

CURRICULUM VITAE

Dr. Asmat Ali

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Post Presently Held: Director Survey Training Institute, [Survey of Pakistan](#), Islamabad

Career Summary: A considerable experience of 33 years in Land Survey, Spatial data production, integration and management.

Field of Specialization: Collection, processing, management and mapping of topographic data, GIS/RS/LIS application development, National Spatial Data Infrastructure (NSDI), Web Spatial databases, Data Conversion, Cadastre & Trainer of the mentioned disciplines.

ACADEMICS

Degree/Diploma/Certificate	Year	Core Subjects
Ph.D. Remote Sensing & GIS PMAS-Arid Agriculture University , Rawalpindi, Pakistan	2022	Thesis “Spatial Data Infrastructure as the Means to Assemble Geographic Information Necessary for Effective Agricultural Policies in Pakistan”
Masters of Science in Geo-information Science and Earth Observation (University of Twente, The Netherlands)	2008	GIS, Web & Mobile GIS, Remote Sensing, SDI, Spatial Databases Specialization Geo-information Management
Diploma in ArcCadastre (National Land Survey of Sweden)	2007	Customizing workflows, Job templates, Access Rights
Certificate in Database Management and Network Administration (State Bureau of Surveying and Mapping, China)	2006	Geo-database Management, Network Administration
Professional Master Degree in Geoinformatics (University of Twente, The Netherlands)	1998	GIS, Remote Sensing, Databases Specialization Cartography
Post graduate diploma in Land Survey (Survey of Pakistan)	1991	Photogrammetry, Geodesy, Cartography, Land Survey
Bachelor of Science (Punjab University, Pakistan)	1986	Applied and Pure Maths, Physics

Experience (in reverse order)

2019 To Up Till Now: Director Survey Training Institute, Islamabad

- Training in the area of land survey and GIS mapping
- Capacity Building, Administrative, Technical and Financial matter

2018-2019: Deputy Director & Director Survey of Pakistan, Peshawar

- Fencing of Pak-Afghan Border
- Boundary demarcation of state reserved forests

2002 To 2017: GIS Database Administrator

Tasks completed

- [As GISCorps volunteer team member for GSDI project, contributed in the development of Standards-based Web Mapping and Online Platform/Portal for Data Access Services for Zimbabwe](#)
- Preparation of GIS data and Google-based application for Pak-China Economic Corridor (Gwadar-Khunjerab) Rail Route as NHA project
- Preparation of GIS data and Google-based application for Lahore-Karachi Motorway as NHA project
- Mosaicing and indexing of 1M, IKONOS Satellite Imagery of entire Pakistan
- Development of Geographical Names Database of entire Pakistan on scale 1:50k
- Development and deployment of Geoportal
- Preparation of Pakistan's Datasets for Global Mapping Project
- Engineering/GIS project of Gwadar Master Plan
- Literacy Monitoring Application for Khyber Pakhtunkhwa province
- Land Information System (LIS) application for Baluchistan as UNDP Project
- Seamless digital map of Baluchistan, Pakistan
- Data Security, Backup and Database Development/Management
- Training of employees in GIS, Database/Network Management
- Professional Method Statements, Proposals and Report writing

1999 To 2002: In-charge of data capturing & GIS development Team in Cartographic office.

The duties include Training of Employees, Technical and Administrative supervision as well as support. During this period carried out the following jobs:

- I. Established a new digital cartographic office
- II. Prepared a team of 100 employees by imparting them training in computer fundamentals, ArcView 3.1 and map digitization
- III. Provided technical support to trained team for digitization of existing topographic maps
- IV. Trained technicians and officers in GIS , AutoCAD Map 2000, ArcView 3.1 & ArcInfo 7.2.5
- V. Imparted training to 10 army officers in Surveying & Mapping

1996 To 1999: Instructor and In-charge of field survey camps. Personally executed as well as supervised different Land surveying disciplines. The duties included the following jobs:

- I. Instructor Land Surveying and Mapping at Survey Training Institute, Islamabad, Pakistan
- II. Establishment of horizontal control network at different scales
- III. Map making using Plan table techniques
- IV. Preparation of Topographic Maps
- V. Preparation of Guide Maps

1993 To 1996: In-charge of Fair Mapping section. The duties included the following:

- I. Supervision of office engaged with preparation of Topo Maps
- II. Supervision of quality control cell

1990 To 1993: Worked independently in various disciplines of Surveying & Mapping as a trainee officer. The duties included the following assignments:

- I. Establishment of Triangulation Network
- II. Establishment of vertical control
- III. Computational assignments

1988 To 1990: Joined Survey of Pakistan in 1988. Therefore, this period was spent to get on job technical training as well as to learn the administrative aspects of duty.

