

# **MASTER OF PLANNING (REGIONAL PLANNING)**

## SCHEME OF EXAMINATION

| 1 <sup>st</sup> YEAR - SEMESTER II |         |  |             |   |   |    |           |                    |                     |                      |             |                           |
|------------------------------------|---------|--|-------------|---|---|----|-----------|--------------------|---------------------|----------------------|-------------|---------------------------|
| Classification of Course           | Code    | Course   | Hours/ Week | L | T | S  | Credits   | External Exam Type | Marks               |                      |             | Duration of (Theory) Exam |
|                                    |         |  |             |   |   |    |           |                    | Internal Assessment | External Examination | Total       |                           |
| Core                               | RP 2.01 | Planning for Regions   | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                    | RP 2.02 | Regional Infrastructure  | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                    | RP 2.03 | District Planning and Rural Development                              | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                    | RP 2.04 | Land Markets and Management  | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                    | RP 2.05 | Advanced GIS Application   | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
| Studio                             | RP 2.06 | Village Planning, Block Planning, Urban and Peri-Urban Area Planning | 10          | 0 | 0 | 10 | 10        | Jury               | 250                 | 250                  | 500         | -                         |
| Department Elective                | RP 2.07 | Poverty and Development  | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                    | RP 2.08 | Climate Change and its Impact  |             |   |   |    |           |                    |                     |                      |             |                           |
| <b>TOTAL</b>                       |         |  | <b>22</b>   |   |   |    | <b>22</b> |                    | <b>550</b>          | <b>550</b>           | <b>1100</b> |                           |

### List of Abbreviations

L = Lecture; T = Tutorial/ Seminar/ Research/ Lab; S = Studio

\* Institute Elective offered by Department of Regional Planning to be chosen by students of Other Department and the students of Department of Regional Planning will choose the Institute Elective from the electives offered by Other Departments

| 2 <sup>nd</sup> YEAR - SEMESTER III |         |   |             |   |   |    |           |                    |                     |                      |             |                           |
|-------------------------------------|---------|---|-------------|---|---|----|-----------|--------------------|---------------------|----------------------|-------------|---------------------------|
| Classification of Course            | Code    | Course  | Hours/ Week | L | T | S  | Credits   | External Exam Type | Marks               |                      |             | Duration of (Theory) Exam |
|                                     |         |   |             |   |   |    |           |                    | Internal Assessment | External Examination | Total       |                           |
| Core                                | RP 3.01 | Environment and Development   | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                     | RP 3.02 | Project Planning  | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                     | RP 3.03 | Institutional Analysis and Governance   | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                     | RP 3.04 | Legal Issues in Planning and Professional Practice  | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
| Studio                              | RP 3.05 | Studio (Resource Regional Planning, Mega and Metro Region Planning, District Planning, Special Regions) | 10          | 0 | 0 | 10 | 10        | Jury               | 250                 | 250                  | 500         | -                         |
| Department Elective                 | RP 3.06 | Resettlement and Rehabilitation   | 2           | 2 | 0 | 0  | 2         | Written-Exam       | 50                  | 50                   | 100         | 2 hrs.                    |
|                                     | RP 3.07 | Spatial Data Infrastructure   |             |   |   |    |           |                    |                     |                      |             |                           |
| Institute Elective                  | RP 3.08 | Future Regions  | 2           | 2 | 0 | 0  | 2         | Internal Only      | 100                 | 0                    | 100         | -                         |
| <b>TOTAL</b>                        |         |   | <b>22</b>   |   |   |    | <b>22</b> |                    | <b>600</b>          | <b>500</b>           | <b>1100</b> |                           |

**List of Abbreviations**

L = Lecture; T = Tutorial/ Seminar/ Research/ Lab; S = Studio

| 2 <sup>nd</sup> YEAR - SEMESTER IV  |         |                            |             |   |   |    |           |                    |                     |                      |             |                           |
|-------------------------------------|---------|----------------------------|-------------|---|---|----|-----------|--------------------|---------------------|----------------------|-------------|---------------------------|
| Classification of Course            | Code    | Course                     | Hours/ Week | L | T | S  | Credits   | External Exam Type | Marks               |                      |             | Duration of (Theory) Exam |
|                                     |         |                            |             |   |   |    |           |                    | Internal Assessment | External Examination | Total       |                           |
| Studio                              | RP 4.01 | Thesis                     | 14          | 0 | 0 | 14 | 14        | Jury               | 350                 | 350                  | 700         | -                         |
| Institute Elective                  | RP 4.02 | Politics and Public Policy | 2           | 2 | 0 | 0  | 2         | Internal Only      | 100                 | 0                    | 100         | -                         |
| <b>TOTAL</b>                        |         |                            | <b>16</b>   |   |   |    | <b>16</b> |                    | <b>450</b>          | <b>350</b>           | <b>800</b>  |                           |
| <b>GRAND TOTAL OF ALL SEMESTERS</b> |         |                            | <b>86</b>   |   |   |    | <b>84</b> |                    | <b>2150</b>         | <b>1850</b>          | <b>4000</b> |                           |

**List of Abbreviations**

L = Lecture; T = Tutorial/ Seminar/ Research/ Lab; S = Studio

## FIRST YEAR: SEMESTER II

The main objective of the second semester course (four main and one elective course) is to equip the students with the knowledge of regions: in terms of typology, functions and to

prepare planning for the regions through the understanding of land, infrastructure, climate, etc. and also enables them to think about what will be the future scenario of emerging regions in the country propelled by technological, economic and social advancements. The main

subjects will enable the students to understand the core issues of regional planning, while the electives make them understand the issues within these core issues such as poverty and climate change issues in a regional perspective.

### RP2.01: Planning for Regions

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objectives

To provide students with knowledge on typology of regions, its inter and intra linkages with other levels, paradigm shift in the definition and scale of regions, regional analysis, and case studies.

### Course Content

#### Module 1: Concepts and Typology of Regions:

- Basic Concepts in Regions, Defining a region: fluidity and purposiveness, Typology of Regions: Resource Regions, Mega, Macro, Meso, and Micro Regions. Delineation of Regions (Regionalisation)
- Rural Settlement Analysis: Types, activity, environment and economic interface in rural habitat, technology in rural settlement.

#### Module 2: Regional Dynamics:

- Growth of Mega and Metro Regions: Scale, Complexity and its impact on national and international scenario, convergence and divergence. Regional Economy, competitiveness among regions, backward and leading regions in development. Special Regions: SEZ, Agro Regions, Ecological regions, etc.; Regional Disparity Analysis (through factor analysis); Regional Interdependence Analysis (through Input-Output model).

#### Module 3: Regions in India and its planning

- Resource Regions; Corridors as regions; National, Sub-National and State as a region; Macro, Meso and Micro regions in India.
- Case Studies from India: NCR and Delhi Mega Region, Mumbai Mega Region,

Kolkata Metro Region, Chennai Metro Region, and other Metro Regions in India. Western & Eastern Ghats, North Eastern Region, Coastal Regions, and River Valley.

- Regions. Corridors: Golden Quadrilateral, Delhi-Mumbai, Chennai-Bangalore Industrial Corridor, North-South and East-West Corridor Regions; Core, Fringe and Periphery in a Region and its planning.
- Tools and techniques available for planning regions in India.
- Role of 73 and 74 CAA in regional plan preparation and implementation.

#### Module 4: Future Regions:

- Seminar 1: Introduction to Futures perspectives and methods.
- Seminar 2: Technological advancement and emerging future regions.

- Seminar 3: Rapid Economic changes and future engines of growth
- Seminar 4: Regional Demographics including regional migration pattern.
- Seminar 5: Concept of Ecological Footprint, Introduction to Ecological Economies, Sustainability Concepts and Practices, Climate Change.
- Seminar 6: Globalisation and emergence of seamless regions.
- Seminar 7: Policy Changes and its impact on future regions

## Expected Learning Outcome:

Students are expected to have obtained the skills in understanding a region, its dynamics, and planning complexities, once they undergo this course.

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external).

## Reading list

Amravati, C., 2016. *Amravati Vision 2020*, s.l.: Creative Circle, Nagpur.

Bhattacharya S. and Cropper M.L., 2010. *Options for Energy Efficiency in India and barrier to their Adoption*. Resources for the future, Washington DC. Issue 202-328-5000.

Authority, B. M., 2016. *Bangalore Metropolitan Region Revised Structure Plan 2031*. Bangalore: Bangalore Metropolitan Region Development Authority.

Authority, M. M. R. D., 2016. *Mumbai Metropolitan Regional Plan 2016-2036*, Mumbai: MMRDA.

Authority, p. R. a. t. p., 2016. *Greater Mohali Region, Punjab*, Mohali: Greater Mohali area Development authority.

BMRDA, 2016. *Bangalore Metropolitan Region Revised Structure plan 2031*, Bangalore: BMRDA.

Board, N. C. *Regional Plan 2021- National Capital Region*. Delhi: National Capital Regional Planning Board.

Brar, J., Gupta S., Madgavkar A., Maitra.B.C., Rohra S., Sundar M., 2014. *India's economic geography in 2025: States, Clusters and cities*. Insights India, Mckinsey Company.

Bruce Tonn, D., 2013. Willow pond: A decentralized low-carbon future scenario. *ELSEVIER*.

Clark, G. and Moonen, T., 2014. *Mumbai: India's Global City*. s.l.:s.n.

Cohen, M. J., 2013. Collective dissonance and the transition to post-consumerism. *Futures*, Vol. 52, pp 42-51.

Creel, L., 2003. Ripple Effects: Population and Coastal Regions. *Population Reference Bureau Policy Brief*, Vol. 42, pp. 39-48.

Eastin, J., Grundmann, R. and Prakash, A., 2011. The two limits debates: "Limits to

Growth" and climate change. *Futures*, Vol. 43, no. 1, pp. 16-26. DOI: 10.1016.

Ehrlich, P. R. and Ehrlich, A. H., 2013. Can a collapse of global civilization be avoided?. *Proceedings of the Royal Society*, 280(1754):20122845. DOI: 10.1098.

Garcia, E., 2012. Degrowth, the past, the future, and the human nature. *Futures*, Vol. 44, pp. 546-552.

Glasson, J., 1974. *An Introduction to Regional Planning*, London: Taylor and Francis Ltd.

Government of Rajasthan NCR Planning and Monitoring Cell, J. R., 2014. *Draft Rajasthan Sub Regional Plan -2031*, Jaipur: DTCP, Government of Rajasthan.

HMDA, 2013. *Metropolitan Development Plan – 2031 for Hyderabad Metropolitan Development Region*, Hyderabad: Hyderabad Metropolitan development Authority.

Industry, C. o. I., 2011. *District Development Plan Khammam*, s.l.: ALC India Pvt. Ltd.

Jaidit Brar, S. G. A. M. C. M. S. R. M. S., 2014. *India's Economic Geography in 2025: States, Clusters and Cities*, Delhi: Mckinsy and Company.

Jain, S., Panda, J. and Kant, S., 2014. Possible Socio-scientific Issues of Land-use and Land-cover Change Impact and Associated Tools of Study with a Special Reference to Delhi-Mumbai Industrial Corridor Region. *International Journal of earth and Atmospheric Sciences*, Vol. 1, pp. 58-70.

Jim Smyle, C. L. G. M. A. M. W., 2014. *Watershed Development in India*, Washington DC: The World Bank.

Josh Eastin, R. G. A. P., 2010. The two limits debates: "Limits to Growth" and climate change. *ELSEVIER*.

Klapka, P., Halas, M. and Tonev, P., 2013. Functional regions: concept and types. *International Colloquium on Regional Sciences*. Brno: Masaryk University. Vol. 16, pp. 94 - 101. ISBN 978-80- 210-6257-3. DOI 10.5817.

KMDA, 2000. *Perspective Planning for metropolitan Development*, Kolkata: Kolkata Metropolitan Development Authority.

Moriarty, P. and Honnery, D., 2012. Preparing for a low-energy future. *Futures*, Vol. 44, pp. 883-892.

MoUD., 2014. *Regional Planning Approach*, URDPFI vol. I and Vol.2. New Delhi

NCRPB, 2005. *National Capital region regional plan 2021*, New Delhi: National Capital Regional Planning Board.

Rengasamy, S., 2009. *Types of Regions and Regionalization of India*, Regional planning part II. UNCRD.

Patrick Moriarty, D. H., 2012. Preparing for a low-energy future. *ELSEVIER*. Vol. 39, No.3, pp. 31-40.

Patrik Söderholm, R. H. B. J. K. F. W., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. *ELSEVIER*. Vol. 28, pp. 43-52.

Piccioni, L., 2012. *Fourty Years Later. The reception of the growth in Italy 1971-1974*, s.l.: Fondazione Luigi Micheletti.

Raskin, P. D., Electris, C. and Rosen, R. A., 2010. The Century Ahead: Searching for

Sustainability. *Sustainability*, Vol. 2, pp.2626-2651.

Sadorsky, P., 2011. Some future scenarios for renewable energy. *Futures*, Vol. 43, pp. 1091-1104.

Soderholm, P. et al., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. *Futures*, Vol. 43, pp. 1105-1116.

Spangenberg, J. H., 2010. World civilisations at crossroads: Towards an expansionist or a sustainable future—Lessons from history. *Futures*, Vol. 42, pp. 565-573.

Taylor, N., 1999. Anglo-American town planning theory since 1945: three significant developments but no paradigm shifts. *Planning Perspectives*, Vol. 14, pp. 327-345.

Tonn, B. and Stiefel, D., 2013. Willow pond: A decentralized low-carbon future scenario. *Futures*, Vol. 33, No. 10, pp. 1772-1787.

Trust, N. I., 2015. Nagpur Metropolitan Area Development Plan 2012-2032, Nagpur: s.n.

Wheeler, S., 2009. Regions, Megaregions, and Sustainability. *Regional Studies*, Vol. 43.6, pp. 863-876.

Nijkamp, P. and Delft, A. V., 1977. *Multi-Criteria Analysis and Regional Decision-Making*. Leiden: Martinus Nijhoff Social Sciences Division.

Behrens, K. and Thisse, J. F., 2007. Regional economics: A new economic geography perspective. *Regional Science and Urban Economics*, Vol. 37, No. 4, pp. 457-465.

Enright, M. J., 2016. Regional Clusters and Multinational Enterprises - Independence, Dependence, or Interdependence? *International Studies of Management and Organisation*, Vol. 30, No. 2, pp. 114-138.

Schaffar, A. and Dimou, M., 2010. Rank-size City Dynamics in China and India, 1981–2004. *Regional Studies*, Vol. 46, No. 6, pp. 707-721.

Strategia, A., 2015. Tools and Technologies for Planning the Development of Smart Cities. *Journal of Urban Technologies*, Vol. 22, No. 2, pp. 43-62.

Counsell, D. and Haughton, G., 2006. Sustainable development in regional planning: The search for new tools and renewed legitimacy. *Geoforum*, Vol. 37, No. 6, pp. 921-931.

Foth, M. and Bajracharya, B., 2009. The Second Life of urban planning? Using NeoGeography tools for community engagement. *Journal of Location Based Services*, Vol. 3, No. 2, pp. 97-117.

Lo, F. C. and Marcotullio, P. J., 2000. Globalisation and Urban Transformations in the Asia-Pacific Region: A Review. *Urban Studies*, Vol. 37, No. 1, pp. 77-111.

Choudhary, B. R., 2015. Regionalism in the Era of Globalization: The Case Study of the SAARC in South Asia. *The international Journal of humanities and Social Studies*, Vol. 3, No. 7, pp. 80-88.

Farhana, I., 2012. The Region and Its Margins: Re-Appropriations of the Border from 'Mahagujarat' to 'Swarnim Gujarat'. *Economic and Political Weekly*, Vol.32, pp.66-72.

Zhu, J., 2002. Industrial globalisation and its impact on Singapore's industrial landscape. *Habitat International*, Vol. 26, No. 2, pp. 177-190.

Sobhan, R., 1998. Regional Cooperation in South Asia: a Quest for Identity. *South Asia Survey*, Vol. 5, No. 1, pp. 3-26.

Cantlon, J. E., 1999. Sustainable Ecological Economies. *Ecological Economics*, Vol. 31, No. 1, pp. 107-121.

York, R.; Dietz, T. and Rosa, E. A., 2008. The Ecological Footprint Intensity of National Economies. *Journal of Industrial Ecology*, Vol. 8, pp. 139-154.

Matutinovic, I., 2002. Organizational patterns of economies: an ecological perspective.

*Ecological Economics*, Vol. 40, No. 3, pp. 421-440.

Wolock, David M.; Winter Thomas C. and McMahon, G., 2004. Delineation and Evaluation of Hydrologic-Landscape Regions in the United States Using Geographic Information System Tools and Multivariate Statistical Analyses. *Environmental Management*, Vol. 34, pp. 71-88.

Rydberg, A. and Borgfors, G., 2001. Integrated method for boundary delineation of agricultural fields in multispectral satellite images. *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 39, No. 11, pp. 2514-2520.

Harrigan, F. J.; McGilvray J. W. and McNicoll I. H., 1980. Simulating the Structure of a

Regional Economy. *Environment and Planning A: Economy and Space*, Vol. 12, No. 8, pp. 927-936.

Nowark, J., 1997. Neighbourhood Initiative and the Regional Economy. *Economic Development Quarterly*, Vol. 11, No. 1, pp. 3-10.

Saxenian, A., 2005. From Brain Drain to Brain Circulation: Transnational Communities and Regional Upgrading in India and China. *Studies in Comparative International Development*, Vol. 40, No. 2, pp. 35-61.

Wanmali, S., 1992. *Rural infrastructure, the settlement system, and development of the regional economy in southern India*. Research Report 91, Washington D.C.: International Food Policy Research Institute.

## RP2.02: Regional Infrastructure

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objective

To provide students with knowledge on typology of regions, its inter and intra linkages with other levels, paradigm shift in the definition and scale of regions, regional analysis, and case studies.

### Course Content

#### Module 1: Infrastructure Management: Planning Issues

- Equity, Access, level and Efficiency, Quality of Service, Paying Capacity, Pricing of Infrastructure Services. Ownership and Control: Public, Private, SPV, and PPP Models

in infrastructure provision, Multi-service providers and their operation at various levels. Infrastructure Policy: Regulatory and Facilitative, Investment Requirement at various levels and actual investments in Infrastructure; Infrastructure Index.



## Module 2: Role and functions of Infrastructure in a Region

- Role of Infrastructure in regional development; Critical Infrastructure in regional development, and Indicators of infrastructure development in defining regional development, standards and bench marks for infrastructure provision and delivery at various levels; Role of Spatial Information Technology in the planning, provision, and monitoring infrastructure.

## Module 3: Regional Resource Analysis

- Regional Resource Mapping across forest resource, mineral resource, agricultural resource, water resource etc.

## Module 4: Physical Infrastructure

- Water
- Introduction: Sources of water, current scenario: Conflicts and Co-operation – Trans boundary water conflicts: inter-state, international water treaties, National Water Policy, Water Rights: Excess and underutilization of water. Access standards, demand and supply analysis, pricing parameters, conservation issues, technology: extraction, cleansing, recycling and reuse. Pollutions associated with water. Institutions in Water provision: PPP, SPV in water. Role of Community in water provision. Conflicting use of water: Agriculture vs. Water harvesting.
- Water for Irrigation: Source, Access, Trans-

boundary conflicts and co-operation, pricing, demand and supply conditions. Regulatory and Facilitative policies, Investments in Irrigation: Minor, Major irrigation and issues related to these. Technology in irrigation (systems); equity, efficiency and pricing issues in irrigation.

