



खंड 10, अंक 1
Vol. 10, No. 1

जनवरी 2026
January 2026

तकनीकी पत्रिका

CURRENT CONTENTS

ON

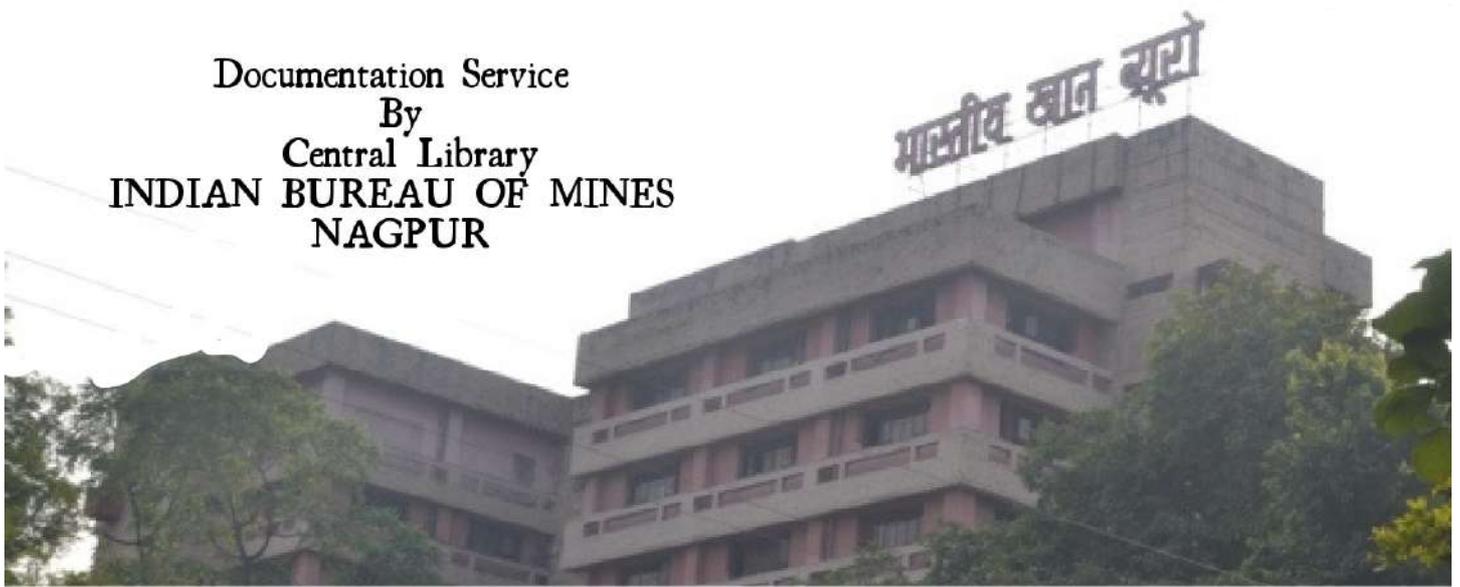


GEOLOGY & MINERALOGY

ECONOMICS OF MINERALS

MINING & ENVIRONMENT

Documentation Service
By
Central Library
INDIAN BUREAU OF MINES
NAGPUR





तकनीकी पत्रिका विषय-सूची

CURRENT CONTENT

(Technical Journals)

(A Monthly Current Awareness Service from Technical Journals)

Vol. 10 No. 01, January, 2026

The Central Library, IBM, Nagpur is subscribing the technical journals and also receiving them on complimentary basis on various subjects like Geology, Mining, Mineral Economics etc. These Technical Journals make up an important collection of latest scientific information. The library is rendering Reference Service to its users from these technical Journals (Article Indexing is one of them). Central Library, IBM provides Current Content Service from these technical journals in the name of "GEM" since 2006 on half yearly basis in print form. To expand this service to the IBM Offices all over India i.e. H.Q., Zonal & Regional Offices and to take a call of time, the Controller General, IBM desired to make this service online on monthly basis. The library staff made efforts to make it successful. This is the 1st issue of Volume-10 for this service named "तकनीकी पत्रिका विषय - सूची" (Current Content- A Monthly Current Awareness Service from Technical Journals) Vol. 10 No.01, January, 2026.

It will be highly appreciated if the valuable feedback is reciprocated. If some article as per content list is found to be of use by the reader the same may be requested and the library will send the scanned copy of the article to the interested reader.

Mrs R S Wakode
Assistant Library & Information Officer
library@ibm.gov.in
0712-2562847

I N D E X

| <u>S.No</u> | <u>Title</u> | <u>Page No</u> |
|-------------|--|----------------|
| 1) | Current Science | 3-8 |
| 2) | Down to Earth | 9-16 |
| 3) | Iron & Steel Review | 17-18 |
| 4) | Journal of the Geological Society of India | 19-21 |
| 5) | Minerals & Metals Review | 22-23 |

Current Science, Vol. 129 No. 11, December 2025

CURRENT SCIENCE

Volume 129 Number 11

10 December 2025

भारतीय खान व
INDIAN BUREAU OF
12 JAN 2025
केन्द्रीय पुस्तकालय
CENTRAL LIBRARY

Unveiling chemosensitivity: colorectal cancer's response to 5-FU

Exploring the metabolome: kombucha meets black carrot juice

Enhancing maize yields: IPM solutions for Karnataka farmers

Current Science Association



Indian Academy of Sciences

INDIAN BUREAU OF

Founded 1911
12 JAN 2026

केंद्रीय

CURRENT SCIENCE

ISSN:0011-3891

Volume 129 Number 11

10 December 2025

948 **Highlights of the Issue****EDITORIAL**

- 949 **Soil health: 'Healthy Soils for Healthy Cities'**
S. K. Satheesh

CORRESPONDENCE

- 951 **Comments on 'Fair and responsible research evaluation in India'**
Milind Watve, M. Kozak and Praveen Chaddah

NEWS

- 954 **Lithium deficiency: a hidden key to Alzheimer's disease prevention and treatment**
V. Shree Yazhini

- 956 **Nobel Prize for Medicine 2025**
Mandakolathur R. Murali and Pudupakkam K. Vedanthan

MEETING REPORT

- 959 **Modelling key geomorphic landforms of the Indian Plate using the ASPECT computational framework – some deep questions***
Anil Earnest

