violence and insecurity faced daily during the commute to and from work. — *Neha Prakash, Sonia George*

Students' Struggle against Assault on Public Education

- 16 The mass movement of the students of Jawaharlal Nehru University against the proposed hike in hostel charges recognises that the very idea of public-funded higher education is at stake. — *Avinash Kumar*

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- 19 Framing the conflict over Aarey as one between environment and development or trees and the metro sidelines the issue of making cities liveable for the people. — *Sulakshana Mahajan*

Assam's 2019 Verdict and the Anti-CAB Mobilisations

- 27 Despite the electoral success of the Bharatiya Janata Party in the general elections in Assam, the ongoing protests against the Citizenship (Amendment) Act could unsettle the calculations of the BJP in the state. — *Akhil Ranjan Dutta*

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- 33 The Bharatiya Janata Party's conscious efforts to colour the Maharashtra election campaign with national-level issues such as Article 370 did not gain as much traction this time as it did in the 2019 Lok Sabha elections. — *Vivek Ghotale, Mukta Kulkarni*

Reservation Policy for Backward Classes

- 40 This paper examines the extent and determinants of popular support for reservation policy for the Scheduled Castes and the Other Backward Classes in India, using an individual-level opinion survey data set. — *Jungug Choi, Narendra Kumar*

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- 47 Although the work of Karl Marx continues to cast an enormous influence on debates concerning the nature of capitalism, one of the least theorised dimensions of his body of thought is his conception of the society that must supplant capitalism. — *Peter Hudis*

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Consultant Editor:
Siobhan Lismore-Scott
Editor: Davide Ghilotti
Davide.Ghilotti@fastmarkets.com
CEO: Raju Daswani
General Manager/Product Director:
Peter Fitzmaurice
peter.fitzmaurice@fastmarkets.com
Market Reporter: Martin Facada
martin.facada@fastmarkets.com
Market Reporter: William Clarke
william.clarke@fastmarkets.com
Market Reporter: Michael Greenfield
michael.greenfield@fastmarkets.com
Market Reporter: Carrie Shi
carrie.shi@fastmarkets.com

Editorial Design: Paul Rackstraw
paul.rackstraw@btconnect.com
Advertising Production: Jane Crump
jane@forshawdesign.co.uk
Global Senior Advertising Manager:
Arzu Gungor
arzu.gungor@fastmarkets.com
T. +44 20 7827 5268

Editorial
8 Bouverie Street,
London, EC4Y 8AX
T. +44 (0) 20 7827 9977
F. +44 (0) 20 7827 6441
E. edit@fastmarkets.com
www.indmin.com

Advertising
8 Bouverie Street,
London, EC4Y 8AX
T. +44 (0) 20 7556 6019
F. +44 (0) 20 7827 6441

Marketing
E. edit@fastmarkets.com

Sales
T. +44 (0) 207 779 8386

Asia-Pacific Research Office
Room 305, 3/F, Asia Center, 1233
Lujiazui Ring Road, Shanghai,
China, 200120
T. +86- 21- 5877 0857
F. +86- 21- 5877 0856

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Euromoney Trading, 4 Bouverie
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Directors: Leslie Van de Walle
(Non-executive Chairman),
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Editor & Publisher:
Santosh Mahanti

Directors:
Sabita Mahanti
Abhishek Mahanti

Director & Content Strategist:
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Editorial:
Anindita Banerjee
Megha Ghosh

Marketing:
Shyamalendu Banerjee
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New Delhi Representative:
Maqsood Alam Khan

Design & Layout:
Dipak Adhikari
Sambaran Karmakar

Editorial & Corporate Office:
Merlin Links, Block 5E/5F, 5th Floor
166B, S. P. Mukherjee Road
Kolkata - 700 026
Phone: 91-033-2465-8581/9406
Fax: 91-033-2465-3790
E-mail: isinfo@eth.net
contact@isinfomedia.in
Website: www.isinfomedia.com

