

# CURRICULUM VITAE

## PERSONAL DETAILS

Name	<b>AYON KUMAR TARAFDAR</b> (Mr.)
City of Present Residence	Vijayawada – 520008, Krishna District, Andhra Pradesh, India.
City of Permanent Residence	Kolkata – 700002, West Bengal, India.
E-mail address	aktarafdar@yahoo.com aktarafdar@gmail.com
Year of Birth	1978
Identification Mark	Brown Mark on spine, Brown Mole on right wrist

## EDUCATIONAL QUALIFICATIONS

<u>Qualification</u>	<u>Name of Institute</u>	<u>Period of Study</u>	<u>Marks Obtained</u>
PhD in Planning (with Govt Fellowship)	Norwegian University of Science and Technology, Trondheim, (NTNU) Norway	Aug 2006 – Sep 2010 (4 Years)	PhD Approved & Completed
MSc in 'Urban Ecological Planning' (Degree with Govt Scholarship)	Dept. of Urban Planning & Design, Faculty of Arch., NTNU, Norway.	Aug 2000 - June 2002 (2 Year, 4 Sem)	Overall Grade - A (Excellent)
Bachelor of Physical Planning (Degree)	School of Planning and Architecture (SPA), New Delhi.	Aug 1996 - May 2000 (4 Year, 8 Sem)	70.32 % (Batch/Univ rank - 3)
Indian School Certificate (Year 12)	Calcutta Boys School, Kolkata.	July 1994 - April 1996	82 %
ICSE (Year 10)	Frank Anthony Public School, Kolkata.	March 1982 - April 1994	93 %

## PROFESSIONAL EXPERIENCE

*OVER 14 YEARS OF EXPERIENCE IN THE INDIAN PRIVATE INDUSTRY, RESEARCH and GOVERNMENT –  
(Excluding the 4 year period utilized for acquiring all above educational qualifications)*

- A) School of Planning and Architecture, Vijayawada SPAV (03.11.2009 till date)**--- Autonomous Institution of National importance established under an Act of Parliament, Ministry of Human Resource Development, Govt. of India --- Working as:
- Associate Professor, Dept of Planning** (from 03 Nov 2009 till date) and;
  - Dean - Planning and Development, SPA Vijayawada** (from 01.02.2019 till 25.09.2020) and;
  - Head, Dept of Planning** (for durations: April 2011 – Aug 2013 and 05 May 2016 - 11 Sept 2017).

Appointed at a higher payscale from 12.02.2014 at 37600-67000, 9000 AGP (VI Pay Commission) of Associate Professor. (Served at Associate Professor between 03.11.2009 and 11.02.2014 at payscale of 15600-39100, 8000 AGP of VI Pay Commission)

Presently working at Payscale of 13A1 of VII Pay Commission of Government of India.

### - (Teaching and Administrative Experience)

Employed from 03 November 2009 till date as **Associate Professor** at the Department of Planning, SPA Vijayawada, which is a premier autonomous Centrally Funded Technical Institution (CFTI) of National

Importance under the Ministry of Human Resource Development, Government of India created by an Act of the Parliament of India.

Other than regular teaching assignments for B.Planning, M.Planning (Urban and Regional Planning), M.Planning (Environmental Planning and Management), M.Planning (Transportation and Infrastructure Planning) and M.Arch (Sustainable Architecture) and for PhD in Planning, undertook several key administrative roles in the School with respect to institution building and programme development, as follows –

### **Important Roles and Positions at SPAV**

- **Dean** – Planning and Development of SPA Vijayawada from 01.02.2019 till 25.09.2020.
- **Head** - Department of Planning (05 May 2016 – 11 September 2017 & 01 April 2011 - 05 Aug, 2013)
- **Chairman** – Library Advisory and Purchase Committee since 14.11.2017 till 05.11.2019.
- **Chairman** – Institutional Purchase Committee (from June 2010 to July 2011) & (March 04, 2016 to Feb 01, 2019)
- **Chairman** - Doctoral Research Committee – Planning, SPAV (01 Sept 2016 to 11 Sept 2017 & earlier 24 July, 2011 to 05 Aug 2013)
- **Chairman** – Campus Development Committee, SPAV between 16.12.2017 and 01.02.2019
- Member - Board of Governors, SPA Vijayawada (09 April, 2011 - Jan, 2013 and Dec 2016 till 11 Sept 2017)
- **Member** – Senate of SPA Vijayawada (Dec 2016 onwards till 11 Sept 2017, & from 01.02.2019 till 25.09.2020)
- **Member** – Building Works Committee, SPAV (from 16.12.2017 till 25.09.2020) wherein assisted in developing of campus development budgets, long term planning of infrastructure and effectively obtained approvals.
  
- Member – Committee to Monitor Swachh Bharat Mission in Campus since 16.01.2018 till 01.02.2019
- **Chairman** - Board of Studies, Planning, SPA Vijayawada (01 April 2011 - 05 Aug, 2013)
- Member Secretary - Academic Council, SPA Vijayawada (12 May, 2011 till Aug, 2013)
- Member - Board of Studies, Planning, SPA Vijayawada (05 Jan, 2014 onwards)
  
- **'Admissions in Charge'** for SPAV (CCB) for academic years : 2010-11 and 2011-12 and 2012-13
- Deputy Admissions in Charge for SPAV (JoSAA) for academic years : 2016-17 & 2015-16
- **Chief Warden** of SPAV Boys and Girls Hostels - from Jan 2014 to July 2014
- **Placement Coordinator** – SPA Vijayawada - from Mar 2014 to Feb 2017.