RESEARCH NEWS

- 961 **Did the Kerguelen hotspot move or remain stable during the formation of the Ninetyeast Ridge?**
K. S. Krishna, K. M. Sreejith and M. Ismaiel

RESEARCH ARTICLES

- 966 **Chemosensitivity profiling of colorectal cancer patient-derived organoids reveals heterogeneous responses to 5-fluorouracil**
Fuyuan Zhan, Sicheng Yan, Xuting Xu, Yuehong Zhu and Zhihong Ma

- 975 **Maize yield sensitivity to fall armyworm (*Spodoptera frugiperda*, J. E. Smith) and the adoption of IPM practices in Karnataka, India**

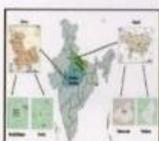
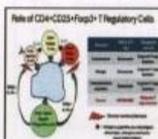
K. N. Prakash, M. N. Venkataramana, Manjanagouda S. Sannagoudar, Bishwa Bhaskar Choudhary, G. M. Gaddi, K. Murali Mohan, Siddayya, Pitambara and Vanitha Khandibagur

- 982 **Livelihood enhancement through IARI-improved wheat varieties in North Western Plain Zone and Central Zone of India**

Anirban Jana and Nishi Sharma

- 989 **Metabolome analysis of traditional kombucha and evaluation of its blending with black carrot juice**

Priya Katyal, Gurleen Kaur, Heena Sharma and Simranpreet Kaur Natt



Current Science, Vol. 129 No. 11, December 2025

12 JAN 2026

केंद्रीय पुस्तकालय
CENTRAL LIBRARY

- 997 **Adoption and impact of remote sensing-based agrometeorological products in advisory services among farmers: a case study**

P. S. Silpa, Sini Susan Varghese, Rahul Nigam, Gayatri Vinodh Ayyangar, Deep Chandra, V. Gopika, Yadav Eknathrao Kadam, Dhani Ram Rajak, Bimal Kumar Bhattacharya and Kailas Kamaji Dakhore

- 1008 **Social responsibility of higher educational institutions: roles of government and private sectors in shaping sustainable societies**

Perminder Jit Kaur, Kavita Prabreja and Monika Agarwal

HISTORICAL NOTE

- 1018 **Nobel elements: the role of chemical elements in Nobel Prize-winning discoveries**
Prathama S. Mainkar, Anjan Ray and Srivari Chandrasekhar



- ◀ COVER. Comparison of PDOs with their primary tumour tissues after subculture. See page 966.

Indexed in CURRENT CONTENTS/GEOBASE/CHEMICAL ABSTRACTS/IndMED/SCOPUS/
WEB OF SCIENCE/JSTOR

Current Science, Vol. 129 No. 12, December 2025

CURRENT SCIENCE

Volume 129 Number 12

25 December 2025



Effects of weevils on phalsa crops in India

Exploring the future of Indian rosewood in Karnataka's forests

Role of satellite laser ranging in geodesy

Current Science Association



Indian Academy of Sciences



ISSN:0011-3891

CURRENT SCIENCE

Volume 129 Number 12

25 December 2025

1042 Highlights of the Issue

GUEST EDITORIAL

1043 Traditional cooking fuels and poor ventilation: a contributor to type 2 diabetes in rural India?

Natarajan Lakshmi, Ranjit Mohan Anjana, Viswanathan Mohan and Rajendra Pradeepa

MEETING REPORT

1045 Indian Academy of Sciences, Bengaluru – 91st Annual Meeting

Arjun R. Krishnan



REVIEW ARTICLE

1048 The role of satellite laser ranging in space geodesy: developments, applications and Indian perspective

Pramod Gandugade, Sushant Shekhar, Somalin Nath, B. Nagarajan and Onkar Dikshit

RESEARCH ARTICLES

1058 Genetic architecture, inter relations in selection programme for yield enhancement in paddy (*Oryza sativa* L.)

B. Manjunatha and B. Niranjana Kumara

1063 Population structure and regeneration status of *Dalbergia latifolia* Roxb. (Indian rosewood) in forest areas of Karnataka, India: implications for conservation and sustainable management

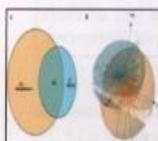
S. M. Balakrishna, T. N. Manohara and H. S. Suresh

1074 Aquaculture growth and its role in India's aquatic food supply: a trend analysis and projection to 2033

Bhupeshri V. Shetye, Ravindra A. Pawar, Kajal B. Rathod and Vivek H. Nirmale

1081 Germination sensitivity and seedling quality of mahogany (*Swietenia macrophylla*) in response to saline irrigation

Manish Kumar, Arvind Kumar Rai, Rajkumar, Amresh Chaudhary, Jitendra Kumar, Gajender Yadav, R. Banyal and Rajender Kumar Yadav



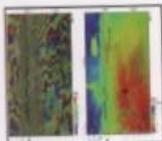
1089 TBX21 as an early immune biomarker of sepsis and septic shock: development of a prognostic immune risk score model

Xue Lin, Shenghao Wu, Siwei Fang, Jianlei Wang and Shaopeng Zheng

1106 Polymorphism rs3729825 of MHRT predicts worse cardiac prognosis in Chagas disease

Gilson Aquino Cavalcante, Fernando Liberalino Fernandes, Danielle Falcão de Brito, Sara Solange Dutra Diniz Morgado, Paula Samyla Fernandes Feitosa, Valéria Duarte de Almeida, Roque Ribeiro da Silva Júnior and Thales Allyrio Araújo de Medeiros Fernandes

Current Science, Vol. 129 No. 12, December 2025



RESEARCH COMMUNICATIONS

- 1109 Myanmar Earthquake Mw 7.7 on 28 March 2025: geodynamic and spaceborne DInSAR perspectives
R. S. Chatterjee and J. R. Kayal
- 1112 Leaf-rolling weevils infesting phalsa (*Grewia asiatica* L.) in India: new observations on *Pseudallapoderus sissus* and *Hemicolabus octomaculatus*
Uma Shankar and Yousra Mukhtar

BOOK REVIEW

- 1115 Anna Mani – The Uncut Diamond
Radhika Ramachandran

भारतीय खा.
INDIAN BUREAU OF
12 JAN 2026
केंद्रीय पुस्तकालय
CENTRAL LIBRARY



COVER. New leaf-rolling weevils recorded on phalsa. See page 1112.