- Drinking/Potable Water: Source and provision at various levels (Village, City and District); equity and efficiency; leakages and unaccounted water and its minimization; Privatisation of Water and its implications; Pricing and access; Spatial variations in standards and provisions.
- Sanitation
- Policies and Programmes in the provision of Sanitation at various levels: Rajiv Gandhi Technology Mission on Water supply and Sanitation (Rural), City Sanitation Plan, and State Sanitation Strategies. Sanitation and MDG, Resource Commitment for Sanitation.
- Access to Sanitation: Cost and Coverage; Role of Institutions: Public, Private and community; Sanitation and environment; Sanitation and health.
- Solid Waste Management
- Wastes in Rural Areas including agriculture: types of waste, Problems and reuse; community involvement in collection, disposal, treatment and reuse
- Wastes in Urban areas: collection and disposal, technological innovations, formal and informal institutions in waste collection; Role of ULBs, NGOs, informal networks: rag-pickers; Solid waste as an economy issue, cost recovery in solid waste
- Urban Waste Disposal in Rural Areas: specialized waste management from urban areas (hazardous, e-waste, medical, wholesale market, mandi and any other waste)
- Regional Connectivity
- Roads:
  - Hierarchy of Roads: National, State, District, Other District Roads, and Village Roads: standards, provision and institutions involved; Investment, pricing and maintenance; Access, Coverage and conditions; National, State and District Policies towards Roads.
  - National Highway Project: Golden Quadrilateral, North-South and East-West Corridors and its impact on regional space, PMGSY and its impact on village connectivity.
  - BRDO and International Roads: border roads, international roads and backward regions; Forward and Backward regions in terms of road provision.
  - Railways:
    - Goods and passengers train, dry ports, container depot etc., high-speed connectivity and Metro
- Energy
  - Conventional and Non-Conventional Energy Sources and Policies and programmes towards energy at various levels; Demand

and Supply projections; investment and pricing; Trans-boundary issues in production and sharing; privatization issues; Nuclear Energy: issues involved and probable spatial impact.

## Module 5: Social Infrastructure

- Health: Provisions, availability, access and future requirement; government policies.
- Education: Provisions, availability, access and future requirement; government policies
- Socio-Cultural and Recreational: Provisions, availability, access and future requirement; government policies

## Module 6: Economic Infrastructure

- Agriculture Extension Centres, Agriculture Marketing/ storage, Banking and Insurance, Tourism Infrastructure, Ports, Airports, Inland Waterways, Special Economic Zones (SEZ)

## Module 7: Line Infrastructure

- Communication: Provisions and Management of Information Communication and Technology (ICT)
- Gas, Liquid Gas and another network connectivity.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding the infrastructure

provision at various levels, conflicts in provision and maintenance, and concepts of infrastructure management at various levels once they undergo this course.

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external).

## Reading list:

Barro, R. and Martin, X. S. I., 1995. *Economic Growth: Neoclassical (SOLOW) growth model*. New York: McGraw Hill.

Boianovsky, M. and Hoover, K. D., 2009. *The Neoclassical Growth Model and 20th Century Economics*. s.l., History of Political Economy Conference.

Energy, M. o. N. a. R., 2012. *Empowering Rural India the RE way - Inspiring success stories*. New Delhi: Ministry of New and Renewable Energy, Government of India.

Foster, A. D. and Rosenzweig, M. R., 1995. Learning by doing and Learning from Others: Human Capital and Technical Change in Agriculture. *The Journal of Political Economy*, Vol. 103, No. 6, pp. 1176 - 1209.

Klenow, P. J. and Clare, A. R., 2005. Externalities and Growth. In: P. Aghion and S. N. Durlauf, eds. *Handbook of Economic Growth*. 1A ed. s.l.: Elsevier B.V., pp. 818 - 859.

Ministry of Water Resources, 1987. *National Water Policy*. New Delhi: Government of India.

Ministry of Water Resources, 2002. *National Water Policy*. New Delhi: Government of India.

Ministry of Water Resources, 2012. *National Water Policy*. New Delhi: Government of India.

Prescott, E. C., 1988. Robert M. Solow's Neoclassical Growth Model: An Influential Contribution to Economics. *The Scandinavian Journal of Economics*, Vol. 90, No. 1, pp. 7- 12.

Nijkamp, P.; Graff, H. de and Sigar, E., 1981. A Multidimensional Analysis of Regional Infrastructure and Economic Development. *Paper presentation at the Conference on "Structural Economic Analysis and Planning in Time and Space"*, pp. 1-24.

Komarova, V. N.; Zjablova, O. V. and Denmukhametov, R. R., 2014. An Infrastructure Factor in Regional Competitiveness. *Mediterranean Journal of Social Sciences*, Vol.5, No.18, pp. 355-360.

De, P., 2010. *Governance, Institutions, and Regional Infrastructure in Asia*. ADBI Working Paper No. 183. Tokyo: Asian Development Bank Institute.

Demurger, S., 2001. Infrastructure Development and Economic Growth: An Explanation for Regional Disparities in China? *Journal of Comparative Economics*, Vol. 29, pp. 95-117.

Zhai, F., 2010. *The Benefits of Regional Infrastructure Investment in Asia: A Quantitative Exploration*. ADBI Working Paper No. 223. Tokyo: Asian Development Bank Institute.

Crescenzi, R. and Rodriguez-Pose, A. 2012. Infrastructure and regional growth in the

European Union. *Papers in Regional Science*, Vol. 91, pp. 487-513.

Hefner, F. L. and Burson, T. E., 1992. The Determinants of Regional Infrastructure Spending. *Regional Science Perspectives*, Vol. 22, No. 2, pp. 19-29.

De, P., 2009. *Regional Cooperation for Regional Infrastructure Development: Challenges and Policy Options for South Asia. RIS Discussion Paper No. 160*. New Delhi: Research and Information System for Developing Countries.

Ghosh, B. and De, P., 1998. Role of Infrastructure in Regional Development: A Study over the Plan Period. *Economic and Political Weekly*, Vol. 33, No. 47/48, pp. 3039-3048.

Bocco, G.; Mendoza, M. and Velazquez, A., 2001. Remote sensing and GIS-based regional geomorphological mapping—a tool for land use planning in developing countries. *Geomorphology*, Vol. 39, No. 3-4, pp. 211-219.

McCann, P. and Shefer, D., 2004. Location, agglomeration and infrastructure. *Regional Science*, Vol. 83, pp. 177-196.

Rajesh, H. M., 2004. Application of remote sensing and GIS in mineral resource mapping - An overview. *Journal of Mineralogical and Petrological Sciences*, Vol. 99, pp. 83-103.

Dymond, R. J. and Harmsworth, G. R., 1994. Towards automated land resource mapping using digital terrain models. *ITC Journal*. Vol. 2, pp. 129-138.

Lee, S., Kim, Y. S. and Oh, H. J., 2012. Application of a weights-of-evidence method and GIS to regional groundwater productivity potential mapping. *Journal of Environmental Management*, Vol. 96, No. 1, pp. 91-105.

Beaucage, P.; Bernier, M.; Lafrance, G. and Choisnard, J., 2008. Regional Mapping of the Offshore Wind Resource: Towards a Significant Contribution from Space-Borne Synthetic Aperture Radars. *IEEE Journal of Selected*

*Topics in Applied Earth Observations and Remote Sensing*, Vol. 1, No. 1, pp. 48-56.

Kalibo, H. W. and Medley, K. E., 2007. Participatory resource mapping for adaptive collaborative management at Mt. Kasigau, Kenya. *Landscape and Urban Planning*, Vol. 82, No. 3, pp. 145-158.

Bartholome, E. and Belward, A. S., 2007. GLC2000: A new approach to global land cover mapping from Earth observation data. *International Journal of Remote Sensing*, Vol. 26, No. 9, pp. 1959-1977.

Eberts, R. W., 1990. Public Infrastructure and Regional Economic Development. *Economic Review, Federal Reserve Bank of Cleveland*, Vol. 42, No. 1, pp. 15-27.

Enright, M. J., 2000. *Survey on the Characterization of Regional Clusters*. Working Paper. Hong Kong: Institute of Economic Policy and Business Strategy- Competitiveness Program, University of Hong Kong.

## RP2.03: District Planning and Rural Development

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objective

District Planning has gained a new momentum after the introduction of 73 and 74 CAA. Within District planning, rural development has acquired a new meaning through participatory

development process from village to district level. It is our endeavour to impart this essential skill in regional planning through this course.

### Details of Course

#### Module 1: Introduction

- Decentralised Planning in India – Historical

perspective: Current Scenario – Recent Development in decentralized district level planning, 73 and 74 Constitutional Amendment Acts, Participative District Planning, Role of Planning Commission and an Overview of District Planning Manual of Planning Commission of India, Finance Commissions, and ICT in District Planning.

## Module 2: District Planning

- Data Management and District Level Visioning, Institutional and other support for District Planning Committee, Bridging gap through district planning, resource mapping and determination of funding sources, consolidation of urban and rural plans; Multi-Sector and multi-level integrated approach to planning (vertical and horizontal spatial integration); Rural-Urban spatial relationship; District Development Plans – Guidelines for District Planning: Content and context and methodologies, Village Development Plans – an Integrated approach, rural norms and standards (spatial). Capacity Building for Decentralised Planning; Democratising Information: using media for district development.

## Module 3: Rural Planning and Development

- Introduction: Meaning, Scope and overview of rural development; Historical perspective - Rural Development Programmes in India, Problem/perception and identification;
- Rural Area Planning - Programmes/Policies/

Schemes for rural development, their coverage and outcomes;

- Rural Infrastructure Development Schemes
- Rural Employment Schemes
- Programmes: Command Area Programme, Drought Prone Area Programme, Backward Area Development Programme, North Eastern Development Programme etc.
- Technology Missions: Water, Sanitation, etc.

## Changing Profile of the Rural areas of India:

- Consumption pattern changes, land utilization changes, cropping pattern changes, holding size change, living standard changes, changes in asset ownership – its implication in the planning process

## Inclusive Development:

- Special Component Plan- Tribal Sub Plan and Weaker Sector Plan allocation, Direct Cash Transfer, Affirmative Action etc., implementation, monitoring and evaluation. North Eastern Plan

## Participatory Planning Process:

- Introduction, purpose, origin, salient features; Principles and Methods of participatory planning; preconditions for participatory planning; steps in participatory planning in local governance: case studies from different parts of India,

Participatory Learning and Action (PLA) tools, challenges faced in participatory planning.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding the District Planning, integrated district planning, participatory district planning, rural development in all its dimensions, once they undergo this course.

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Reading list

Singh, K. and Reddy, K., 2000. *Designing and Managing Rural Development Organisation*, New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.

Singh, K. and Shishodia, A. 2016. *Rural Development: Principles, Policies, and Management*. New Delhi: Sage Publication.

Singh, K. and Ballabh, V., 1996. *Cooperative Management of Natural Resources*. New Delhi: Sage Publication.

Bardhan, P., 1989. *The economic theory*

of *Agrarian Institutions*. Oxford: Oxford University Press.

Chopra, K., G. K. Kadekodi and M. N. Murthy., 1990. *Participatory development: people and common property resources*. New Delhi: Sage Publication.

Acharya, S. S., 1997. Agricultural price policy and development: some facts and emerging issues. *Indian Journal of Agricultural Economics*, Vol. 52, No. 1, pp. 1-47.

Coase, R., 1937. The nature of the firm. *Economica*, Vol. 4, pp. 386-405.

Coase, R., 1960. The problem of social cost. *Journal of Law and Economics*, Vol. 3, pp. 1-33.

Gandhi, V. P., 1998. Institutional framework for agricultural development. *Indian Journal of Agricultural Development*. Vol. 53, No. 3, pp. 552-564.

Marothia, D. K., 2002. *Institutionalizing common pool resources*. Delhi: Concept Publication.

Dhawan, B. D., 1995. *Groundwater depletion, land degradation and irrigated agriculture in India*. New Delhi: Commonwealth Publishers.

Gupta, A. K., 1999. Making Indian agriculture more knowledge intensive and competitive: the case of intellectual property rights. *Indian Journal of Agricultural Economics*, Vol. 54, No.3, pp. 342-369.

Jodha, N. S., 2002. *Decline of rural commons: role of population growth and public policies*. In institutionalizing common pool resources. D. K. Marothia, New Delhi: Concept Publishing Company.

Deshpande, R. S. and Thimmaiah, G., 1999. Watershed development approach and experience of national watershed development program in the country. *Journal of Rural Development*, Vol. 18, No.3, pp. 453-469.

Reddy, R. V., 2000. Sustainable watershed management: institutional perspective. *Economic and Political Weekly*, Vol. 35, No.40, pp. 3435-3444.

Reese, L.A. and Fasenfest, D., 2003. Planning for development: An assessment of the economic development district planning process. *Economic Development Quarterly*, Vol. 17, No.3, pp.264-279.

Renting, H., Marsden, T.K. and Banks, J., 2003. Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and planning*, Vol. 35, No. 3, pp.393-411.

Uphoff, N., 1993. Grassroots organizations and NGOs in rural development: Opportunities with diminishing states and expanding markets. *World Development*, Vol. 21, No.4, pp.607-622.

Ellis, F. and Biggs, S., 2001. Evolving themes in rural development 1950s-2000s. *Development policy review*, Vol. 19, No.4, pp.437-448.

Tregear, A., Arfini, F., Belletti, G. and Marescotti, A., 2007. Regional foods and rural development: The role of product qualification. *Journal of Rural studies*, Vol. 23, No.1, pp.12-22.

Kuse, H., Endo, A. and Iwao, E., 2010. Logistics facility, road network and district planning:

Establishing comprehensive planning for city logistics. *Procardia-Social and Behavioural Sciences*, Vol.2, No.3, pp.6251-6263.

Jin, L., Qian, G. and Yan, W., 2012. Industry-city Integrate Development Oriented High-tech District Development and Planning Strategies: Jinan East High-tech District Case. *Planners*, Vol. 4, pp.58-64.

Lekorwe, M.H., 1998. *Local government and district planning*. JL Van Schaik.

Fischer, G.W., 1994. Agro-ecological land resources assessment for agricultural development planning: A case study of Kenya: Making land use choices for district planning, Food and Agriculture Org, Vol. 10, pp. 13-21.

Planning Commission, 1984. *Report of the Working Group on District Planning*. New Delhi: Government of India.

Heikinaro-Johansson, P. and Sherrill, C., 1994. Integrating children with special needs in physical education: A school district assessment model from Finland. *Adapted Physical Activity Quarterly*, Vol. 11, No.1, pp.44-56.

Dawson, E., 1992. District planning with community participation in Peru: the work of the institute of local democracy IPADEL. *Environment and Urbanization*, Vol.4, No.2, pp.90-100.

Inamdar, N.R. and Kshire, V.K., 1986. *District Planning in India: A Case Study of Maharashtra*. Oxford and IBH Publishing Company.

Thakur, D. and Singh, S.N., 1991. *District Planning and Panchayati Raj*. Deep and Deep Publications.

Sanwal, M., 1987. The implementation of decentralization: A case study of district planning in Agra District, Uttar Pradesh, India. *Public Administration and Development*, Vol.7, No.4, pp.383-397.

Yugandhar, B.N. and Mukherjee, A. eds., 1991. *Readings in Decentralised Planning: With Special Reference to District Planning*, Vol. 1. Concept Publishing Company.

Hooja, R. and Mathur, P.C. eds., 1991. *District and Decentralized Planning*. Rawat Publications.

*Manual for Integrated District Planning*. Planning Commission Government of India. Vol. I and 2.

Hooja, R., 1973. The District as a Planning Unit: Style and Locus. *Indian Journal of Public Administration*, Vol. 19, No.3, pp.393-406.

Yan-ping, D.O.N.G., 2008. On residential district planning and design. *Shanxi Architecture*, Vol.10, pp.33-41.

Ahuja, K., 1977. *District Planning in Rajasthan*. Jaipur: HCM State Institute of Public Administration.

Hooja, R., 1995. *Bibliography on Multi-level and District Planning*. Madhya Pradesh Institute of Social Science Research.

Stiggins, R.J., 2001. *Leadership for Excellence in Assessment: A Powerful New School District Planning Guide*. Portland Oregon, Assessment Training Institute.

## RP2.04: Land Markets and Management

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objective

This course will provide an understanding of the functioning of the land markets, land policy, supply and demand analysis, equity and efficiency in land markets, regulation in land markets, land management techniques and land price issues. These aspects were taught for urban; fringe and peri-urban areas of India and case studies were provided from developing and developed countries.

### Course Content

#### Module 1: Introduction to Land Economics

- Economic Principles of Land use, Concept of Rent and its application, Demand forecasting for land, factors affecting land supply and demand; interpretation of Revenue Maps (Cadastral maps)

#### Module 2: Land Policy and Land Markets

- Market Conditions: formal and informal, legal and illegal
- Instruments of land policy and impact on markets: Planning instruments, market development instruments, financial development instruments, fiscal instruments, and other supportive instruments: Market by Government and Government by Markets: Regulation,

monopoly power and its use, private development

- Rent-seeking and its impact on land supply, access to land by various segments of population, and PPP in land; Introduction to Resettlement & Rehabilitation (R&R).

### Module 3: Supply Side Management

- Property Rights: ownership, user and exchange rights: Its implication on land supply; Land Development: Type, cost, methods of disposal; Corruption and land markets: Corruption, black money and land markets; Relation between land, share and gold markets.
- Regulation in Land Markets: Social justice and land distribution: public domain, social-democratic regulation, corporatist regulation, collective action of the state and regulation of its supply of land – overall impact of regulation on land prices: Master Plan, Zoning and other planning regulations and their impact on supply.
- Land Utilisation: Types of land utilization and its relevance to planning. Land conversions and its regulation/facilitation in peri-urban areas. Land utilization analysis. Common property and its use, tenancy and ownership, holding size and its relevance, irrigated and non-irrigated and land values. Sources of information for land information.
- Land Management Techniques: Private land assembly, co-operatives in land development, FDI in land development, land pooling and plot reconstitution,

transfer of development rights, land sharing and land lease.

### Module 4: Demand side Management

- Income elasticity of land, business cycles and its impact on demand for land, externalities and internalities in land development and induced demand, economic growth and demand for land; Changes in tastes and preferences and its effect on type of land; Poor and their demand; Physical, fiscal, financial and legal incentives for inducing or restricting the demand for land; Mega investments and its effect on land.

### Module 5: Land Pricing

- Land valuation techniques, land pricing, subsidies, auctions; type of development: plotted, flatted system, and their effect on land pricing; Hedonistic pricing; land price behaviour in urban centres; Constructing the land price index.

### Module 6: Land Information System (LIS)

- Land records in Rural areas (examples from Karnataka, Andhra, etc), transparency in land transaction, methods of publicising land prices and land price monitoring.

### Expected Learning Outcome:

Students are expected to have obtained the skills in understanding the functioning of land markets by undergoing this course.

### Pedagogic Method:

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

### Reading List

Acharya, B. P., 1989. *The Indian Urban land Ceiling Act: a critique of the 1976 legislation and Policy and land Acquisition and Development: Analysis of an Indian Experience*. Washington: The World Bank.

Ballaney, S., 2008. *The town planning mechanism in Gujarat, India*. Washington: The World Bank.

Banerjee, B., 2002. Security of Tenure in Indian Cities. In: D. Lasserve and A. a. L. Roystan, eds. *Holding their land*. s.l.: *Earthscan*, pp. 37 - 58.

Banerjee, B., 2014. *Diversity, informality and opportunities for the poor in villages in Asian megacities: examples from Delhi and Mumbai*. Hanzhou: International Policy Workshop on Rural-Urban Poverty Linkages.

Department of Land Resources, 2013. *National Land Utilization Policy - framework for land use planning and management*. New Delhi: Ministry of Rural Development, Government of India.

Deshpande, R. S., 2007. *Emerging Issues in Land Policy*. New Delhi: Asian Development Bank.

