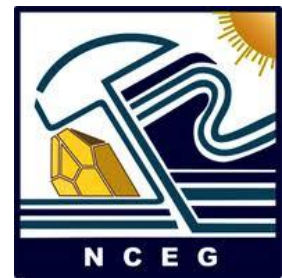


National Centre of Excellence in Geology University of Peshawar



1974-2012



VISION & MISSION

- Development and advancement in Earth Sciences is crucial in sustainable usage of the natural resources, mitigating the natural hazards and countering the adverse effects of climate change.
- This Centre bears the responsibility for **developing a professional workforce of Earth Scientists**, who, not only contribute to socioeconomic development of Pakistan through their research and outreach but also contribute to the **advancement of Earth Sciences as a subject**.

OBJECTIVES

As Per Federal Parliament Act 1974

- Engagement in goal-oriented high-level teaching and research
- To train researchers and scholars according to new developments in the field of Earth & Environmental Sciences
- To establish M.Phil/Ph.D. and other programmes in the relevant discipline in accordance with the standard and requirements of the HEC & University of Peshawar
- To promote co-operation and inter-disciplinary relationship with other teaching and research establishments
- To arrange conferences, seminars and refresher courses for the development of teaching and research
- To conduct research in such particular disciplines as is assigned to by the Government in consultation with the University of Peshawar.

Brief History

- Established under the Federal Parliament Act 1974 (Modified 1976).
- One & only Centre of Excellence in Earth Science discipline in the country.
- Dedicated to developing Professional Workforce through Post-Graduate Education and Research.
- Established through a Federal Government PC1 Project Scheme 1974-1978 (Civil Work)
- Development Phases
 - JICA Grant 1982
 - USAID Grant 1992
 - MoST-HEC PC1 Project 2001 for National Library of Earth Sciences
 - HEC PC1 Project 2003 for Laboratory Development
 - ECNEC PC1 Project 2005-Ongoing
- Devolved to Khyber-Pakhtunkhwa Province 2011 under 18th Amendment.

On Going Development

- Establishment of New Campus (Academic Block, Admin Block, 3 Hostels (Completed))



- **2 Faculty Apartment Blocks (Tendered)**
- **Established/Strengthened 15 Laboratories.**
- **Faculty Development through 17 PhD Foreign Scholarships.**

Degree Programs & Disciplines

- PhD, MPhil and 2-Years Masters **(22 PhDs, 62 MPhil Produced)**
- Post-Graduate Diploma Programs (1 Year) **(280 Graduates Produced)**

Discipline	Major	Specialization
Earth Sciences	Geology	Structures/ Tectonics Mineralogy/Petrology/Geochemistry Economic Geology Sedimentology Stratigraphy/Paleontology Petroleum Geology Industrial Mineralogy
	Geophysics	Earthquake Seismology Exploration Seismology Gravity Hydrogeophysics Magnetism Petrophysics
	Environmental Geosciences	Hydrogeology/Hydrology Engineering Geology Quaternary Geology/Neotectonics Natural Hazards Environmental Geochemistry
	Geospatial Sciences	GIS/Remote Sensing GPS Geodesy