### **Important Achievements at SPAV**

- Worked towards starting the “credit patterned academic regulations (CGPA)” in the Dept of Planning – made effective from 2011-12 Batch (first amongst all three SPAs in India).
- Worked towards revising the B.Planning course structure and syllabus as per AICTE and ITPI standards - made effective from 2011-12.
- Worked towards developing and getting the PG Programme of M.Planning (Environmental Planning & Management) approved for the Dept of Planning, SPAV. Programme, got initiated from 2013-14 A.Y.
- Worked towards initiating the Doctoral Programme at Dept. of Planning, SPAV – Programme initiated in 2012-13 A.Y.
- Worked again towards revising the B.Planning course structure and syllabus after 5 years of its revision which became effective from 2019
  
- Instrumental in monitoring the works of CPWD and Consulting Architect towards completion of SPAV's permanent campus and its handing over on September 2018 (as Chairman of Campus Development Committee SPAV)
- Instrumental in developing several infrastructure of the campus (as Dean Planning and Development): IT systems, Furniture, AMCs for Campus Utilities, Solar Power in campus, etc.
- Instrumental in procurement of library books (over 1000 titles), journals and library furniture as Chairman of Library Advisory and Purchase Committee since Dec 2017 till 05.11.2019.
- Worked towards developing the Equivalence Course Structure as a bridge between old and new syllabus - implemented between 2011 and 2014.
- Developed the Environmental Monitoring Laboratory for the M.Planning (Environmental Planning and Management)
- Worked towards developing a detailed Academic Manual for Dept. of Planning, SPAV in 2017 for expanding outreach in public domain.
- Worked towards converting students outputs into Digital Archives for the Departmental of Planning in 2016

- Conducted training programmes and workshops as detailed in subsequent sections
- Executed research projects as detailed in subsequent sections

Assisted in several other portfolio/assignments related to Examinations, Proposal Development for Research Projects, Disciplinary Actions, Recruitment, Procurement, Development of Labs, etc.

**B) GIS Development Pvt Ltd --- Team Leader, Research & Contents. (16 Aug 2003 till 15 Sept 2006)**

**- (Industrial, Research and Managerial Experience)**

Employed from 16 Aug 2003 till 15 Sept 2006 at National Capital Region of Delhi, India. GIS Development is presently named as Geospatial Media and Communications Pvt. Ltd. Responsibilities include heading operationally the entire research division for the company. This involves management of all research activities related to different development projects, budgeting, vision development, team building etc.. Responsibilities also included overall content management of a GIS portal, managed by the company. Key projects:

- 'Incremental Regional Plan' for Almora District (India). Worked as Team Lead (Physical Planning) in this intensive field-oriented project. It involved making of integrated 'land use and development plan' for neighbourhoods, in a participatory approach using GPS and GIS and satellite imageries. 10 local high schools and their students were involved. Neighbourhood level plans were amalgamated to make a district level plan. 1.5 year project was sponsored by Department of Science and Technology, Govt of India, and served as pilot project for other federal states in India. Project mentioned and lauded by President of India in 2005.
- 'National Disaster Response Plan (NDRP)' document: Research & Development. Specific responsibility of development of a process-accountability-model for district-level preparedness for disasters. Project done for National Centre for Disaster Management, Ministry of Home Affairs, Govt of India supervised under the Prime Minister of India. Duration – 18 months.
- Nation Spatial Database Infrastructure (NSDI) research. Research Partner in the national Govt' project by Department of Science and Technology to develop an integrated NSDI that can serve across various fields of government's administration, planning and security needs. Role was to contribute on 'interoperability aspects of data' that will feed into the massive NSDI model from different sources. Personally made series of presentations at government level. Project still underway with Government of India.

**C) Centre for Spatial Database Management and Solutions (CSDMS) --- As Senior Research Associate. (02 June 2002 to 14 August 2003)**

**- (Industrial & Research Experience)**

Employed from 02 June 2002 to 14 August 2003 months at Delhi, India. CSDMS is presently known as Centre for Science, Development and Media Studies. Responsibilities included conceptualization, analysis, and execution of developmental and social projects within the ambit of GIS, GPS and its application in urban planning, for national and international clients. Wrote detailed project proposals for funding. Represented in national and international occasions. Key research projects:

- Constituency Management System, Maharashtra: Project funded by the Government of Maharashtra, and Ministry of Information Technology, Govt of India, was done in collaboration with IIT Mumbai and IIT Delhi. Objective was to develop detailed socio-economic, infrastructure, and utilities "information system" for key constituencies in Maharashtra, India. The system was used to develop a "Constituency Management System (CMS)" aimed to aid the local elected representative in deciding upon the development projects to be undertaken.
- Health GIS for Revised National Tuberculosis Programme (RNTP), Orissa: A pilot project, funded by WHO and Orissa Government. Involved detailed mapping of the distribution of tuberculosis affected patients in Deogarh district and the location of 'DOTs'. Project involved development of a planning and management model for the monitoring of the disease and actions of DOTs.
- Community-based Water Resource Management Plan, Faridabad. Sponsored by Media Lab Asia, MIT, USA and Ministry of Information Technology, Govt of India, the project assessed water resource and management practices of 7 large villages (1 block) of Faridabad, India. Objective was to develop a plan for water management in the arid regions. 'GramChitra', a community based GIS model for water management was developed. Project successfully completed in 12 months.

#### **D) M/s Consulting Engineering Services (India) Ltd. --- As Project Trainee**

##### **(Industrial Experience)**

Was involved at Calcutta from 14/6/99 to 30/7/99 in the following projects:

- Detail Sector Design, Rajarhat New Township, Calcutta: Involved in the design of four physical sectors of the new township (Phase 1 & 2) and presentation in front of WB HIDCO, the development agency. Involved also in development of zonal level land-use guidelines.
- Land use Planning for Haldia Industrial Township: Was involved in making a 'Strategic Plan' aiming at improving accessibility of Haldia with the city of Calcutta. Work included regional demographic pattern studies and land suitability analysis.

#### **E) M/s India Property Research --- As Project Associate**

##### **(Industrial Experience)**

Was involved for six weeks from 16/9/99 to 30/10/99 at New Delhi in the final stages of the preparation of the book: The Dynamics of Delhi Property Market, 1999. The report received the prestigious award of the 'UK- Best Research Work on Property Markets' for the year 1999 by the PriceWaterHouse.

#### **F) M/s Jones Lang Lasalle --- As Project Trainee**

##### **(Industrial Experience)**

Was involved for eight weeks at New Delhi from 10/4/99 to 10/6/99 in the following projects:

- Proposals for Residential Development Options in Gurgaon for Larsen & Toubro. Preparation of 'Preliminary Report' involving analyzing existing residential developments in Gurgaon and conducting primary survey to capture market demand and preferences. Report included 'desired housing mix, sizes pricing and facilities' for a residential complex of 200 households.
- Development options along the MRTS Corridor (Phase I) New Delhi for Delhi Metro Rail Corporation: Was involved in the analysis and conduction of 'household and retail market surveys' and development of 'Detailed Land Use Proposals' along 3 station sites of Phase I, MRTS corridor, New Delhi. Land use analysis were aimed at strategizing commercial nodes around the stations.

