

GeoChronicle Panorama is an open-access, peer reviewed, annual publication with one issue in each year containing Student-teacher relevant articles on Earth System Science (Earth, Climate, Health and Environment). It is published under the aegis of the **CEHESH TRUST OF INDIA**, Keonjhar-758 001, Odisha, India. The publication encompasses articles on Earth, climate, and Environmental Sciences focusing the societal needs and relevance viz. mineral deposits and their modern techniques of mineral exploration, groundwater, remote sensing, GIS, stratigraphy, petrology, sedimentology, economic geology, industrial application of earth materials, sustainable mining and beneficiation and advances in earth sciences; climate change and its impacts and solution mechanisms; pollution and global warming, Environmental catastrophe and remedial measures, etc. The publication is continuing with the enthusiastic participation and contribution of the Earth System Science Community.

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Cover page: P.50 ,Figure 2. Global distribution of critical minerals (modified after Mller et al., 2025).



Protect Climate, Earth and Environment

CEHESH TRUST OF INDIA

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(CEHESH – Climate, Earth, Health, Environmental Sciences and HUMANITY)

CEHESH TRUST OF INDIA, a Non-Government Organization was established on 17th December 2021. It was registered on 29th April 2022 in Keonjhar, Odisha. **CEHESH stands for Climate, Earth, Health, Environmental Sciences and Humanity**. This Trust was formed by a small group of dedicated geo- scientists, Climate and Environment friendly community with the following aims and objectives.

- a. Dissemination of Earth System Science (Climate, Earth and Environmental Science) knowledge through offline and online teaching to +3 Degree and postgraduate students on **free of cost**.
- b. Publication of a biannual journal with the title "**JOURNAL OF GEOINTERFACE**", Research publication: and an annual Student-teacher relevant publication "**GeoChronicle Panorama**" comprising Earth, Climate, planetary and Environmental Sciences. **Both journals are peer reviewed publications**.
- c. Conduct of National and International Seminar/symposium/workshop in the field of the Earth System Science (Earth, climate and Environmental Sciences).
- d. Introduction of "**GEO EXCELLENCE AWARD**", "**YOUTH AWARD FOR ACADEMIC DISTINCTION**", "**NATIONAL AWARD FOR ENVIRONMENT PROTECTION**" and "**CEHESH TRUST OF INDIA AWARDS**" from our country and abroad to those distinguished teaching/industrial/intellectual communities who have substantial contributions in the field of the Earth System Science on behalf of this TRUST.
- e. Establishment of a library related to these sciences.
- f. To organize and assist in the Field Training Programmes of students of Geology depts. of different colleges and universities.
- g. To organize special programmes in different schools and colleges to aware students on climate change, earth and environmental sciences, water and energy conservation along with action plans. In addition, awareness shall be developed through seminars and essay competitions on moral and ethical science, cultural and spiritual heritage of India and burning social problems of our country.
- h. To assist students for their placement in different earth science related organizations.
- i. Conduct of systematic plantation programmes with proper nourishment in different areas. In addition to it, a special drive to throw fruit bearing seeds of Mango, Jamun, Jack fruit etc. on barren lands and mounds (at 2-3inch depth if it is possible) has been taken up in western Odisha in the fruit season.
- j. To take up welfare activities in rural areas related to the provisions of **safe drinking water, health and sanitation**. We were **successful in establishing one safe drinking water project in an area dominated by tribal and underprivileged people of Keonjhar district where drinking water was highly unsafe, mostly muddy with dominance of iron content**. The people were suffering from various types of stomach diseases prior to our drinking water project. The location of the second project has also been detected and surveyed. It will be materialized subject to the availability of fund.
- k. Conduct of Health Checkup camps and "Yogic Exercises for Health Care" programmes in different schools and colleges.

The Earth, Climate and Environment friendly community of our country and abroad are cordially invited to join this noble mission and to shoulder the responsibility of the execution of certain objectives and action plans of this registered Trust.

LET US SAVE OUR MOTHER EARTH'S ENVIRONMENT TO GET OURSELVES SAVED.

*Focus to Excel. Dedicated to Selfless Service. Harness and Conserve Water and minerals for a Better Future.
Nurture Nature for Future. Shaping our Future Together.*

Dr. B. Mishra

On behalf of the CEHESH TRUST OF INDIA

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