University of Gour Banga

Malda, West Bengal -732103

Undergraduate Course Curriculum

DESIGNED BASED ON THE POLICY REFLECTED IN THE NEP -2020

Value Added Course (VAC)

AEC Course ID: **VAC1**

Name of Skill Enhancement Course: **Holistic Understanding of India and Environmental Sustainability**

Prior Disciplinary Cluster: Commerce, Economics, Mathematics, Computer Science, Education, Geography, Sociology, Physics

SEMESTER: I

Holistic Understanding of India and Environmental Sustainability

Objectives of the Course

- *Develop a comprehensive understanding of India's cultural, social, and environmental context.*
- *Enhance knowledge of sustainable practices and policies in India.*
- *Cultivate the ability to analyze the interplay between cultural heritage and environmental sustainability.*
- *Equip students with skills to propose and implement sustainable solutions within the Indian context.*
- *Foster an appreciation of India's efforts towards achieving environmental sustainability and conservation.*

Course Curriculum

Module 1: Cultural and Social Landscape of India

- Overview of India's Cultural Diversity
- Historical Context and Heritage
- Social Structures and Traditions
- Indigenous Knowledge Systems
- Role of Communities in Environmental Conservation

Module 2: Environmental Challenges and Policies in India

- Major Environmental Issues in India
- National Environmental Policies and Regulations
- Conservation Initiatives and Success Stories
- Role of Government and Non-Governmental Organizations (NGOs)
- Case Studies of Environmental Projects in India

Module 3: Sustainable Practices and Innovations

- Principles of Sustainability
- Renewable Energy and Resource Management
- Sustainable Agriculture and Organic Farming
- Green Technologies and Innovations
- Urban Sustainability and Smart Cities

Module 4: Future Directions and Global Impact

- India's Contribution to Global Environmental Goals
- International Collaboration and Agreements
- Future Trends in Environmental Sustainability
- Role of Education and Public Awareness
- Pathways to a Sustainable Future in India

Suggestive Books

- *A.L. Basham, "The Wonder That Was India", Picador, 2004, London*
- *Romila Thapar, "A History of India Volume 1", Penguin Books, 1990, London*

- *M.N. Srinivas, "Social Change in Modern India", Orient BlackSwan, 1995, New Delhi*
- *David Hardiman, "The Coming of the Devi: Adivasi Assertion in Western India", Oxford University Press, 1987, Oxford*
- *Anil Agarwal and Sunita Narain, "Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting Systems", Centre for Science and Environment, 1997, New Delhi*
- *Sunita Narain, "Conflicts of Interest: My Journey through India's Green Movement", Penguin Random House India, 2017, New Delhi*
- *Ravi Agarwal and K. Sivaramakrishnan, "Restoration Earth: How India is Building a Sustainable Future", HarperCollins India, 2015, New Delhi*
- *Madhav Gadgil and Ramachandra Guha, "This Fissured Land: An Ecological History of India", University of California Press, 1992, Berkeley*
- *Neeraj Vedwan, "Pesticides in South Asia: Understanding the Costs of Inaction", Palgrave Macmillan, 2014, New York*
- *Siddhartha Krishnan, "Dialogues on Conservation: The Global South in the Crises of Environment", Routledge, 2018, London*
- *Vandana Shiva, "Earth Democracy: Justice, Sustainability, and Peace", North Atlantic Books, 2005, Berkeley*
- *Harish Hande, "Harnessing the Sun: A Step-by-Step Guide to Solar Cooking", Orient Blackswan, 2000, New Delhi*
- *Debal Deb, "Beyond Developmentality: Constructing Inclusive Freedom and Sustainability", Earthscan, 2009, London*
- *Ravi S. Singh, "Energy and Environment: Resource Conservation and Management", Springer, 2013, New York*
- *Rohit Jigyasu and R. K. Gairola, "Urban Cultural Heritage: Managing and Preserving Urban Heritage in Indian Cities", Springer, 2019, Singapore*
- *Anil K. Gupta, "Grassroots Innovation: Minds on the Margin Are Not Marginal Minds", Random House India, 2016, New Delhi*
- *Bina Agarwal, "Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry", Oxford University Press, 2010, Oxford*
- *Pavan Sukhdev, "Corporation 2020: Transforming Business for Tomorrow's World", Island Press, 2012, Washington, D.C.*
- *Kartikeya Batra, "Environmental Education and Awareness", New Age International Publishers, 2015, New Delhi*
- *Amitabh Kant, "Branding India: An Incredible Story", HarperCollins India, 2009, New Delhi*