Indexed in CURRENT CONTENTS/GEOBASE/CHEMICAL ABSTRACTS/IndMED/SCOPUS/
WEB OF SCIENCE/JSTOR

Down To Earth, Vol. 34 No. 13, November 2025

16-30 NOVEMBER, 2025

Down To Earth

FORTNIGHTLY ON POLITICS OF DEVELOPMENT, ENVIRONMENT AND HEALTH

Subscriber copy, not for resale

₹80.00



+

UN CLIMATE SUMMIT
**Reports suggest
climate crisis is
gathering pace**
P37

BIOPIRACY
**Sumi Nagas'
ethnomedicinal
knowledge at risk**
P54

Down To Earth, Vol. 34 No. 13, November 2025

DownToEarth

Founded in 1992 to arm you with knowledge critical to shaping a better world

FOUNDER EDITOR Anil Agarwal
EDITOR Sunita Narain
MANAGING EDITOR Richard Mahapatra
CHIEF COPY EDITOR Snigdha Das
ASSOCIATE EDITORS Aditya Misra, Rajit Sengupta
SENIOR CREATIVE DIRECTOR Ajit Bajaj
SUPPLEMENT EDITOR Souparno Banerjee
CHIEF CARTOONIST Sarit Gupta
REPORTING TEAM Shagun, Akshit Sangamla, Pulaha Roy, Rohini Krishnamurthy, Himanshu Nitnaware, Puja Das
SENIOR SUB EDITOR Dakshiani Palicha
WEB EDITORS Rajat Ghai, Preetha Banerjee, Nandita Banerji
DESIGN TEAM Chaitanya Chandan (Art Editor), Ritika Bohra (Assistant Art Editor), Tarun Sehgal (Senior Designer), Yogendra Anand (Senior Illustrator), Vineet Tripathi (Graphic Designer), Shri Krishan
PHOTO EDITOR Vikas Choudhary
PRODUCTION Rakesh Shrivastava, Gundhar Das
TECHNICAL SUPPORT Rajendra Rawat, Jaidev Sharma
MULTIMEDIA Joel Michael, Sunny Gautam, Shreya KA, Dhruval Parekh, Surangya Kaur, Danishmand Khan, Shrestha Raj
INFORMATION AND RESEARCH SUPPORT Kiran Pandey, Susan Chacko, Madhumita Paul, Lalit Maurya, Dayanidhi Mishra
CONSULTING EDITORS Anumita Roychowdhury, Vibha Varshney

Vol 34, No 13; Total No of Pages: 60
 Editorial, subscriptions and advertisements:
 Society for Environmental Communications,
 41, Tughlakabad Institutional Area, New Delhi 110 062.
 Phone: 91-11-40616000, 29955124,
 29956110, 29956394, 29956399 | Fax: 91-11-29955879,
 Email: editor@downtoearth.org.in
 © 2025 Society for Environmental Communications. All rights reserved throughout the world. Reproduction in any manner is prohibited. Printed and published by Richard Mahapatra on behalf of Society for Environmental Communications. Printed at Viba Press Pvt. Ltd. C-66/3, Okhla Industrial Area, Phase-II, New Delhi - 110 020, India, and published at 41, Tughlakabad Institutional Area, New Delhi 110 062.
 To subscribe, sms 'dte Subscribe' to 56070 or visit www.downtoearth.org.in/subscription
FOR ADVERTISEMENTS Jyoti Ghosh
jghosh@cseindia.org
FOR SUBSCRIPTIONS
 KCR Raja, raja@cseindia.org



◀ Cover design: Ajit Bajaj

Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/New Delhi only.

Contents



COVER STORY

24

Disruptions in weather systems, once expected decades hence, appear to be unfolding now

11 Digest

Hurricane Melissa made likelier by climate change

14 Governance

Does Kerala's declaration of being free of "extreme" poverty add up?

16 Health

Delhi High Court weighs in on labelling of rehydration products

37 Appraisal

Reports provide mounting evidence of an accelerating climate crisis



42 Patently Absurd

ICAR's push for gene-edited rice ignores data red flags

46 Opinion

Cloud seeding failures show imperfection in the science

58 Civil Lines

US government shutdown enhances hunger problems

Down To Earth, Vol. 34 No. 13, November 2025



18

Chhattisgarh High Court upholds mining in Hasdeo Arand over community forest rights



21

First climate inequality report on how wealthy few worsen climate catastrophe



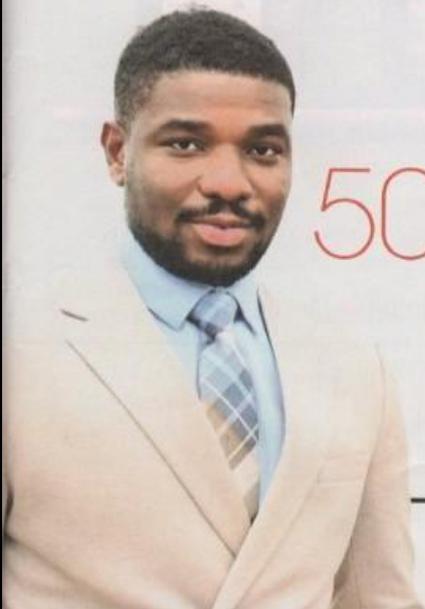
भारतीय खान ब्यूरो
INDIAN BUREAU OF MINES
23 JAN 2026
केंद्रीय पुस्तकालय
CENTRAL LIBRARY

Need legal framework to save ethnomedicinal practices of the Sumi Nagas from biopiracy

54

50

Excessive groundwater extraction accelerates subsidence, says Leonard Oehenhen of University of California, US



