



Prof.(Dr.) Ranjan Roy

## **Dr. Ranjan Roy**

Ph.D

**Professor**

**Life Member-** Geographical Society of India, Kolkata; Geographical Society of North-Eastern Hill Region (India), Shillong; National Association of Geographers, India (NAGI); Indian Institute of Geomorphologists (IGI), Allahabad; Institute of Landscape, Ecology and Ekistics (ILEE), Kolkata; Association of North Bengal Geographers (ANBG), Siliguri.

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**Subject Specialization:** Cartography, Population Geography, Agricultural Geography, Urban Geography, Geography of Rural Development, Remote Sensing & GIS.

**Areas of Research Interest:** Agricultural Geography, Transport and Marketing Geography, Population Studies, Urban Problems, Rural Development.

**No. of Ph.D. Students:** (a) Supervised: 08 (b) Ongoing: 08

**No. of M. Phil. Students:** (a) Supervised: 03 (b) Ongoing: 03

**No. of Publications:** 82

### **Achievement & Awards:**

- Nil

### **Administrative Experiences:**

- Continuing as HOD, Department of Geography and Applied Geography, University of North Bengal,

### **Research Projects Completed:**

- Co-investigator, “Preparation of contour map for drainage management in English Bazar municipality, Malda, Sponsored by Malda municipality, Malda”, Govt. of West Bengal, Memo No. 2375/IV-2/11-12, dt. 07.02.2012.
- Co-investigator, UGC SAP DRS-I Programme on “Geo-hazards in Sub-Himalayan West Bengal”, 2009-2014.
- Project Investigator, North Bengal University Assistance Project on “An Appraisal of Urban Basic Services and Amenities in Newly Emerged Census Towns: A Case Study of Siliguri Subdivision of Darjiling District, West Bengal”, 2017-2018.
- Co-investigator, UGC SAP DRS-II Programme on Disaster Management with focus on Sub-Himalayan North Bengal, 2016-2021
- Project Investigator, North Bengal University Assistance Project on , “ Status of Primary Education and Determinants of Primary School Dropout: A Comparative Analysis between Madarihat-Birpara and Kalchini Blocks of Alipurduar District”, 2021-2022

### **Selective List of Publications:**

#### ***Books (Edited/Monographs):***

1. Applications of Geospatial Technology in Geomorphology and Environment: D.K. Mandal and R. Roy, ISBN: 978-81-925799-3-1

#### ***Articles in Books (Edited/Monographs):***

1. AN ASSESSMENT STUDY ON HIERARCHICAL INTEGRITY OF ROAD CONNECTIVITY AND NODAL ACCESSIBILITY OF MATERNAL HEALTH CARE SERVICE CENTRES IN ITAHAR BLOCK, UTTAR DINAJPUR DISTRICT, WEST BENGAL, Livelihood Enhancement Through Agriculture, Tourism and Health, ISBN 978-981-16-7310-8, 2022
2. THE WORKING AGE PEOPLE: ROLE OF AGE GROWTH AND HEALTH VARIATION IN UTTAR DINAJPUR, WEST BENGAL, INDIA, Population, Development and Environmental Sustainability: Challenges and Opportunities, ISBN 978-93-91139-21-6, 2021