List of Significant Tutorial Modalities	Aspects of Empirical Activities	List of Effective Teaching Modalities
1. Hands-on Environmental Workshops	• Practical Sustainability Assignments	1. Lectures and Seminars
2. Cultural Immersion Projects	• Cultural and Environmental Field Studies	2. Interactive Workshops
3. One-on-One Mentorship Sessions	• Analytical Case Studies	3. Group Discussions and Peer Feedback
4. Interactive Sustainability Exercises	• Simulated Environmental Policy Projects	4. Online Modules and E-learning Resources
5. Real-World Environmental Project Simulations	• Portfolio Development and Review	5. Guest Lectures from Industry Professionals

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement in Abroad
1. Environmental Policy Analyst	1. Corporate Sustainability Manager	1. International Environmental Consultant
2. Forest Officer	2. Environmental Health and Safety Officer	2. Global Sustainability Manager
3. Urban Planner	3. Sustainability Consultant	3. Environmental Policy Advisor
4. Conservation Scientist	4. Green Technology Innovator	4. International Conservation Specialist
5. Environmental Consultant	5. Environmental Project Manager	5. Global Renewable Energy Developer
6. Public Health Officer	6. CSR (Corporate Social Responsibility) Specialist	6. Climate Change Policy Analyst
7. Agricultural Extension Officer	7. Renewable Energy Project Developer	7. International Urban Planner
8. Environmental Educator	8. Environmental Compliance Auditor	8. Global Corporate Sustainability Strategist
9. Wildlife Conservationist	9. Sustainable Supply Chain Manager	9. International Development Officer
10. Renewable Energy Specialist	10. Eco-Friendly Product Developer	10. Global Environmental Health Specialist
11. Environmental Compliance Officer	11. Environmental Risk Analyst	11. International Water Resource Manager
12. Water Resource Manager	12. Sustainable Business Strategist	12. Global Biodiversity Specialist
13. Climate Change Analyst	13. Green Marketing Specialist	13. International Environmental Educator
14. Green Building Consultant	14. Waste Management Consultant	14. Global Green Technology Specialist
15. Environmental Impact Assessor	15. Sustainable Agriculture Consultant	15. International Environmental Compliance Officer
16. Biodiversity Specialist	16. Environmental Data Analyst	16. International Waste Management Consultant
17. Solid Waste Management Specialist	17. Urban Sustainability Specialist	17. Global Environmental Risk Assessor
18. Pollution Control Officer	18. Energy Efficiency Consultant	18. International Environmental Research Scientist
19. Rural Development Officer	19. Environmental Communications Specialist	19. Global Sustainable Business Advisor
20. Natural Resource Manager	20. Climate Change Mitigation Advisor	20. International Climate Change Researcher
21. Ecotourism Planner	21. Sustainable Building Designer	21. Global Environmental Impact Assessor
22. Community Development Officer	22. Water Conservation Specialist	22. International Sustainable Agriculture Expert
23. Environmental Legislation Specialist	23. Environmental Finance Analyst	23. Global Environmental Data Analyst
24. Sustainable Development Officer	24. Green Infrastructure Planner	24. International Green Building Consultant

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement in Abroad
25. Air Quality Specialist	25. Environmental Quality Specialist	25. Global Eco-Tourism Developer

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Undergraduate Course Curriculum

DESIGNED BASED ON THE POLICY REFLECTED IN THE NEP -2020

Value Added Course (VAC)

AEC Course ID: **VAC2**

Name of Skill Enhancement Course: **Digital and Technological Solutions for a Sustainable Future**

Prior Disciplinary Cluster: Environmental Studies, Computer Science, Geography, History, Political Science, Sociology, Economics, & Education

SEMESTER: II

Digital and Technological Solutions for a Sustainable Future

Objectives of the Course

- *Develop a comprehensive understanding of how digital and technological innovations contribute to sustainability.*
- *Enhance skills in applying digital tools and technologies to solve environmental challenges.*
- *Cultivate the ability to analyze and implement sustainable digital solutions.*
- *Equip students with knowledge of emerging technologies and their potential for sustainability.*
- *Foster an appreciation for the role of technology in achieving a sustainable future.*

