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Thursday 5 November
EU-India PARTNERING EVENT

PROFILE FORM

ORGANISATION DETAILS				
Organisation name	Central Institute of Mining and Fuel Research (Council of Scientific and Industrial Research)			
Street *	Barwa Road			
ZIP *		City * Dhanbad	Country * India	
Phone *	+91 326 2296027		Fax +91 326 2296025	
Email *	jaikrishna_p@yahoo.com		Web www.cimfr.nic.in	
Employees	☐ 1-10	☐ 11 - 50	☐ 51 - 250	☐ 250 +
Organisation type	☐ University	☑ Research Center	☐ Industry	☐ SME ☐ Other
Department				
Short description of your company/organization	Central Institute of Mining and Fuel Research (CIMFR-CSIR), a constituent of Council of Scientific and Industrial Research is an autonomous R&D institution under Ministry of Science and Technology, Government of India. The Institute undertakes various projects sponsored by different government and funding agencies for evolving new and technologically improved methodologies for mining and allied industries with a focus on the safety and environmental protection. It conducts research and provides technological support service to mining and power production industries. A major part of its activity is directed towards providing techno economic solutions for making coal mining, coal processing and power generation more safe and environmentally friendly. This comprises environmentally safe management and reuse of bulk waste from these industries, in particular of fly ash, including its application in agriculture as soil			

	amendment and as a structural fill at the surface. The Institute is involved into assessment of its environmental impact particularly on soil and water, and into evaluation of bulk waste as environment contaminant and modifier. The institute has a total of 800 employees, out of which about 200 are scientists.

PARTICIPANT			
Gender	☐ Mr	☐ Ms	Title Ph.D, Head of Department,
First name	Jai Krishna		
Last name	Pandey		
Position	Head of Respiratory Protection Department		

Dr JAI KRISHNA PANDEY is head of a Laboratory of Central Institute of Mining and Fuel Research (CSIR), Dhanbad. He received his graduation (B. Tech) and post graduation (M.Tech.) in Mining Engineering from Banaras Hindu University, Varanasi and Doctoral Degree (Ph.D) in Mining Engineering from Indian School of Mines, Dhanbad. His area of interests include all aspects and areas of safety and environmental protection in mining and power generation and in areas affected, and environmentally safe reuse of waste from these industries. He had successfully completed eight R&D Projects sponsored by various Ministries of Govt. of India and as many as 50 Industry sponsored projects, which resulted in more than 50 research publications in various Journals and Seminar/symposia of National and International level and two patents. Organized a national Seminar 'VSE-2001' as a convenor and edited its proceedings. He has been a leader of a number of executive development training program for practicing field engineers. He was awarded CSIR Golden Jubilee CMRI Whitaker Award for outstanding contribution in the field of Mining Technology on May 10, 2000 Represented Institute at various important committees including BIS and Internal Quality auditor for ISO 9000 system of Institute.

PARTNERSHIP PROPOSAL

EU-India partnering event session participation:

- ☉ *Sustainable production and management of biological resources from lan forest and aquatic environment*
- ☐ *Fork to farm: Food (including seafood), health and well being*
- ☐ *Life sciences, biotechnology and biochemistry for*
- ☐ *Health*

Areas of activity *(Free keywords)* environmental safety in mining and power generation industries, methane control, sustainable bulk solid waste management from mining and power generation, bulk waste reuse, soil/water and agricultural products quality protection in the areas of mining and waste re-use from these industries.

PROJECT DESCRIPTION

Title of your research project in one sentence	Sustainable management and bulk reuse of fly ash in the light of soil and groundwater resource protection and food /drinking water safety. (to be taken up as one of the partner with IEE-PAS)

Short description of project	In India, coal-based power production contributes to 70% of total power consumption, and is fast growing. This results in annual generation of about 100 Mt of fly ash, with prospects of reaching 180 Mt/year by 2012 and its increasing massive application in agriculture and as a structural fill. In the EU, despite emphasis on clean energy, in several Member States over 50% of electricity production is still coal-based, which also causes problems with sustainable management of fly ash that is one of the major waste streams. In view of bulk generation of fly ash as well as the fact that it contains trace elements in about 10-fold higher concentrations than in lithosphere and is subject to long-term weathering processes, its sustainable management is crucial for the sustainability and heath of the future generations. Project is aimed to elucidation temporal transformations of properties of fly ash applied as soil amendment and as a structural fill for sustainable protection of the environment and natural resources. To achieve this goal, mineralogical and physicochemical studies of weathering transformations of fly ash and composition of pore solutions in objects of different defined age such as surface structural fill, opencast mine fillings, active and closed landfills (ponds) of power plant fly ash, groundwater quality in their vicinity as well as fly ash amended soils will be carried out. The anticipated outcome of the joint project will be: (1) reliable long-term assessment of the environmental safety of groundwater and agroecosystems at fly ash use as surface structural fill and in agriculture as soil amendment; (2) guidelines on environmentally safe fly ash management with a focus on the principles of sustainable development .
Description of expertise offered	The institute has almost all sophisticated equipment and facilities for analysis and assessment of water, soil, waste and air borne contaminants. Being a part of CSIR constituting world's largest public funded Research Institution, it can get support from any facility and expertise from any of our 37 laboratories, which are working in different areas of specialization. Although, environment and environmentally safe management and reuse of fly ash is the concern of a number of CSIR laboratories. CIMFR has taken up and is involved in a number of projects directed towards different types of environmental friendly fly ash management and application.
Description of requested partner expertise	we will be working as one of partners in a project proposed br IEE-PAS