- Deshpande, R. S., 2012. *Current land policy issues in India*. s.l.: FAO Corporate Document Repository.
- Dunkerley, H. B., 1983. *Urban Land Policy: Issues and Opportunities*. Washington: Oxford University Press. Vol.1.
- EU Task Force on Land Tenure, 2004. *EU Land Policy Guidelines*. Denmark: European Union.
- Farvacque, C. and McAuslan, P., 1992. *Reforming Urban Land Policies and Institutions in Developing Countries*. Vol. 1. Washington: The World Bank.
- Hong, Y. H. and Needham, B., 2007. *Analysing Land Readjustment*. Chicago: Lincoln Institute of Land Policy. Vol.2
- Lim, G. C., 1987. Land Markets and Public Policy: A Conceptual Framework. *Habitat International*, Vol. 11, No.1, pp. 23 - 27.
- Rasheed, S. and Parambath, S. G., 2014. Urban Land Management and Planning. *International Journal of Scientific and Engineering Research*, Vol. 5, No.7, pp. 58 - 62.
- Roy, A., 2005. Urban Informality: Toward an Epistemology of Planning. *Journal of the American Planning Association*, Vol. 71, No. 2, pp. 147 - 158.
- The World Bank, 2003. *Land Policies and Growth and Poverty Reduction*, Washington: Oxford University Press.
- Town and Country Planning Organization, 2007. *Model Guidelines for Urban Land Policy*. New Delhi: Ministry of Urban Development.
- UN HABITAT, 2007. *How to Develop a Pro - poor Land Policy: Process, Guide and lessons*. Kenya: United Nations Human Settlements Programme (UN-HABITAT).
- UN HABITAT, 2008. *Secure Land Rights for All*. Kenya: United Nations Human Settlements Programme (UN-HABITAT).
- United Nations HABITAT, 2014. *Urban Planning for City Leaders*. Vol.2. Germany: United Nations Human Settlements Programme (UN-Habitat).
- World Bank, 2007. *India Land Policies for Growth and Poverty Reduction*. Washington: Oxford University Press.
- Wu, F., 2001. China's recent urban development in the process of land and housing marketization and economic globalisation. *Habitat International*, Vol. 25, No.1, pp. 273 - 289.
- Yuen, B., 2007. Squatters no more: Singapore Social Housing. *Global Urban Development*, Vol. 3, No. 1, pp. 1 - 22.
- Dunk A., 2011. Defining a typology of peri-urban land-use conflicts. *Landscape and Urban Planning*, Vol.101, pp. 149-156.
- Navastara M. A., Navitas, P., 2012. Impact of residential Land Development Towards land price Dynamics in Surabaya. *Land Price Dynamics*, Vol. 25, pp. 273-289.
- Bastiaan Philip Reydon, L. E. g. S., 2014. Determination and Forecast of Agricultural Land Prices. *Research Gate*, Vol. 24, pp. 389-407.
- Cheshire, P., 2012. Land market regulation: market versus policy failures. *Research Gate*, Vol. 30, pp. 170-188.
- D. hasse, H. N., 2010. Assessing the impacts of Land use change on transforming regions. *Land use science*, Vol. 5, pp. 67-72.
- Deshpande, R. S., 2002. *Current land policy issues in India*. Delhi: Corporate document respiratory.
- Holden S.T., H. G., 2016. Land rental market legal restrictions in Northern Ethiopia. *Elsevier*, Vol. 55, pp. 212-221.
- Holden, S. H. G., 2016. Land Rental Market Legal Restrictions in Northern Ethiopia. *Land use Policy*, Vol. 52, pp. 410-421.
- Holden, S. K. O., 2014. The roles of land tenure reforms and land markets in the context of population growth and land use in Africa. *Elsevier*, Vol. 48, pp. 88-97.
- Holden, S. S. B., 2010. Preferences for land sales Legalization and Land Values in Ethiopia. *Land use Policy*, Vol. 52, pp. 410-421.
- John, F., 2012. A model of mixed land use in Urban Area. *Elsevier*, Vol. 41, pp. 64-69.
- Lim, G. C., 2007. Land markets and public policy: A conceptual framework. *Habitat International*, Vol. 11, pp. 23-27.
- Long, H., 2014. Land use policy in China: Introduction. *Elsevier*, Vol. 40, pp. 81-85.
- Ludwig Einstein, G. S., 2014. Determination and forecast of agricultural land prices. *Research Gate*, Vol. 24, pp. 389-407.
- Narain, V., 2009. Growing city, shrinking hinterland: land acquisition, transition and conflict in peri-urban Gurgaon, India. *Elsevier*, Vol. 21, pp. 501-512.



Netto, V., 2011. *Urbanization at the heart of economy: the role of cities in economic development*. Sage Publications.

Paul Cheshire, S. S., 2010. Land markets and land market regulation: progress towards understanding. *Science direct*, Vol. 34, pp. 619-637.

Peter D. little, W. T. D. N. D., 2015. *Formal or Informal, Legal or Illegal: The Ambiguous*

*Nature of cross-border Livestock Trade*. Borderland studies.

Pindiga, A. O. K., 2013. Development of a land information system of tumpure residential and commercial layout in Akko local government area of Gombe State. *IOSR journal of environmental science*, Vol. 3, pp. 54-63.

Prarambath, S. R. and., 2014. Urban land management and planning. *International*

*journal of scientific and engineering research*, Vol. 5, pp. 58-62.

Sebastian Galiani, E. S., 2011. Land property rights and resource allocation. *Elsevier*, Vol. 54, pp. 329-345.

Talen, E., 2012. *City Rules: How regulation affect urban form*, Island Press, Washington. Elsevier.

## RP2.05: Advanced GIS Application

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Course Content

#### Module 1. Cartographic Concepts

Course Introduction, fundamental of cartographic concepts, GIS spatial concepts, roles of GIS components, Coordinate systems and projections, scale and cartographic generalization, typography, map design, semiotics.

#### Module 2. Map Design Principles of Spatial Information

GIS modeling overview, GIS analysis: how to design choropleth, proportional symbol, dot, dasymetric, isoline, cartogram, and flow map, Spatial registration, GIS thematic mode.

#### Module 3. GIS Concepts

Spatial Data Types and Data acquisition , Data Creation, vector data structure and algorithms, raster data structure and algorithms, conversion from raster to vector data and vice versa, Geo-referencing, geo-coding and visualizing indigenous spatial knowledge, Spatial Analysis, Use of GIS in planning and decision making process.

#### Module 4. Geospatial Database

Fundamental database concepts, benefits of using databases, functions of database management systems; Data modelling, error modelling, data uncertainty and database design: Entity- Relation diagrams, relational model, object-oriented database design,

object-relational database, geo-relational model; Geospatial database creation, query and manipulation. Constructing spatial data infrastructure and spatial information system.

#### Module 5. GIS and Spatial Analysis

Multiple regression, principal components, clustering methods, time series analysis, computer-intensive methods (e.g., bootstrapping), spatial autocorrelation, spatial interpolation, spatial pattern analysis, and machine learning techniques for spatial data, Spatio-temporal data modelling and analysis; Interoperability arrangement for geospatial data and ontology mapping.

### Reading List

Ben She, 2011. *Principle and Application of GIS -Principles and Applications of GIS*, ISBN-13: 978-7564611699, ISBN-10: 7564611693, China: China University of Mining and Technology Press.

Bernhardsen, T., 1992. *Geographic Information Systems*, Randburg: Vitak IT.

Davis, B.E., 1996. *Geographic Information Systems: a visual approach*, New Delhi: Word Press

DeMers, M.N., 2000. *Fundamenatals of Geographic Information Systems*, 2nd Edition, Hoboken, New Jersey: John Wiley & Sons.

Heywood, I., Cornelius, S. & Carver, S., 1998. *An introduction to geographical information systems*, Harlow, London: Longman.

Jones, C., 1997. *Geographic Information Systems and Computer Cartography*, Harlow, London: Longman

Masser, I., 2005. GIS Worlds-Creating Spatial Data Infrastructures. *URISA Journal*, Vol.17, No.2, pp. 51-53.

Ministry of Science and Technology, 2011. *National Spatial Data Infrastructure - India ASPIRATION*, New Delhi: Department of Science and Technology, Government of India.

Paul A Longley and Michael F Goodchild, 2005. *Geographical Information Systems: Principles, Techniques, Management and Applications*, ISBN-13: 978-0471735458, ISBN-10: 9780471735458, 2nd Edition, Hoboken, New Jersey: John Wiley & Sons.

Qihao Weng, 2009. *Remote Sensing and GIS Integration: Theories, Methods, and Applications (Electronics)*, 1 edition, New York: McGraw-Hill Education.

## RP2.06: Village Planning, Block Planning, Urban and Peri-Urban Area Planning

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 10         | 0       | 0        | 10     | 10      | Jury               | 250                 | 250                  | 500   | -                         |

### Objectives

The objective of this studio is to expose the students in the practical ways of planning for a village, block, tehsil, peri-urban and urban area. The students will be trained in applied GIS based on the case study selected. The students will be given a live case study to understand the complexities of planning at various levels i.e. village, block, tehsil, peri-urban and urban levels. This will enable them to identify data sources, carry out primary surveys, understand sampling methods,

stakeholder analysis, techniques of analysis and come out with policy level proposals.

### Duration of Study

- Village Study: 6 weeks
- Block Study including presentation of village study: 10 weeks

### Expected Learning Outcome

Students are expected to have obtained the skills in understanding the various levels of planning, planning institutions, sources of information for village, block, tehsil, peri-urban and urban planning, and also develop public interaction by undergoing this course.

### Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge

building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Reading List

Banerjee B., 2015. *Summary Report of 'International Policy Workshop on Rural-Urban Poverty Linkages*. Asian Development Bank, Manila. Workshop during 2 to 4 September, 2014, Hanzhou, Zhejiang, PRC.

Baruah, Joydeep, 2009. *Planning at the Grassroots: An experiment with Integrated District Planning*. OKD Institute of Social Change and Development, MPRA Paper No. 47529. Germany on 24th November, 2015.

Cecilia T., 2007. EarthscanReader in Rural-Urban Linkages. Reviewed by Arif, G.M. in *Pakistan Institute of Development Economics*, Islamabad, Vol. 46, No. 1, pp. 42-59.

Corwin, Anita, Lauren, 1977. The Rural Town: Minimal Urban Center, *Urban Anthropology*, Vol.6, No.1, pp.023-043.

International Labour Organisation, 2003. *Integrated Rural Accessibility Planning*, Third

Expert Group Meeting Report, Regional Office for Asia and the Pacific, Bangkok.

Jeganathan C, Roy P.S. and Jha, M.N., 2011. Multi-Objective Spatial Decision Model for Land use Planning in a Tourism District of India, *Journal of Environmental Informatics*, Vol. 17, No. 1, pp.15-24.

Kulshrestha, S.K., 2012. *Urban and Regional Planning in India: A handbook for Professional Practice*, New Delhi: Sage India.

Majumder R., 2003. *Infrastructural Facilities in India: District Level Availability Index*, Munich Personal RePEc Archive (MPRA), MPRA Paper No. 4779, posted 8th September, 2007.

Rao M., 1996. Beyond Urban Bias? *Economic Political Weekly*, Vol.31, No.27, pp. 1743- 1745.

MSS Research Foundation, 2014. *Rural Employment Strategies in India*.

National Institute of Disaster Management, 2014. *Training Manual for Mainstreaming Climate Change adaptation and Disaster Risk Reduction: Into District Level Development Plans*, New Delhi: National Institute of Disaster Management.

National Remote Sensing Center, 2015. *Bhuvan Panchayat – Space Based Information Support*

*for Decentralised Planning (SIS-DP)*.

Planning Commission of India, 2008. *Manual for Integrated District Planning*, Planning Commission of India, Ministry of Planning and Implementation, Government of India, New Delhi, Vol. 1, No. 4, Vol.2 – No.3, 5, 6 and 7.

Niharranjan, R., 1978. Indian Tradition and History, Bhandarkar Oriental Research Institute, Golden Jubilee. Vol. 58/59, pp. 863-892.

Sharma, N., 2016. *How Gram Panchayat Development Plan is changing the villages of India*, ET Bureau, July 30, 2016, 02.36 AM IST, Accessed From: <https://economictimes.indiatimes.com/news/politics-and-nation/how-gram-panchayatdevelopment-plan-is-changing-the-villages-of-india/articleshow/53458749.cms>

Yadav, L.R and Singh, R.S., 2013. *e-MANCHITRA: A step*. <http://geospatialworld.net/Paper/CaseStudies/ArticleView.aspx?aid=30625India> GeoSpatial Digest, 2013, New Delhi.

## RP2.07: Poverty and Development

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

## Objectives

This course will provide an understanding of the poverty situation across continents with a specific focus on India. It will help in inclusive planning with a pro-poor development agenda.

## Course Content

### Module 1: Understanding Poverty

- Definition, concept of poverty, new definitions of poverty and its likely impact: relative poverty, absolute poverty, over all poverty, extreme poverty, physical poverty, income poverty, rural and urban poverty; poverty data base in India, data sources used for estimating poverty in India (household surveys and household consumption surveys). Globalisation of poverty.

### Module 2: Measures of poverty

- Evolution of poverty line, consumption expenditure data: per capita consumer expenditure, distribution of expenditure; source of Data: National Sample Survey (NSS), National Accounts Statistics, Identification of poor: how identification is done in India, food and land as a substitute, slum centric views, other methods. Approaches: livelihood approach, consumption-based approaches, etc.; Head Count ratio, Poverty Gap and Squared Poverty gap.

### Module 3: Indicators of poverty

- Methodology: Poverty Lines, Rural and urban poverty lines, national poverty lines, poverty ratio, sub-national indicators: MDG indicators, income and non-income indicators (Education and health, etc), Quality of life indicators, empowerment indicators, gender indicators, and human development indicators; Multiple Poverty Index, Small Area Estimation of Poverty.

### Module 4: Rural Poverty

- Overview: incidence and dynamics of rural poverty: causes of rural poverty: dimensions of rural poverty, estimates of rural poverty in India, issues related to rural poverty; reviews of development strategies of past decade.

### Module 5: Urban Poverty

- Multi-dimensional aspects of poverty, urban poverty matrix, vulnerability and asset ownership, Informal sector and poverty, role of National Commission for Enterprises in the organized sector (NCEUS), Programmes to address the poverty issues: policy based (tenure regularization), sector based (slum upgradation, access to housing), finance based (Micro finance, compulsory municipal fund allocation)

### Module 6: Policies and Programmes

- Monitoring and Evaluation of anti-poverty programmes; National and International Best Practices in poverty alleviation;

Percentage allocation for poor in the budget; Skill Development and Capacity Building

### Module 7: Poverty and Climate Change

- Climate Vulnerability and its Impact on Poverty, ways to overcome the risk and reducing their vulnerability to climate change - double effect of poverty and vulnerability to risks; Spatial targeting of poverty; Government programmes.

### Expected Learning Outcome

- Students are expected to have obtained the skills in understanding the various dimensions of poverty and how to address them in the planning process by undergoing this course.

### Pedagogic Method

- Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

### Reading List

Ahluwalia, M. S., 1990. Policies for Poverty Alleviation. *Asian Development Review: Studies of Asian and Pacific Economic Issues*, Vol.8, No.1.

- Anon., 2009. *Summary. In: India Urban Poverty Report.*
- Gibson, J., 1998. Identifying the Poor for Efficient Targeting: Results for Papua New Guinea. *New Zealand Economic Papers*, Vol. 32, No.1, pp. 1-18.
- Government of India, 2002. Poverty Alleviation in Rural India—Strategy and Programmes. *Tenth Five Year Plan 2002-07*. Delhi: Government of India, pp. 293-314.
- Lal, D., Natrajan, I. and Mohan, R., 2002. Economic Reforms and Poverty Alleviation in India - A Tale of Two Surveys. *University of California (Department of Economics) Working Paper Series*, WP no. 822.
- Mallick, S., 2009. Macroeconomic Policy and Poverty Reduction in India. *IGIDR Proceedings/Project Reports Series*, PP no. 062-15, pp. 1-37.
- Mehta, A. K. et al., 2011. *India Chronic Poverty Report: Towards Solutions and New Compacts in a Dynamic Context*. Delhi: Indian Institute of Public Administration.
- Morduch, J., 1999. Reforming Poverty Alleviation Policies. Conference on Economic Policy Reform: What We Know and What We Need to Know, *Stanford University*, pp. 1-36.
- OXFAM, 2009. *Urban Poverty and Vulnerability in Kenya*, Kenya: Oxfam GB Kenya Programme.
- Pasha, H. A., 2002. Pro Poor Policies. Fourth Global Forum on Citizens, Businesses, and Governments: Dialogue and Partnerships for the Promotion of Democracy and Development, *Marrakech, Morocco*, pp. 1-17.
- Sharma, S., 2004. Poverty Estimates in India: Some Key Issues. *ADB ERD Working Paper Series*, WP No. 51.
- Bruck, T., Danzer, A. M., Muravyev, A. and Weibhaar, N., 2007. Determinants of Poverty during Transition: Household Survey Evidence from Ukraine. *PRUS Working Paper Series*, WP No. 40.
- Health Planning Department, Ministry of Health, Uganda; Directorate of Water Development, Ministry of Water and Environment, Uganda; Uganda Bureau of Statistics; International Livestock Research Institute; and World Resources Institute, 2009. *Mapping a Healthier Future - How Spatial Analysis Can Guide Pro-Poor Water and Sanitation Planning in Uganda*, Washington DC and Kampala: World Resources Institute.
- Lavallee, E., Olivier, A., Doumer, L. P. and Robilliard, A.-S., 2010. *Poverty Alleviation Policy Targeting: A Review of Experiences in Developing Countries*. Document de Travail UMR DIAL.
- Wetlands Management Department, Ministry of Water and Environment, Uganda; Uganda Bureau of Statistics; International Livestock Research Institute; and World Resources Institute, 2009. *Mapping a Better Future: How Spatial Analysis Can Benefit Wetlands and Reduce Poverty in Uganda*, Washington DC and Kampala: World Resources Institute.
- Alkire, S. and Santos, M. E., 2010. Acute Multidimensional Poverty: A New Index for Developing Countries. *OPHI Working Paper Series*, WP No. 38.
- Alkire, S. and Santos, M. E., 2010. Multidimensional Poverty Index. *OPHI Research Brief*.
- Alkire, S. and Seth, S., 2008. Measuring Multidimensional Poverty in India: A New Proposal. *OPHI Working Paper Series*, WP No. 15.
- OPHI, 2010. *Multidimensional Poverty Index (MPI) At a Glance: Country Briefing - India*. Oxford Poverty and Human Development Initiative Country Briefs.
- IFAD, 2011. *Rural Poverty Report 2011, Rome: International Fund for Rural Development*.
- UNAIDS, 2010. *Global Report: UNAIDS report on the Global AIDS Epidemic*, s.l.: Joint United Nations Programme on HIV/AIDS.
- UN, 2000. United Nations Millennium Declaration. *Resolution adopted by the UN General Assembly*, Fifty-fifth session, Agenda item 60 (b).
- UNDP, 2010. *What Will It Take to Achieve the Millennium Development Goals? – An International Assessment*, New York: United Nations Development Programme.
- Government of India, 2008. *Report of the Committee on Slum Statistics/Census*, Delhi: National Building Organisation, Ministry of Housing and Urban Poverty Alleviation, Gol.
- Government of India, 2011. *Model Property Rights to Slum Dwellers Act, 2011*. Delhi: Ministry of Housing and Urban Poverty Alleviation, Gol.
- Hailu, D. and Tsukada, R., 2011. Measuring MDG Achievements: Rate of Progress Matters Most. *The International Policy Centre for Inclusive Growth One Pager*, No. 125.
- Hurley, G., 2010. Achieving Debt Sustainability and the MDGs in Small Island Developing