Down To Earth, Vol. 34 No. 14, December 2025

1-15 DECEMBER, 2025

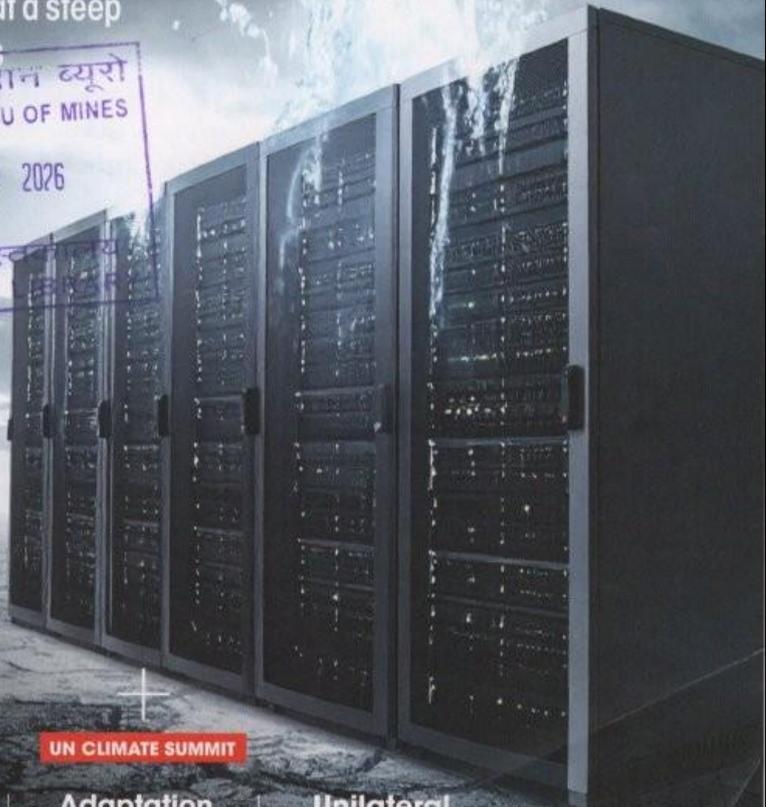
Down To Earth

FORTNIGHTLY ON POLITICS OF DEVELOPMENT, ENVIRONMENT AND HEALTH

Subscriber copy, not for resale ₹80.00

DIGITAL THIRST

Data centre boom in India at a steep cost to local water reserves



UN CLIMATE SUMMIT

New mechanism for just transition

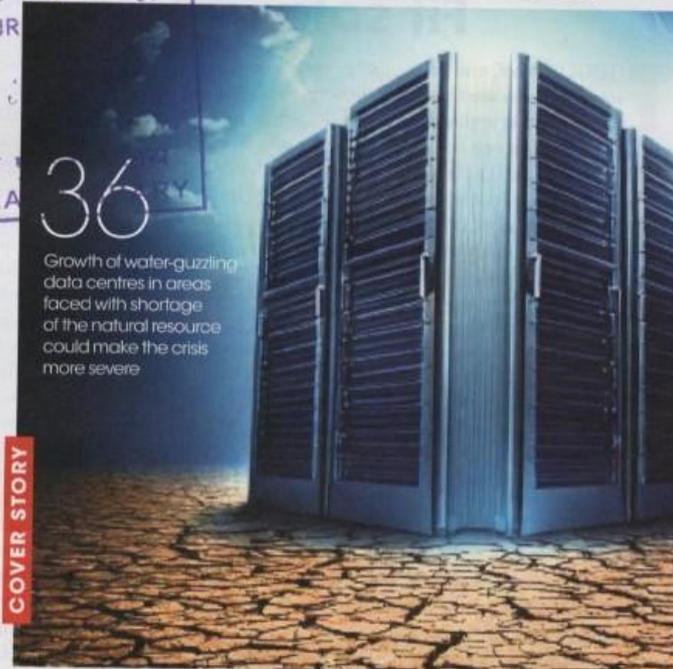
Adaptation finance triples, deadline drifts

Unilateral trade measures in spotlight

Down To Earth, Vol. 34 No. 14, December 2025

DownToEarthFounded in 1992 to arm you with knowledge
critical to shaping a better world**FOUNDER EDITOR** Anil Agarwal**EDITOR** Sunitha Narain**MANAGING EDITOR** Richard Mahapatra**CHIEF COPY EDITOR** Snigdha Das**ASSOCIATE EDITOR** Aditya Misra**SENIOR CREATIVE DIRECTOR** Ajit Bajaj**SUPPLEMENT EDITOR** Souparno Banerjee**CHIEF CARTOONIST** Sorit Gupta**REPORTING TEAM** Shagun, Akshit Sangam,
Pulaha Roy, Himanshu Nitnaware, Puja Das**SENIOR SUB EDITOR** Dakshiani Palicha**WEB EDITORS** Rajat Ghai, Preetha Banerjee,
Nandita Banerji**DESIGN TEAM** Chaitanya Chandan (Art Editor),
Ritika Bohra (Assistant Art Editor),
Tanun Sehgal (Senior Designer),
Yogendra Anand (Senior Illustrator),
Vineet Tripathi (Graphic Designer), Shri Krishan**PHOTO EDITOR** Vikas Choudhary**PRODUCTION** Rakesh Shrivastava, Gundhar Das**TECHNICAL SUPPORT** Rajendra Rawat,
Jaidev Sharma**MULTIMEDIA** Joel Michael, Sunny Gautam,
Shreya K.A, Dhruval Parekh, Surangya Kaur,
Danishmand Khan, Shrestha Raj**INFORMATION AND RESEARCH SUPPORT**Kiran Pandey, Susan Chacko, Madhumita Paul,
Lalit Maurya, Dayanidhi Mishra**CONSULTING EDITORS** Anumita Roychowdhury,
Vibha Varshney**Vol 34, No 14; Total No of Pages: 60**Editorial, subscriptions and advertisements:
Society for Environmental Communications,
41, Tughlakabad Institutional Area, New Delhi 110 062.Phone: 91-11-40616000, 29955124,
29956110, 29956394, 29956399 | Fax: 91-11-29955879.
Email: editor@downtoearth.org, in© 2025 Society for Environmental Communications. All rights
reserved throughout the world. Reproduction in any manner is
prohibited. Printed and published by Richard Mahapatra on behalf
of Society for Environmental Communications, Printed at Viba Press
Pvt. Ltd. C-66/3, Okhla Industrial Area, Phase-II, New Delhi - 110 020,
India, and published at 41, Tughlakabad Institutional Area, New
Delhi 110 062.To subscribe, sms 'dte Subscribe' to 56070
or visit www.downtoearth.org.in/subscription**FOR ADVERTISEMENTS** Jyoti Ghosh
jghosh@cseindia.org**FOR SUBSCRIPTIONS**
K.C.R. Raja, raja@cseindia.orgCover design:
Ajit Bajaj