3. ROLE OF SCIENCE, TECHNOLOGIES AND INNOVATIONS TO TACKLE THE COVID-19 PANDEMIC IN INDIA: A BRIEF ANALYSIS, The Covid 19 Pandemic: A Review of the Social, Economic and Environmental Issues/Challenges, ISBN 978-93-5427-451-0, 2021
4. INCOME AND EMPLOYMENT STRUCTURE OF HANDLOOM INDUSTRY - A CASE STUDY OF TUFANGANJ-II BLOCK, COOCH BEHAR DISTRICT, WEST BENGAL, Socio-Economic Development and Environmental Sustainability: The Indian Perspective, ISBN 978-93-90124-61-9, 2020
5. AN ANALYSIS OF TRENDS AND PATTERNS OF SEX RATIO IN KOCH BIHAR DISTRICT OF WEST BENGAL, Socio-Economic Development and Environmental Sustainability: The Indian Perspective, ISBN 978-93-90124-61-9, 2020
6. ASSESSMENT OF MAHATMA GANDHI RURAL EMPLOYMENT GUARANTEE SCHEME (MGNREGS) ON RURAL OUT-MIGRATION IN KOCH BIHAR DISTRICT, WEST BENGAL: A MULTIVARIATE ANALYSIS, Socio-Economic Development and Environmental Sustainability: The Indian Perspective, ISBN 978-93-90124-61-9, 2020
7. SOCIO-ECONOMIC STATUS OF WOMEN: A CASE STUDY FROM WEST BENGAL, Geography in the 21st Century: Emerging Issues, ISBN : 978-81-947715-9-3, 2020
8. AN ASSESSMENT OF LAND USE AND LAND COVER CHANGE IN KOCH BIHAR DISTRICT, WEST BENGAL, Geography in the 21st Century: Emerging Issues, ISBN : 978-81-947715-9-3, 2020
9. INFRASTRUCTURAL DEVELOPMENT OF SCHOOL EDUCATION IN KHARIBARI C.D. BLOCK OF DARJILING DISTRICT, WEST BENGAL, Education in the 21<sup>st</sup> Century: Emerging Issues and the Way Forward, ISBN: 978-81-947715-8-6, 2020
10. SPATIAL DISPARITY IN THE LEVEL OF EDUCATION IN KAKDWIP SUBDIVISION OF SOUTH 24 PARGANA, WEST BENGAL, Education in the 21<sup>st</sup> Century: Emerging Issues and the Way Forward, ISBN: 978-81-947715-8-6, 2020
11. AN ASSESSMENT STUDY ON HIERARCHICAL INTEGRITY OF ROAD CONNECTIVITY AND NODAL ACCESSIBILITY OF MATERNAL HEALTH CARE SERVICE CENTRES IN ITA HAR BLOCK, UTTAR DINAJPUR DISTRICT, WEST BENGAL, Livelihood Enhancement through Agriculture, Tourism and Health, IGU Seminar Proceedings. 2020
12. APPALCHAND-MAHANANDA ELEPHANT CORRIDOR; A SERIOUS GEO-ENVIRONMENTAL CONCERN, Applications of Geospatial Technology in Geomorphology and Environment, ISBN: 978-81-925799-3-1, 2019

13. FACTORS FOR GROWTH OF TINBATI COLONY SLUM IN SILIGURI MUNICIPAL CORPORATION, DARJILING DISTRICT, WEST BENGAL, Sustainable Urbanization in East India: Present trends and future concerns, ISBN: 978-93-88069-43-4, 2019
14. POPULATION DYNAMICS AND LAND USE CHANGE IN DAKSHINDINAJPUR DISTRICT: A GEOSPATIAL STUDY, Sustainable Urbanization in East India: Present trends and future concerns, ISBN: 978-93-88069-43-4, 2019
15. HUMAN-ELEPHANT CONFLICT IN SUB-HIMALAYAN TERAIDUARS OF WEST BENGAL, Disaster Management in Sub-Himalayan North Bengal, ISSN 978-81-921692-9-3, 2018, 129-144
16. SOIL QUARRYING FOR BRICK KILN AND ITS IMPACT ON ENVIRONMENT: A STUDY IN TUFANGANJ BLOCK-I, KOCH BIHAR, WEST BENGAL, Disaster Management in Sub-Himalayan North Bengal, ISSN 978-81-921692-9-3, 2018, 145-164
17. ASSESSMENT OF SOCIO-ECONOMIC STATUS (SES) OF URBAN HOUSEHOLDS IN GANGTOK MUNICIPAL CORPORATION, Population Growth, Urbanisation and Land Utilisation, ISBN 978-81-921692-5-5, 2017, 99-117
18. URBAN SLUMS: A CASE STUDY OF MATHABHANGA MUNICIPALITY IN KOCH BIHAR DISTRICT, WEST BENGAL USING GIS TECHNIQUES, Application of Geo-spatial Technology for Sustainable Resource Management, ISBN 978-81-921692-7-9, 2015, pp. 274-285.
19. SPATIAL VARIATION IN LITERACY OF KOCH BIHAR DISTRICT IN WEST BENGAL, Application of Geo-spatial Technology for Sustainable Resource Management, ISBN 978-81-921692-7-9, 2015, pp. 363-371.
20. A STUDY ON CONNECTIVITY AND ACCESSIBILITY OF PERIODIC MARKETS IN UTTAR DINAJPUR DISTRICT, Application of Geo-spatial Technology for Sustainable Resource Management, ISBN 978-81-921692-7-9, 2015, pp. 406-414.
21. APPLICATION OF GIS ON GROUND WATER FLUCTUATION OF KOCH BIHAR DISTRICT, WEST BENGAL, Application of Geo-spatial Technology for Sustainable Resource Management, ISBN 978-81-921692-7-9, 2015, pp. 342-353.
22. LAND USE /LAND COVER MAPPING USING GIS TECHNIQUES: A CASE STUDY OF MATIGARA BLOCK, DARJILING DISTRICT, Application of Geo-spatial Technology for Sustainable Resource Management, ISBN 978-81-921692-7-9, 2015, pp. 162-167.
23. STATUS OF WOMEN: A CASE STUDY OF NALGRAM ENCLAVE (CHHITMAHOL) OF KOCH BIHAR DISTRICT IN WEST BENGAL,