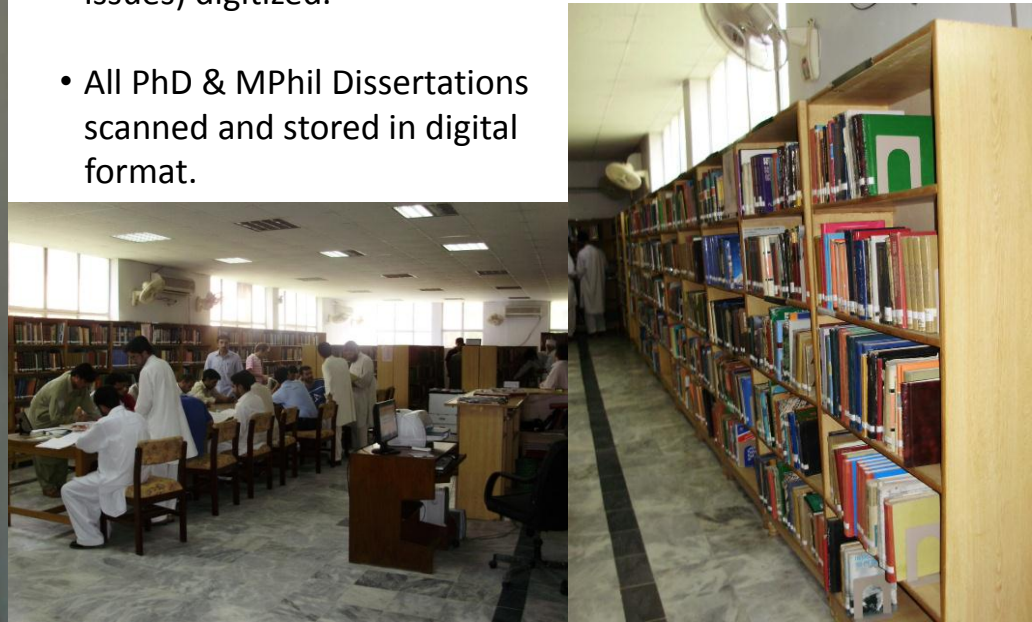
Category	Number	Names	Qualification	Scale
Professor Emeritus	2	Dr. R.A.K. Tahirkheli Dr. M. Qasim Jan	PhD (UK) PhD (UK)	Fixed Pay
Professors	4	Dr. M. Asif Khan Dr. M. Tahir Shah Dr. Irshad Ahmad Dr. Niamatullah Khattak	PhD (UK) PhD (USA) PhD (Pesh) PhD (Pesh)	TTS TT BPS 21 BPS 21
Associate Professors	1	Dr. Tazeem Khan	PhD (Pesh)	BPS 20
Assistant Professors		Dr. M. Sayab	PhD (Australia)	TTS
		Present Faculty: 37 (9 on Study Leave for PhD)		BPS 19
		PhD Faculty: 16		BPS 19
		MPhil/MS: 3		BPS 19
		MS: 3		BPS 19
		MSc.: 7		TTS
		Dr. Muhammad Hanif	PhD (UK)	BPS 19
		Dr. Muhammad Shafique	PhD (Dutch)	TTS
Dr. Khista Rehman	PhD (UK)	TTS		
Dr. Irfan Jan	PhD (UK)	TTS		
Dr. Liaqat Ali	PhD (UK)	BPS 19		
Research Associates	7	Muhammad Sufyan Qazi Sarfraz Khan Syed Ali Turab Khalid Latif Abdul Rashid Pasha Wajid Ali Muhammad Waqas Javed	M.Sc. (Pesh) MPhil. (QAU) M.Sc. (Pesh) M.Sc. (Pesh) MS (UK) MSc (Pesh) MSc (Pesh)	BPS 18
Research Assistants	3	Zaheer Ahmad Muhammd Younus	M.Sc. (QAU) M.Phil. (QAU)	BPS 16

NCEG PUBLICATIONS

Publication Type	Numbers	Publishers
BOOKS	12	2 International, 10 national
MAPS	8	3 International & 5 National
Peer Reviewed Research Papers (Impact Factor)	320	International Publishers
Peer Reviewed Research Papers (HEC Recognized)	560	Journals in Pakistan, International Proceedings, Book Chapters
Professional Reports	16	<ul style="list-style-type: none">• WAPDA & Associated International Consultants• Exploration Oil Companies

NATIONAL LIBRARY OF EARTH SCIENCES

- A total of 6234 books, and subscription to over 100 journals in Earth Sciences
- 480 more books were purchased during 2008-09
- Life & Relief Development Foundation, Islamabad donated 250 books.
- 40 Volumes of the Research Journal digitized and full on-line access since Volume 1, 1964.
- Maps & Reports Published in Pakistan (No Copyright Issues) digitized.
- All PhD & MPhil Dissertations scanned and stored in digital format.