- States: The Case of the Maldives. *UNDP working Papers on Poverty Reduction*, pp. 1-38.
- Yadav, V., 2011. Urban Poverty: Issues and Remedies for Inclusive Development. *Spatio-Economic Development Record*, Vol.18, No.4.
- Hailu, D. and Tsukada, R., 2011. Achieving the Millenium Development Goals. UNDP International Policy Centre for Inclusive Growth: *Working Paper Series*, WP No. 78.
- World Bank, 2011. *Global Economic Prospects - Navigating Strong Currents*, Washington DC: World Bank. Vol. 2.
- David Dodman, G. M. a. B. D.C., 2013. *Integrating The Environment In Urban Planning And Management*, s.l.: UNON/Publishing Section Services.
- Elliott, J., 2012. *An Introduction to Sustainable Development*. London: Taylor and Francis group.Vol.4
- Emma Grant, J., 2002. *Urban Livelihoods*. UK, USA: Earthscan.
- Esser, J. B. a. D., 2005. *Shaping Urban Futures: Challenges to Governing and Managing Afghan Cities*, Afghanistan: Afghanistan Research and Evaluation Unit.
- Fox, J. B. a. S., 2007. *Urban Poverty and Development in the 21st Century*, London: Oxfam GB.
- Gibbs, D., 2000. Ecological modernisation, regional economic development and regional development agencies. *Elsevier*, Vol. 31, No.1, pp. 9-19.
- Haan, A. d., 2009. Urban Poverty and its Alleviation: Introduction. *IDS Bulletin*, pp. 1-8.
- Habitat, U., 2003. *Global Report on Human Settlements "The Challenge of Slums"*, UK, USA: Earthscan Publications Ltd.
- Isa Band, N. S. K. P., 2008. Mapping Urban Poverty for Local Governance in an Indian Mega-City: The Case of Delhi. *Sage Journals*, Vol. 45, No.7, pp. 1385-1412.
- Jorge Enrique Hardoy, D. M. D. S., 2001. *Environmental problems in an urbanizing world: finding solutions for cities in Africa, Asia and Latin America*. Vol.15. London: Earthscan.
- KAY, C., 2006. Rural Poverty and Development Strategies in Latin America. *Journal of Agrarian Change*, Vol. 6, No. 4, pp. 455-508.
- Lawrence Haddad, M. T. R. J. L. G., November 1999. Are Urban Poverty and Under nutrition Growing? Some Newly Assembled Evidence. *Elsevier*, Vol. 27, No.11, pp. 1891-1904.
- Mehta, D., 2000. Urbanisation of Poverty. *Habitat Debate*, Vol.6, No.4.
- Moser, C. O. N., 2004. Urban Violence and Insecurity, *Elsevier*, Vol.16, No.2, pp. 3-16.
- Office, I. L., 2018. *Women and Men in the Informal Economy*. Vol.3. Geneva: Printing and Distribution Branch (PRODOC) of the ILO. .
- Rakodi, C., 1995. Poverty lines or household strategies?: A review of conceptual issues in the study of urban poverty. *Elsevier*, Vol. 19, No.4, pp. 407-426.
- Satterthwaite, D., 2003. The Millennium Development Goals and urban poverty reduction: great expectations and nonsense statistics. *Sage Journals*, Vol. 15, No.2, pp. 179-190.
- Satterthwaite, D., 2009. Urban Poverty: Reconsidering its Scale and Nature. *IDS Bulletin*, Vol.28, No.2, pp. 9-23.
- Wratten, E., 1995. Conceptualizing urban poverty. *Sage Journals*, Vol.7, No. 1, pp. 11-38.
- Allen, T. and Thomas, A., 2000. *Poverty and Development*. Oxford University Press.
- McLoyd, V.C., 1998. *Children in Poverty: Development, Public Policy and Practice*.
- Lipina, S.J. and Colombo, J.A., 2009. *Poverty and brain development during childhood: An approach from cognitive psychology and neuroscience*. American Psychological Association.
- Agrawal, A. and Redford, K., 2006. Poverty, development, and biodiversity conservation: Shooting in the dark? *Ann Arbor MI*, Vol. 48109, No. 734, pp.647-5948.
- Gillis, M., Perkins, D.H., Roemer, M. and Snodgrass, D.R., 1992. *Economics of Development*, Vol.3. WW Norton and Company, Inc.
- Thomas, B.P., 1985. *Politics, participation and poverty; development through self-help in Kenya*.

## RP2.08: Climate Change and its Impact

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objectives

This course will help to understand the phenomenon of climate change, its impact on region and international discourses/ debates. It will appraise the students about government policies both macro and micro to deal with the impact of climate change.

### Course Content

#### Module 1: Global Climatic Change

- Environment, economics science and policy; The scale of potential change, vulnerability of particular societies, sectors and ecosystems – environment – economic development conflicts – Momentum of the economic system producing greenhouse gases; industrial concentration and regional concentration of heat sinks and its impact on the region.

#### Module 2: Economics of Climate change

- Climate Change and its impact on agriculture
- Introduction on economics of climate change: theoretical concepts and

framework of analysis; Food security and regional development; Water availability; drought and flash floods; productivity changes and its impact.

- Climate Policy Analysis under uncertainty
- Modelling, prediction, sensitivity studies and uncertainty; Environment decisions under uncertainty; Climate Policy choice under uncertainty; unresolved problems in climate analysis; International agreements and its repercussions on India.

#### Module 3: Urban Micro Climates

- Urbanisation and its impact on micro climates; urban heat islands – causes and effects; research on heat islands globally and in India; Use of remote sensing and GIS in detecting urban heat islands.

#### Module 4: Climate change in India

- Changing agricultural pattern, productivity and security, industrial concentration, weather and micro climatic changes, funding climate change prevention: market and non-market based approaches, role of institutional actors: Government, NGOs, Multilateral agencies and citizen groups.

#### Module 5: Government's Policy and Action on Climate Change

- Climate change response strategies: Climate Change adaptability and livelihood, climate change and the challenge to achieve MDGs, Climate Action Plan (CAP), 4x4 Report on Climate Change and its strategies; International Covenants on Climate Change.

### Expected Learning Outcome

Students are expected to have obtained the skills in understanding the various dimensions of climate change and how to address them in the regional planning process by undergoing this course.

### Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Reading list

- Berliner, L. M., 2003. Uncertainty and Climate Change. *Statistical Science*, Vol. 18, no.4, pp. 430 - 435.
- Center for Science and Environment, 2018. *Climate change - For the young and curious*.
- Dutt, G. and Gaioli, F., 2007. Coping with Climate Change. *Economic and Political Weekly*, Vol. 42, No. 42, pp. 4239 - 4250.
- Kapur, D., Khosla, R. and Mehta, P. B., 2009. Climate Change: India's Options. *Economic and Political Weekly*, Vol. 44, No. 31, pp. 34 - 42.
- Macpherson, C. C., 2014. Climate Change Matters. *Journal of Medical Ethics*, Vol. 40, No.4, pp. 288 - 290.
- Meevoy, D., 2007. Climate Change and Cities. *Built Environment*, Vol. 33, No.1, pp. 4 - 9.
- Prabhakar, S. V. R. K., Shivakoti, B. R., Schayvens, H. and Corral, A. F., 2005. *Trans boundary Impacts of Climate Change in Asia: making a case for Regional Adaptation and planning and cooperation*. s.l.:Institute For Global Environmental Strategies (IGES).
- Romm, J., 2015. *Climate Change: What everybody needs to know*. Vol.1. New York: Oxford University Press.
- Beermann J., Damodaran A., 2016. Climate action in Indian cities, *Journal of integrative environmental sciences*, Vol. 13, pp. 55-66.
- Bush, Kathleen F., Frumkin, Howard and Rani K., 2011. The Impact of Climate Change on Public Health in India, Climate change and environmental health, *Journal slww*, Vol. 22, pp. 30-81.
- Climate Modelling Forum, 2009. *India's GHG Emissions Profile: Results of Five Climate Modelling Studies*. Delhi: Ministry of Environment and Forests Government of India.
- Estrada F, Richard S.J. T., 2017. Global economic impacts of climate variability and change, *journal pone*, Vol-10.
- Fadnavis, S., Kumar, K. R., Tiwari, Y. K. and Pozzoli, L., 2016. Atmospheric CO2 source and sink patterns over the Indian region. *Annales Geophysical*, pp. 279 -291.
- INCCA Indian Network for Climate Change Assessment, 2010. *India: Greenhouse Gas Emissions 2007*. Delhi: Ministry of Environment and Forests, Government of India.
- Jingjin Li., and Nyuk H. W., 2016. Urban Microclimate Research in High Density Cities: Case Study in Nanjing, *Procedia Engineering*, *Science direct*, Vol. 169, pp. 88-99.
- Fisher, K. and Popp, D., 2014. Introduction to the special issue on climate adaptation: improving the connection between empirical research and integrated assessment models, energy economics, *Elsevier journals*, Vol. 46, pp. 495-499.
- Marechal, K. 2010. The economics of climate change, and the change of climate in economics, Energy policy, *Science direct*, Vol.35, pp. 5181-5194
- Krishnan, N., Prasanna, M.V., and Vijith, H. 2018. Fluctuations in Monthly and Annual Rainfall Trend: A Statistical Assessment to Detect the Influence of Climate Change, *Journal of climate change*, Vol. 4, pp. 15-29.
- Kumar, R., Gautam, H.R., 2014. Climate Change and its Impact on Agricultural productivity in India, *Journal of climatology and weather forecasting*, Vol. 55, pp. 12-15.
- Green, M., Weather head, E.K., 2014. Coping with climate change uncertainty for adaptation planning: An improved criterion for decision making under uncertainty, Climate risk management, *Science direct*, Vol. 1, pp. 63-75.
- Widya, N., 2011. *Urban Heat Island towards Urban Climate, earth and environmental science*, IOP science, Vol. 118, conference-1.
- Peterson, Sonja, 2011. Uncertainty and Economic Analysis of climate change: a survey of approaches and findings, *Environmental modelling and assessment*, Vol. 11, pp. 1-17.
- Ramanathan, AL., 2018. Ablation of ice and snow of Kara-Batkak Glacier and its Impact on River Flow, *Journal of Climate change*, Vol. 4, pp. 1-14.
- Rui-li, ShuGeng, 2013. Impacts of Climate Change on Agriculture and Adaptive Strategies in China, *Journal of integrative agriculture*, Vol. 12, pp. 1402-1408.
- Sharma, S. K. and Chauhan, R., 2011. Climate change research initiative: Indian Network for Climate Change Assessment. *Current Science*, Vol. 101, No. 3, pp. 308 -311.
- Webster, M., Sokolov, A.P. and Reilly, J.M., 2012. Analysis of Climate Policy Targets under Uncertainty, *Climate change*, Vol. 4, pp. 569-583.
- Zonooz, M. R. F., Nopiah, Z. M., Yusof, A. M. & Sopian, K., 2009. A review of MARKAL energy



Modelling. *European Journal of Scientific Research*, Vol. 26, No. 3, pp. 352 -361.

Saryal R., 2018. *Climatic Change Policy of India*, South Asia research: Sage Journal.

Bowen A. Rydge J., 2011. Climate Change policy in United Kingdom, *Policy paper-Centre for climate change economics and policy*, Vol. 35, pp. 3347-3359.

Helm D, 2010. Government Failure, rent-seeking, and capture: the design of climate-change policy, *Oxford review of economic policy*, Vol. 26, pp. 182-196.

Stern, N. 2011. *The Economics of Climate Change*, Cambridge University press.

Tvinnereim E., 2017. Citizen's preferences for tackling climate change, Global environmental change, *Science direct*, Vol. 46, pp. 34-41.

Edidah L., Ampaire, 2017. Institutional Challenges to Change Adaptation, Environmental science and policy, *Science direct*, Vol. 75, pp. 81-90.

## SECOND YEAR: SEMESTER III

The objective of the third semester theory and the studio subjects are to provide the students

with higher levels of specialized knowledge in the field of planning that will make them more hands on planners. The subjects selected

are such that they deal with environment, policy making and analysis, governance, and rehabilitation and resettlement issues.

### RP3.01: Environment and Development

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

#### Objective

During the first semester, during the course on Housing and Environment, students were imparted knowledge in the field of environmental issues, especially basic concepts and its simple applicability to planning. In this semester, skills are imparted at the higher levels of knowledge. They will be taught in the interface between environment and development at various levels: from village to regional level. This course will equip them in understanding and managing the environment, help them in minimizing the disaster.

#### Course Content

##### Module 1: Environment and Development

- Environment and Development interface: Resource Use; exploitation and conservation: Land, water, air and green

spaces including forest cover; Impact of various human activities on environment including recreation, tourism; urban waste and its impact on environment.

##### Module 2: Emerging Concepts

- Emerging Concepts: smart growth, clustered cities, ecological footprints, green development, sustainable cities and inclusive cities for sustainable livelihood; Environment and poverty links; Environment and Economy interaction: Kuznet curve, Green GDP, Carbon Trading, carbon sequencing, environmental accounting, and Green Budgeting.

##### Module 3: Environmental Risks and Impact

- Environmental Risks in rural and urban areas, health and environmental links, sustainable growth, carrying capacity, optimum city, Environmental Impact Assessment: project specific, universal

##### Module 4: Role of Institutions in Environment Management

- Role of various levels of governments in environmental management, NGOs and other agencies in environmental management; Case studies from developing and developed countries; Political commitment and environmental policy; Local Agenda 21, MDGs, environmental standards; Civil Society around Environment Management

##### Module 5: Disaster Preparedness, Prevention and Mitigation

- Concepts, processes and perceptions of Disasters – natural and man-made – causes and consequences. Disaster and natural environment: flooding and drainage, landslides, soil erosion, earth quakes, tremor, tsunami, cloud bursts, etc. Damage to people and property due to disaster. Case studies from across the world. Disaster Recovery.

- Disaster Mitigation Planning and resource management: Disaster preparedness, prevention, displacement and development; Government structure and disaster mitigation, disaster mitigation measures at individual, group and community level; Human response to disaster – short term and long term effects; Integrating disaster mitigation in spatial planning process: micro zoning, building bye-laws, norms and standards, density variations, provisions of infrastructure for disaster mitigation; vulnerability index and mapping; Disaster insurance at various levels: village, district, and town/city level.

### Module 6: Disaster Education

- Community awareness and participation at various levels; Role of NGOs/ CBOs and communities in disaster education; Relevance of disaster management with relevant to development and environment; Use of technology and media for spreading disaster awareness.

### Expected Learning Outcome

Students are expected to have obtained the skills in understanding various concepts of environment and disaster and how to use them in the planning process. It will also provide them with the knowledge of various environmental regulations in the country.

### Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

### Reading list

Chandra, P., 1987. *Projects: Preparation, Appraisal, Budgeting and Implementation*. Vol.2. Noida: Tata McGraw-Hill.

Chandra, P., 2009. *Projects: Planning, Analysis, Selection, Financing, Implementation, and Review*. Vol.8. Noida: Mc Graw Hill India.

Davies, D. G., 1996. *The economic evaluation of projects: papers from a curriculum development workshop*. Vol.1. Washington: Economic Development Institute of the World Bank.

McCracken, J. R. and Narayan, D., 1998. *Participation and social assessment: tools and techniques*. Vol.1. Washington: The World Bank.

United Nations Industrial Development Organization, 1986. *Manual for evaluation of Industrial projects*. Vol.1. Vienna: UNIDO publications.

Dvir, D., Raz, T. and Shenhar, A.J., 2003. An empirical analysis of the relationship between project planning and project success. *International journal of project management*, Vol.21, No.2, pp. 89-95.

Duy Nguyen, L., Ogunlana, S.O. and Thi Xuan Lan, D., 2004. A study on project success factors in large construction projects in Vietnam. *Engineering, Construction and Architectural Management*, Vol.11, No.6, pp.404-413.

Kerzner, H. and Kerzner, H.R., 2017. *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley and Sons.

Haugan, G.T., 2001. *Project planning and scheduling*. Berrett-Koehler Publishers.

Pinedo, M.L., 2005. *Project Planning and Scheduling. Planning and Scheduling in Manufacturing and Services*, pp.51-79.

Speranza, M.G. and Vercellis, C., 1993. Hierarchical models for multi-project planning and scheduling. *European Journal of Operational Research*, Vol.64, No.2, pp.312-325.

Munier, N., 2013. Project Planning and Scheduling. In *Project Management for Environmental, Construction and Manufacturing Engineers* Springer, *Dordrecht*, pp. 119-150.

Hartmann, S. and Sprecher, A., 1996. A note on “Hierarchical models for multi-project planning and scheduling”. *European Journal of Operational Research*, Vol.94, No.2, pp.377-383.

Emery, A.R., 2000. *Guidelines: integrating indigenous knowledge in project planning and implementation*. Washington: The World Bank.

Nutt, P.C., 1983. Implementation Approaches for Project Planning. *Academy of Management Review*, Vol.8, No.4, pp.600-611.

Ehie, I.C. and Madsen, M., 2005. Identifying critical issues in enterprise resource planning implementation. *Computers in industry*, Vol.56, No.6, pp.545-557.

Pinto, J.K. and Slevin, D.P., 1987. Critical factors in successful project implementation. *IEEE transactions on engineering management*, Vol.1, pp.22-27.

Pinto, J.K. and Prescott, J.E., 1990. Planning and tactical factors in the project implementation process. *Journal of Management studies*, Vol.27, No.3, pp.305-327.

Ahuja, H.N., Dozzi, S.P. and Abourizk, S.M., 1994. *Project management: techniques in planning and controlling construction projects*. John Wiley and Sons.

Frimpong, Y., Oluwoye, J. and Crawford, L., 2003. Causes of delay and cost overruns in construction of groundwater projects in a

developing countries; Ghana as a case study. *International Journal of project management*, Vol.21, No.5, pp.321-326.

Chan, A.P., Scott, D. and Chan, A.P., 2004. Factors affecting the success of a construction project. *Journal of construction engineering and management*, Vol.130, No.1, pp.153-155.

Loucks, D.P., Van Beek, E., Stedinger, J.R., Dijkman, J.P. and Villars, M.T., 2005. *Water resources systems planning and management: an introduction to methods, models and applications*. Paris: UNESCO.

Turner, J.R., 2014. *Handbook of project-based management*, Vol. 92. New York: McGraw-hill.

Hans, E.W., Herroelen, W., Leus, R. and Wullink, G., 2007. A hierarchical approach to multi-project planning under uncertainty. *Omega*, Vol.35, No.5, pp. 563-577.

Hulme, D., 1995. Projects, politics and professionals: alternative approaches for project identification and project planning. *Agricultural Systems*, Vol.42, No.2, pp.211-233.

Caughron, J.J. and Mumford, M.D., 2008. Project planning: The effects of using formal planning techniques on creative problem-solving. *Creativity and Innovation Management*, Vol.17, No.3, pp.204-215.

Antoniol, G., Di Penta, M. and Harman, M., 2005. Search-based techniques applied to optimization of project planning for a massive maintenance project. *In null*, pp. 240-249.

Kelley Jr, J.E. and Walker, M.R., 1959. Critical-path planning and scheduling. *Eastern joint IRE-AIEE-ACM*, pp. 160-173.

## RP3.02: Project Planning

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

### Objectives

This course is to equip the students to understand the whole Project Planning Cycle. It will look into aspects such as to how prepare a project, how to do the various appraisals, how to implement, monitor and evaluate

the projects. These aspects will be taught for urban, fringe and peri-urban areas of India and case studies will be provided from developing and developed countries.

### Course Content

#### Module 1: Introduction

- Introduction to Project, nature of planning projects – Project Life Cycle: Identification, issues involved in identification including

source of projects, Formulation: links between projects and local, district, state and national level planning including sectoral policies; pre-feasibility studies; feasibility studies; Concept of Appraisal: Definition, need and aspects; Appraisal Methods: UNIDO, Little-Mirrlees, ZOPP, GOPP, etc.

