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Economic potential and coal mining hazards in the Lakhra Area, Sindh, Pakistan

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Lakhra coal field covering an area of about 100 sq. km is located 35 km northwest of Hyderabad city between latitudes 25-32-45 N and longitudes 68-O-15 E. The coal beds occur on the Lakhra anticline in the lower part of the Ranikot Formation belonging to Paleocene age. The thickness of coal seams varies between 1.5 to 3.5 meters (Avg. 1 meter) at 15-25 meters depth with estimated reserves of about 240 million tons. The coal is subbituminous and lignite in rank, classed as medium to high ash and high sulfur grades. About two dozens of small private mining units are engaged in exploiting coal from Lakhra without using underground machinery. The coal is produced by hand tools causing health hazards to the mine workers. Unscientific mining methods are also causing damage to the coal resources of Lakhra, as open pits are abandoned after excavating upper coal seams lying at shallower depth, leaving unexploited two other coal beds occurring at deeper levels in the area. Recent exploration studies by electrical resistivity method reveal new coal deposits in the vicinity of Lakhra coalfield. This paper discusses the economic potential of Lakhra and other coalfields in the area, as their easy accessibility ensure large scale utilization of coal. The skilled mine workers engaged in coal open pit mining are often facing serious health and safety problems due to poor working and living conditions in the area. The environmental hazards for miners and mitigation measures are also part of the present study.

Biography

Seema Naz Siddique is the Chairperson of Department of Geology, Federal Urdu University of Arts, Science and Technology, Karachi, with about 25 years of teaching and research experience. She served as Lecturer in Department of Soil Science, Baluchistan Agriculture College, Quetta during 1990-1993. In 1993 she joined Department of Geology, Federal Urdu College which became Federal Urdu University, of Arts, Science and Technology, Karachi in 2002 where she is serving as senior faculty member.

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