#### **G) M/s Transport Planners Associates --- As Project Trainee**

##### **(Industrial Experience)**

Was involved for six weeks from 18/5/98 to 30/6/98 in the following projects:

- Feasibility study for Shahdra MRTS station, New Delhi
- Kamptee Kanhan Bypass Alignment on environmental parameters, Nagpur, India
- Design of intersection at Zanda Chowk, Silvassa, Dadar Naqar Haveli, Gujarat, India

## **CAREER ACHIEVEMENTS**

### **External Expert and Advisory Roles:**

1. Has been an **Advisory Panel Member** to **Union Public Service Commission (UPSC)**, Govt. of India, New Delhi, which assists in UPSC recruitments
2. Has been an **Advisory Member** for **Haryana Public Service Commission (HPSC)** for assistance in recruitments.
3. Served on **Selection and Interview Committee** for **Govt of Andhra Pradesh** for recruitment of posts of Planning at State Govt level (2017).
4. Is a **Technical Advisory Member** for **Vijayawada Municipal Corporation** for evaluation of development projects.
5. Served on **Selection and Interview Committee** for **SPA Vijayawada** for recruitment of posts of Assistant Professor and Asst. Librarian (2013 and 2019 respectively).
6. Has been an **Advisory Member** for **erstwhile VGTM-UDA** (Vijayawada Urban development Authority) on setting of benchmarks for the Regional Plan preparation of Vijayawada Region.
7. Has been an **Expert Member** for **Andhra Pradesh Capital Region Development Authority (AP-CRDA)** for Master Plan Preparation for CRDA region.
8. Invited and attended as Planning Expert Member in the Roundtable Discussion on Revisiting Planning Curriculum in India conducted by **National Institute of Urban Affairs (NIUA)**, Ministry of Urban Development, Government of India in May 2017 at Delhi.

### **Jury Member Roles and Invited Lectures:**

9. Was the **PhD External Examiner** for Ms. N. R. Lambe for the award of PhD degree at the Department of Architecture and Planning at **V National Institute of Technology, Nagpur**, an Institute of National Importance under MHRD, GoI, during Sept 2017.
10. Was the **PhD External Examiner** for final thesis report of Ms. Sutapa Joti for the award of PhD degree at the Department of Architecture and Planning at **IIEST, Shibpur (WB)**, an Institute of National Importance under MHRD, GoI, during Dec 2018.
11. Is a **Member** of "Departmental Doctoral Research Progress Committee" for the Dept of Architecture and Planning at **NIT Trichy** since Aug 2018, for 5 PhD scholars.
12. Delivered **Invited Public Lecture** at **NIAS at IISc Bangalore** in 2019 on "Computation in Planning" to Grade A Officers of Govt of India.
13. Delivered **Invited Public Lecture** at **AP Human Resource Development Institute (AP HRDI)** for training of GRADE A officers of AP-Public Service Commission, Govt of Andhra Pradesh, during June 2016 and March 2017.
14. Delivered **Invited Public Lecture** at **SPA Bhopal** during October 2015 for all PG batches in Urban, Regional and Environmental Planning.
15. Evaluated as **External Jury Member for M.CP Thesis** at **IIT Kharagpur** in 2013-14 for final assessment of M.Tech thesis of final year batch of Masters in City & Regional Planning.
16. Evaluated as **External Jury Member for M.Plan thesis** at **CEPT University, Ahmedabad** for 2019-20, and 2018-19 for assessment of thesis of final year batch of M.Planning (Infrastructure Planning).
17. Evaluated as **External Jury Member for M.Plan thesis** at **CEPT University, Ahmedabad** for 2019-20 and 2011-12 for assessment of thesis of two final year batches of M.Planning (Urban Planning Department and Environmental Planning).
18. Evaluated as **External Jury Member at SPA Delhi** in 2019-20 and 2018-19 for final assessment of Third Year Studio (Master Plan) and First Year B.Planning studio exercise (Physical Planning Department) respectively and in 2015-16 for Second Sem M.Planning (Environmental Planning) Studio Assessment.
19. Evaluated as **External Jury Member at SPA Delhi** for 2014-15 for final assessment of Third Year B.Planning Zonal Development Planning exercise (Physical Planning Department).
20. Evaluated as **External Jury Member at SPA Bhopal** in 2014-15 for final assessment of Masters in Environmental Planning II Sem Studio work.
21. Evaluated as **External Jury Member for B.Plan thesis** at **SPA Bhopal** in 2014-15 for final assessment of thesis of final year batch of B.Planning.

### **Prestigious Projects - Coordination and Implementation:**

22. Has been the SPAV **Project Coordinator** of the **Erasmus+ NTNU-SPAV Global Mobility Project 2016-17**, which funded exchange of faculty and PhD students between NTNU Norway and SPA Vijayawada. Program led to exchange of faculty between SPAV and NTNU.
23. Awarded full sponsorship from **Global Institutions Academic Network (GIAN)** programme, under **MHRD, Govt of India** and conducted 5-day National workshop together with Prof. Adam Sheppard from **University of West England, Bristol (UK)** and Mr. Prasanth Vardhan SPAV on theme of "Planning Implementation – Delivering with Awareness of Barriers" during *Oct 03-07, 2017* at SPA Vijayawada campus.
24. Has been a project team member in the **EU funded project "Building Inclusive Urban Communities"** which is a consortium project executed by Danube University Austria, ITC Netherlands, Lunds University Sweden, SPA Vijayawada, KRVIA Mumbai and CEPT Ahmedabad during 2016-2018.
25. Has been a project team member in the **GoAP funded project "Revision of AP Town and Country Planning Act"** (Ongoing 2019-20).
26. Has been a project team member in the **EU funded project "Building Resilient Urban Communities"** which is a consortium project executed by Danube University Austria, ITC Netherlands, SPA Vijayawada, KRVIA Mumbai, NIT Hamirpur and SPA Bhopal which is underway between 2019-2020.
27. Was **Team Member (Urban Planning Specialist)** in completed project titled "Re-delineation of VGTM-Urban Development Authority Area - 2010" for VGTM Urban Development Authority.
28. Has been a project team member in the **MoPR, GoI funded project "Model Gram panchayat Spatial Development Plan"** (Ongoing in 2020).

### **Nomination and Academic Supervision:**

29. Nominated and attended training on **Government e-Market Place** conducted by National Institute of Financial Management, **Ministry of Finance, Govt of India** at Delhi on 20, Dec 2016.