## Module 2: Appraisal

- Technical Appraisal: Magnitude of the project, processes, materials, equipment, reliability of the system to be used, suitability of the plan, layout and design, location of the project, necessary infrastructure, factors of production, methods of implementation, procurement, phasing and implementation schedule.
- Financial Appraisal: Project profitability at market price; techniques of financial appraisal (methods not based on time value of money and use of time value of money in appraisal); financial effects on the intended beneficiaries, financial risk and sensitivity to price changes, adequacy, autonomy and financial standards and overall financial viability of project through Internal Rate of Return (IRR) and sensitivity analysis.
- Economic Appraisal: Efficiency pricing: a) Market distortions- shadow pricing: labour, foreign exchange, land and capital b) Income distribution effect c) consumption, savings and investment adjustments d) adjustments for poverty e) adjustment for merit and demerit goods, calculation of Economic Rate of Return (ERR)

- Social Appraisal: Socio-cultural context of a project, Five entry points to social analysis of a project and how to do that, Use of social assessment methods: PRA, SARAR, etc, Social-Cost-Benefit Analysis and Returns (SRR)
- Commercial Aspects of Appraisal: Country Specific and Project Specific Procurement: compulsory contract tendering, e-tendering and transparency; Marketing of the project Output.
- Environmental Appraisal: Resource Pricing: Methods of identifying environmental costs and benefits of a project- travel cost, replacement cost, bequest pricing, hedonic pricing, contingent valuation, land values, preventive/mitigation expenses, benefit transfers, productivity changes. Preparation of EIA/EIS in terms of costs and benefits.
- Institutional Appraisal: Institutional Commitment towards a project, Capacity Enhancement Need Assessment (CENA); Five aspects of institutional appraisal: prior experience in the sector, interface between participating institutions, power, responsibility and cost and benefit sharing, institutional covenants, and relevant regional, state and local level actors/agents in a project. Policy level issues: National, Sectoral, State, and local: Fiscal, legal and other policies that affect the projects; Technology usage in a project and its impact.
- Risk and Uncertainty: Types of Risk: Systematic and unsystematic, integrating risks in project NPV criterion; Methods:

Conservative estimates, project classification, shorter payback period, certainty equivalent approach, Risk adjusted return, Capital Asset Pricing Model (CAPM), Monte Carlo Simulation, Decision Tree Analysis, Cost and Time over runs in project.

## Module 3: Methods of Financing

- Fiscal Transfers under 73 and 74 Constitution Amendment Act (CAA), Central and State Finance Commissions; Own Source funding, Equities, debt financing, sell out, refinancing, co-financing, and venture capital; Issues in Project financing; Credit Rating of Bonds, Special Purpose Vehicle, Conditionalities for PPP

Module 4: Monitoring and Evaluation of projects and Practical Problem Solving

- Monitoring a project: Techniques and software for project monitoring.
- Evaluation: Types of evaluation and its effectiveness.
- Problem Solving: Cost effective, cost-benefit analysis, discounted cashflow techniques, calculation of Internal Rate of Return (IRR) and Economic Rate of Return (ERR)
- Project Management: PERT, CPM, Project Manager and other tools

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam

(both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding the various dimensions of project planning and how to incorporate them in the regional planning process by undergoing this course.

## Reading List

### Governance: When, Why, What

Ahluwalia MS., 1999. India's economic reform: An appraisal In India in the era of economic reforms. Sachs J, Varshney A, Bajpai N (eds.) *Oxford University Press*, New Delhi. pp.26-80

Asian Development Bank (ADB), 1997. *Governance: Promoting Sound Development Management*. Manila: ADB.

Banerjee, A. M. and K. A. Chandrasekaran., 1996. *Renewing Governance: Issues and Options*. New Delhi: Tata McGraw Hill.

Crook, Rand J. and Manor, 1995. Democratic Decentralization and Institutional Performance: Four Asian and African Experiences Compared. *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 32-41.

Currie, B., 1996. "Governance, democracy and Economic Adjustment in India: Conceptual and Empirical Problems", *Third World Quarterly*.

Expert Group on Commercialisation of Infrastructure Projects. 1996. *The India Infrastructure Report: Policy Imperatives for Growth and Welfare*. New Delhi: Ministry of Finance, Govt. of India.

International Monetary Fund (IMF). 1997. *Good Governance: The IMF's Role*. Washington: IMF.

Jayal, N.G., 1997. The Governance Agenda: Making Democratic Development Dispensable, *Economic and Political Weekly*. Vol. 32, No. 8, pp. 22-27.

Landell-Mills, Pierre and I. Seralgeldin, 1992, 'Governance and External Factor, *Proceeding of the World Bank Annual Conference on Development Economics 1991*, World Bank, Washington D.C.

Leftwich, A., 1993. Governance, Democracy and Development in the Third World, *Third world Quarterly*, Vol. 14, No. 3, pp. 605-624.

Mitra, S. K., 2001. Making Local Government Work: Local Elites, Panchayati raj and Governance in India in Atul Kohli Ed The Success of India's Democracy Cambridge, *Cambridge University Press*, pp. 103-126.

Sachs J, Varshney A. and Bajpai N., 1999. *India in the era of economic reforms*. New Delhi: Oxford University Press

UNDP, 1997. *Governance for Sustainable Development*. New York: UNDP Policy Document.

World Bank, 1997. *The State in a Changing World, World Development Report*. New York: Oxford University Press.

Gupta, B., 1996. *India: Problems of Governance, Governing South Asia*. Vol. 5, New Delhi: Konark Publishers.

Bagchi, S. and Kundu, 2003. A. Development of Municipal bond market in India: Issues concerning financing of urban infrastructure, *Economic and Political Weekly*, Vol.38, No. 8, pp.789-98.

Balachandren, G., 2001. Urban Decentralisation: case Study – West Bengal, *SDR*, Vol.8, No.5, pp.18-24.

Bewa and Kumar, V., 1987. Indian Metropolis urbanization, Planning and Management, New Delhi: Inter India Publications.

Crook, R. and Manor, J., 1995. Democratic Decentralisation and Institutional Performance: Four Asian and African Experiences Compared, *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 19-25.

Datta and Abhijit, 1992. Constitutional Strengthening of local government a third world federation, *Indian Journal of Public Administration*, Vol.42, No.2, April, pp. 144-52.

Jain, A.K., 2002. Urban Governance, Planning and Development in Delhi, *SDR*, Vol. 9, No. 2, pp. 13-20.

Kohli, A., 1987. *State and Poverty in India: The Politics of Reform*, Cambridge University Press.

Kundu, A., 2001. Politics and Economics of Credit Rating, *EPW*, Vol.35, No.4, pp.293-95.

Kundu, A., 2003. Urban and Urban Governance: Scared for neoliberalism, *EPW*, Vol. 38, No.29, pp. 3079-87.

Kundu, A. and Mahadevi, P., 2002. *Poverty & Vulnerability in Globalising Metropolis Ahmedabad*, New Delhi: Marab Publications.

Merino R. and Pinto, 2000. *Metropolitan City Governance in India*, New Delhi: Sage Publications.

Nayyar, D. 2002. *Governing Globalisation: Issues and Institutions*, Oxford University Press.

Mathur, O. P., 1999. *India: The Challenge of Urban Governance*, NIPFP & Centre for Urban & Community Studies.

### **Governance: Definition, Measurement, Indicator**

Graham, J., Anos, B. and Plumpre, T., 2003. *Principles for Good Governance In The 21st Century, Policy brief no. 15*. Canada: Institute on Governance.

Mehta, D., 1998. *Urban Governance: Lessons from Best Practices in Asia*, UMP-Asia Occasional Paper no. 40.

Mohanty, P.K., 1999. *Municipal Decentralisation and Governance: Autonomy, Accountability and Participation in Jha, S.N. and Mathur, P.C (Eds) Decentralisation and Local Politics: Reading in Indian Government and Politics-2*. New Delhi: Sage Publications.

Osborne, D. and Gaebler T., 1992. *Reinventing Government*, MA: Addison-Wesley.

Putnam, R. D., 1993. *Making Democracy Work: Civic Tradition in Modern Italy*, Princeton, NJ.: Princeton University Press,

United Nations Centre for Human Settlement (HABITAT), 1996. *An Urbanising World: Global*

*Report on Human Settlements*. New York: Oxford University Press.

United Nations Centre for Human Settlement, 2000. *Urban Indicators Tool kit guide*, New York: Oxford University Press.

UNDP, 1997. *Public Private Partnership for the Urban Environment*. New York: UNDP.

UNDP, 1999. *Human Development Report-Globalisation with a Human Face*. New York: UNDP.

UNDP, 2002. *Urban Governance: A sourcebook on indicators*, New York: UNDP.

UNDP, 2003. *What is Good Governance*, New York: UNDP.

Urban Management Programme (UMP), 2000. Capacity Enhancement of Civil Societies for Good Governance, *UMP Asia News*, Vol. 3, No. 2, pp. 32-46.

World Bank, 1994. *Governance: the World Bank's experience, The International Bank for Reconstruction and Development*, Washington, D.C.: The World Bank.

World Bank, 1997. *The State in a Changing World- World Development Report*. , New York: Oxford University Press.

Wickramasinghe, N. K., 1997. 'Governance: A Critique' in ed. M. Somasundram, *The Third Wave. Governance and Public Administration in Sri Lanka*, New Delhi: Konark Publications.

Weisgrau, and Maxine, 1997. *Interpreting Development: Local Histories, Local Strategies*, Lanham, New York: University Press of America.

### **Governance, Civil Society and Development**

Barber, B., 1998. *A Place for Us: How to Make Society Civil and Democracy Strong*, New York: Hill and Wang.

Gramsci and Antonio, 1971. *Selections from the Prison Notebooks of Antonio Gramsci*, New York: International Publishers.

Mencher, J., 1999. NGO: Are they a Force for Change, *Economic and Political Weekly*, Vol. 34, No.30, pp. 32-39.

Pearce J., 1997. Civil Society, Market and Democracy in Latin America. *Democratisation*, Vol.4, pp.57-83.

United Nations Development Programme, 1993. *UNDP and Civil Society*, New York: UNDP.

Walzer, M., 1997. *Concept of Civil Society in M. Walzer (ed.) Towards a Global Civil Society*. Berghahn Books, U.K: Oxford.

### **Global Governance**

Lamb, H., 1996. *Global Governance: Why? How? When?*, Murchison Chair of Free Enterprise College of Engineering, <http://www.engr.utexas.edu/cofe/governance/>

Farer, T., Timothy D. and Sisk, 2007. *Global Governance: A Review of Multilateralism and International Organisations*. Japan: Lynne Rienner Publishers in association with ACUNS and United Nations University.

Prado and De, C., 2000. *Global Multi-level Governance: European and East Asian Leadership*, Japan: United Nations University Press.

Stuckler, D. and Basu, S., 2010. *Six Concerns about the data in the (Dead) Aid Debate*, Global Economic Governance Programme, GEG Brief, University College Oxford, University of Oxford and Department of Politics and International Relations

## E-Governance

Government of India, 2008. *Promoting E-Governance: The Smart Way Forward*. Second Administrative Reforms Commission, 11th Report, New Delhi.

## Others

Hajer, M., Hajer, M.A. and Wagenaar, H. eds., 2003. *Deliberative policy analysis: understanding governance in the network society*. Cambridge: Cambridge University Press.

Congleton, R.D., 2007. *Understanding institutional diversity*. Cambridge: Cambridge University Press.

Arts, B. and Buizer, M., 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest policy and economics*, Vol.11, No.5-6, pp. 340-347.

Aoki, M., Jackson, G. and Miyajima, H., 2007. *Corporate governance in Japan: Institutional change and organizational diversity*. New York: Oxford University Press.

Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No. 4, pp.429-458.

Ostrom, E., 1994. Institutional analysis,

design principles and threats to sustainable community governance and management of commons. In *ICLARM Conf. Proc. No. 45*, pp. 34-50.

Clement, F., 2010. Analysing decentralised natural resource governance: proposition for a “politicised” institutional analysis and development framework. *Policy Sciences*, Vol.43, No.2, pp.129-156.

Kang, N. and Moon, J., 2011. Institutional complementarity between corporate governance and corporate social responsibility: A comparative institutional analysis of three capitalisms. *Socio-Economic Review*, Vol.10, No. 1, pp.85-108.

Vatn, A., 2010. An institutional analysis of payments for environmental services. *Ecological economics*, Vol.69, No.6, pp.1245-1252.

Bowles, S. and Gintis, H., 2002. Social capital and community governance. *The economic journal*, Vol.112, No. 483, pp.F419-F436.

Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No.4, pp.429-458.

Andersson, K., 2006. Understanding decentralized forest governance: an application of the institutional analysis and development framework. *Sustainability: Science, Practice and Policy*, Vol.2, No.12, pp.25-35.

Aoki, M., 2001. *Toward a comparative institutional analysis*. Cambridge: MIT press.

Ostrom, E., 2011. Background on the institutional analysis and development

framework. *Policy Studies Journal*, Vol.39, No.1, pp.7-27.

Williamson, O.E., 1991. Comparative economic organization: The analysis of discrete structural alternatives. *Administrative science quarterly*, pp.269-296.

Alexander, E.R., 2001. Governance and transaction costs in planning systems: a conceptual framework for institutional analysis of land-use planning and development control—the case of Israel. *Environment and Planning B: Planning and Design*, Vol.28, No.5, pp.755-776.

Campbell, J.L., Pedersen, O.K. and Pedersen, O. eds., 2001. *The rise of neoliberalism and institutional analysis*. Princeton University Press.

Campbell, J.L., 2006. Institutional analysis and the paradox of corporate social responsibility. *American Behavioural Scientist*, Vol.49, No.7, pp.925-938.

Ostrom, E., 1991. Rational choice theory and institutional analysis: Toward complementarity. *American political science review*, Vol.85, No.1, pp.237-243.

Imperial, M.T., 1999. Institutional analysis and ecosystem-based management: the institutional analysis and development framework. *Environmental management*, Vol.24, No.4, pp.449-465.

Fedosov, V. and Paientko, T., 2018. Government financial accountability: key problems and main trends in post-communist countries. *Zeszyty Teoretyczne Rachunkowości*, Vol.99, No. 155, pp.25-39.



Bennett, A., Acton, L., Epstein, G., Gruby, R.L. and Nenadovic, M., 2018. *Embracing conceptual diversity to integrate power and institutional analysis: Introducing a relational typology.*

Fritz, B. and Mühlich, L., 2018. *Regional Financial Arrangements in the Global Financial*

*Safety Net.* The Arab and the Eurasian Fund.

Thiel, A. and Moser, C., 2018. Toward comparative institutional analysis of polycentric social-ecological systems governance. *Environmental Policy and Governance*, Vol.28, No.4, pp.269-283.

Siddiki, S., 2018. Policy Compliance: Personal, Social, and Institutional Motivations. *In Contextualizing Compliance in the Public Sector*, pp. 34-47.

### RP3.03: Institutional Analysis and Governance

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

#### Objectives

This course is to make the students understand the nuances of institutions and their role in the planning and decision-making process.

#### Course Content

##### Module 1: Institutions in Planning

- Type of institutions, their role and relevance (legal, political, social, cultural and economic institutions); formal and informal institutions and spaces – their interface, conflicts, reach and their effectiveness in planning; Analysing the institutions: Methods, process and evaluation; Role of the State in Planning: Market facilitative, regulatory and monopoly power; Hierarchies, Scales and Levels of Planning Institutions

##### Module 2: Comparative Institutions

- Formal and informal institutions such as constitutions, electoral rules, property rights, and civil rights; How and why people in different groups, countries, and cultural context of institutions to facilitate collective action; Whether different groups construct distinctly different institutions to deal with similar problems and why similar institutions seem to work differently in differently in distinct societies.

##### Module 3: Institutions and Organisations

- Different between organizations and institutions, government and governance; Organisations: types, concepts, theories, structure and functions; approaches to understanding organizations; Institutional building: factors and processes, institution

Process and networks – how the network operates.

##### Module 4: Planning Organisations

- Present Organisations dealing with urban and regional planning; Post 73 and 74 CAA environment and the modified role and functions of local bodies, local authorities, district authorities and state level agencies; Case studies.

##### Module 5: Decentralisation of Powers

- Development Planning and Indian state-centralisation, powerlessness, decentralization; institutional frame and mechanism for urban governance as envisaged in 73rd and 74th CAA; transfer of power from Centre to State and State to Local government; role of the existing

planning and development agencies in various states in the light of CAA; Role of various institutions in the governance process and access to government by various stakeholders; Digital Governance, E-Democracy, E-Governance and Grievances Redressal system; case study related to digital and e-governance.

### Module 6: Participatory Governance

- Benefits of participation in community planning; process and principles of community planning, bottom up planning process, community building process, community planning, partnership; community rights and physical planning norms/standards, public distribution system, community-based evaluation of planned projects. Community Participation Laws

### Module 7: Network Governance

- Role of the state in relation to other Stakeholders (NGOs, Private Sector, Scientific Network and international institutions), New State Spaces: Invited and contested spaces: changing role of the state-emergence of middle class and its socio-political space, collective bargaining and collective action; role of donor agencies. Advanced Locality Management, Resident Welfare Associations and other agencies in the governance system. Role of People's participation in planning process: Process of inclusion and exclusion in governance.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding various institutions, their interface in the planning process. It will also provide them with the knowledge of various changes that the 73 and 74 CAA has brought in the country in terms of empowerment at various levels.

## Pedagogic Method

Teaching, Role Play, Presentations, Assignments and participatory knowledge building through case study analysis, and exam (both internal and external). School lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Reading List

### Governance: When, Why, What

Ahluwalia MS., 1999. India's economic reform: An appraisal In India in the era of economic reforms. Sachs J, Varshney A, Bajpai N (eds.) *Oxford University Press*, New Delhi. pp.26-80

Asian Development Bank (ADB), 1997. *Governance: Promoting Sound Development Management*. Manila: ADB.

Banerjee, A. M. and K. A. Chandrasekaran., 1996. *Renewing Governance: Issues and Options*. New Delhi: Tata McGraw Hill.

Crook, Rand J. and Manor, 1995. *Democratic Decentralization and Institutional Performance:*

Four Asian and African Experiences Compared. *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 32-41.

Currie, B., 1996. "Governance, democracy and Economic Adjustment in India: Conceptual and Empirical Problems", *Third World Quarterly*.

Expert Group on Commercialisation of Infrastructure Projects. 1996. *The India Infrastructure Report: Policy Imperatives for Growth and Welfare*. New Delhi: Ministry of Finance, Govt. of India.

International Monetary Fund (IMF). 1997. *Good Governance: The IMF's Role*. Washington: IMF.

Jayal, N.G., 1997. The Governance Agenda: Making Democratic Development Dispensable, *Economic and Political Weekly*. Vol. 32, No. 8, pp. 22-27.

Landell-Mills, Pierre and I. Seralgeldin, 1992, 'Governance and External Factor, *Proceeding of the World Bank Annual Conference on Development Economics 1991*, World Bank, Washington D.C.

Leftwich, A., 1993. Governance, Democracy and Development in the Third World, *Third world Quarterly*, Vol. 14, No. 3, pp. 605-624.

Mitra, S. K., 2001. Making Local Government Work: Local Elites, Panchayati raj and Governance in India in AtulKohli Ed The Success of India's Democracy Cambridge, *Cambridge University Press*, pp. 103-126.

Sachs J, Varshney A. and Bajpai N., 1999. *India in the era of economic reforms*. New Delhi: Oxford University Press

UNDP, 1997. *Governance for Sustainable Development*. New York: UNDP Policy Document.

World Bank, 1997. *The State in a Changing World, World Development Report*. New York: Oxford University Press.

Gupta, B., 1996. *India: Problems of Governance, Governing South Asia*. Vol. 5, New Delhi: Konark Publishers.

Bagchi, S. and Kundu, 2003. A. Development of Municipal bond market in India: Issues concerning financing of urban infrastructure, *Economic and Political Weekly*, Vol.38, No. 8, pp.789–98.

Balachandren, G., 2001. Urban Decentralisation: case Study – West Bengal, *SDR*, Vol.8, No.5, pp.18-24.

Bewa and Kumar, V., 1987. *Indian Metropolis urbanization, Planning and Management*, New Delhi: Inter India Publications.