Laboratories

1. Electron Microprobe (Established 1982-Upgraded 2005)
2. XRF (Originally established 1982, Replaced 2005).
3. XRD (Established 1982; Upgraded 2005)
4. Geochemistry Lab. (Established 1978, upgraded 1982, 1992 and 2005, 2008).
5. Thin Section Lab (Established 1976, Upgraded 1992, 2008).
6. Microscopy Lab (Established 1976; Upgraded 1982, 1992, 2006)
7. Crushing/Powdering/Sample Preparation Lab (Established 1976; Upgraded 1982, 1992, 2006, 2008)
8. GPS Geodesy Lab (Established 2001; Upgraded 2007).
9. Paleontology Lab (Established 1992; Upgraded 2006).
10. Petroleum Geochemistry Lab (Established 2007-2008)
11. Environmental Geochemistry Lab (Established 2007-2008)
12. Hydro-Geophysics Lab (Established 2007-2008)
13. Geotechnical/Engineering Geology Lab (Equipment Purchased 2008-2009; currently in process of installation).
14. Radon Lab (Orders Placed).
15. Gemology Lab (Established 2011-2012)
16. Seismology Lab (2012)



Grinding and Powdering of Samples

A total number of 1050 samples well processed for students (500), Faculty (200), and Industry (350)

Digestion Process:

A total number of 1950 samples well processed for students (1000), Faculty (500), and Industry (450).

Analysis on Atomic Absorption analyst 700 & UV/Vis Photo spectrometer

A total number of 1400 samples well processed for students (800), Faculty (200), and Industry (400). A total of 16800 elemental analyses were carried out.

Analysis on Portable Kit

A total number of 450 samples well processed for students (300), Faculty (100), and Industry (50). A total of 2700 parameters were determined.

Analysis on DO Meter

A total number of 370 samples well processed for students (300), Faculty (50), and Industry (20). A total of 370 parameters were determined.

Analysis on Turbidity Meter

A total number of 480 samples well processed for students (400), Faculty (60), and Industry (20). A total of 480 parameters were determined.

Analysis on DR 2800

A total number of 580 samples well processed for students (500), Faculty (50), and Industry (30). A total of 2400 parameters were determined.

CHNS, Elemental Analyzer:

A total number of 30 samples well processed for students (20), Faculty (5), and Industry (5). A total of 120 elements were determined.



<p>XRD</p>	<p>Total Samples Analyzed: 250 NCEG: 70 NCE Physical Chemistry: 68 UoP other Departments: 42 COMSAT: 13 PCSIR : 2 Industry: 10 Tests: 10</p>
<p>XRF</p>	<p>Total Samples Analyzed: 88 NCEG Faculty/Students : 6 Industry: 6 University of Baluchistan: 60 Test Samples: 16</p>



**Electron
Microprobe
Laboratory**

Total Samples: 33
Total Spots: 145
NCEG: 23
NCE Physical Chemistry: 10 Samples
25 Spots

An update software (Quantax) has been installed which has the capability of with standard and without standard analysis.



**Rock
Cutting/
Thin Section
Lab**

A total of 922 thin sections were prepared at the rock cutting laboratory in 2008-09.



FTIR.

Cost of Equipment =Rs. 1.5M



HPLC.

Cost of Equipment =Rs. 1.2M



GC-MS.

Cost of Equipment =Rs. 4.9M



Roto Evaporator.

Cost of Equipment =Rs. 0.5M



GC-FID.

Cost of Equipment =Rs. 2.2M



UV-VIS Spectrophotometer.

Cost of Equipment =Rs. 0.73M



HYDRO-GEOPHYSICS LAB

Resistivity Meter.

Cost of Equipment =Rs. 3.4M



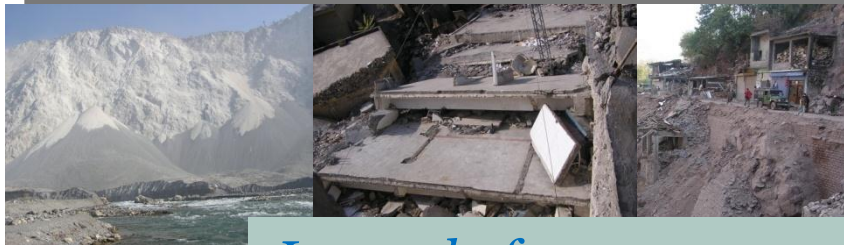
GPR.