Important Projects of Surveying and Mapping Handled

- ◆ Project Director National Spatial Data Infrastructure (NSDI) for Pakistan
- ◆ Fencing of Pak-Afghan Border
- ◆ Establishment of Horizontal control for BhawalPur Guide Map
- ◆ Establishment of Horizontal control for Lahore Guide Map
- ◆ Plan Table Survey of Bhakkar District
- ◆ Horizontal Control for Multan District
- ◆ Horizontal Control in World Bank project

- ◆ Land survey of Bhakkar, Multan & Faisalabad district.

Important GIS Projects Completed

- ✓ Engineering/GIS project of Gwadar
- ✓ Literacy Monitoring Application for N.W.F.P
- ✓ Land Information System(LIS) for Baluchistan as UNDP Project
- ✓ Seamless digital map of Baluchistan

Project Leadership and Coordination Experience

- Master Trainer for ArcGIS 9x, ArcView3x, AutoCAD Map2000 and ArcInfo
- Supervising professional employees
- Preparing project work plans
- Assisting users with application/operational problems trouble shooting in GIS development and data capturing

Teaching and Training Experience

- Visiting Faculty [PMAS-Arid Agriculture University](#), Rawalpindi, Pakistan
- Visiting Faculty Bahria University, Islamabad
- Designed syllabi for GIS and Remote Sensing courses for [NISTE](#), Islamabad
- Taught course of GIS in 2009 at [NISTE](#), Islamabad
- Taught course of Remote Sensing (RS) in 2009 at [NISTE](#), Islamabad
- Taught course of GIS, GPS, Google Mapping and RS in 2010 at [NISTE](#), Islamabad
- Performed duties as Chief Instructor at [Survey Training Institute](#), Islamabad
- Provided training on ArcGIS Server as well as ArcGIS Image Server to Air Intelligence, Headquarters, Islamabad
- Served as Instructor Land Survey at [Survey Training Institute](#), Islamabad
- Master Trainer in Survey of Pakistan, for ArcGIS Desktop/Server 9x, ArcView3x, AutoCAD Map2000 and ArcInfo
- Visiting faculty member of: [National Institute of Science and Technical Education \(NISTE\)](#), Islamabad

Report Writing Experience

- Assisting in producing policy documents and briefs in the area of GIS, RS, Geospatial Portal and National Spatial Data Infrastructure (NSDI) for Pakistan

GIS/RS/Google/GPS Application Subject Areas

- Integrated application development of Google, GIS, GPS and RS
- Web, Mobile and Desktop GIS Development
- Web Cartography

- Image registration, rectification, classification and DEM generation
- Survey control

GIS Development Tools

- GIS Tools, launched by ESRI. Available at;
<http://arcscripts.esri.com/scripts.asp?eLang=&eProd=&perPage=10&eQuery=asmat>

GIS/RS Software

- ESRI ArcGIS Server 9x, 10.0
- ESRI ArcSDE 9x, 10.0
- ESRI ArcGIS (Desktop) 9x, 10.0
- Quantum GIS (QGIS)
- ESRI ArcView3x (Image Analysis, Spatial analysis,3D,Network Analysis)
- AutoCAD Map2000i & AutoCAD Map 3D 2012
- ERDAS Imagine 9x, 2011,12&13.

Spatial /Database Tools

- PostgreSQL
- PostGIS
- Micro Soft SQL Server
- MS Access

Peer Review

- [Information Development](#); ISSN: 1741-6469
- [Earth Science Informatics](#); ISSN: 1865-0481

Publications:

- Factors influencing integrated information management: Spatial data infrastructure in Pakistan <https://journals.sagepub.com/doi/abs/10.1177/02666669211048483>
- The Evolution of National Spatial Data Infrastructure in Pakistan - Implementation Challenges and the Way Forward <https://ijsdir.sadl.kuleuven.be/index.php/ijsdir/article/view/500>
- National Spatial Data Infrastructure vs Cadastre System for Economic Development: Evidence from Pakistan <https://www.mdpi.com/2073-445X/10/2/188>
- The Theory versus the Reality of Alignment between EGov and SDI in Pakistan <http://gsdiassociation.org/images/gsdi15/refereed/90-188.pd>
- Geospatial Data Sharing in Pakistan: Possibilities and Problems
Published in the proceedings of GSDI 14 World Conference, Addis Ababa, Ethiopia.