30. Has been **Main Supervisor** and guided 11 B.Planning thesis and 18 M.Planning thesis between 2010-2019 (out of which 7 students secured Best Thesis Awards in thesis in their batch)

## PROFICIENCY, FELLOWSHIPS AND AWARDS

1. Recipient of full sponsorship from **Global Institutions Academic Network (GIAN), Ministry of Human Resource Development (MHRD), Govt of India** to conduct a 5-day National workshop together with Prof. Adam Sheppard from **University of West England, Bristol** and Asst. Prof. Prasanth Vardhan on theme of "Planning Implementation – Delivering with Awareness of Barriers" during *Oct 03-07, 2017* at SPA Vijayawada campus. Workshop conducted successfully.
2. Awarded acclaimed **Norwegian Government Research Fellowship** for full time doctoral research in 2006 for entire period of studies (2006-2009), with family support, leading to PhD degree
3. Awarded **Norwegian Government Scholarship for Masters Degree** studies for entire period 2000-2002 leading to MSc in UEP degree.
4. Won **NTNU Department of Planning's financial support** to attend one week Workshop in Oxford, February 2001 (see Conferences section).
5. Won **NTNU Department of Planning's financial support** to attend 3 day Seminar at Royal Danish Academy of Architecture and Planning, Copenhagen, May 2001 (see Conferences section).
6. Has been the SPAV **Project Coordinator** of the **Erasmus+ NTNU-SPAV Global Mobility Project 2016-17**. This project funded exchange of faculty and PhD students between NTNU Norway and SPA Vijayawada. Program led to exchange of faculty between SPAV and NTNU.
7. Qualified for **Graduate Aptitude Test in Engineering (GATE)** of India in 2000 with 91.8 percentile, which is a National level competitive exam conducted by MHRD, Govt. of India.
8. Received Overall Academic Proficiency Prizes – 'First' in SPA (Bachelors) for IInd and IIIrd Year.
9. Held the position of 'Secretary' of the 'Indian Students Forum' at Trondheim, Norway for a year.

## PAPERS AND PUBLICATIONS

**Citations:** Till March 2019, there have been 25 citations (in total) from amongst my publications by other authors in their academic publications. The publications in my name are as mentioned below.

### 2020

1. Vardhan P. and Tarafdar A. K. (2020): "*Revenue Potential of Public Leasehold System for Urban Infrastructure: A Case of Guntur Municipal Corporation*". Published in '**Journal of Critical Reviews**', (Jun, 2020) Vol 07, Issue No. 12 2020, pp 476-486. Advanced Scientific Research, Malaysia. ISSN 2394-5125. DOI: <http://dx.doi.org/10.31838/jcr.07.12.85>. Open Access Article.
2. Vardhan P., Razak A. and Tarafdar A. K. (2020): "*Public Land as a Resource to Finance Urban Infrastructure*". Published in '**International Journal of Advanced Science and Technology**', (Jun, 2020) Vol 29, Issue No. 06 - 2020, pp 6672-6686. SERSC, Sandy Bay Australia. ISSN: 2005-4238 (Print), 2207-6360 (Online). Open Access Article.

### 2018

3. Tarafdar A. K. (2018): "*Exploring Relations Between Vulnerability, Tenure And Physical Conditions In Slums Along Sewerage Channels Of Vijayawada City*" published as a report for the European Union project titled 'Building Inclusive Urban Communities (BINUCOM)', funded by the Erasmus+ Programme of the European Union, Krems, Austria. Published at - <http://moodle.donau-universitaet.ac.at/binucom>

### 2016

4. Tarafdar A K. (2016): "*Unraveling the Smart Conundrum*". Published in '**Journal of New Building Material & Construction World**'. Volume 22 (01). NBM Media P Ltd. New Delhi. ISSN: 0973-0591
5. **BOOK** - Tarafdar A K. (2016): "Systems Approach to Settlement Planning- Dealing with Uncertainties in Planning". A chapter published in the book titled - '**Manual of Urban Planning and Development**'. Published by Andhra Pradesh Human Resource Development Institute, Govt of Andhra Pradesh.

### 2012

6. **BOOK** - Tarafdar A K. and Bjønness H. C. (2012): "*Sustainability in Practice*". (**Chapter 26 of Book**) in Fitzgerald J and Michael M. Jr. (Eds) **Cities and Sustainability**. Routledge. ISBN: 978-0-415-67099-9.

#### **2011-10**

7. Tarafdar A.K. (2011): "*PRETAB Planning Model: Local Information Infrastructure (LII) as DSS for Local-level Urban Planning*". Published in "**Full Paper Proceedings – International Conference: Geospatial World Forum 2011: Dimensions and Directions of Geospatial Industry.**" Hyderabad, India. Jan 18-21, 2011. GIS Development Publications, Noida. Web Publication: <http://geospatialworldforum.org/2011/conference/CE.htm>
8. **BOOK** - Tarafdar A.K. (2010): "*Bridging the Dichotomy: Exploring Linkages between Urban Environmental Challenges and Local development Practices. Neighbourhoods of Kolkata, India*". Trondheim: **NTNU University Press**. ISBN: 978-82-471-2117-7.
9. Tarafdar A K. and Bjønness H. C. (2010): "*Environmental Premises in Planning for Sustainability at the Local Level in Large Southern Cities. Case Study: Calcutta, India - Suggesting the PRETAB Planning Process Model*". Published in '**International Journal of Sustainable Development & World Ecology**', (Feb 2010) Vol 17, No. 01, pp 24-38. **Taylor and Francis, New York & London**. (ISSN 1350-4509 print / ISSN 1745-2627 online. DOI: 10.1080/13504500903481581)
10. **BOOK** - Tarafdar A K., Kumar D., Mishra, S. and Sengupta, R. (2010): "*Portraying the status, potential and prospects of GIS industry*". (**Chapter 4 in Book**) in Joshi R G., and Seshagiri S. (Eds.) *Geographic Information System: Management and Technology Perspectives*. **Saujanya Books**, Mumbai and Delhi. ISBN-13 : 978-81-31411-93-3 / 9788131411933.