Cost of Equipment =Rs. 5.2M



Earthquake Hazards, Pakistan: Post-October 08, 2005 Muzafarabad Earthquake Scenario

MonaLisa and M. Qasim Jan (*Guest Editors*)



Journal of
Himalayan Earth Sciences

(Geological Bulletin, University of Peshawar)



National Centre of Excellence in Geology

University of Peshawar
NWFP, Pakistan

RESEARCH BULLETIN

- Annual Publication
- Regularly Published Since 1964. 41 volumes published.
- HEC Recognized.
- International acclaimed for high quality research publications on Himalayas



CONFERENCES/WORKSHOPS

International/Regional

Status	Title	Dates	Sponsor	Participants
International	Two-Day International Conference, "Earthquake Hazards : Post-October 08, 2005 Muzaffarabad Earthquake Scenario". Summer Campus, Baragali	August 22-23, 2008	HEC, PAS, QAU, NCEG	200
Regional	Training/Workshop on "Recent Developments in Geo-Hazards Disaster Management Focusing on Earthquake Vulnerability Reduction in Mountainous Regions"	11-23 August 2008	NCEG, ICIMOD, ITC	26
Regional	Training/Workshop on "Earthquake Vulnerability and Multi-Hazard Risk Assessment"	13-24 Nov 2006	NCEG, ICIMOD, ITC, ADPC	31
Regional	Regional Training Course on "Earthquake Vulnerability and Multi-Hazard Risk Assessment: Geo-Spatial Tools for Rehabilitation & Re-construction Efforts"	13-31 March 2006	NCEG, ICIMOD, ITC, ADPC	34
International	Earthquake Rehabilitation Conference on "Seismology, Structure and Codes"	November 18, 19, 2005	HEC, NWFP UET, NCEG	200
Regional	Regional Training Course, "Geo-Informatics for Rangeland Resources Management",	July 04-15, 2005	NCEG & ICIMOD	36



International Collaborative Research Projects

NCEG-Oregon State University-California State University, North Ridge International Collaborative Project

Field: Neotectonics and Paleoseismology

Participants: Professors Bob Yeats, Andrew Meigs, Chris Madon (Oregon)
Doug Yule (North Ridge)
M. Asif Khan, M. Sayab (NCEG)

Sponsoring: NSF, USA

Status: Joint Fieldwork, 2008.
Dr. M. Sayab completed 1-year Fulbright with Andrew Meigs and Doug Yule.
Trenching/Paleoseismology Workshop planned for winter 2009.

NCEG-University of Colorado, Boulder, University of Montana, USGS, Pasadena International Collaborative Project

Field: Seismic Hazards, Earthquake Seismology, GPS Geodesy, Microseismic Hazard Analyses using Shear-Wave Velocity.

Participants: Roger Bilham (Boulder)
Rebecca Bendick (Montana)
Sue Hough (Pasadena)
M. Asif Khan, Shah Faisal, Sufyan Qazi and Abdul Whab (NCEG)

Status: Project in progress since 2001. An 80-point GPS Geodesy Network established in Pakistan from Makran to Chitral-Hunza.
A new project focused on site characterization submitted to USAID.

International Collaborative Research Projects

NCEG-Chinese Academy of Sciences-Chinese Academy of Transport Sciences Joint Project

Field: Geo-Hazard Characterization of the Karakoram Highway

Participants: Professor Cui Peng, Yingyan Zhu (CAS, Chengdu)
M. Asif Khan, Muhammad Haneef, Muhammad Waseem (NCEG)

Sponsoring: Chinese Academy of Transport Sciences

Status: Joint Fieldwork, 2007, 2008
Project Meetings at Beijing and Chengdu (December 2008).
Major Fieldwork planned for 2009-2010.

NCEG-University of Houston Joint Research Project

Field: Himalayan Collision History: Remote Sensing, Geochemistry and Isotope Studies
(2005-2007)

Participants: Dr. M. Tahir Shah (NCEG) and Shuhab Khan (Houston) Sponsoring:
Chinese Academy of Transport Sciences

Status: Completed. Research Published in international journals.

AWARDS/FELLOWSHIPS

- Gold Medal-Earth Sciences, 5
- Civil Awards 5
- Presidential Awards 3
- Commonwealth Fellowships 2
- Endeavour (Australia) Fellowships 1
- Honorary Fellowship (Life Long), Geological Society London 1
- Fellowship, Pakistan Academy of Sciences 3
- HEC Distinguished National Professor 2