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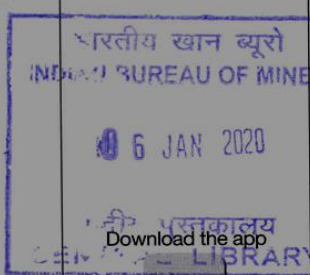
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Editor & Publisher:
Santosh Mahanti

Directors:
Sabita Mahanti
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Megha Ghosh

Marketing:
Shyamalendu Banerjee
Angan Chatterjee

New Delhi Representative:
Maqsood Alam Khan

Design & Layout:
Dipak Adhikari
Sambaran Karmakar

Editorial & Corporate Office:
Merlin Links, Block 5E/5F, 5th Floor
166B, S. P. Mukherjee Road
Kolkata - 700 026
Phone: 91-033-2465-8581/9406
Fax: 91-033-2465-3790
E-mail: isinfo@eth.net
contact@isinfofmedia.in
Website: www.isinfofmedia.com

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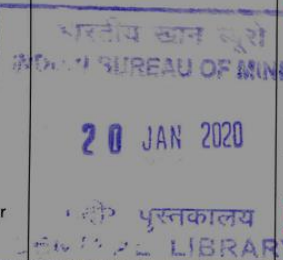
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Cover

Field photograph of large rock slide near the confluence of Mandakini and Vasuki Ganga river at Sonprayag (N30.6366°: E79.0013°), Rudraprayag district, Uttarakhand.

ADDRESS OF EDITOR

All papers intended for publication and also related correspondence should be addressed to:
B. Mahabaleswar, Editor, Geological Society of India, No.30 & 31, 10th Cross,
BSK 3rd Stage, Byrappa Garden, Kathriguppe Village, Bengaluru - 560 085
Email: editorjournalgsi@gmail.com; jgsi.journal@gmail.com; **Mobile:** 09341264052;
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kral@smenet.org

Managing Editor

William M. Gleason
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Georgene Renner
renner@smenet.org

Managing Technical Editor

Chee Theng
theng@smenet.org

Production Graphic Artist

Ted Robertson
robertson@smenet.org

Business Staff

Media Manager/Advertising

Ken Goering
goering@smenet.org

Phone: 1-800-763-3132

Fax: 1-303-973-3845

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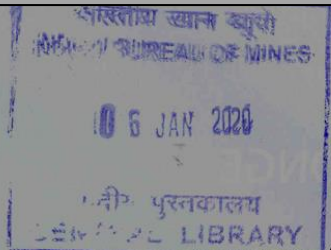
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Correspondence Address

MEAI National Headquarters

Contact: **Secretary General,**

Mining Engineers' Association of India

F-608 & 609, Raghavaratna Towers, 'A' Block, VI Floor,
Chirag Ali Lane, Abids, Hyderabad - 500 001.

Ph.: 040-66339625, 23200510

E-mail : meai1957@gmail.com

website : www.meai.org

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Correspondence Address

MEAI National Headquarters

Contact: **Secretary General,**

Mining Engineers' Association of India

F-608 & 609, Raghavaratna Towers, 'A' Block, VI Floor,

Chirag Ali Lane, Abids, Hyderabad - 500 001.

Ph.: 040-66339625, 23200510

E-mail : meai1957@gmail.com

website : www.meai.org

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The future is underground

The enormous haul trucks that have moved millions of tonnes of material across millions of kilometres in the Pilbara region of Western Australia – and all this autonomously – are certainly an impressive sight.

Indeed, Fortescue Metals Group recently achieved the milestone of moving more than one billion tonnes of material with its fleet, equipped with Caterpillar's autonomous haulage technology. The miner's aim is to become the first iron-ore company in the world to have a fully autonomous haulage operation.