- Women Empowerment in India: Issues and Challenges, ISBN 978-81-86772-78-2, 2015, pp. 59-69.
24. FLOOD AND WATER LOGGING HAZARDS IN TUFANGANJ SUB-DIVISION, KOCH BIHAR DISTRICT, Living with Hazards, Monograph-IV, ISBN 978-81-921692-6-2, 2014, pp. 24-48, 2014.
  25. LABOUR MIGRATION FROM RURAL AREAS: A CASE STUDY OF SITALKUCHI BLOCK OF KOCH BIHAR DISTRICT IN WEST BENGAL, Population, Urbanisation and Changing State of Environment, ISBN 978-93-84671-04-4, 2014, pp. 121-130
  26. MIGRANT CHILD LABOUR IN INFORMAL SECTOR OF HOTELS AND RESTAURANTS-A CASE STUDY ON SILIGURI AND ADJOINING AREAS, Rural Out-Migration in India: Problems and Prospects, pp. 109-118, ISBN 978-81-926968-0-5, 2013
  27. IMPACT OF FLOOD HAZARD IN SUB-HIMALAYAN NORTH BENGAL, Mapping Hazards and Disasters, Monograph-III, ISBN 978-81-921692-3-1, 2012, pp. 113-124
  28. HAILSTORM DISASTER AND ITS MITIGATION: A CASE OF KOCH BIHAR DISTRICT, Disaster Perception and mitigation, Monograph-II, ISBN 978-81-921-0-0, 2011, pp. 101-109.
  29. FLOOD PROBLEM IN KOCH BIHAR DISTRICT AND ITS MANAGEMENT, Geo-Hazards in Sub-Himalayan North Bengal, Monograph-I, ISBN 978-81-921692-0-0, 2010, pp. 95-105.

***Journals:***

30. A NOVEL GIS-BASED MCDM APPROACH TO IDENTIFY THE POTENTIAL ECO-TOURISM SITES IN THE EASTERN DOORS REGION (HIMALAYAN FOOTHILL) OF WEST BENGAL, INDIA, Geocarto International, Vol. 37, 2022
31. FACILITATORS AND BARRIERS TO THE UTILISATION OF MATERNAL HEALTHCARE SERVICES IN EMPOWERED ACTION GROUP STATES, INDIA, Journal of Health Management, Vol. 24, 2022
32. HUMAN ELEPHANT CONFLICT IN CHANGING LAND-USE LAND-COVER SCENARIO IN AND ADJOINING REGION OF BUXA TIGER RESERVE, INDIA, Environmental Challenges, Vol. 7, 2022
33. LAND SUITABILITY ANALYSIS FOR PADDY CROP USING GIS-BASED FUZZY-AHP(F-AHP) METHOD IN KOCH BIHAR DISTRICT, WEST BENGAL, Geocarto International, November, 2021
34. REINTEGRATION WITH FAMILY AND INTIMATE PARTNER VIOLENCE (IPV) AGAINST WOMEN AMONG THE RETURNEE MIGRANT WORKER'S FAMILY DURING COVID-19 INDUCED