#### **2009 - 06**

11. Tarafdar A K. (2009): "*Critical Reflections on the Relations between Sustainability, Urban Environmental Challenges, and Livelihood Issues at a Local Scale. Case Study: Fringe areas of Kolkata, India*". Published in "**Full Paper Proceedings - 11th International Conference on Humane Habitat (ICHH) 2009.**" **Mumbai, India**. Jan 29-31, 2009. Rizvi Publications, Mumbai (ISBN 87-217-0370-7).
12. Tarafdar A K. (2008): "*Unravelling the Plight of Local Urban Environment in Planning Practices Aimed at Sustainability in Large Southern Cities. Case Study: Kolkata, India*". Published in "**Proceedings of 2<sup>nd</sup> International Sustainability Conference 2008.**" University of Basel Press: Basel, Switzerland, Aug 21–22. (ISBN 978-3-906129-48-8).
13. Tarafdar A K. (2008): "*Changing urban environment in the context of multiple stakeholders and urban planning. Case Study: Calcutta, India*". Published in proceedings of '**The UK-Ireland Planning Research Conference 2008**', Mar 18-20, Queen's University Press, Belfast, Ireland. (ISBN 978-0-853899-25-9)
14. Tarafdar A K. (2007): "*Planning the Urban Environment in Developing Countries – A Dilemma between Theory and Practise. Case Study: Calcutta, India*". Published in '**Proceedings of 2nd International Congress on Environmental Planning and Management.**' Technical University of Berlin Press, Germany, Aug 2007. (ISBN 978-3-7983-2050-5)
15. **BOOK** - Tarafdar A K., SatyaPrakash, and Gupta R. (2006): '*GeoICT and Development - The Inverted Pyramid Syndrome*'. (**Chapter 12 in Book**) In Rana, Sanjay; Sharma, Jayant (Eds.) *Frontiers of Geographic Information Technology*. **Springer**: New York. (ISBN: 978-3-540-25685-4)
16. Tarafdar A K. (2006): "*Does Urban Planning Ensure a Better Local Environment?*". Published in international journal - '**GIS Development Asia Pacific**'. Vol 10 Issue 11 Nov: p34-38. (ISSN 0971-9377)

#### **2005 – 02**

17. **BOOK** - Tarafdar A K. and Gupta R. (2005) '*Rethinking Community Geographic Information Systems*'. (**Chapter 5 in Book**) In book by Roy, P.S. (ed.) *Geoinformatics for Tropical Ecosystems*. **Vedam Books**: New Delhi. (ISBN 81-211-0370-3)
18. **BOOK** - Gupta R., Tarafdar A K., & Krishna B. (2005): '*GramChitra - Taking GIS to Grassroots*'. **Chapter 7 in Book** by Haqqani A B. (Ed.). *The role of information and communication technologies in global development : analyses and policy recommendations*. xvi, 383 pp. **United Nations ICT Task Force**: New York. (ISBN 9211045320)

19. Tarafdar A K. (2005): '*Map Policy of India: Policy for whom?*'. Published in the international journal '**Information for Development**', Vol 1 Issue 6, June 2005. <http://i4d.eletsonline.com/map-policy-of-india/> (ISSN 0972-804X)
20. Tarafdar A K. (2005): '*Cartography Takes A Leap Forward*'. Published in the international journal '**GIS Development India**', Vol 9 Issue 6, June 2005. (ISSN 0971-9377)
21. Tarafdar A K. (2005): '*Realising the Critical Steps to Urban Renewal in India*'. Published in Proceedings of '**NSDI – V. An International Workshop on Spatial Data Infrastructure for Bharat Nirman, Hyderabad, India (18th - 21th Dec)**'. Published by Government of India.
22. Tarafdar A K. (2003): '*Interoperability Issues of a NSDI*', published in the **Proceedings of International Workshop on National Spatial Data Infrastructure (NSDI) IV**, Lucknow, India. Published by Government of India. Feb, 2003.
23. Gupta R., Tarafdar A K., & Krishna B. (2002): '*GramChitra - Taking GIS to Grassroots*', Published in the '**Proceedings of International Development by Design 2002 Conference**', Bangalore. Published By CBA Publications, MIT, USA. Online access - <http://cba.mit.edu/pubs/papers.html>
24. '*Revisiting Solid Waste Management Practices of Kolkata, India*' published in **Proceedings of the NORASIA II Conference** - "Conflicts and development in Asia" - at the Norwegian University of Science and Technology, Trondheim, Norway, August 29-31, 2002.
25. '*Community GIS' vs 'GIS Community*', Published in the international journal '**GIS Development India**', Vol 6 Issue 9, Sept 2002. (ISSN 0971-9377)
26. '*In The Maze of Disaster Management*', Published in the international journal '**GIS Development India**', Vol 6 Issue 10, Oct 2002. (ISSN 0971-9377)

## PRESENTATION IN CONFERENCES

### INTERNATIONAL

1. **Symposium on 'Resilient Cities', Krems & Vienna, Austria 2019** organised at and by Danube University, Krems on Oct 23-25, 2019. Invited and presented a paper on '*Urban Heat Stress and Its Implications of Land Use Planning*'.
2. **International Conference on Future of Cities 2019** by IIT Roorkee on Dec 10-12, 2019: Two full papers published in Conference Proceedings titled -
  - "*Conservation and Development of Ecologically Sensitive Regions, Case: Pithoragarh District, Uttarakhand, India*" where Mr. Ajay Kumar is Main Author and Ayon Kumar Tarafdar is co-author, and;
  - "*Composite Vulnerability Assessment of Slums of Bhubaneswar, Odisha*" where Ms. Arpita Sahu is Main Author and Ayon Kumar Tarafdar is co-author.
3. **International Conference of Planning Education 2014** by Institute of Town Planners, India, (ITPI) and Institute of Development Studies (IDS), Mysore: Made an invited presentation titled "Pedagogy of Planning Education in India".
4. **Geospatial World 2011, Hyderabad** (Jan 19-21, 2011): Made an invited presentation titled "PRETAB Planning Model: Local Information Infrastructure (LII) as DSS for Local-level Urban Planning" at the Symposium of GIS and RS for Design and Engineering.
5. **South East Asia Survey Congress (SEASC 2005), Brunei**, (Nov 21-25, 2005): Made a powerpoint presentation on 'Status of Surveying Industry in India: Challenges and Prospects'.
6. **Map Asia 2005, Jakarta, Indonesia** (Sept 2005): Was a participant of the 3-day international conference on geospatial sciences. Participant and member of Technical Committee of conference.
7. **Map Middle East 2003, Dubai, UAE** (April 2005): Was a participant of the 3 day international conference on spatial sciences. Made company presentation on 'GIS in Solid Waste Management'.