Crook, R. and Manor, J., 1995. Democratic Decentralisation and Institutional Performance: Four Asian and African Experiences Compared, *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 19-25.

Datta and Abhijit, 1992. Constitutional Strengthening of local government a third world federation, *Indian Journal of Public Administration*, Vol.42, No.2, April, pp. 144-52.

Jain, A.K., 2002. Urban Governance, Planning and Development in Delhi, *SDR*, Vol. 9, No. 2, pp. 13-20.

Kohli, A., 1987. *State and Poverty in India: The Politics of Reform*, Cambridge University Press.

Kundu, A., 2001. Politics and Economics of Credit Rating, *EPW*, Vol.35, No.4, pp.293-95.

Kundu, A., 2003. Urban and Urban Governance: Scared for neoliberalism, *EPW*, Vol. 38, No.29, pp. 3079-87.

Kundu, A. and Mahadevi, P., 2002. *Poverty & Vulnerability in Globalising Metropolis Ahmedabad*, New Delhi: Marab Publications.

Merino R. and Pinto, 2000. *Metropolitan City Governance in India*, New Delhi: Sage Publications.

Nayyar, D. 2002. *Governing Globalisation: Issues and Institutions*, Oxford University Press.

Mathur, O. P., 1999. *India: The Challenge of Urban Governance*, NIPFP & Centre for Urban & Community Studies.

### **Governance: Definition, Measurement, Indicator**

Graham, J., Anos, B. and Plumtre, T., 2003. *Principles for Good Governance In The 21st Century, Policy brief no. 15*. Canada: Institute on Governance.

Mehta, D., 1998. *Urban Governance: Lessons from Best Practices in Asia*, UMP-Asia Occasional Paper no. 40.

Mohanty, P.K., 1999. *Municipal Decentralisation and Governance: Autonomy, Accountability and Participation in Jha, S.N. and Mathur, P.C (Eds) Decentralisation and Local Politics: Reading in Indian Government and Politics-2*. New Delhi: Sage Publications.

Osborne, D. and Gaebler T., 1992. *Reinventing Government, MA: Addison-Wesley*.

Putnam, R. D., 1993. *Making Democracy Work: Civic Tradition in Modern Italy*, Princeton, NJ.: Princeton University Press,

United Nations Centre for Human Settlement (HABITAT), 1996. *An Urbanising World: Global Report on Human Settlements*. New York: Oxford University Press.

United Nations Centre for Human Settlement, 2000. *Urban Indicators Tool kit guide*, New York: Oxford University Press.

UNDP, 1997. *Public Private Partnership for the Urban Environment*. New York: UNDP.

UNDP, 1999. *Human Development Report-Globalisation with a Human Face*. New York: UNDP.

UNDP, 2002. *Urban Governance: A sourcebook on indicators*, New York: UNDP.

UNDP, 2003. *What is Good Governance*, New York: UNDP.

Urban Management Programme (UMP), 2000. Capacity Enhancement of Civil Societies for Good Governance, *UMP Asia News*, Vol. 3, No. 2, pp. 32-46.

World Bank, 1994. *Governance: the World Bank's experience, The International Bank for Reconstruction and Development*, Washington, D.C.: The World Bank.

World Bank, 1997. *The State in a Changing World- World Development Report*. , New York: Oxford University Press.

Wickramasinghe, N. K., 1997. 'Governance: A Critique' in ed. M. Somasundram, *The Third Wave. Governance and Public Administration in Sri Lanka*, New Delhi: Konark Publications.

Weisgrau, and Maxine, 1997. *Interpreting Development: Local Histories, Local Strategies*, Lanham, New York: University Press of America.

## Governance, Civil Society and Development

Barber, B., 1998. *A Place for Us: How to Make Society Civil and Democracy Strong*, New York: Hill and Wang.

Gramsci and Antonio, 1971. *Selections from the Prison Notebooks of Antonio Gramsci*, New York: International Publishers.

Mencher, J., 1999. NGO: Are they a Force for Change, *Economic and Political Weekly*, Vol. 34, No.30, pp. 32-39.

Pearce J., 1997. Civil Society, Market and Democracy in Latin America. *Democratisation*, Vol.4, pp.57-83.

United Nations Development Programme, 1993. *UNDP and Civil Society*, New York: UNDP.

Walzer, M., 1997. *Concept of Civil Society in M. Walzer (ed.) Towards a Global Civil Society*. Berghahn Books, U.K: Oxford.

## Global Governance

Lamb, H., 1996. *Global Governance: Why? How? When?*, Murchison Chair of Free Enterprise College of Engineering, <http://www.engr.utexas.edu/cofe/governance/>

Farer, T., Timothy D. and Sisk, 2007. *Global Governance: A Review of Multilateralism and International Organisations*. Japan: Lynne Rienner Publishers in association with ACUNS and United Nations University.

Prado and De, C., 2000. *Global Multi-level Governance: European and East Asian Leadership*, Japan: United Nations University Press.

Stuckler, D. and Basu, S., 2010. *Six Concerns about the data in the (Dead) Aid Debate*, Global Economic Governance Programme, GEG Brief, University College Oxford, University of Oxford and Department of Politics and International Relations

## E-Governance

Government of India, 2008. *Promoting E-Governance: The Smart Way Forward*. Second Administrative Reforms Commission, 11th Report, New Delhi.

## Others

Hajer, M., Hajer, M.A. and Wagenaar, H. eds., 2003. *Deliberative policy analysis: understanding governance in the network society*. Cambridge: Cambridge University Press.

Congleton, R.D., 2007. *Understanding institutional diversity*. Cambridge: Cambridge University Press.

Arts, B. and Buizer, M., 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest policy and economics*, Vol.11, No.5-6, pp. 340-347.

Aoki, M., Jackson, G. and Miyajima, H., 2007. *Corporate governance in Japan: Institutional change and organizational diversity*. New York: Oxford University Press.

Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No. 4, pp.429-458.

Ostrom, E., 1994. Institutional analysis, design principles and threats to sustainable community governance and management of commons. *In ICLARM Conf. Proc. No. 45*, pp. 34-50.

Clement, F., 2010. Analysing decentralised natural resource governance: proposition for a "politicised" institutional analysis and development framework. *Policy Sciences*, Vol.43, No.2, pp.129-156.

Kang, N. and Moon, J., 2011. Institutional complementarity between corporate governance and corporate social responsibility: A comparative institutional analysis of three capitalisms. *Socio-Economic Review*, Vol.10, No. 1, pp.85-108.

Vatn, A., 2010. An institutional analysis of payments for environmental services. *Ecological economics*, Vol.69, No.6, pp.1245-1252.

Bowles, S. and Gintis, H., 2002. Social capital and community governance. *The economic journal*, Vol.112, No. 483, pp.F419-F436.

Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No.4, pp.429-458.

Andersson, K., 2006. Understanding decentralized forest governance: an application of the institutional analysis and development framework. *Sustainability: Science, Practice and Policy*, Vol.2, No.12, pp.25-35.

Aoki, M., 2001. *Toward a comparative institutional analysis*. Cambridge: MIT press.

Ostrom, E., 2011. Background on the institutional analysis and development framework. *Policy Studies Journal*, Vol.39, No.1, pp.7-27.

Williamson, O.E., 1991. Comparative economic organization: The analysis of discrete structural alternatives. *Administrative science quarterly*, pp.269-296.

Alexander, E.R., 2001. Governance and transaction costs in planning systems: a conceptual framework for institutional analysis of land-use planning and development control—the case of Israel. *Environment and Planning B: Planning and Design*, Vol.28, No.5, pp.755-776.

Campbell, J.L., Pedersen, O.K. and Pedersen, O. eds., 2001. *The rise of neoliberalism and*

*institutional analysis*. Princeton University Press.

Campbell, J.L., 2006. Institutional analysis and the paradox of corporate social responsibility. *American Behavioural Scientist*, Vol.49, No.7, pp.925-938.

Ostrom, E., 1991. Rational choice theory and institutional analysis: Toward complementarity. *American political science review*, Vol.85, No.1, pp.237-243.

Imperial, M.T., 1999. Institutional analysis and ecosystem-based management: the institutional analysis and development framework. *Environmental management*, Vol.24, No.4, pp.449-465.

Fedosov, V. and Paientko, T., 2018. Government financial accountability: key problems and main trends in post-communist countries.

*ZeszytyTeoretyczneRachunkowości*, Vol.99, No. 155, pp.25-39.

Bennett, A., Acton, L., Epstein, G., Gruby, R.L. and Nenadovic, M., 2018. *Embracing conceptual diversity to integrate power and institutional analysis: Introducing a relational typology*.

Fritz, B. and Mühlich, L., 2018. *Regional Financial Arrangements in the Global Financial Safety Net*. The Arab and the Eurasian Fund.

Thiel, A. and Moser, C., 2018. Toward comparative institutional analysis of polycentric social-ecological systems governance. *Environmental Policy and Governance*, Vol.28, No.4, pp.269-283.

Siddiki, S., 2018. Policy Compliance: Personal, Social, and Institutional Motivations. *In Contextualizing Compliance in the Public Sector*, pp. 34-47.

### RP3.04: Legal Issues in Planning and Professional Practice

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

#### Objectives

The objective of this course is to enable the students to understand the legal implications of the plans that they will be making and also the professional practice guidelines.

#### Course Content

##### Module 1: Introduction, Concept and Significance of Law

- Sources of law: custom, legislation and precedent; Meaning and terms of law:

legislation, ordinance, bill, act, regulation, and bye-laws; Significance of law and its relationship to urban and regional planning, benefit of statutory backing, eminent domain powers and police powers.

## Module 2: Indian Constitution and Evolution of Planning Legislation

- Indian Constitution: Concepts and contents related to planning provision regarding property rights, Concept of Arbitration, betterment levy development charges and public participation in statutory planning process, concept of structure plan, local plan and action plan under the Law; legislative competence of Local, State and Central government to deal with various matters concerning Town and Country Planning.
- Evolution of Planning Legislation: An overview of legal tools connected with urban and regional planning and development. Town and Country Planning Act, Improvement Trust Act, Development Authorities Act: objectives, content, procedures for provision an implementation of regional plans, master plans and town planning schemes.

## Module 3: Policy, Acts and Laws

- Inventory of Planning legislations pertaining to Regional Planning
- Policy: National Environmental Policy Act; Environmental Protection Act; Land Acquisition Act: Concepts, procedure for compulsory acquisition of property and determination of compensation.
- Acts: Acts pertaining to SEZ, disaster management, and legal aspects of innovative techniques such as Transfer of Development Rights, Air Rights, etc.; Consultancy document contract Agreement

and Contract Management.

- Law: Laws relating to Slum Clearance, environment, housing, landscape and traffic; Laws relating to conservation and restoration, historical monuments, archaeological sites and remnants of national importance; contract management and execution of projects.

## Module 4: Significance of Land Development Control

- Objectives of legal tools, critical evaluation of zoning, sub-division regulations, building regulations and bye-laws, development code zoning, periphery control, land conversion in the peri-urban areas.

## Module 5: Professional Practice in Public, Private and Joint Sector

- Professional Practice: Aims and objectives of professional institute, sister bodies, professional role and responsibility of planning consultants, professional ethics and code of conduct and scale of professional charges; Professional Practice under International Agreements (GATT & WTO) and its impact in India; Formulation of Consultancy project proposal and outlines; Expression of Interest (EoI), Request for Proposal (RFP), etc.; Scale of Professional Charges, Management of office and personnel, Collaborative projects.
- Role of Inter-Disciplinary groups: appreciation of decision-making process and the process in relation to varied consultancy assignments in planning

- Expected Learning Outcome: Students are expected to gain knowledge in the legal issues in planning and how to design a contract as a professional practitioner.

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

## Reading List:

Banicki, K., 2014. Positive psychology on character strengths and virtues- A disquieting suggestion. *New Ideas in Psychology*, Vol. 33, pp.21-34.

Barnett, J.E., 1996. Leaving a practice: Ethical dilemmas and concerns. *The Maryland Psychologist*, Vol. 5, pp.149-150.

Bradley, L.J., Hendricks, B. and Kabell, D.R., 2012. The professional will: An ethical responsibility. *The Family Journal*, Vol.20, No.3, pp. 309-314.

Cvetanovski, J. and Jex, S.M., 1994. Locus of control of unemployed people and its relationship to psychological and physical well-being. *Work & Stress*, Vol.8, No.1, pp. 60-67.

Eby, L.T. and Buch, K., 1994. The effect of job search method, sex, activity level, and emotional acceptance on new job characteristics: Implications for counselling

unemployed professionals. *Journal of Employment Counselling*, Vol.31, No.2, pp.69-82.

Goldsmith, A.H. and Darity Jr, W., 1992. Social psychology, unemployment exposure and equilibrium unemployment. *Journal of Economic Psychology*, Vol.13, No.3, pp.449-471.

Goldsmith, A.H., Veum, J.R. and William Jr, D., 1996. The impact of labor force history on self-esteem and its component parts, anxiety, alienation and depression. *Journal of Economic Psychology*, Vol.17, No.2, pp. 183-220.

American Psychological Association. 1969. Guidelines for telephone directory listings. *American Psychologist*, Vol.24, pp.70-71.

Davidson, G., Garton, A.F. and Joyce, M., 2003. Survey of ethics education in Australian university schools and departments of psychology. *Australian Psychologist*, Vol. 38, No.3, pp.216-222.

Lerner, M.J. and Somers, D.G., 1992. Employees' reactions to 13 anticipated plant closure: The influence of positive illusions. *Life crises and experiences of loss in adulthood*, Vol.229, pp. 47-56.

Barnett, J.E., 1996. Leaving a practice: Ethical dilemmas and concerns. *The Maryland Psychologist*, Vol.5, pp.149-150.

Siebold, C., 1991. Termination: When the therapist leaves. *Clinical Social Work Journal*, Vol.9, NO.2, pp. 191-204.

Turner, J.B., Kessler, R.C. and House, J.S., 1991. Factors facilitating adjustment to unemployment: Implications for intervention. *American Journal of Community Psychology*, Vol.19, No.2, pp.521-542.

Brenner, M.H., 1973. Fetal, infant, and maternal mortality during periods of economic instability. *International Journal of Health Services*, Vol.3, No.2, pp. 145-159.

Koocher, G.P., 2003. Ethical and legal issues in professional practice transitions. *Professional Psychology: Research and Practice*, Vol.34, No.4, pp. 383-387.

Bradley, L.J., Hendricks, B. and Kabell, D.R., 2012. The professional will: An ethical responsibility. *The Family Journal*, Vol. 20, No.3, pp. 309-314.

Gutheil, I.A. and Heyman, J.C., 2005. Communication between older people and their health care agents: results of an intervention. *Health and Social Work*, Vol.30, No.2, pp. 107-116.

Leitch, V., 2010. Securing planning permission for onshore wind farms: the imperativeness of public participation. *Environmental Law Review*, Vol.12, No.3, pp. 182-199.

Black, K., 2007. Advance care planning throughout the end-of-life: focusing the lens for social work practice. *Journal of social work in end-of-life and palliative care*, Vol.3, No.2, pp.39-58.

Sridhar, K.S. and Narayanan, P., 2016. Suburbanization of Indian Cities: What is the Evidence from Gulbarga? *Environment and Urbanization ASIA*, Vol.7, No.1, pp. 93-112.

Gleeson, B. and Low, N., 2000. [BOOK REVIEW] Australian urban planning, new challenges, new agendas. *Environment and Planning*, Vol.32, No.10, pp.1893-1894.

Ahern, J., Cilliers, S. and Niemelä, J., 2014. The concept of ecosystem services in adaptive urban planning and design: A framework for supporting innovation. *Landscape and Urban Planning*, Vol.125, pp.254-259.

Sridhar, K.S., 2016. Solid Waste Management in Asia Pacific: What Explains Its Coverage? *Public Works Management & Policy*, Vol.21, No.1, pp.53-70.

Sacrates, J. and Govindaraj, G.H., 2014. Estimating Economic Costs of Municipal Solid Waste Management: Using Contingent Valuation Method. *In Urbanization in Asia* .pp. 179-197.

## RP3.05: Studio (Resource Regional Planning, Mega and Metro Region Planning, District Planning, Special Regions)

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 10         | 0       | 0        | 10     | 10      | Jury               | 250                 | 250                  | 500   | -                         |

### Objective

The objective of this studio is to expose the students in the practical ways of planning for a region (district/mega/metro Region). The students will be given a live case study to understand the complexities of planning the region, inter-sector, scalar interface, integration, etc. The focus will be to understand the scale of the problem and how to tackle them. It is expected that the approach will be mostly in terms of governance, which the students have acquired through theory subjects in second semester. It is also expected that the students after preparing the plan will present it to the stakeholders to get their viewpoint.

### Expected Learning Outcome

Students are expected to have obtained the skills in understanding the various levels of planning, planning institutions, sources of information for regional planning, and also develop public interaction by undergoing this course.

### Pedagogic Method

Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

### DEPARTMENT ELECTIVE

Students are given the option to choose Department elective from the one offered by the Regional Planning Department.

### Reading List:

Aalborg, D. M. o., 2011. *The city regions Project - Synthesis report: Paths to growth in medium sized European cities - with particular emphasis on the role of city collaboration*, Denmark: s.n.

Ache, P., 2000 Cities in old industrial regions between local innovative milieu and urban governance—Reflections on city region governance, *European Planning Studies*, Vol.8, No.6, pp. 693–709.

Anderton, D., 2017. Changing leadership in peripheral city-region development: The case of Liverpool's high technology sectors. *Local Economy*, Vol.32, No.4, pp. 352 - 373.

AromarRevi, G. J., 2011. Urban India 2011: Evidence. *Autumn Worldwide*.

Bennett, R. J., 1985 Central city-city region fiscal disparities in Austria: Estimates for 1979, *Urban Studies*, Vol.22, No.1, pp. 69–81.

Cairncross, F., 1997. *The Death of Distance* (Cambridge, MA: Harvard Business School Press).

Cauthen, J. O., 1973. *New Plant Site Selection: A study of various factors with emphasis on human resource considerations in the decisions*. Florida: Florida Atlantic University.

Christofakis, M. and Papadaskalopoulos, A., 2011. The Growth Poles Strategy in Regional Planning: The Recent Experience of Greece. *Theoretical and Empirical Researches in Urban Management*, Vol.6, No.2, pp. 5 - 20.

Choudhary, P. and Adane, V., 2012. Spatial configurations of the urban cores in central India, *Santiago: Eighth International Space Syntax Symposium*.



