Course title: Economic Foundations of Environmental and Infrastructure Law			
Course code: MPL 141	**No. of credits:** 2	**L-T-P:** 30-0-0	**Learning hours:** 30
Pre-requisite course code and title (if any): None			
Department: Centre for Post Graduate Legal Studies			
Course coordinator: Dr Kavita	**Course instructor:** Ms Preety Sharma		
Contact details: joinpreetysharma26@gmail.com			
Course type: Core	**Course offered in:** Semester 1		

Course description:

As the title suggests, this course will offer economic foundations for a select set of policies and laws related to infrastructure and natural resources. In particular, it will explore theoretical basis, conceptual foundations and principles from the discipline of economics to examine policies and laws, aided by the relevant case studies. Importance of this course arises from the very fact that policy and legal regime functions with the objective of meeting a number of economic objectives, including augmenting rate of economic growth and social net benefit. Unfortunately, the market, however efficiently it may function, fails to deliver either the public goods like infrastructure or take care of externalities like pollution/waste or efficiently allocate or assign the correct prices for natural resources—these instances of 'market failure' makes a strong case of intervention by the State, through appropriate policies and laws, towards achieving a socially beneficial and sustainable outcome, while considering both costs and benefits. Recent instances of the State entering into partnerships with the private players imputes additional challenges to the framing of laws, for such instruments to address the matter of profitability, risk-taking ability, and uncertainties faced by the private players, along with aiming at the social objective.

Course objectives:

1. To provide a clear understanding on the economic theories, concepts and principles relevant for laws related to infrastructure and natural resources.
2. To apply the concept of perfect competition and cases of imperfect competition to environmental and infrastructure sectors, to analyze market-based instruments and the role of regulatory agencies in enforcing laws.
3. To explain causes of market failures, apply welfare theories and economic principles behind public policy and regulation of natural monopolies and analyze the relative efficiency of command-and-control and market-based instruments.
4. To connect the theory, concept and principles with the appropriate case studies.

Course contents

S. No.	Topic	L	T	P
1	**Basic Economic Concepts** Concept of Positive and Normative Economics Supply and demand analysis in the context of environmental and infrastructure law frameworks Economic Theories by Adam Smith and Schumpeter Developmental economics	2	0	0
2	**Market Structures** Perfect competition as an 'ideal' for achieving economic efficiency Cases of imperfect competition: monopolistic competition, monopoly, oligopoly	2	0	0
3	**Causes of Market Failures** Concept of Asymmetric Information - Case study of Lemons market; Property	8	0	0

	Rights and Pigouvian Fee Cases of market failure Provision of Public Good by the State and private provision Absent markets and role of property rights Externalities and Coase Theorem Role of Welfare State- Welfare Theories; Economics of Regulation; Economic principles behind public policy; Regulation of Natural Monopoly Market based environmental policies (e.g., cap and trade, pollution taxes); Carbon credits Command and Control type: tax, subsidies Market Based types Relative efficiency of Command-and-Control and Market Based instruments			
4	**Liability, loss and damages** Compensation Principle Efficiency of Liability Rules	2	0	0
5	**International Perspectives** Comparative Analysis of environmental and infrastructure law across different jurisdictions International Investment Law: NAFTA, SAFTA, ASEAN etc. International agreements and treaties related to environmental protection and infrastructure development-Kyoto Protocol, Paris Agreement	6	0	0
6	**Case Studies:** Oil and Natural Gas Pricing in India Spectrum Allocation Electricity pricing models Coal pricing and bidding models National Highway Toll pricing Computation of Environmental damages and Ecological Values	10	0	0
	Total	30	0	0

Evaluation criteria:

1. Minor 1	25% (Topics 1 and 2)
2. Assignments/Presentations	25% (Topic 6)
3. Final test	50% (Topics 3,4 and 5)

Learning outcomes:

1. Analysis of economic concepts and theories as they apply to environmental and infrastructure policies. (Minor 1)
2. Evaluation of market structures and regulatory frameworks influencing environmental and infrastructure sectors. (Minor 1 and Major Test)
3. Application of cost-benefit analysis and economic efficiency principles to decision-making processes. (Assignments/Presentations)
4. Assessment of the role of market-based instruments and regulatory agencies in enforcing environmental and infrastructure laws. (Major Test)
5. Analysis of international perspectives and global economic trends impacting environmental and infrastructure policies through case studies. (Major Test)

Pedagogical approach:

The course will be delivered through a mix of classroom lectures and discussions around case studies.