8. **NASA Meet, Washington DC, USA** (May 2004): Made a concept presentation at NASA headquarters on invitation, on *'Use of space technology and GPS for rural development in Southern Countries'*.
9. **GeoSpatial World 2004 Conference, Miami, Florida, USA** (May 2004): Was a participant of the conference on GIS, GPS, digital photogrammetry and Remote Sensing. Made company presentation on 'Open GIS and GIS applications on Disaster Management'.
10. **Bentley International User Conference, Orlando, Florida, USA** (May, 2004): Was a participant of the conference on GIS and related technologies. Responsible for conference technical reporting.
11. **Map Asia 2004, Beijing, China** (August 2004): Was a participant of the 3-day international conference on geospatial sciences. Participant and member of Technical Committee of conference.
12. **GeoSpatial World 2003 Conference, New Orleans, Louisiana, USA** (May 2003): Was a participant of the conference on GIS, GPS, digital photogrammetry and Remote Sensing. Was responsible for detailed analysis of certain technical sessions on behalf of the organizers.
13. Presented a paper in **NOFUA Conference on 'Compact Cities' held in Copenhagen, Denmark** (May, 2001): 5 day international conference organized by the Royal School of Architecture and Planning, Copenhagen.
14. Workshop on **'Sustainable Settlement Design' held in Oxford, UK** (February 2001): Was a participant in this one week international workshop organized by Oxford Brooks University, UK and Massachusetts Institute of Technology, USA.
15. Presented a paper in **"The 11th International Conference on Humane Habitat (ICHH) 2009, Mumbai"** (Jan 29-31) organized by International Association for Humane Habitat (IAHH). *See Publication List.*
16. Presented a paper in **"2<sup>nd</sup> International Sustainability Conference 2008, Basel, Switzerland"** (Aug 21 – 22, 2008) organised by University of Applied Sciences Northwestern Switzerland and the University of Basel. *See Publication List.*
17. Paper published in **"The UK-Ireland Planning Research Conference 2008, Belfast, Ireland"** (Mar 18-20, 2008), organized by Queen's University, Ireland. *See Publication List.*
18. Presented a paper in **"2nd International Congress on Environmental Planning and Management, Berlin, Germany"** (Aug, 2007) organized by Technical University of Berlin. *See Publication List.*
19. Presented a paper in **NOFUA Conference on 'Compact Cities' held at KTH, Stockholm, Sweden** (Feb, 2007): Paper Title: *'Raising questions related to the linkages between development and urban environment. The case of Kolkata and its fringes'*.

### **NATIONAL (India)**

1. Invited and attended as Planning Expert in the Roundtable Discussion on Revisiting Planning Curriculum in India conducted by **National Institute of Urban Affairs (NIUA)**, Ministry of Urban Development, Government of India in May 2017 at Delhi.
2. International Workshop on **National Spatial Data Infrastructure (NSDI) IV, Lucknow** (Nov 2004): Presented a paper on *'Interoperability Issues of a NSDI: Issues and Prospects'* in the workshop organised by Department of Science and Technology, Government of India
3. Regional Conference on **State and District Level Disaster Management, Yashada, Pune** (August 2002): Participant of conference organized by National Centre for Disaster Management.
4. Workshop on **Technology Transfer and Capacity Building for Local level Planning, IIT Delhi** (September 2002): organized by the Department of Science and Technology, Govt of India and hosted by IIT Delhi, Department of Civil Engineering.
5. State Workshop on **'Bio-Medical Wastes Management', Calcutta** (August, 2001): Was a participant of the workshop organized by 'West Bengal Pollution Control Board' and 'Environment Department' (State Ministry of Environment).

6. Workshop on '**Disaster Management in India**', New Delhi (March, 2000): Was a participant in the workshop organized by School of Planning and Architecture (New Delhi), National Center for Disaster Management (NCDM) and Indian Institute of Public Administration (IIPA), Delhi.

## **SUPERVISION OF RESEARCH**

**PhD:** Main Supervisor for ongoing PhD Thesis at SPA Vijayawada, as below:

1. Karteek Guturu (Ongoing) – "Developing a Built Form Model Based on Floor Space Index for Indian Cities"
2. Prasanth Vardhan (Ongoing) – "Assessment of Land based Fiscal Tools to Municipal Services in Small and Medium Towns"

Has been **Main Supervisor** of 13 B.Planning thesis and 23 M.Planning thesis between 2010-2020 (out of which **SEVEN students secured Best Thesis Awards** in thesis in their respective batch), as detailed below:

**Supervision of Master of Planning (PG Thesis):** Main Supervisor for PG level Thesis at SPA Vijayawada, are as below:

### **Master of Environmental Planning and Management**

1. Bibhuprakash Saha (2020) – "Changing Aquatic Biodiversity and Livelihood. The Case of Chilika Lake, Odisha"
2. Rahul Roy (2020) – "Urban Heat Vulnerability and Planning Implications – The Case of North East Delhi"
3. Dipika M (2019) – "Changing Capacities of Ecosystem Services of Urban Wetlands. The Case of Ennore Creek, Chennai"
4. Rajendra Prasad Naik (2019) – "Building Resilience of Agriculture Sector to Climate Change – A Case of Anantapur District".
5. **Adjudged as the Best Thesis of the Batch: Ajay Kumar (2018) – "Understanding Relations between Backwardness and Ecosensitivity. Case of Pithorgarh District in Uttarakhand"**
6. **Adjudged as the Best Thesis of the Batch: Lokenath Saha (2018) – "Ecosystem Services Assessment of East Kolkata Wetlands"**
7. **Adjudged as the Best Thesis of the Batch : Tulika (2017) – "Water Footprint Assessment: A case of rural areas of Bhiwani District"**
8. Bitumoni Chaudhuri (2017) – "Ecosystem Services of Bio-diversity Regions in Urban Context – Case Area of Yamuna Biodiversity Park and Northern Ridge, Delhi"
9. Akshaya S (2016) – "Implications of Socio-economic and spatial factors on Energy Consumption at Chennai"
10. Ganesh S (2016) – "Vulnerability Assessment of Coastal Settlement due to Sea Level Rise. Goa"
11. Amanpreet K (2016) – "Decarbonisation of Urban Transport. Amritsar"
12. **Adjudged as the Best Thesis of the Batch : Babita Pilonia (2015) – "Urban Green As Carbon Sink For Industrial Emission"**
13. Priya Johnson (2015) – "Changing Land Use And Its Impact On Ground Water Resource. Guntur City"