- LOCKDOWN: A BLOCK-LEVEL ANALYSIS USING MULTINOMIAL LOGISTIC REGRESSION MODEL, *Children and Youth Services Review*, E-ISSN: 0190-7409, Vol. 130, 2021
35. PREVALENCE AND CHANGE DETECTION OF CHILD GROWTH FAILURE PHENOMENA AMONG UNDER-5 CHILDREN: A COMPARATIVE SCRUTINY FROM NFHS-4 AND NFHS-5 IN WEST BENGAL, INDIA, *Clinical Epidemiology and Global Health*, E-ISSN: 2213-3984, Vol. 12, Issue 4, 2021
  36. EDUCATIONAL STATUS AND DROPOUT AMONG TRIBAL WOMAN: A CASE STUDY OF NAXALBARI C.D. BLOCK, DARJILING DISTRICT, WEST BENGAL, *IOSR Journal of Humanities and Social Science*, E-ISSN: 2279-0837, P-ISSN: 2279-0845, Vol. 26, Issue. 6, 2021
  37. AN INTEGRATED APPROACH TO IDENTIFY SUITABLE AREAS FOR BUILT UP DEVELOPMENT USING GIS-BASED MULTI-CRITERIA ANALYSIS AND AHP IN SILIGURI PLANNING AREA, INDIA, *SN Applied Sciences*, E-ISSN: 2523-3971, Vol. 3, Issue 4, 2021
  38. FERTILITY TRANSITION AND ITS SOCIO-ECONOMIC FACTORS IN WEST BENGAL, INDIA, *IASSI Quarterly: Contributions to Indian Social Science*, P-ISSN: 0970-9061, E-ISSN: 0974-018X, Vol. 40, No. 1, 2021
  39. DETERMINE THE REGIONS OF OUTMIGRATION IN NORTH-EAST INDIA: A CROSS SECTIONAL ANALYSIS, *Spatial Information Research*, E-ISSN: 2366-3294, P-ISSN: 2366-3286, Vol. 29, 2021
  40. AN ANALYSIS OF CROP COMBINATION REGIONS- A CASE STUDY OF COOCHBEHAR DISTRICT BASED ON JOHNCARRIER WEAVER'S METHOD, *International Journal of Current Research*, ISSN: 0975-833X, Vol. 13, Issue. 01, 2021
  41. SPATIAL VARIATION IN DEMOGRAPHIC DEVELOPMENT IN KOCH BIHAR DISTRICT, WEST BENGAL: AN INTER BLOCK WISE APPRAISAL, *IOSR Journal of Humanities and Social Science*, E-ISSN: 2279-0837, P-ISSN: 2279-0845, Vol. 25, Issue. 12, 2020
  42. TRAFFIC CONGESTION AND URBAN MOBILITY: A STUDY IN SILIGURI MUNICIPAL CORPORATION (SMC), WEST BENGAL, INDIA, *Geographical Thoughts*, ISSN: 2229-466X, Vol. XVIII, 2020
  43. AGRICULTURAL REGIONALIZATION OF KOCH BIHAR DISTRICT, WEST BENGAL: A GEOGRAPHICAL ANALYSIS, *Indian Journal of Spatial Science*, ISSN: 2249 – 3921, Volume 11, Issue 2, 2020
  44. LITERACY AND EMPLOYMENT STATUS OF TRIBAL POPULATION IN DARJILING DISTRICT, WEST BENGAL, *International Journal of Research and Analytical Reviews*, E-ISSN 2348-1269, P- ISSN 2349-5138, Volume 7, Issue 1, 2020

45. REPRODUCTIVE HEALTHCARE SERVICES AND HEALTH OUTCOMES: A COMPARATIVE STUDY OF ASPIRATIONAL AND NON-ASPIRATIONAL DISTRICTS IN WEST BENGAL, Indian Journal of Spatial Science, ISSN: 2249 – 3921, Volume 11, Issue 1, 2020
46. A SPATIO-TEMPORAL ANALYSIS OF URBAN GROWTH AND IDENTIFICATION OF URBAN SPRAWLING OF SILIGURI MUNICIPAL CORPORATION, WEST BENGAL, INDIA, Hill Geographer, ISSN: 0970-5023, Volume 36, Issue 1, 2020
47. SITE AND SITUATION OF SETTLEMENTS IN THE RAMMAM BASIN, DARJILING- SIKKIM HIMALAYA, Indian Journal of Landscape Systems and Ecological Studies, ISSN 0971-4170, Volume 42, No. 2, December, 2019
48. A SPATIAL APPROACH ON DELINEATION OF THE SPHERE OF URBAN INFLUENCE OF SIX MUNICIPALITIES OF KOCH BIHAR DISTRICT, WEST BENGAL, INDIA, RESEARCH REVIEW International Journal of Multidisciplinary, ISSN: 2455-3085, Vol. 4, Issue, 2, 2019
49. NATURE AND CHARACTERISTICS OF RURAL LABOUR OUT-MIGRATION: A CASE STUDY OF SITALKUCHI BLOCK IN KOCH BIHAR DISTRICT, WEST BENGAL, Thematics Journal of Geography, ISSN 2277-2995, Volume 8(4), October 2019
50. BLOCK-WISE DISPARITIES IN SOCIO-ECONOMIC CONDITION OF KOCH BIHAR DISTRICT, WEST BENGAL, Journal of Global Resources, ISSN: 2395-3160 (Print), 2455-2445 (Online), Volume 6, Issue 1, 2019
51. A HISTORY OF SURFACE WEATHER ROAD TRANSPORT DEVELOPMENT IN INDIA: A SPATIO-TEMPORAL VARIABILITY ANALYSIS, International Journal of Social Science and Economic Research, ISSN: 2455-8834, Vol. 04, Issue 05, 2019
52. DISPARITY IN LITERACY: A GEOGRAPHICAL ANALYSIS OF KOCH BIHAR DISTRICT, Geographical Thoughts, ISSN: 2229-466X, Vol. XVII, 2019
53. EMPLOYMENT AND EDUCATION STATUS OF TRIBAL POPULATION IN DARJILING DISTRICT, West Bengal, Geographical Thoughts, ISSN: 2229-466X, Vol. XVII, 2019
54. CAUSES OF INFANT AND CHILD MORTALITY A MACRO, MESO AND MICRO AREA ANALYSIS, Asian Journal of Research in Social Sciences and Humanities, ISSN 2249-7315, Vol. 8, No. 2, 2018, pp. 157-170
55. DIFFERENTIALS AND DETERMINANTS OF FAMILY PLANNING IN KOCH BIHAR DISTRICT, WEST BENGAL; An Analysis From NFHS-4, Geographical Thoughts, ISSN: 2229-466X, XVI, 2018
56. A VARIABILITY STUDY ON SPATIAL CONCENTRATION OF DIFFERENT TYPES OF DISABILITIES, Research Journal of Humanities and