Reading Materials:

Core text for Module 1-6

1. Cento Veljanovski, 2007, 'Chapter 2: The Economic Approach' in Economic Principles of law, Cambridge University Press, pp. 19-57
2. Roger Perman, Yue Ma, Michael Common, and David Maddison. (2011). "Natural Resource and Environmental Economics." Pearson Education Limited.
3. Nicholas Barr. (1992). "Economic Theory and the Welfare State." Oxford University Press.
4. N. Gregory Mankiw. (2018). "Principles of Economics." Cengage Learning.

Module 1

5. J Stiglitz, 'Chapter 3: Market Efficiency' in Economics of the Public Sector, Third Edition, W W Norton, pp. 55-75

Module 2 and 3

6. C T S Ragan and Richard G Lipsey, 1999, 'Chapter 16: Market Failure and Government Intervention and 'Chapter 17: The Economics of Environmental Protection' in Economics, Pearson Canada, pp. 415-445 and 449-469
7. Richard Ipotito, 2003, 'Chapter 7: Externalities-the Coase Theorem and Rules of Law,' in Economics for Lawyers, George Mason School of Law, mimeo, 168-183
8. J Stiglitz, 'Chapter 1: The Public Sector in a Mixed Economy', in Economics of the Public Sector, pp. 3-25
9. J Stiglitz, 'Chapter 4: Market Failure' in Economics of the Public Sector, pp. 76-90
10. J Stiglitz, 'Chapter 6: Public Goods and Publicly provided Private Goods', in Economics of the Public Sector, pp. 127-152
11. Cento Veljanovski , 2006, 'Chapter 7: Regulation' in The Economics of Law, Second edition, The Institute of Economic Affairs, pp. 142-172
12. Kenneth E Train, 1991, 'Introduction: The Economic Rationale and Task of Regulation' in Optimal Regulation: The Economic Theory of Natural Monopoly, MIT Press, pp. 1-17.

Module 6: Case Studies

Oil and Natural Gas Pricing in India

10. Paranjoy Guha Thakurta, Jyotirmoy Chaudhuri, 2014, 'How Reliance's Options on Natural GasPrice Hike Narrowed', EPW, XLIX (22), pp. 13-16
11. Paranjoy Guha Thakurata, 2015, 'Great Indian Gas Robbery', EPW, L (49), pp. 12-15Additional Reference:

Paranjoy Guha Thakurata, Subir Ghosh and Jyotirmoy Chaudhuri, 2016, Gas Wars - Crony

Capitalismand the Ambanis, Authorsupfront Publishing Services Private Limited

Spectrum Allocation

12. Upendra Baxi, 2012, 'Good Law, Poor Economics', Indian Express, February 24
13. Rohit Prasad, 2010, 'Value of 2G Spectrum in India', EPW, XLV (4), pp. 25-28
14. Alok Kumar, 2011, '3G Spectrum Auctions in India: A Critical Appraisal', EPW, XLVI (13), pp.121-129
15. Arun Mehta, Robert Horvitz, 2010, 'Managing and Utilising Spectrum More Efficiently', EPW,XLV (9), pp. 26-28
16. Manas Bhattacharya, 2008, 'The International Experience of Auctioning Spectrum', EPW,September 13, pp. 33-38

Additional reference:

Claudio Feijóo, José Luis Gómez-Barroso and Asunción Mochón, 2009, 'Chapter III: Reforms in Spectrum Management Policy', in In Lee, eds., Handbook of research on telecommunications planning and management for business, Information Science Reference, pp. 33-47

Johannes M. Bauer, 2006, 'A Comparative Analysis of Spectrum Management Regimes', paper presentedat the 30th Communications and Internet Research Conference, Alexandira, Virginia, USA. Available online at http://www.ictregulationtoolkit.org/Documents/Document/Document/2299