### **Master of Urban and Regional Planning**

14. Chiranjeevi Teja (2020) – "Resilience to Natural Disasters and its Relation to Liveability. Case of Vijayawada"
15. Manoj V (2020) – "Land as a tool for enhancing Municipal Finance in Nandiyal Municipality"
16. **Adjudged as the Best Thesis of the Batch : Pooja G Auropremi (2019) – "Planning and Management of Coastal Ecosystem Services of Puducherry Coastal Region".**
17. Kastury Biswas (2019) – "Safety in Urban Public Spaces at the Neighbourhood Level. Kolkata"
18. Arpita Sahu (2019) – "Composite Vulnerability Assessment of Slums in Bhubaneswar, Odisha"
19. **Adjudged as the Best Thesis of the Batch : Vasudevan (2018) – "Child Safety in Urban Planning. The Case of Chennai".**
20. Sai Sahithi Ch (2017) – "Role Of Urban Green Spaces Within Residential Neighbourhoods. Vijayawada".
21. Anjana James (2016) – "Age Friendly Cities. Trivandrum"
22. Manisha K (2016) – "Implications of Water, Sanitation and Hygiene on Educational Performance. Greater Warangal Municipal Area"

## Master of Transport and Infrastructure Planning

23. Anirudh K. (2020) – “Planning for the Last Mile Connectivity for Improved Ridership in Public Transport Systems. Case Study Vijayawada”

## Supervision of Bachelor of Planning: Main Supervisor for completed Thesis as below:

24. Bijoya Ganguli (2020) – “Vulnerability of Rural Communities due to sea level rise in the Sundarban Mangrove Areas”
25. Prateeksha Sehgal (2018) – “Relations between Energy Consumption and Income Patterns of Female Headed Households. Case of Delhi”
26. Sandeep Kumar (2018) – “Integrated Urban Water Management. Applicability and Challenges in Jaipur City”.
27. M Bala Eshwari (2017) – “Cultural Tourism Strategies and its Linkages to Predominant Art Forms, Krishna District, Andhra Pradesh”
28. Nishtha Saha (2017) – “Impact of Disaster on Local Economy: A Case Study of Siliguri, West Bengal”
29. Srilikitha K (2016) – “Community Based Eco-Tourism In Aruku Valley, Andhra Pradesh”
30. Ravalli Vadalli (2015) – “A Framework To Enhance The Functions Of Urban Wetlands. Case Area: Bellandur Wetland, Bengaluru, Karnataka”
31. Vikram Kumar (2013) – “Participatory Planning Process: A Critical Evaluation. Slum Upgrading in Muzaffarpur”
32. S. Lakshmi Priya Mukherjee (2013) – “Redensification of Housing Areas to contain Urban Sprawl. Greater Imphal”
33. **Adjudged as the Best Thesis of the Batch :** Rajeev Saxena (2013) – “Evolving Parameters for Development Control for Medium Towns. Lakhimpur, U.P”
34. Harshbir Kaur (2012) – “Environmental Issues in Transformation of Urban Fringe Areas. Ludhiana”
35. Ashish Mohan (2012) – “Risk Assessment of Flood Prone Areas. Darbhanga, Bihar”
36. Suraj Kumar (2012) – “Networking Informal Settlements. Identifying Indicators for Growth. Vijayawada”

## CONFERENCES AND TRAINING CONDUCTED

Instrumental in the organization and conduct of following workshops/seminars/training programmes at SPA Vijayawada:

1. Conducted one day **National Seminar on “Planning and Preservation of Heritage Zones”** on 13 Jan, 2020 at SPA Vijayawada which with speakers - Prof. Micheal Tomlan – Cornell University, Thomas Richmond – New York State Department of Conservation, Dr. P. Pavan K – University of Bangalore amongst others. 52 participants attended.
2. Conducted 5-day workshop together with Prof. Adam Sheppard from University of West England, Bristol and Mr. Prasanth Vardhan SPAV on theme of **“Planning Implementation – Delivering with Awareness of Barriers”** during Oct 03-07, 2017 at SPA Vijayawada campus. Workshop attended by 22 participants from all over India. Workshop sponsored under **Global Institutions Academic Network (GIAN) programme, under MHRD, Govt of India.**
3. Was part of the Organising Team which conducted a **3 day National Conference on “Building Inclusive Communities”** attended by over 80 participants (including 12 international participants) in Feb 08-10, 2019.
4. One day workshop on “Affordable Housing Practices” on World Habitat Day – 2015 – attended by about 60 participants
5. Two day National Seminar on Sustainable Water Resource Management – 2015 – attended by about 50 participants
6. Two Day International Conference on “Regional Economic Growth and Corridor based Development” in 2014 – attended by about 80 participants.

## RESEARCH PROJECTS UNDERTAKEN

1. **“Re-delineation of VGTM-Urban Development Authority Area - 2010”:** Was Project Team Member (Urban Planning Specialist) (representing SPA Vijayawada) in project titled “Re-delineation of VGTM-Urban Development Authority Area - 2010” for VGTM Urban Development Authority

executed by SPA Vijayawada for Govt of Andhra Pradesh. Project was completed in 2010. Govt of Andhra Pradesh extended the VGTM jurisdiction subsequent to this project.

2. **"Building Inclusive Urban Communities (BINUCOM)" - 2018:** Has been a Project Team Member (representing SPA Vijayawada) in the European Union (EU) funded project titled "Building Inclusive Urban Communities" which is a consortium project executed by Danube University Austria, ITC Netherlands, Lunds University Sweden, SPA Vijayawada, KRVI Mumbai and CEPT Ahmedabad. Project duration was 2016-2019. Was responsible for sub-research case study under BINUCOM titled "Vulnerabilities of Slum Dwellers residing in Slums along Sewer Canals of Vijayawada" and was responsible for developing and conducting the OpenCourseWare (OCW) titled 'Vulnerabilities Studies in Slums' at PG level.
3. **"Revision of AP Town and Country Planning Act" (Ongoing since 2019):** Has been a project team member (representing SPA Vijayawada) in the Govt of Andhra Pradesh funded project "Revision of AP Town and Country Planning Act". Project duration is 2019-2020.
4. **"Building Resilient Urban Communities" (Ongoing since 2019):** Has been a Project Team Member (representing SPA Vijayawada) for the European Union (EU) funded project titled **"Building Resilient Urban Communities"** which is a consortium project executed by Danube University Austria, ITC Netherlands, SPA Vijayawada, KRVI Mumbai, NIT Hamirpur and SPA Bhopal which is underway between 2019-2021.
5. **'Model Gram Panchayat Spatial Development Plan'** for villages in Andhra Pradesh (**Ongoing since July 2020**): Has been a Project Team Member (representing SPA Vijayawada) for the Government of India project (funded by Ministry of Panchayati Raj, Govt of India) for developing a model GP Spatial Development Plan covering 7 sectors of development and using satellite imageries and GPS data.