- Davoudi, S., 2008. Conceptions of the city-region: a critical review. Newcastle, UK, *Proceedings of the Institution of Civil Engineers: Urban design and planning*.
- European Commission, 2016. *Smart Regions Conference: Driving Smart Specialisation Investments in Priority Areas for European Growth 1 – 2 June 2016*, Brussels.
- Galiani, S., and Kim, S., 2008. *The Law of the Primate City in the Americas*. Washington: Wshington University.
- Galland, D., 2015. *Perspectives on Regions and City Regions*. Aalborg: Department of Development and Planning.
- Gopi, K.N., 1973. *Economic Hinterland of Vishakhapatnam Port*, Osmania Bulletin, No 1, Centre for Urban Research, Osmania University
- Jayasinghe, A. B., and Dissanayake, M. N., 2014. Validity of Rank Size Rule (GeargeZipf, 1949), Law of Primate City (Mark Jefferson, 1939) and Rank Size Class Concepts Case of Kerala. *SAITM Research Symposium on Engineering Advancements*, Vol. 34, pp. 186-191.
- Jefferson, M., 1939. *The law of Primate City*. Vol.29, No.2, pp. 34-39.
- Johnson, C., 2013. *Managing urban growth, Delhi: A metropolis in association with India's National Institute of Urban Affairs*.
- Kumari, A., 2015. City size distributions and hierarchy among cities in India. *The journal of Development Practice*, Vol. 2, pp.26-34.
- Kumari, K., 2014. Determining Rank Size Distribution of Urban Centres of Eastern Uttar Pradesh, India. *IOSR Journal of Humanities and Social Science*, Vol.19, Issue 9, pp.50-59.
- Lindsay, D., 2012. *The city-region concept in a Scottish context*, Glasgow: College of Social Sciences.
- Markkula, M. and H. Kune., 2015. 'Making Smart Regions Smarter: Smart Specialization and the Role of Universities in Regional Innovation Ecosystems', *Technology Innovation Management Review*, Vol. 5, Issue 10 (October, 2015).
- Mohammady, S. And Delavar, M. R., 2015. Urban Sprawl Monitoring. *Modern Applied Sciences*, Vol. 11, No. 9, pp. 1-12.
- Mokhtar, B., 2013. Urban system and Primate City in Onam. *British Journal of Arts and Social Sciences*, Vol. 13, No 1, pp.84-95.
- Mu, X. and Yeh, A. G., 2016. Measuring polycentricism of mega-city regions in China based on the intercity migration flows. *The international Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol. 41, No. 6, pp. 275 - 281.
- Myres, G., 2015. A World-Class City Region? Envisioning the Nairobi of 2030. *American Behavioural Scientist*, Vol.59, No.3, pp. 328 - 346.
- Myrdal, G., 1957. *Economic Theory and Underdeveloped Regions* (London: Duckworth). s.l.:s.n.
- New Local Government Network (NLGN), 2005. *Seeing the light? Next step for city Regions*, London: New Local Government Network (NLGN).
- Office of the Deputy Prime Minister, 2006. *A framework for city - regions*, London: University of Salford.
- Parr, J. B., 2005. Perspective on the city region. *Urban Studies*, Vol.44, No.2, pp. 381 - 392.
- Parr, J. B., 2007. Spatial definitions of the city: Four perspectives. *Urban studies*, Vol.44, No.2, pp. 381 - 392.
- RDAMNC Smart Region Strategy .,2017, *Regional Development Australia – Mid North Coast*, accessed from innovation@rdamnc.org.au
- Rodriguez-Pose, A., 2008. The rise of the 'city region' concept and it development policy implications. *European Planning studies*, Vol.16.No.8, pp. 1025 - 1046.
- Scott, A. J., 2001. *Global City - Regions*. Vol.1. Oxford: Oxford University Press.
- Scott, A. J. and Storper, M., 2014. The Nature of Cities: The scope and limits of Urban Theory. *International Journal of Urban and Regional Research*, pp. 1 - 16.
- Sharma, A. M. S. a. A. S., 2015. Peri urban Area: A Review of Problems and Resolutions. *International Journal of Engineering Research & Technology (IJERT)*, pp. 16-17.
- Sharma, K.D., 1985. *Urban Development in the Metropolitan Shadow: A Case Study from Haryana*, Inter India Publications, New Delhi, 161
- Sullivan, A. O., 2003. Market Areas and Central Place Theory. *Urban Economics*.

Tewdwr-Jones, M. and McNeill, D., 2000. The politics of city-region planning and governance. Reconciling the national, regional and urban in the competing voices of institutional restructuring, *European Urban and Regional Studies*, Vol.7, No.2, pp. 119–134.

Weber, R., Tammi, I., Anderson, T. and Wang, S., 2016. *A spatial analysis of the City -*

*Regions: Urban form and service accessibility*, Stockholm: Nordregio - Nordic Centre for Spatial Development.

Yndestad, H. 2014, *Smart Regions*, Aalesund University, accessed from <https://www.researchgate.net/publication/274194125>.

Yousuf, T., and Shah, S. A., 2014. An analysis of urban primacy in Himalayan Settlements: The case of Srinagar city of Jammu and Kashmir. *International Journal of Recent Scientific Research*, Vol. 5, No. 9, pp.1670-1674.

### RP3.06: Resettlement and Rehabilitation (R & R)

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

#### Course Content

##### Module 1: Land Development and Resultant Resettlement

- Land Acquisition Models and Practices in India and elsewhere for projects. Compulsory Acquisition, land sharing and adjustment models, land pooling, negotiated land acquisition. Development induced relocation – voluntary and involuntary resettlement; Resettlement and Rehabilitation Policies. Policies of multi-lateral/bilateral funding institutions: World Bank, Asian Development Bank Policies, National Policy on Resettlement and Rehabilitation and State Policies on R & R and Sector Specific Policies in large projects

such as Multi-Purpose Dam Projects, Mining projects, Highway projects, SEZ, etc.

##### Module 2: Impact of Resettlement and Rehabilitation Plan

- Poverty and Social Impact Assessment for Development projects: Linear Projects (Roads, railways, etc), vis-à-vis non-linear projects (Township/industrial area development, dams, forests). Impact on vulnerable and indigenous groups: Project Affected People and Project Affected Assets, Impact on Women and Children, Gender Action Plans. Resettlement Plan: Context, content, structure, principles and practices: Economic, social and physical implications of resettlement and

rehabilitation. Resettlement options and strategies, Self-relocation and project facilitated relocation.

##### Module 3: Case Studies

- Case studies in Resettlement and Rehabilitation in Development Sectors: Mining, Highways, Power, industrial and township development; Flood affected areas and other infrastructure projects such as Mumbai Transport Project, SEZ, Ports etc.

##### Module 4: Rehabilitation

- Policies, Assessing the livelihood losses, livelihood impact assessment and skill mapping surveys, income restoration

strategies, training strategy for skill upgradation and meeting demands for shifting economic profiles in the development area.

## Module 5: Participation as an important tool for R & R

- Use of Participatory tools for Resettlement Planning; Institutional arrangements for R & R - Role of NGOs/CBOs and other Local, State, National and International Organisations in resettlement and rehabilitation; Monitoring and Evaluation of R & R interventions.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding various issues related to Resettlement and Rehabilitation due to Development induced displacement and natural displacement and how to minimize the problems associated with it through proper planning as well as participatory approaches.

## Pedagogic Method

Teaching, Interaction, Presentations, Assignments, Test and external exam. Eminent experts from outside the School (policy makers and implementers) will be invited to deliver Special lectures.

## Reading List

### Government Policies/Legislations

Delhi Development Authority, 2010. *Master Plan for Delhi - 2021*, New Delhi: Delhi Development Authority.

Government of Gujarat, 1976. *The Gujarat Town Planning and Urban Development Act, 1976*. Gujarat: The Gujarat Government Gazette.

Ministry of Law and Justice, 1985. *The Land Acquisition Act, 1894*. New Delhi: Government of India.

Ministry of Rural Development, 2007. *The National Rehabilitation and Resettlement Policy, 2007*. New Delhi: Department of Land Resources.

Ministry of Rural Development, 2012. *The land Acquisition, Rehabilitation and Resettlement Bill, 2011 (31 report)*. New Delhi: Lok Sabha Secretariat.

Ministry of Rural Development, 2013. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement Act*. New Delhi: Government of India.

Ministry of Rural Development, 2014. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement amendment ordinance*. New Delhi: Government of India.

Ministry of Rural Development, 2015. *The right to fair compensation and transparency in land acquisition, rehabilitation and*

*resettlement (second amendment) bill*. New Delhi: Government of India.

Ministry of Rural Development, 2015. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement amendment bill*. New Delhi: Government of India.

### Policies of International Agencies

Asian Development Bank, 1995. *Policy on Involuntary Resettlement*. Indonesia: Asian Development Bank.

Center on Housing Rights and Evictions, 2005. *The Pinheiro Principles: United Nations Principles on Housing and Property Restitution for Refugees and Displaced Persons*. Switzerland: COHRE.

Japan International Cooperation Agency, 2010. *Guidelines for Environmental and Social considerations*. China: Jica.

Nations, U., 2001. *Guiding Principles on Internal Displacement*. Vol.2. New York: United Nation Publication.

OECD Development Assistance Committee, 1992. *Guidelines for Aid Agencies on Involuntary Displacement and Resettlement Projects*. Paris: Organisation for Economic Co-operation and Development.

The World Bank, 2004. *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. Vol.1. Washington: World Bank.

The World Bank, 2017. *Environmental and Social Framework*. Washington: The World Bank.

United Nations, 1997. *Basic principles and guidelines on development - based evictions and displacement*. Switzerland: United Nations Human Rights.

United State Agency International Development, 2004. *USAID Assistance to Internally Displaced Persons Policy Implementation Guidelines*.

### Key Articles and Other readings:

Asian Development Bank, 1998. *Handbook on Resettlement A guide to Good Practice*. Vol.1. Philippines: Asian Development Bank.

Cernea, M. M., 2008. Compensation and benefit sharing: Why resettlement policies and practices must be reformed. *Water Science and Engineering*, Vol.1, No.1, pp. 89 - 120.

Fernandes, W., 2009. India's Forced Displacement Policy and Practice. In: M. Cernea and H. Mathur, Eds. Can Compensation prevent Impoverishment? Reforming Compensation through Investments and Benefit Sharing. London: *Oxford University*, pp. 180-207.

Flood, L. U., 1997. Sardar Sarovar Dam: A Case Study of Development induced Environmental Displacement. Refugees: *Canada's Journal on Refugees*, Vol.16, No.3, pp. 12 - 17.

Sharma, R. N., 2010. Changing Facets of Involuntary Displacement and Resettlement in India. *Sage Journals*, Vol.40, No.4, pp. 503 - 524.

Usha, R., 2008. *The Land Acquisition Act 1894: Displacement and state power*. New Delhi: Oxford University Press and Council for Social Development.

World Bank, 1990. *Operational Directive: Involuntary Resettlement*. Washington: World Bank.

Ahmad, N. and Lahiri D. K., 2006. Engendering mining communities: examining the missing gender concerns in coal mining displacement and rehabilitation in India. *Gender, Technology and Development*, Vol.10, No.3, pp.313-339.

Nayak, A.K., (2010). Big dams and protests in India: A study of Hirakud dam. *Economic and Political Weekly*, pp.69-73.

Kwokal, Z., Sarkar, S.K., Frančišković-Bilinski, S., Bilinski, H., Bhattacharya, A., Bhattacharya, B.D. and Chatterjee, M., (2012). Mercury concentration in sediment cores from Sundarban mangrove wetland, India. *Soil and Sediment Contamination: An International Journal*, Vol.21, No.4, pp.525-544.

Bandyopadhyay, S., 1997. Natural environmental hazards and their management: a case study of Sagar Island, India. *Singapore Journal of Tropical Geography*, Vol.18, No.1, pp. 20-45.

Bandyopadhyay, S., 2000. Coastal changes in the perspective of long term evolution of an estuary: Hugli, West Bengal, India. Quaternary sea level variation, shoreline displacement and coastal environments. *New Academic Publishers, New Delhi*, pp.103-115.

Behera, D.K., 2013. Dams, Development and the Exclusion of Indigenous Groups: A Case

from Odisha. *Navigating Social Exclusion and Inclusion in Contemporary India and Beyond: Structures, Agents, Practices*, pp.167-207.

Bandyopadhyay, S., 1997. Coastal erosion and its management in Sagar Island, South 24 Parganas, West Bengal. *Indian Journal of Earth Sciences*, Vol. 24, No. 3-4, pp. 51-69.

Bandyopadhyay, S., Mukherjee, D., Bag, S., Pal, D.K. and Rudra, K., 2004. 20th Century evolution of banks and Islands of the Hugli estuary. West Bengal, India: evidence from maps, images and GPS survey, geomorphology and environment. *ACB Publications*, Kolkata, Vol. 23, pp.235-263.

Sharma, S., 2016. Endogenous Nuclear Deterrence: The Bomb and Security in South Asia. *Jadavpur Journal of International Relations*, Vol.20, No.2, pp.178-205.

Cullet, P., 2017. The Sardar Sarovar Dam Project: An Overview. In *The Sardar Sarovar Dam Project*, *Routledge*. pp. 19-58.

Danda, A.A., Sriskanthan, G., Ghosh, A., Bandyopadhyay, J. and Hazra, S., 2011. *Indian Sundarbans delta: a vision*. World Wide Fund for Nature-India, New Delhi, 40.

Das, K., 2002. Social mobilization for rehabilitation: relief work in cyclone-affected Orissa. *Economic and Political Weekly*, pp.4784-4788.

Ghosh, T., Hajra, R. and Mukhopadhyay, A., 2014. Island erosion and afflicted population: Crisis and policies to handle climate change. In *International Perspectives on Climate Change*, *Springer, Cham*, pp. 217-225.

Disterheft, A., Caeiro, S., Azeiteiro, U.M. and Leal Filho, W., 2013. Sustainability science and education for sustainable development in universities: a way for transition. *In Sustainability assessment tools in higher education institutions*, Springer, Cham, pp. 3-27.

Gopinath, G. and Seralathan, P., 2005. Rapid erosion of the coast of Sagar island, West Bengal-India. *Environmental Geology*, Vol. 48, No.8, pp.1058-1067.

Kudaisya, G., 1997. Divided landscapes, fragmented identities: east Bengal refugees and their rehabilitation in India, 1947–79. *Singapore Journal of Tropical Geography*, Vol.17, No.1, pp.24-39.

Harms, A., 2015. Leaving Lohāchāra: On circuits of emplacement and displacement in the Ganges Delta. *Global Environment*, Vol.8, No.1, pp.62-85.

Hazra, S., Ghosh, T., DasGupta, R. and Sen, G., 2002. Sea level and associated changes in the Sundarbans. *Science and Culture*, Vol.68, No.9/12, pp. 309-321.

McConnell, F., 2011. A state within a state. Exploring relations between the Indian state and the Tibetan community and government-in-exile. *Contemporary South Asia*, Vol.19, No.3, pp.297-313.

Morse, B. and Berger, T.R., 1992. *Sardar Sarovar: Report of the independent review*.

Published for the Independent Review of the Sardar Sarovar Projects by Resource Futures International.

McConnell, F., 2013. Citizens and refugees: constructing and negotiating Tibetan identities in exile. *Annals of the Association of American Geographers*, Vol.103, No.4, pp.967-983.

Garratt, K., 1997. Tibetan Refugees, Asylum Seekers, Returnees and the Refugees Convention—Predicaments, Problems and Prospects. *The Tibet Journal*, Vol.22, No.3, pp.18-56.

### RP3.07: Spatial Data Infrastructure (SDI)

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Written-Exam       | 50                  | 50                   | 100   | 2 hrs.                    |

#### Course Content

##### Module 1: Concepts and Hierarchy

- Spatial Data Infrastructure: Concepts, Contents, Nature and SDI hierarchy; Global, National, Regional and Local SDI initiatives; Building a SDI and using it in planning and decision making process; Open Geospatial

Consortium - ISO standards (TC211); Data streaming and mining in Spatial Data Infrastructure.

##### Module 2: From Global to Local SDI applications

- National SDI Initiatives: NRDMS: Multi-level spatial data infrastructure, NSDI:

Assimilation and Dissemination and Data warehouse; State SDI: NCT Delhi SDI, Karnataka and Kerala Portals; Case studies from various levels. Karnataka’s Land Management Programme: Bhoomi, geo portal assisting local to state level planning process; Gujarat’s Tax programme, etc.; Application to coastal area planning - Tamil Nadu coast.

### Module 3: SDI application in Planning and Decision Support

- SDI – Location based technology development, Interoperability arrangement for geospatial data and ontology mapping; Application in Bhuvan and its spatial applications, Population Data Sets, Natural Resource Repository, Integrated Water Resource Management, mKrishi – application in agriculture and rural development, geospatial application in transportation, disaster management and conservation; Spatio-temporal data modeling and analysis; 3-D mapping of land and its use in city and regional planning, Geo visualization of landscapes: rural and urban; spatial inequalities.
- PGIS: Definition, concept and need; PGIS and PPGIS; Geo-referencing and visualizing indigenous spatial knowledge; Ethical issues in PGIS; PGIS for regional level technology based information system; case studies and application of PGIS in India.

### Module 4: Technology in SDI and decision support system

- Real time technologies and their application: landslides monitoring in Himalayan region, web based spatial-temporal prediction of landslides, decentralization planning in Uttarakhand - web based model. Satellite based and other real time technologies and their use in identifying physical transformation. Its application in urban and rural areas: slum formation, illegal colonies, flash flood warning system in river and coastal belt, etc.

### Expected Learning Outcome

Students are expected to gain knowledge in the spatial data infrastructure and its effective use in planning and decision support system.

### Pedagogic Method

Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

### Reading List

Coleman, D. J. and McLaughlin, J., 1998. Defining Global Geospatial Data Infrastructure (GGDI): Components, Stakeholders and Interfaces. *Geomatica*, Vol.52, No.2, pp. 129 - 143.

Cooper, A. K. and Nielsen, A. S., 2000. *Global Spatial Data Infrastructure White Paper*, s.l.: ICA Commission on Spatial Data Standards.

Federal Geographic Data Committee, 1997. *Framework Introduction and Guide*. Vol.1. Washington: Federal Geographic Data.

Kresse, W. and Danko, D., 2012. *Springer Handbook of Geographic Information*. Vol.1. Berlin: Springer-Verlag Berlin Heidelberg.

Masser, I., 1998. *The first Generation of National Geographic Information Strategies*. Canberra, Selected Conference Papers, 3 GSDI Conference.

Ministry of Science and Technology, 2011. *National Spatial Data Infrastructure - India ASPIRATION*, New Delhi: Department of Science and Technology, Government of India.

Moellering, H., 1991. *Spatial Database Transfer Standards: Current International Status*.vol.1. s.l.:Elsevier Spatial Database Transfer Standards.

Cathy Macharis, J. C., 2014. A stakeholder-based assessment framework applied to evaluate development scenarios for the spatial data infrastructure for Flanders. *Computers, Environment and Urban Systems, Elsevier Journals*, Vol. 46, pp. 45-56.

Christian Thellufsen, A. R. S. E. I. W., 2009. Awareness as a foundation for developing effective spatial data infrastructures. *Land Use Policy, Elsevier Journals*, Vol.26, No.2, pp. 254-261.

Craglia, M., 2015. Spatial Data Infrastructures. *International Encyclopedia of the Social Behavioral Sciences, Elsevier Journals*, pp. 130-135.

Danny Vandenbroucke, E. D. J. C. A. K. B. J. V. O., 2013. A methodology to assess the performance of spatial data infrastructures in the context of work processes. *Computers, Environment and Urban Systems, Elsevier Journals*, Vol. 38, pp. 58-66.

David J. Maguire, P. A. L., 2005. The emergence of geoportals and their role in spatial data infrastructures. *Computers, Environment and Urban Systems, Elsevier Journals*, Vol.29, No.1, pp. 3-14.