However, it seems the underground space has somewhat outpaced its surface counterparts. The 'mines of the future' are being built below our feet. As we heard at the Future of Mining EMEA conference in early September, Resolute Mining's Syama mine is taking its last steps to full automation. In addition, it was recently announced that Newmont Goldcorp's all-electric Borden mine in Ontario, Canada, was officially opened.

In many ways, the business case for deploying an electric fleet underground seems like a no-brainer, from fuel savings to reduced ventilation costs. However, this isn't the full story, as the design of the mine itself has to work around the battery-electric equipment and ventilation-on-demand systems, among other things. The new technology also has a higher upfront capital cost.

MM asked Newmont Goldcorp about the most challenging part of an electrification project like Borden, and the miner said it was to make that initial leap, spend the additional capital and to commit to the vision. "Everything else will fall into place afterwards," the miner's spokesperson said.

Semi-autonomous and fully autonomous machinery has also made its way underground, with new deployments being announced on a regular basis. However, Syama has been given the title of 'world's first fully automated underground mine'. It might be a bit of a misnomer, as there are still complex applications that aren't automated particularly well – if at all – such as bucket loading tasks. So, a bit of remote control might still be required – even in the most automated mines of the world.

The aim of autonomous underground operations is partly to move workers away from the equipment and onto the surface – into the safer, comfier confines of remote operation centres. With one operator able to keep an eye on several machines at once, this could mean automated mines require less labour than traditional ones.

Resolute Mining's senior project engineer Mathew Allan, however, thinks this is a misconception. "Globally when you look at automation – it has been occurring since people started making machines – however, unsurprisingly, you don't see staggering rates of unemployment," he notes.

"The core issue, and what people are worried about, is the more generally observed local displacement of workers who used to be employed to undertake a specific task. The key for any business that cares about its people is to ensure it is providing the opportunity for its employees to access education and training to continually learn to be effective within the business as the needs of the business change."

Accordingly, miners need to ensure their workforce has the digital fluency needed for the 'mines of the future' – whether on the surface or underground.

NIA KAJASTIE, EDITOR

nia.kajastie@aspermontmedia.com Twitter: @MM_Ed_Nia

"The key for any business that cares about its people is to ensure it is providing the opportunity for its employees to access education and training"



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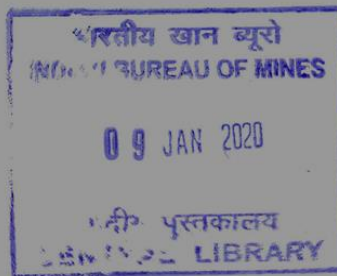
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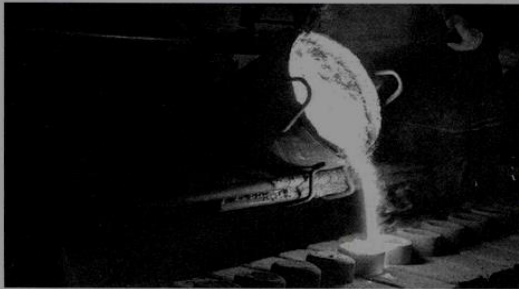
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Dundee Precious Metals' Ada Tepe open-pit gold mine (previously known as the Krumovgrad project) in southern Bulgaria has now completed its ramp-up activities and successfully reached design throughput and recovery. Mining Magazine was present at the mine's opening ceremony on August 23, 2019.

Photo: Nia Kajastie

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Editor-in-Chief

Prof.(Dr.) S.Jayanthu, Deptt. of Mining, NIT, Rourkela

Technical Editor (Hony.)

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Correspondence Address

The IM & E Journal 1457, Fishery Tank Road, Chintamaniswar, Laxmisagarpatna, Bhubaneswar - 751006, Odisha **Mobile:** +919861008387

Mail: indianminingjournal61@hotmail.com

Branch office:Near TV Tower, JODA, Dt. Keonjhar 758034

Phone: 06767-273173

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