## **TEACHING EXPERIENCE – SUBJECTS TAUGHT**

### **School of Planning and Architecture, New Delhi - Master of Planning (Environmental Planning)**

Was Visiting Faculty, from Aug 2005 to March 2006, for the course "Applications of GIS in Environmental Planning – Advanced Course" for final year Master of Planning (Environmental Planning) students at SPA, New Delhi. Was involved for one and half semester, ie., in this capacity. Work involved in conceptualizing study plans, giving weekly lectures (3 hours each week for 12 weeks), assignment plans, final exam and evaluation.

### **NTNU --- For Undergrad' and Grad' Students**

Was course responsible for MSc and Bachelors level courses at the Faculty of Architecture and Planning, NTNU, Norway between 2006 and 2010.

- Approx 450 hours of teaching and supervision of MSc level students in NTNU, Norway
- Courses dealt: Planning Theory, Research Methods, Urban Ecological Planning - Process
- Primary Course Responsible for "Research Methods (Advanced Course for MS - AAR 5250)" and "Planning Theory and Process – FP 4350" in 2009 - 2010

### **School of Planning & Architecture, Vijayawada – For UG, PG and PhD levels**

As Associate Professor of Planning, taught following theory subjects -

#### **At UG Level –**

*Planning Theory, Geoinformatics in Planning, Techniques of Planning, Rural Resource Planning, Urban Management, Planning Information Systems, Planning for Informal Sector, Environmental Planning, Professional Practice, Planning Project I, Cities and Climate Change.*

#### **At Master of Environmental Planning level –**

*Theory of Environmental Planning & Design, Ecological Footprints Analysis, Environmental Impact Assessments, Geoinformatics in Planning, Advanced Research Methods, Planning Theory and Techniques*

#### **At Master of Urban and Regional Planning level –**

*Advanced Research Methods, Applications of Geoinformatics, Planning Theory and Techniques*

#### **At Master of Architecture (Sustainable Architecture) level –**

*Environmental Impact Assessments*

#### **At PhD level –**

*Research Methods for Doctoral Studies*

## PROFESSIONAL MEMBERSHIPS

- Institute of Town Planners, India (ITPI) - Associate Member (AITP 2007-166)
- International Association of Academicians and Researchers (INAAR) – Life Member (INAAR / 1041)

## OTHER RESEARCH EXPERIENCE (as student)

- **GIS Project for Xian Muslim District, China (2001):** Developing a detailed GIS database for NTNU's ongoing conservation project for the traditional and transforming Xian Muslim District.
- **Project Kathmandu 2000, Nepal:** Was involved in the project of 'Area Upgradation of Ward 19, Kathmandu' conducted by the Dept. of Town & Regional Planning, NTNU in collaboration with the Inst. of Engg., Kathmandu. The focus was on making of a 'strategic ward development plan' through participatory planning approach based on a detailed 2 month site visit.
- **Revisiting Solid Waste Management Practices of Calcutta:** Conducted a 1 year MSc level applied research at NTNU, Norway in conjugation with Calcutta Municipal Corporation (CMC). Work was adjudged best thesis – 2002 at NTNU.

## RELEVANT SUBJECTS STUDIED

### MSc/Doctoral level courses attended at NTNU, Norway

- Methods in Environmental Impact Assessments; Environment and Urban Planning- Theoretical Frameworks; Urban Ecological Planning; Environment, Development and Livelihoods; Landscape and Planning; Planning & Construction; Planning Theory.
- GIS in Urban Planning (Packages handled in GIS - Themaps, Idrisi, MapInfo, ArcGIS, ERDAS)
- Research Methods for Planners and Architects

### Undergraduate level courses attended at SPA, India

- Urban and Rural Planning, Architectural Design Basics, Environmental Sciences, Techniques in Land Use Planning, Planning theory
- Operation Research (Linear Programming Problems, Transshipment Problems, Transportation problems, PERT & CPM Networks, queuing models, replacement theory)
- Statistical Analysis (SPSS package), Welfare Economics, Traffic & Transportation Planning

## EXPERIENCE AS STUDENT OF SPA DELHI

- Developing '**Sector Planning Guidelines for the new township of Rajarhat next to Calcutta**' collaborating with 'West Bengal Housing & Infrastructure Development Corporation' (Final thesis).
- **Block Development Plan (Sub-Regional Plan) Salcete Block, Goa, India** (population 3 lac): Policy guidelines framed for industrial sector preserving the rich eco-system of Goa. (IV Year)
- **Master Plan of Thodupuzha, Kerela, India** (population 45000): Involved in evolving a '*Comprehensive Transportation Plan*' for the town as a part of the Master Plan document. (III Year)
- **Zonal Development Plan for Dwarka, Delhi, India:** Was specifically responsible for the *Detailed Land Use Plan* of the subcity and detailed *Sector Plans* of 3 sectors. (III Year)
- **Traffic Engineering and Transportation Planning:** Involved in studies, surveys, analysis and proposals of transport sector. Also undertook a **Site Planning Exercise** (area 10 Ha). (II Year)
- Delegate from SPA Delhi to the annual meet of 'National Organization of Students of Planning (NOSPLAN)' 1998 at CEPT, Ahmedabad.

## PERSONAL INTERESTS

- Swimming & Photography
- Instrumental Music
- Theatre
- Poetries
- Satyajit Ray and Film-making

## LANGUAGE SKILLS

	<b>Speaking</b>	<b>Writing</b>	<b>Reading</b>	
Bengali	Excellent	Excellent	Excellent	Mother Tongue
English	Excellent	Excellent	Excellent	TOEFL (292 / 300 CBT in 2001)
Hindi	Excellent	Excellent	Excellent	
Norwegian	Good	V.Good	V.Good	Passed Norwegian National Language Eligibility Test (Bergen Test equivalent)
Telegu	Satisfactory	Minimum	Minimum	