- Foley, R., 2009. Integrated Spatial Data Infrastructure. International Encyclopedia of Human Geography, *Elsevier Journals*, pp. 507-511.
- Gregory Giuliani, N. R. A. L., 2011. Grid-enabled Spatial Data Infrastructure for environmental sciences: Challenges and opportunities. Future Generation Computer Systems, *Elsevier Journals*, Vol.27, No.3, pp. 292-303.
- Lars Bernard, L. K. A. A. P. S., 2005. The European geoportal-one step towards the establishment of a European Spatial Data Infrastructure. *Elsevier*, Vol.29, No.1, pp. 15-31.
- León, L. F., 2018. A blueprint for market construction? Spatial data infrastructure(s), interoperability, and the EU Digital Single Market. *Geoforum, Elsevier Journals*, Vol. 92, pp. 45-57.
- Lisa Strain, A. R. I. W., 2006. Marine administration and spatial data infrastructure. Marine Policy, *Elsevier Journals*, Vol.30, No.4, pp. 431-441.
- Loenen, B. v., 2014. Spatial Data Infrastructures at Work; Analyzing the Spatial Enablement of Public Sector Processes. *International Journal of Applied Earth Observation and Geoinformation, Elsevier Journals*, Vol. 33, pp. 341-344.
- Luis Americo Conti, H. F. F. A. T. A. C. Z. A., 2018. Building a local spatial data infrastructure (SDI) to collect, manage and deliver coastal information. *Elsevier Journal*, Vol. 164, pp. 136-146.
- Łukasz Grus, W. C. J. C. T. O. A. K. B. B. v. L. A. v. G. A. R., 2011. An assessment view to evaluate whether Spatial Data Infrastructures meet their goals. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol.35, No.3, pp. 217-229.
- Lutz. M, J. S. E. K. C. S. I. C., 2009. Overcoming semantic heterogeneity in spatial data infrastructures. Computers and Geosciences, *Elsevier Journals*, Vol.35, No.4, pp. 739-752.
- Mapping Science Committee, N. R. C., 1993. *Toward a Coordinated Spatial Data Infrastructure for the Nation*. s.l.:National Academies Press.
- Maria Teresa Borzacchiello, M. C., 2013. Estimating benefits of Spatial Data Infrastructures: A case study on e-Cadastres. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol. 41, pp. 276-288.
- Masser, I., 2005. GIS Worlds-Creating Spatial Data Infrastructures. *URISA Journal*, Vol.17, No.2, pp. 51-53.
- Maurice de Kleijn, R. d. H. O. M.-R., 2016. A 3D spatial data infrastructure for mapping the Via Appia. Digital Applications in Archaeology and Cultural Heritage, *Elsevier Journals*, Vol.3, No.2, pp. 23-32.
- Miguel Ángel Latre, F. J. L.-P. J. N.-I. R. B. P. R. M.-M., 2013. Spatial Data Infrastructures for environmental e-government services: The case of water abstractions authorisations. Environmental Modelling & Software, *Elsevier Journals*, Vol. 48, pp. 81-92.
- Nama Raj Budhathoki, B. B. Z. N.B., 2008. Reconceptualizing the role of the user of spatial data infrastructure. *Geo Journal*, Vol.72, No.3-4, pp. 149-160.
- Sarah M. Hamylton, J. P., 2012. Development of a spatial data infrastructure for coastal management in the Amirante Islands, Seychelles. International Journal of Applied Earth Observation and Geoinformation, *Elsevier Journals*, Vol. 19, pp. 24-30.
- Simmons, S., 2018. 1.09 - Metadata and Spatial Data Infrastructure. *Elsevier Journals*, pp. 110-124.
- Steve Jacoby, J. S. L. T. a. I. W., 2010. Developing a common spatial data infrastructure between State and Local Government--an Australian case study. *International Journal of Geographical Information Science*, Vol.16, No.4, pp. 305-322.
- Yalcin, G., 2014. Initial Organizational Studies on National Spatial Data Infrastructure at Government Level. *Procedia Technology, Elsevier Journals*, Vol. 12, pp. 572-576

## RP3.08: Future Regions

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Internal Only      | 100                 | 0                    | 100   | -                         |

### Objective

This course will help to have an orientation towards visualizing future regions, develop a long-term vision, understanding concepts of ecological economics ecological footprint, impact of climate change on Future Regions. It will appraise the students about futuristic planning of regions.

### Course Content

#### Module 1: Technological advancement and emerging Future Regions

- Orientation and introduction to Visualising Future Regions in a rapidly changing World; Introduction to Futures perspectives and methods; Concepts and Perspectives for Planning Future Regions; Future Studies in India; Developing a broader and longer-term vision of Regional Planning (50 to 100 years) rather than making Regional Plan for standard 15-25 years; Key Determinants of shaping the Future Regions particularly ICT and other Technological Advancements.

#### Module 2: Rapid Economic changes, Future Engines of Growth and Sustainability challenges

- Economic Development Planning in India and Changing Drivers of Economic Growth (Planning Commission and NITI Aayog Documents); Introduction to Ecological Economics and Sustainability Concepts; Concept of Ecological Footprint; Limits to Growth; Agricultural Productivity in Future; Natural Resources and Inclusive Growth; Sustainable Development issues with respect to Economic Development - Water, Land, Energy, Urbanization, Regulations.

#### Module 3: Population Dynamics and Future Regions

- Population Dynamics and Global Change; Demographic Transitions; Demographic Dividend; Migration of populations due to Climate Change, Economic and other factors; Carrying Capacity.

#### Module 4: Climate Change and the Future Resource Regions

- Impact of Climate Change on Global society (including debates about human extinction scenarios); Challenge of Sustainable Development of Future Regions in the context of impacts of disruptive Climate Change; Climate Change in Future Resource Regions such as Hilly Regions, Coastal Areas, Arid Areas etc.; Agricultural adaptation to Climate Change; Municipal Climate Change adaptations; Initiatives and Case Studies for Renewable Energy/Low-Carbon lifestyle and Consumption Choices.

#### Module 5: Globalisation and Development Critiques

- Global Settlements and Economic Hubs; Human Scale Development; Globalizations and Critiques of Development.



## Module 6: Policy Changes and its Impact on Future Regions

- Concepts for Planning Future Regions and its implications on Future Policy changes; Visionary Societies; Future Studies Perspectives; Policy Context; Policy Changes (Pricing, Trade, Tax, Land, Resources) and their impact on Future Regions.

### Pedagogic Method

Interaction, Presentations, Case Study Analysis, statistical techniques, Role-Play. Eminent experts working in this field from outside the School will be invited to deliver Special lectures.

### Reading List

Anon., 2010. Options for Energy Efficiency in India and barrier to their Adoption. Resources for the future, Issue 202-328-5000.

Brar, J. et al., 2014. India's economic geography in 2025: States, Clusters and cities. Insights India.

Clark, G. & Moonen, T., 2014. Mumbai: India's Global City. s.l.:s.n.

Cohen, M. J., 2013. Collective dissonance and the transition to post-consumerism. Futures, Volume 52, pp 42-51.

Creel, L., 2003. Ripple Effects: Population and Coastal Regions. population Reference Bureau.

Eastin, J., Grundmann, R. & Prakash, A., 2011. The two limits debates: "Limits to Growth" and Climate Change. Futures, Volume 43 (1), pp 16-26.

Ehrlich, P. R. & Ehrlich, A. H., 2013. Can a collapse of global civilization be avoided?. Proceedings of the Royal Society , 280 (2012-2845).

Garcia, E., 2012. Degrowth, the Past, the Future, and the Human Nature. Futures, Volume 44, pp 546-552.

Government of Andhra Pradesh (2015): Amravati: Draft Perspective Plan, 2050.

Government of Andhra Pradesh (2016): Sunrise Andhra Pradesh Vision 2029: A Happy, Inclusive and Globally Competitive Society, draft June 2016.

Jain, S., Panda, J. & Kant, . S., 2014. Possible Socio-scientific Issues of Land-use and Land-cover Change Impact and Associated Tools of Study with a Special Reference to Delhi-Mumbai Industrial Corridor Region. International Journal of Earth and Atmospheric Sciences, 1(2).

Klapka, P., Halas, M. & Tonev, P., 2013. Functional Regions: Concept and Types. Sborník příspěvků, Volume XVI, pp 94-101

Ministry of Urban Development (2012): Report of the National Mission on Sustainable Habitat.

Moriarty, P. & Honnery, D., 2012. Preparing for a low-energy future. Futures, Volume 44, pp 883-892.

NIPFP (2013): Towards Building Capabilities, Enhancing Freedom and Accelerating Development: Meghalaya Vision 2030.

Niti Aayog (2017): INDIA: 3 year Action Agenda: 2017-18 to 2019-20.

Piccioni, L., 2012. Fourty Years Later.. Fondazione Luigi Micheletti .

Planning Commission (2011): Faster Sustainable and More Inclusive Growth: An Approach to the 12th Five Year Plan (2012-2017).

Planning Commission (2013). Shaping India's Future.

Raskin, P. D., Electris, C. & Rosen, R. A., 2010. The Century Ahead: Searching for Sustainability. Sustainability, 1, p. 2626-2651.

Rengasamy, S., n.d. Regional Planning & Development. s.l.: Madurai Institute of Social Sciences.

Sadorsky, P., 2011. Some future scenarios for renewable energy. Futures, Volume 43 Issue 10, pp 1091-1104.

Soderholm, P. et al., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. Futures, Volume 43, pp 1105-1116.

Spangenberg, J. H., 2010. World civilisations at crossroads: Towards an expansionist or a sustainable future—Lessons from history. Futures, Volume 42 (6), pp 565-573.

Taylor, N., 1999. Anglo-American town planning theory since 1945: three significant developments but no paradigm shifts. *Planning Perspectives*, Volume 14 (4), pp 327-345.

The Bombay First (2003): Vision Mumbai: Transforming Mumbai into a World Class city, Mackinsey Report.

Tonn, B. and Stiefel, D., 2014. Willow pond: A decentralized low-carbon future scenario. *Futures*, Volume 58, pp 91-102.

UN-ESCAP (2016): Policy Brief – Integrated Resource management in Asian Cities: The Urban Nexus.

UN-HABITAT (2015): International Guidelines on Urban and Territorial Planning.

Wheeler, S., 2009. Regions, Megaregions, and Sustainability. *Regional Studies*, Volume 43.6. pp 863-876.

---

## SECOND YEAR: SEMESTER IV

The courses that are offered during the fourth semester enables the students to acquire knowledge associated with implementation of the plans that they prepared during the

second and third semester. This semester Department of Regional Planning offers only one theory subject as Institution Elective (IE) i.e. Politics and Public Policy. Students are given the option to choose Institute elective from the one offered by the Regional Planning

Department or from the electives offered by other Departments. Along with this subject, a student is expected to select a topic for his/her thesis work, which he/she prepares during this semester.

### RP4.01: Thesis

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 14         | 0       | 0        | 14     | 14      | Jury               | 350                 | 350                  | 700   | -                         |

### Objective and Details of the Course

Students are expected to write a thesis on the topic selected by them with the constant guidance from faculty members.

### Reading List

Appelbaum, M. et al., 2018. *Journal Article Reporting Standards for Quantitative Research in Psychology: The APA Publications and Communications Board Task Force Report*. s.l.:American Psychological Association.

Choy, L. T., 2014. The Strengths and Weaknesses of Research Methodology: Comparison and Complimentary between Qualitative and Quantitative Approaches. *IOSR Journal of Humanities And Social Science*, Vol.19, No.4, pp. 99 - 104.

Coughian, M., Cronin, P. and Ryan, F., 2007. *Step by-step guide to critiquing research. Part 1: quantitative research*. Dublin: School of Nursing and Midwifery. Trinity School.

Greener, S., 2008. *Business Research Methods*. Chicago: Dr. Sue Greener & Ventus Publishing ApS.

Igwenagu, C., 2016. *Fundamentals of research methodology and data collection*. Vol.1, Nsukka: University of Nigeria

Kothari, C. R., 2004. *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.

Kumar, R., 2011. *Research Methodology - A step by step guide*. London: SAGE Publications.

MacDonald, S. And Headlam, N., n.d. *Research Methods Handbook - Introductory guide to research methods for social research*. Manchester: Centre for Local Economic Strategies.

Malliari, A. & Togia, A., 2016. An analysis of research strategies of articles published in Library Science journals: the example of Library and Information Science Research. *Qualitative and Quantitative Methods in Libraries*, Vol.5, No.1, pp. 1 - 14.

Mohajan, H., 2018. Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*, Vol.7, No.1, pp. 23 - 48.

Newman, I. et al., 2006. *Adolescent Alcohol Use: Mixed Methods Research Approach*. Lincoln: University of Nebraska.

Pandey, D. P. and Pandey, D. M. M., 2015. *RESEARCH METHODOLOGY: TOOLS AND TECHNIQUES*, Romania: Bridge Center

Walliman, N., 2011. *Research Methods - The Basics*. Oxon: Routledge.

## RP4.02: Politics and Public Policy

| Hrs / Week | Lecture | Tutorial | Studio | Credits | External Exam Type | Marks               |                      |       | Duration of (Theory) Exam |
|------------|---------|----------|--------|---------|--------------------|---------------------|----------------------|-------|---------------------------|
|            |         |          |        |         |                    | Internal Assessment | External Examination | Total |                           |
| 2          | 2       | 0        | 0      | 2       | Internal Only      | 100                 | 0                    | 100   | -                         |

### Objective

This course is to make the students understand the role of politics in the planning and decision-making process, how the public policies, especially planning policies are made in India and how to evaluate them in the context of planning.

### Course Content

#### Module 1: Introduction

- Political culture of Indian State: Center, State and Local political economy, emergence of state in the federal set up; politics of the state and bureaucracy; politics and emergence of civil society; regeneration and redevelopment politics.

#### Module 2: State as a manager of resources

- Property rights, norms and standards, government market and market by government; regulatory state, reforming state, rent-seeking state and their spatial implications.

#### Module 3: Politics of Provision

- Land use Politics; politics of provision of housing in urban and rural areas; infrastructure; Decision Making; Decision-Taking process; Financing and Pricing.

#### Module 4: Case Studies

- Case studies from India and abroad on planning and political decisions in their impact on rural and urban development; Examples from: South Korea: conversion of rural land to urban land; FSI changes and resultant changes in land use and form: China, USA and other countries.

#### Module 5: Public Policy

- Nature and Making of Public Policy: The Nature of public problems, planning as a public issue – policy analysis and process: Six Steps in Policy Analysis: how are policies made, who influences the policy agenda and what issues affect policy's 'success' and 'failure'? What can we learn from how different countries approach similar policy problems? Theoretical frameworks, the role of institutions in the policy process,

and the motivation of policy actors; Classical Rational Problem-Solving Model; Limitations in Public Sector and the Private Sector; Establishing Analysis.

- Public Policy Analysis: Overview of Policy Process Models, Policy Initiation: Multi-Stream Approaches, policy implementation analysis; life-course approach to policy analysis; Case studies in Policy Process Analysis; Policy Integration: possible areas of integration in Planning.
- Public Policy and Management in the Information Age: How are new information and communication technologies shaping public service delivery? E-Governance, E-Panchayats, E-Market, etc.; transparency, accountability, accessibility and participatory mechanisms.
- Public policy Management and Delivery: Trends and Pressures that affect public service organizations; Market based arrangements; Multi-service provider arrangements in public sector setting and benchmarks in policy management.

## Model 6: Strategic Policy Planning

- Differences between strategic planning and management in the public and private sectors; Mission statements and goal-setting techniques; Strategic decisions and evaluation, strategic leadership; Co-ordination and networks; Crisis Management; Transformational strategic Management.

## Module 7: Sectoral Policy Analysis

- Land, Environment; Health, Water and other policies – Integration and disintegration of policies – Frequency and commitments to change; Global Commitments: Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs), Environment, etc. and its commitment at the National, State and Local Level; Land Policy: Interest Groups, Acts/agents and policy making process.

## Expected Learning Outcome

Students are expected to have obtained the skills in understanding various institutions, their interface in the planning process. It will also provide them with the knowledge of various changes that the 73rd and 74th CAA has brought in the country in terms of empowerment at various levels.

## Pedagogic Method

Teaching, Role Play, Assignment, Presentations, Assignments and participatory knowledge building through case study analysis, and

exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

## Reading List

Chakrabarti, R. and Sanyal, R., 2016. *Public Policy in India*. New Delhi: Oxford University Press.

Kraft, M. E. and Furlong, S. R., 2012. *Public Policy - Politics, Analysis and Alternative*. Los Angeles: Sage Publications. ,Vol.4

Mathur, K., 2013. *Public Policy and Politics in India*. New Delhi: Oxford University Press.

Stone, D., 1997. *Policy Paradox - The art of Political Discourse Making*. United Kingdom: Longman Classic Edition.

Frank Fischer, Gerald J. Miller, Mara S. Sidney., 2006. *Handbook of Public Policy Analysis: Theory, Politics, and Methods*. Boca Raton: CRC Press.Vol.1.

Amanda Glassman, K. B., 2017. Politics, and Public Health Policy Reform. *International Encyclopaedia of Public Health*, Vol.2, pp. 527-532.

Arye L. H, D. S. I. S. T. S., 2018. The Political Economy of Public Policy – Editorial introduction. *European Journal of Political Economy*, Vol. 54, pp. 1-4.

Auerbach, G., 2013. Urban politics and public policy – Looking back and going forward: “Project Renewal” in one Israeli city. *Cities, Elsevier Journals*, Vol. 31, pp. 197-207.

Azzone, G., 2018. Big data and public policies: Opportunities and challenges. *Statistics & Probability Letters*, Vol. 136, pp. 116-120.

Calvin Wan, G. Q. S. S. C., 2017. A review on political factors influencing public support for urban environmental policy. *Environmental Science & Policy*, Vol. 75, pp. 70-80.

Calvin Wan, G. Q. S. S. C., 2018. Understanding public support for recycling policy: To unveil the political side of influence and implications. *Environmental Science & Policy*, Vol. 82, pp. 30-43.

Carlos Scartascini, E. S. M. T., 2013. Political Institutions, Intertemporal Cooperation, and The Quality Of Public Policies. *Journal of Applied Economics*, Vol.16, No.1, pp. 1-32.

Casey B. Mulligan, K. K. T., 2015. Political entry, public policies, and the economy. *Research in Economics, Elsevier Journals*, Vol.69, No.3, pp. 377-397.

Sim.F, P. M., 2015. Politics, policies and public health. *Public Health*, Vol.129, No.4, pp. 291-292.

Grechyna, D., 2016. Political frictions and public policy outcomes. *Journal of Comparative Economics*, Vol.44, No.3, pp. 484-495.

Guilherme de A. Dantas, N. J. d. C. L. D. C. H. A. L. Z., 2018. Public policies for smart grids in Brazil. *Renewable and Sustainable Energy Reviews*, Vol. 92, pp. 501-512.

Kristof De Witte, B. G. N. L. S., 2018. Strategic public policy around population thresholds. *Journal of Urban Economics*, Vol. 106, pp. 46-58.

Lintelo, D. J. H. t., 2017. Enrolling a goddess for Delhi's street vendors: The micro-politics of policy implementation shaping urban (in) formality. *Geoforum*, Vol.84, pp. 77-87.

Marcesse, T., 2018. Public Policy Reform and Informal Institutions: The Political Articulation of the Demand for Work in Rural India. *World Development, Elsevier Journals*, Vol.103, pp. 284-296.

Marianne Aasen, A. V., 2018. Public Attitudes Toward Climate Policies: The Effect of Institutional Contexts and Political Values. *Ecological Economics*, Vol.146, pp. 106-114.

Myriam Merad, B. D. T., 2018. The legitimacy principle within French risk public policy: A reflective contribution to policy analytics. *Science of The Total Environment*, Vol. 645, pp. 1309-1322.

Nelida Cervantes, Z. R., 2018. Weber's bureaucratic model in Brazil: The corruption of ideas as obstacles to the implementation of public policies. *Geoforum*, Vol. 95, pp. 165-168.

Ng, Y. K., 2018. Ten rules for public economic policy. *Economic Analysis and Policy*, Vol. 58, pp. 32-42.

Philippe Delacote, C. M. H., 2012. Political consumerism and public policy: Good complements against market failures?. *Ecological Economics, Elsevier Journals*, Vol.73, pp. 188-193.

Real Arai, K. N. T. O., 2018. Intergenerational policies, public debt, and economic growth: A politico-economic analysis. *Journal of Public Economics*, Vol. 166, pp. 39-52.

Sascha Alexander Wagner, S. V. R. K., 2016. The future of public participation: Empirical analysis from the viewpoint of policy-makers. *Technological Forecasting and Social Change*, Vol.106, pp. 65-73.

Sebastian Ellingsen, Q. H., 2018. The impact of commercial television on turnout and public policy: Evidence from Norwegian local politics. *Journal of Public Economics*, Vol. 159, pp. 1-15.

Valentina Ferretti, I. P. A. T., 2018. Studying the generation of alternatives in public policy making processes. *European Journal of Operational Research*, Vol. 273, pp. 353-363.

Yu-Kang Lee, C.T. C., 2010. Framing public policy: The impacts of political sophistication and nature of public policy. *The Social Science Journal, Elsevier Journals*, Vol.47, No.1, pp. 69-89.

---