Social Science, ANV Publication, ISSN: 0975-6795 2321-5828, Vol. 9 Issue no. 3, 2018

57. MOVEMENT OF SELLERS IN PERIODIC MARKETS-A DECISION MAKING APPROACH, International Journal of Scientific Research and Reviews, ISSN: 2279-0543, Vol 7, Issue No.3, 2018
58. A SPATIO-TEMPORAL ANALYSIS OF CROP RANKING REGIONS IN SILIGURI SUBDIVISION, DARJILING DISTRICT, WEST BENGAL, International Journal of Research and Analytical Reviews, ISSN 2348 –1269, Print ISSN 2349-5138, Volume 5, Issue 3, 2018
59. REGIONAL DISPARITIES OF HEALTH CARE INFRASTRUCTURE IN KOCH BIHAR DISTRICT, WEST BENGAL, Research Journal of Humanities and Social Sciences, ISSN 0975-6795 (Print) 2321-5828 (Online), Vol. 9, Issue 4, 2018, pp. 949-959
60. SOCIO-ECONOMIC DISPARITIES IN DAKSHINDINAJPUR DISTRICT, WEST BENGAL: A BLOCK LEVEL STUDY, Research Analysis And Evaluation, ISSN-0975-3486 (P), 2017, Issue-94-96, 2017
61. TOURISM LANDSCAPE DIVERSITY AND POTENTIALITY OF DARJEELING DISTRICT: WEST BENGAL, Geographical Thoughts, ISSN: 2229-466X, Vol. XV, 2017
62. IMPACT OF DEEP TUBE WELL IRRIGATION ON CROPPING INTENSITY –A CASE STUDY OF KOCH BIHAR DISTRICT, WEST BENGAL, Indian Science Cruiser, ISSN: 0970-4256, Vol 31, Issue. 4, 2017, pp. 21-27
63. IMPACT OF SHALLOW TUBE WELL IRRIGATION ON CROPPING INTENSITY –A CASE STUDY OF KOCH BIHAR DISTRICT, WEST BENGAL, International Journal on Arts, Management and Humanities, ISSN: 2319–5231, Vol. 6, Issue. 2, 2017, pp. 84-96
64. PROBLEM OF WATER LOGGING THROUGH SOIL QUARRYING IN BRICK KILN INDUSTRY: A STUDY OF TUFANGANJ BLOCK-I, KOCH BIHAR, WEST BENGAL, International Journal of Theoretical & Applied Sciences, ISSN No. (Print): 0975-1718 ISSN No. (Online): 2249-3247, Vol.9, Issue. 2, 2017, pp. 192-200
65. A STUDY ON SPATIO-TEMPORAL ASPECTS OF RURAL PERIODIC MARKET CENTRES IN UTTAR DINAJPUR DISTRICT, WEST BENGAL, INDIA, International Journal of Research in Geography, ISSN 2454-8685, Vol. 3, Issue. 4, 2017, pp. 109-117
66. IMPACT OF ENVIRONMENT ON RURAL LIVELIHOOD PATTERN: A CASE STUDY OF DARJILING DISTRICT, WEST BENGAL, Geographical Thoughts, ISSN: 2229-466X, Vol. 14, 2016, pp. 69-83