Contents



COVER STORY

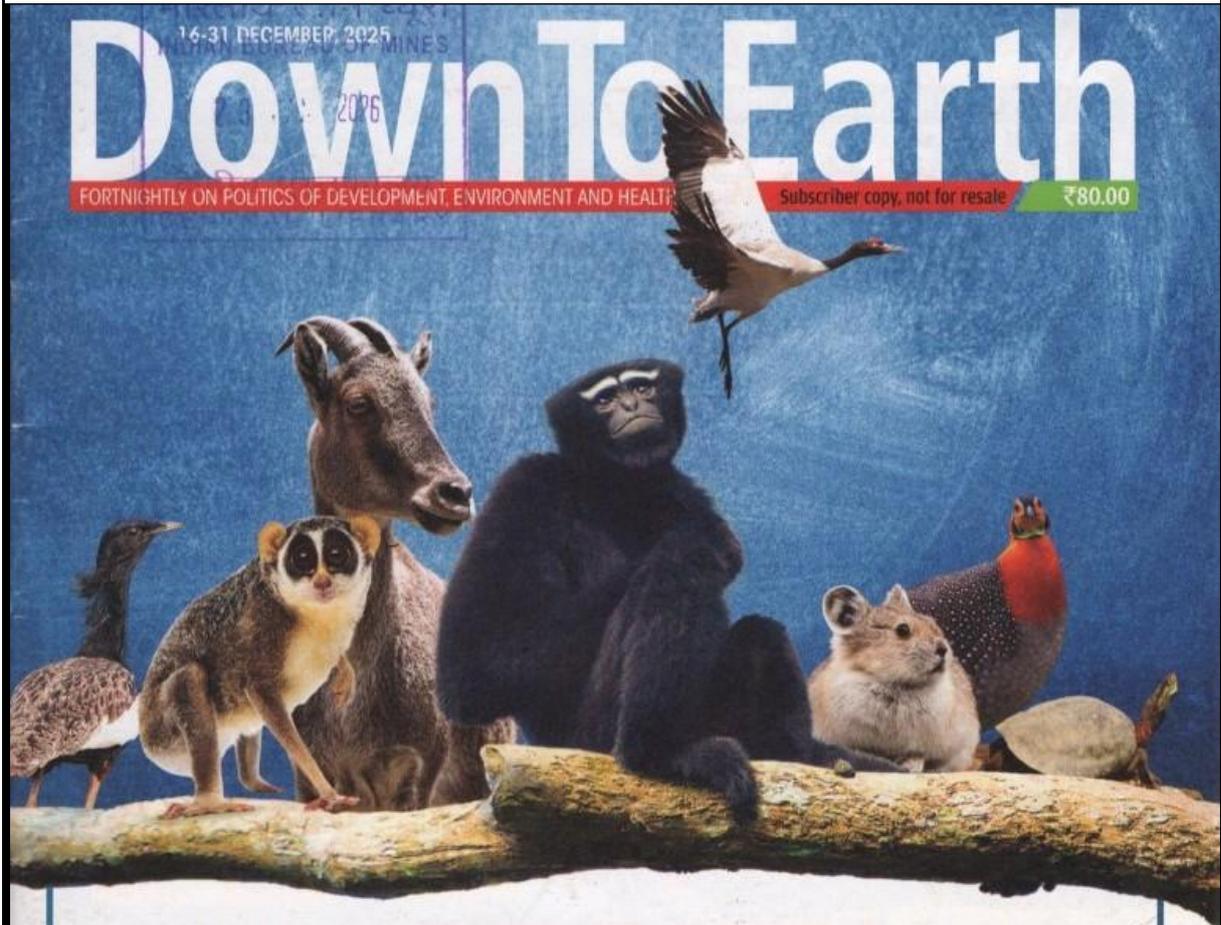
- 9 **Digest**
An India-specific climate study predicts an apocalyptic future
- 12 **Forest rights**
Kendu leaf trade in Odisha ensnared in clashing state, central laws
- 16 **Bihar election**
Deciphering the electoral windfall for the state's ruling alliance
- 19 **Soil erosion**
Ravine levelling in Madhya Pradesh harming farms and biodiversity
- 50 **Patently absurd**
Bangladesh's pharma regulatory regime worthy of emulation
- 54 **Opinion**
Abandoned borewells in Punjab could help replenish groundwater, mitigate flood damage
- 58 **Civil Lines**
As seasons lose their distinct character and rhythm, what future awaits Earth?



22 The UN's COP30 climate summit concludes, leaving the hard work to mid-year talks in Bonn and to COP31

Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/New Delhi only.

Down To Earth, Vol. 34 No. 15, December 2025



SPECIAL

CAUGHT IN THE BLIND SPOT

Conservation efforts must look beyond
charismatic megafauna

Down To Earth, Vol. 34 No. 15, December 2025

Down To Earth

Founded in 1992 to arm you with knowledge critical to shaping a better world

FOUNDER EDITOR Anil Agarwal

EDITOR Sunita Narain

MANAGING EDITOR Richard Mahapatra

CHIEF COPY EDITOR Snigdha Das

ASSOCIATE EDITOR Aditya Misra

SENIOR CREATIVE DIRECTOR Ajit Bajaj

SUPPLEMENT EDITOR Souparna Banerjee

CHIEF CARTOONIST Sorli Gupta

REPORTING TEAM Shagun, Akshit Sangomla,

Pulaha Roy, Himanshu Nitnoware, Puja Das

SENIOR SUB EDITOR Dakshiani Palicha

WEB EDITORS Rajat Ghai, Preetha Banerjee,

Nandita Banerji

DESIGN TEAM Chaitanya Chandan (Art Editor),

Ritika Bohra (Assistant Art Editor),

Tarun Sehgal (Senior Designer),

Yogendra Anand (Senior Illustrator),

Vineet Tripathi (Graphic Designer), Shri Krishan

PHOTO EDITOR Vikas Choudhary

PRODUCTION Rakesh Shrivastava, Gundhar Das

TECHNICAL SUPPORT Rajendra Rawat,

Jaidev Sharma

MULTIMEDIA Joel Michael, Sunny Gautam,

Shreya KA, Dhruval Parekh, Suranya Kaur,

Danishmand Khan, Shrestha Raj

INFORMATION AND RESEARCH SUPPORT

Kiran Pandey, Susan Chacko, Madhumita Paul,

Lalith Maurya, Dayanidhi Mishra

CONSULTING EDITORS Anumita Roychowdhury,

Vibha Varshney

Vol 34, No 15; Total No of Pages: 60

Editorial, subscriptions and advertisements:

Society for Environmental Communications,

41, Tughlakabad Institutional Area, New Delhi 110 062.