Electricity pricing models

17. Paranjoy Guha Thakurta, 2016, 'Power Tariff Scam Gets Bigger at Rs.50,000 Crore', EPW, LI(21), pp. 12-15

Power (Coal/Nuclear) pricing and bidding models

18. Sumantra Bhattacharya, Rachit Tiwari, 2014, 'Non-Coking Coal Pricing in India', EPW, XLIX(3), pp. 20-22
19. E A S Sarma, 2013, 'Myopia on Coal', EPW, XLVIII (44), pp. 12-15
20. Suvrat Raju, M V Ramana, 2013, 'Cost of Electricity from the Jaitapur Nuclear Power Plant',EPW, XLVIII (26 & 27), pp. 51-60
21. Pranjul Bhandari, Rohit Lamba, 2013, 'The Coal Saga: The Imminent and the Feasible', EPW,XLVIII (28), pp. 19-21
22. Rahul Tongia and Rangan Banerjee, 1998, 'Price of power in India', Energy Policy, 26 (7), pp.557Ð 575
23. Kannan Kasturi, 2013, 'Pricing Electricity in Delhi', EPW, 58(1), pp. 20-23

Liability

24. Suvrat Raju, M V Ramana, 2010, 'The Other Side of Nuclear Liability', EPW, XLV (16), pp.48-54
25. Michael G. Faure and Karine Fiore, 2009, An Economic Analysis Of The Nuclear Liability Subsidy, Pace Environmental Law Review, 26 (2). Available at: http://digitalcommons.pace.edu/pelr/vol26/iss2/5

National Highway Toll pricing

26. Ram Singh, 2010, 'A High-handed Approach to National Highways', EPW, XLV (8), pp. 19-21

Environmental Damages and Ecological values

27. L Venkatachalam, 2005, 'Damage Assessment and Compensation to Farmers: Lessons fromVerdict of Loss of Ecology Authority in Tamil Nadu', EPW, April 9, pp. 1555-60

K. Chopra and P. Dasgupta, 2008, 'Assessing the Economic and Ecosystem Services Contribution of Forests: Issues in Modelling, and an Illustration', International Forestry Review, 10(2), pp. 376-386

Module 5:

28. "Edited by Robert N. Stavins. (2000). "Economics of the Environment: Selected Readings." Norton.
29. Frischmann, B. M. (2012). "Infrastructure: The Social Value of Shared Resources." Oxford University Press.
30. Grigg, N. (2017). "Infrastructure Finance: The Business of Infrastructure for a Sustainable

Future." Wiley.
31. Hartwick, J. M., & Olewiler, N. D. (1998). "The Economics of Natural Resource Use." Addison Wesley Longman.
32. Gómez-Ibáñez, J. A. (2003). "Regulating Infrastructure: Monopoly, Contracts, and Discretion." Harvard University Press.
33. Backhaus, J. G., & Wagner, R. E. (1998). "The Law and Economics of Public Policy: A Plea to Economics for more Interdisciplinary Research." Kluwer Academic Publishers.
34. Hayes, B. (2005). "Infrastructure: A Guide to the Industrial Landscape." W. W. Norton & Company.

35. **General additional reading:** Relevant judgments of the Supreme Court

Indian Authored Books

36. Sunder, S. Shyam. (2016). Law and Economics in India: Understanding and Practice. Oxford University Press.
37. Adhikari, Malay. (2019). *Economics of Development and Environmental Law.* LexisNexis.
38. Gouri, Geeta. (2014). *Competition Law and Economics in India.* Wolters Kluwer.
39. Bhala, Raj. (2013). Law, Economics and Development. Foundation Press.
40. Saran, Shyam (Ed.). (2018). *Law, Economics and Environment in India.* Springer.

Additional information (if any): 75% Attendance is compulsory to appear for Major Test.

Student responsibilities: Reading financial newspapers like Mint, Economic Times, Business Line, as well magazines like Economist, for identifying the relevant topics for the assignment**.**