67. ECONOMIC STATUS OF TRIBAL PEOPLE IN MAL SUBDIVISION OF JALPAIGURI DISTRICT, *Geographical Thoughts*, ISSN: 2229-466X, Vol. 14, 2016, pp. 32-41
68. HEALTH STATUS OF WORKERS IN BRICK KILN INDUSTRY: A STUDY IN TUFANGANJ BLOCK-I, KOCH BIHAR DISTRICT, *Geographical Thoughts*, ISSN: 2229-466X, Vol. 14, 2016, 141-153
69. AN ASSESSMENT OF TOURISM INDUSTRY IN KOCH BIHAR DISTRICT, WEST BENGAL, *Geographical Thoughts*, ISSN: 2229-466X, Vol. 14, 2016, pp. 179-190
70. MEASURING THE NODAL CONNECTIVITY OF SURFACE TRANSPORT NETWORK IN RAIGANJ BLOCK, UTTAR DINAJPUR DISTRICT, WEST BENGAL, INDIA, *ACADEMICIA: An International Multidisciplinary Research Journal*, ISSN:2249-7137 Vol. 6 Issue 5, 2016, pp. 5-13
71. PERFORMANCE ANALYSIS OF DIFFERENT BRICK KILN TECHNOLOGIES, *Geo-Analyst*, ISSN: 2249-2909, Vol 5, No 2, 2015, pp. 13-32
72. FACTS AND REALITIES OF ENCLAVE DWELLERS: A CASE STUDY OF NALGRAM ENCLAVE IN KOCH BIHAR DISTRICT, *Geographical Thoughts*, ISSN 2229-466X, Vol. XIII, 2015, pp. 55-64.
73. DISPARITIES IN THE LEVEL OF SOCIO-ECONOMIC DEVELOPMENT IN DARJEELING DISTRICT, WEST BENGAL: AN ANALYSIS, *Journal of Geo-Environment Observer*, ISSN 2277-6141, Vol. 3, No. 2, Oct., 2014; pp. 22-35.
74. ASSESSMENT OF IMPLEMENTATION OF MGNREGS: A CASE STUDY OF COOCH BEHAR DISTRICT, WEST BENGAL, *Geographical Thoughts*, ISSN 2229-466X, Vol. XII, 2014, pp. 28-37.
75. STATUS OF RURAL DRINKING WATER SUPPLY: A CASE STUDY OF KOCH BIHAR DISTRICT, WEST BENGAL, WEST BENGAL, *Geographical Thoughts*, ISSN 2229-466X; Vol. XI, 2013, pp. 38-48.
76. SPATIO-TEMPORAL CHANGE IN OCCUPATIONAL STRUCTURE OF KOCH BIHAR DISTRICT: A GEOGRAPHICAL ANALYSIS, *Geographical Thoughts*, ISSN 2229-466X, Vol. X, 2011-12, pp. 65-70.
77. A GEOGRAPHICAL STUDY OF PERIODIC MARKET PLACES OF KALIYAGANJ BLOCK IN UTTAR DINAJPUR DISTRICT, WEST BENGAL, *The Geographer, AMU*, ISSN 0072-0909, 2010 July, Vol. 57, No. 2, pp. 71-79.
78. SPATIO-TEMPORAL CHANGE IN CROP DIVERSIFICATION OF KOCH BIHAR DISTRICT: A GEOGRAPHICAL ANALYSIS, *Geographical Thoughts*, ISSN 2229-466X, 2010-11; Vol. IX, pp. 49-54.

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80. MEASUREMENT OF AGRICULTURAL EFFICIENCY: A CASE STUDY OF KOCH BIHAR DISTRICT, Indian Journal. of Landscape Systems, Kolkata, ISSN 0971-4170, 2008, 31, No. 21, pp. 175-180.
81. AN APPROACH TO THE STUDY OF CROPPING PATTERN IN KOCH BIHAR DISTRICT, Geographical Thoughts, ISSN 2229-466X, 2008-09; Vol. VII, pp. 25-35.
82. TRENDS OF URBANISATION IN INDIA, Geographical Thoughts, ISSN 2229-466X, 2007-08; VI, pp. 41–47.