Phone: 91-11-4361 6000, 29955124,

29956110, 29956394, 29956399 | Fax: 91-11-29955879.

Email: editor@downtoearth.org.in

© 2025 Society for Environmental Communications. All rights

reserved throughout the world. Reproduction in any manner

is prohibited. Printed and published by Richard Mahapatra on

behalf of Society for Environmental Communications. Printed

at Viba Press Pvt. Ltd. C-66/3, Okhla Industrial Area, Phase-II,

New Delhi - 110 020, India, and published at 41, Tughlakabad

Institutional Area, New Delhi 110 062.

To subscribe, sms 'dte Subscribe' to 56070

or visit www.downtoearth.org.in/subscriptions

FOR ADVERTISEMENTS Jyoti Ghosh

ghosh@cseindia.org

FOR SUBSCRIPTIONS

K C R Raja, raja@cseindia.org



◀ Cover design:
Ajit Bajaj

Down To Earth does not endorse the content of advertisements printed in the magazine. All disputes are subject to the exclusive jurisdiction of competent courts and forums in Delhi/ New Delhi only.

CONTENTS



AMBIKA AIYADURAI

Anthropologist of wildlife conservation and associate professor, Department of Humanities and Social Science, Indian Institute of Technology, Gandhinagar

MISHMI TAKIN

Where myth meets muscle| P10



ANUPAM CHAKRAVARTY

Independent journalist, Guwahati

SANGAI DEE

Drowning in its home| P13



K A SHAJI

Independent journalist, Thriuvananthapuram

NILGIRI TAMR

The mountain monarch| P15

GREY SLENDER LORIS

The night watcher| P20

NILGIRI LANGUR

Golden spirit| P22

LION-TAILED MACAQUE

Symbol of Silent Valley| P30



RIYAZ AHMAD

Former head, Markhor Recovery Project, Wildlife Trust of India, Jammu and Kashmir

KASHMIR MARKHOR

Hanging by the cliff| P18



NARAYAN SHARMA

Assistant professor, Department of Environmental Biology and Wildlife Sciences, Cotton University, Guwahati

HIMANGSHU KALITA

Doctoral research scholar, National Institute of Advanced Studies, Bengaluru

PHAYRE'S LEAF MONKEY

Ringed eyes in the canopy| P24

GEE'S GOLDEN LANGUR

Assam's pride| P26

WESTERN HOOLOCK GIBBON

The ape in our stories| P28

Down To Earth, Vol. 34 No. 15, December 2025

SABUJ BHATTACHARYYA
Scientist and research ethics and integrity officer, Biotechnology Research and Innovation Council-Institute for Stem Cell Biology and Regenerative Medicine, Bengaluru
ROYLE'S PIKA
Whiskers all aquiver| P32

PARAG JYOTI DEKA
Project director, Pygmy Hog Conservation Programme, Durrell Wildlife Conservation Trust and programme manager, Threatened Species Recovery Programme, Aaranyak, Guwahati
PYGMY HOG
A little pig goes a long way| P34

R BRAWIN KUMAR
Early carrier conservation biologist, Salem, Tamil Nadu
MADRAS HEDGEHOG
Under moonlit scrub| P36

TIASA ADHYA
Fishing cat conservationist, Kolkata
FISHING CAT
The odd feline| P38

ASAD R RAHMANI
Former director, Bombay Natural History Society, Mumbai
BLYTH'S TRAGOPAN
More than a dazzle| P40
CHEER PHEASANT
On a slippery slope| P44
BLACK-NECKED CRANE
Sentinel of the high cold desert| P46
WESTERN TRAGOPAN
King of birds| P48

SHAIENDRA SINGH
Program director, Indian Turtle Conservation Program, Lucknow
PAWAN PAREEK
Project coordinator, Indian Turtle Conservation Program, Lucknow
RED-CROWNED ROOFED TURTLE
Turning turtle| P50

DHRITIMAN DAS
Field scientist, Pygmy Hog Research and Breeding Centre, Guwahati
BENGAL FLORICAN
The last dance| P52

GITANJALI KANWAR
Senior coordinator, World Wide Fund for Nature (WWF)-India
BASANTA RAJKUMAR
Chief wildlife warden, Punjab
INDUS RIVER DOLPHIN
Angel of the Beas| P54

P GOWRI SHANKAR
Founder-director, Kalinga Foundation, Agumbe, Karnataka
KING COBRA
Perfect stranger| P56

Iron & Steel Review, Vol. 69 No. 07, December 2025

IRON & STEEL REVIEW

भारतीय खनिज एवं
धातु विभाग
INDIAN BUREAU OF MINES
27/1/2025

A GLOBAL PUBLICATION ON STEEL & HEAVY ENGINEERING

Vardhman Special Steels Integrates the 4D EAGLE S Measuring System



KOCKS



A PUBLICATION OF ISR INFOMEDIA PRIVATE LIMITED
MAHANTI MEDIA GROUP

Iron & Steel Review, Vol. 69 No. 07, December 2025

December 2025

INDIAN BUREAU OF MINES

27 JAN 2026

Features

Editor & Publisher:
Santosh Mahanti

Director & Associate Editor:
Abhishek Mahanti

Directors:
Sabita Mahanti

Director & Strategic Communication:
Kritika Mahanti

Editorial:
Megha Ghosh

Sales & Marketing:
Shyamalendu Banerjee
Angan Chatterjee
Sanjana Tiwari

Design & Layout:
Dipak Adhikari
Sambaran Karmakar

Editorial & Corporate Office:
Merlin Links, Block SE/5F, 5th Floor
166B, S. P. Mukherjee Road
Kolkata - 700 026
Phone: 91-6292241782/6292241783/
033-2463 8088
Fax: 91-033-2465-3790
E-mail: contact@isrinfomedia.in
Website: www.isrinfomedia.com