Available at: <http://www.gsdi.org/gsdiconf/gsdi14/papers/69.pdf>

- How Does NSDI Development Fit into Pakistan's E-Government Programme?
Published in the proceedings of GSDI 12 World Conference, Singapore). Available at:
<http://www.gsdi.org/gsdiconf/gsdi12/papers/8.pdf>
- The role of remote sensing in fighting against terrorism-A case of Pakistan. Published in ISPRS Technical Commission VII Symposium 2010 Vienna, Austria.
http://www.isprs100vienna.org/fileadmin/files/isprs_preliminary_programme_20100513e.pdf
- Is Public Private Partnership an Effective Instrument to Implement SDIs? Published in the proceedings of The XXIV FIG International Congress 2010: Facing the Challenges– Building the Capacity, Sydney, Australia, 11-16 April 2010. Available at:
http://www.fig.net/pub/fig2010/papers/ts07e/ts07e_ali_4484.pdf
- Spatial Data Infrastructure for Land Administration in Pakistan. Published in the proceedings of 7th FIG Regional Conference Spatial Data Serving People: Land Governance and the Environment – Building the Capacity. Hanoi, Vietnam, 19-22 October 2009. Available at:
http://www.fig.net/pub/fig2010/papers/ts04b/ts04b_ali_4523.pdf
- What does Spatial Data Infrastructure mean to Pakistan? Published in the proceedings of GSDI 11 World Conference (The Netherlands). Available at:
<http://www.gsdi.org/gsdiconf/gsdi11/papers/pdf/2.pdf>
- Natural Resources-Neglected Pillars of Pakistan's Economy. Published in the proceedings of ISM Commission 6 3rd International Conference November 21-25, 2008, China. Available at:
<http://www.ism.rwth-aachen.de/images/upload/CommissionMeetings/Commission6/2008Commission6Meeting.pdf>
- Assessing Readiness for National Geospatial Data Clearinghouse-A Milestone for SDI Development in Pakistan. Presented at 2nd international conference on Advances in Space Technologies, November 29-30, 2008, Islamabad, Pakistan: pp. 85-90.
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4747692
- Assessing SDI Readiness in Pakistan
<http://gisdevelopment.net/magazine/global/2008/november/index.htm>
- Is e-Government an SDI Implementation Strategy?
http://www.directionsmag.com/article.php?article_id=2922&trv=1
- Is Indian NSDI an example to follow?, Available at
<http://mycoordinates.org/indian-nsdi-april08.php>
- NSDI Implementation Strategies. Available at:

- Potential of Public-Private Partnership for NSDI Implementation in Pakistan (Published at ITC, The Netherlands) , Available at :
http://www.itc.nl/library/papers_2008/msc/gim/asmatt.pdf
- GIS databases (Published in “The Surveyor” Pakistan)
- Multimedia Cartography (Published in “The Surveyor” Pakistan)
- Digital Production Line in context of Survey of Pakistan (Published at ITC, The Netherlands)

Appreciation Letter:

From

- Surveyor General of Pakistan for supervising [Global Map Pakistan version 2](#)
- Director Survey of Pakistan for developing and implementing Open Source Geospatial [Metadata](#) Portal
- Surveyor General of Pakistan for developing [GeoPortal](#)
- Surveyor General of Pakistan for supervising Global Mapping Project version 1
- Director Survey of Pakistan for supervising, integrating & managing spatial data in Gwadar Master Plan project
- Surveyor General of Pakistan declaring me as an asset for the department
- Chief Instructor Survey Training Institute for introducing new calculating techniques
- Officer-in-Charge regarding training , Digitization & GIS
- Officer-in-Charge for developing seamless data for Baluchistan(Pakistan)

Conference/Seminar Attended

- Workshop on Modern Tools for the Evaluation of Seismic Induced Ground Shaking and Associated Secondary Hazards, Nathia Gali, Pakistan
- 2nd International Conference on Advances in Space Technologies, Islamabad, Pakistan.
- Seminar on PPP4SDI & E-GOV arranged by: EUROGI at Rome, Italy
- Workshop on E-Government arranged by: Center for Executive Development, Pakistan
- GSDI-8 conference arranged by GSDI at Cairo, Egypt

Professional Membership/Affiliation:

- Founding Member [International Geospatial Society](#)
- [Wikipedia](#) contributor
- Focal Point for SDI in Pakistan (www.gsdi.org/newsletters/SDIAPv5n6.pdf)
- Professional Membership Institute of Mapping Sciences Australia
- Evaluator for National Technology Fund (Ignite) Projects, (<https://ignite.org.pk/>)

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