Registered Office:
10, Chowringhee Road
Kolkata - 700 013

Subscription Rate

Domestic
Print Copy
₹ 13,000 (Yearly)
₹ 1,250 (Single Copy)

Digital Copy
₹ 13,000 (Yearly)
₹ 1,250 (Single Copy)

Overseas
Print Copy
\$ 1,600 (Yearly)
€ 1,250 (Yearly)

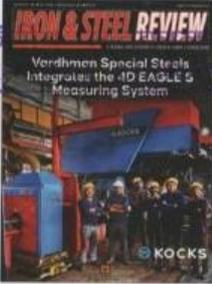
Digital Copy
\$ 1,600 (Yearly)
€ 1,250 (Yearly)

- Shipping Charge ₹ 1200 (Yearly)
- 5% GST on Print Advertisement as Applicable
- 18% GST on Digital Advertisement & Subscription as Applicable

Owned & Printed by Santosh Mahanti at M/s. Kalpana Offset Private Limited 123, Tarak Pramanick Road, Kolkata 700 006 and published by him from 10, Chowringhee Road Kolkata - 700 013, India.

Reproduction of matter published here, in whole or in parts, is prohibited without written permission from the publisher.

The publisher and printer do not accept any responsibility for statements, data and opinions expressed by the author.



Cover:
KOCKS

Cover Story

21

Vardhman Special Steels Integrates the 4D EAGLE S Measuring System



Scan QR Code for Visiting Our Website

Articles/write-ups may be forwarded to: contact@isrinfomedia.in

To Subscribe Scan QR Code



BHIM LPI

Special Feature

22

India's Steel Industry – Capacity Expansion and Current Performance

National Trends

30

NMDC Celebrates 68 Years of Excellence as India's Leading Iron Ore Producer

Global Trends

54

SAIL Bokaro Advances Green Steelmaking with Hydrogen Injection from Primetals Technologies

Interview

78

"Sustainability defines our design and manufacturing philosophy"



Brajesh Nahar
Director & COO
APL Apollo Building Products Ltd.

"Almatis' vision statement is a clear expression of our ambition: Innovate Alumina and Beyond for Tomorrow"



Christian Ammermann
Chief Supply Chain Officer
Almatis

"Our primary mandate is to reduce customer fuel cost and CO₂ intensity"



Rajesh Kumar
Managing Director,
Kalnsa India Pvt. Ltd.

Company News

89

Concast (India) Sets a New Industry Benchmark – One Caster Per Week and Beyond

Focus

106

Demand for Green Steel in India

Market & Product

112

Precision in Motion: A Deep Dive into Power Build's Core Gear Series Products – M, C, F, K

Lubricants

117

End-to-End Lubrication Solutions for the Steel Industry

Steel Market & Performance

122

Performance of the Indian Steel Industry in April-November, 2025

Steel Technology

127

Integrated Approach for Improving Pulverized Coal Injection Efficiency in Blast Furnace Using Operational Parameter Control and Flue Dust Analysis

Refractory

173

Development of Tundish Coating Mix with Excellent Drying and Dismantling Properties

Statistics

200

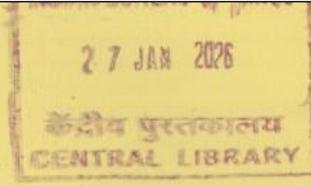
World Crude Steel Production – October 2025

Indian Steel Market & Prices – November 2025

Contd...

Journal of The Geological Society of India, Vol. 101 No. 12, December 2025

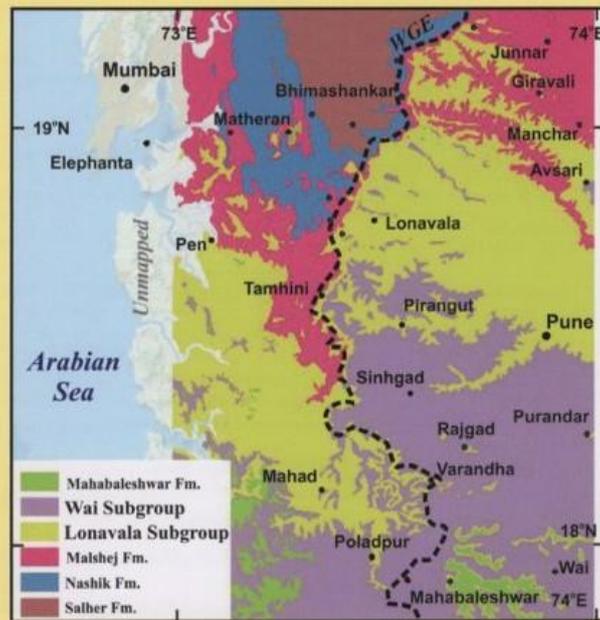
Journal of The Geological Society of India



Vol.101

DECEMBER 2025

No. 12



Journal of The Geological Society of India, Vol. 101 No. 12, December 2025

ISSN 0016-7622

INDIAN BUREAU OF MINES

27 JAN 2026

केंद्रीय पुस्तकालय
CENTRAL LIBRARY

**JOURNAL
of
THE GEOLOGICAL SOCIETY OF INDIA**

(Abstracted/Indexed in AGI's Bibliography and Index of Geology, Chemical Abstracts, Current Contents, GEOBASE, GEOref, Mineralogical Abstracts, GeoArchive, Thomson ISI database (SCIE, CC/PC & ES))

Vol. 101

DECEMBER 2025

No. 12

CONTENTS

EDITORIAL

- A Breakthrough Rock Drilling Technology is Looming a Global Geothermal Revolution**
P V SUKUMARAN1733

RESEARCH ARTICLES

- Magnetostratigraphic Analysis of Miocene Sediments in the Middle Bhuban Formation, Mizoram, Northeast India**
RAMESH K. NISHAD, V. KUMARAVEL, SUJIT K. PRADHAN, KAPESA LOKHO, GAUTAM GUPTA and ANUP K. SINHA.1738
- Assessing the Impact of Water Saturation on Planar and Wedge Stability: Limit Equilibrium Modelling with RocPlane and SWedge**
KRIPAMOY SARKAR, AVISHEK DUTTA and T.N. SINGH1747
- Petrogenesis and Tectono-Magmatic Evolution of Neoproterozoic Kainchwa Granitoids in the NW Himalaya: Insights from Petrography and Whole-Rock Geochemistry**
HEMLET GOGOI, SHASHI KANT MAURYA and RIMJHIM SINGH1757
- Porcellanite and Chert from Lodhwara Hill, Chitrakoot District, Uttar Pradesh: Insights from Field Observations and Petrographic Study**
PRITI RAI, SHYAMA PRASAD NATH and SIDDHARTHA SANKAR DAS.1767
- Flood Frequency Analysis and Susceptibility Mapping in the Mahanadi River Basin Using Geospatial and Statistical Techniques**
M. UMA MAHESWAR RAO, MONALISHA MEHER, ANURAG SHARMA and ROHAN BENJANKAR1775
- Genesis and Controls of Graphite Mineralisation in Daspalla Belt - A Greenfield Prospect in Nayagarh District, Odisha, Eastern India**
K. K. BEHERA, T. P. SAHOO and S. MITRA.1788
- Geometry of the Bushe-Poladpur Contact in the Western Deccan Volcanic Province, India**
ANKITA LALLA, AMBER SARAF, DEVDUTT UPASANI, GAURI DOLE and VIVEK S. KALE.1799

1731

Journal of The Geological Society of India, Vol. 101 No. 12, December 2025

CONTENTS

| | |
|---|------|
| Phase Chemistry and Formational Conditions of Mesoproterozoic Gabbro and Diabase Dykes from Prakasam Alkaline Province, SE India: Insights into Crystallisation of Fractionated-Oxidised Calc-Alkaline Magmas of Lower-Mid Crustal Magma Chambers NALLURI SRIDHAR, RAGI MALLIKARJUNA REDDY, ROHIT PANDEY, V.V. SETHA SAI, KUMARI MINU SINGH and POTURI R.C. PHANI | 1810 |
| Petrological Significance and Geochemical Characteristics of Metabasic Rocks in Central Shillong Plateau, Meghalaya, India RITUPRIYA DAS, ANAMIKA GOGOI and BALEN BHAGABATY | 1823 |
| Subsurface Imaging by Modelling and Inversion of Geophysical Data to Delineate Targets for Uranium Exploration along Halbhavi-Madnal Tract, Bhima Basin, Karnataka, India SINGH RAMSEVAK, SATYAM, KRISHNA CHAITHANYA, K., MANOJKUMAR, T., MARKANDEYULU, A., RAMESH BABU, V. and SARAWANAN, B | 1835 |
| Determination of the Optimum Stabilising Scheme of Foundation Pits for Utility Tunnels XIAOLIN BIAN, CHANGJUN SONG, JIANGXIN LIU, PENG LI and BO PENG | 1847 |
| SHORT RESEARCH ARTICLE | |
| Energy: India Marching Towards Self-Reliance ALOK KUMAR and PRAKASH K. SINGH | 1857 |
| SHORT RESEARCH NOTE | |
| Is Climate Change a Convenient Narrative for Recent Himalayan Disasters? Y.P. SUNDRIYAL, S.P. SATI and N. JUVAL | 1861 |
| NEWS AND NOTES | |
| Proceedings of the Annual General Meeting of the Geological Society of India – 2025, Nainital, Uttarakhand K. V. KRISHNAMURTHY and N. RAJENDRAN | 1863 |
| Note on Book Release Function: "Iron Ore Resources of India" V.N. VASUDEV | 1875 |
| Evolution of Tectonic Paradigm on Archean Earth PRIYADARSHI CHOWDHURY | 1876 |
| OBITUARY | |
| Prof. K. Surya Prakash Rao PROF. B. SRINIVAS | 1878 |

Cover

Stratigraphic map of a part of the Western DVP based on Pattabhiram et al. (2022), updated with our observations. The dashed line marks the Western Ghats Escarpment (WGE) that separates the Deccan Plateau on the east from the Konkan Coastal Plains (KCB) in the west. For details see pages 1799-1809.

ADDRESS OF EDITOR

All papers intended for publication and also related correspondence should be addressed to:
G.M. Bhat, Editor-in-Chief, Department of Geology, University of Jammu, Jammu - 180 006, India.
Email: bhatgm@jugaa.com; Editor_JGSI@geosocindia.org; Mobile: 91-9419200120;
Website: <https://www.geosocindia.org>

Minerals & Metals Review, Vol. 51 No. 12, December 2025



Minerals & Metals Review

VOLUME NO.51 ISSUE NO.12, DECEMBER 2025
Price Rs. 400

**Where there's steel
there's JSW**



भारतीय खान ब्यूरो
INDIAN BUREAU OF MINES
27 JAN 2026
केन्द्रीय पुस्तकालय
CENTRAL LIBRARY

The flagship company of the US\$ 24 billion JSW Group, JSW Steel is one of India's leading integrated steel manufacturer. A diverse product portfolio enables our customers to use our steel in a plethora of applications, making JSW Steel an integral part of everything around us.



www.jswsteel.in
Toll-free No: 1800-225-225



Minerals & Metals Review, Vol. 51 No. 12, December 2025

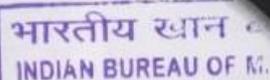
Contents



 MMR

 MINERALS & METALS REVIEW

 MUMBAI BUREAU GROUP



 भारतीय खान

 INDIAN BUREAU OF M.

27 JAN 2026

 केंद्रीय पुस्तकालय

 CENTRAL LIBRARY

 FOCUS ON

 STEEL
07 **Market Reports**18 **Steel**

India on cusp of an incredible steelmaking expansion

India's primary steelmaking under stress: How met-coke import curbs are reshaping BF-BOF economics

Structural dynamics and policy impacts on India's secondary steel industry

Scrap and the steel industry

31 **Sustainability**

Carbon capture for steel

Green steel & decarbonisation: India's race toward a low-carbon future

Decarbonizing India's steel industry: A strategic roadmap

Scrap use in secondary steel production critical in India's pursuit of green steel

44 **Policy View**

FTAs hurting India's steel sector

48 **Techno Trends**

Indian steel industry in transformative phase with automation, digitalisation

50 **Green Hydrogen**

Green hydrogen: From hype to reality

55 **Region Focus**

The steel industry in Southeast Asia: Between growth and trade barriers?

60 **Product Profile**

ITI-1600 high-precision thickness gage

61 **Events**

BKT Tyres to spotlight future-ready tyre solutions at EXCON 2025

62 **Statistics**