Course Curriculum

Module 1: Introduction to Digital and Technological Solutions

- Overview of Digital Technologies and Sustainability
- Principles of Sustainable Development
- The Role of Technology in Environmental Conservation
- Case Studies of Successful Digital Solutions
- Ethical Considerations in Technology Use

Module 2: Digital Tools for Environmental Monitoring and Management

- Remote Sensing and Geographic Information Systems (GIS)
- Internet of Things (IoT) for Environmental Monitoring
- Big Data and Analytics for Sustainability
- Blockchain for Sustainable Supply Chains
- Cloud Computing and Data Storage Solutions

Module 3: Technological Innovations for Renewable Energy

- Solar and Wind Energy Technologies
- Smart Grids and Energy Storage Systems
- Advances in Bioenergy and Hydropower
- Energy Efficiency Technologies
- Policy and Regulatory Frameworks for Renewable Energy

Module 4: Sustainable Smart Cities and Communities

- Concepts of Smart Cities and Urban Sustainability
- Sustainable Infrastructure and Transportation Systems
- Green Building Technologies
- Waste Management and Recycling Solutions
- Future Trends in Sustainable Urban Development

Suggestive Books

- *Rolf T. Wigand, "Information Technology and Sustainable Development", MIT Press, 2004, Cambridge*
- *Hans Bruyninckx, "The Principles of Sustainability", Routledge, 2010, London*
- *Tariq Muneer, "Sustainable Development and Environmental Technology", Elsevier, 2013, Amsterdam*

- *Paul Hawken, "Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming", Penguin Books, 2017, New York*
- *Mike Martin and Roland Schinzinger, "Ethics in Engineering", McGraw-Hill Education, 2009, New York*
- *Thomas M. Lillesand, "Remote Sensing and Image Interpretation", Wiley, 2015, Hoboken*
- *Ovidiu Vermesan and Peter Friess, "Internet of Things: Converging Technologies for Smart Environments and Integrated Ecosystems", River Publishers, 2013, Aalborg*
- *Bill Franks, "The Analytics Revolution: How to Improve Your Business By Making Analytics Operational In The Big Data Era", Wiley, 2014, Hoboken*
- *Melanie Swan, "Blockchain: Blueprint for a New Economy", O'Reilly Media, 2015, Sebastopol*
- *Aris Gkoulalas-Divanis and Grigorios Loukides, "Privacy-Preserving Record Linkage", Springer, 2015, New York*
- *Jenny Chase, "Solar Power Finance Without the Jargon", Routledge, 2019, London*
- *James Momoh, "Smart Grid: Fundamentals of Design and Analysis", Wiley-IEEE Press, 2012, Hoboken*
- *Veera Gnaneswar Gude, "Advanced Biofuel Technologies: Present and Future Perspectives", CRC Press, 2018, Boca Raton*
- *Pierre Langlois, "Energy Efficiency: Towards the End of Demand Growth", Routledge, 2019, London*
- *David Elliott, "Renewable Energy: Policy and Practice", Routledge, 2013, London*
- *Vikram Janardhan and Bob Fesmire, "Smart Grids and Their Communication Systems", Springer, 2014, New York*
- *Peter Newman, "Sustainable Cities: Urban Planning Challenges and Policy", Routledge, 2016, London*
- *Jerry Yudelson, "Green Building A to Z: Understanding the Language of Green Building", New Society Publishers, 2007, Gabriola Island*
- *Gary C. Woodward, "Waste Management Practices: Municipal, Hazardous, and Industrial", CRC Press, 2012, Boca Raton*
- *Tan Yigitcanlar, "Technology and the City: Systems, Applications and Implications", Routledge, 2016, London*

List of Significant Tutorial Modalities	Aspects of Empirical Activities	List of Effective Teaching Modalities
1. Hands-on Technology Workshops	• Practical Technology Application Assignments	1. Lectures and Seminars
2. Sustainability Project Simulations	• Environmental Monitoring and Data Collection Exercises	2. Interactive Workshops
3. One-on-One Mentorship Sessions	• Analytical Case Studies	3. Group Discussions and Peer Feedback
4. Interactive Data Analysis Exercises	• Simulated Sustainability Projects	4. Online Modules and E-learning Resources
5. Real-World Technology Implementation Projects	• Portfolio Development and Review	5. Guest Lectures from Industry Professionals

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement Abroad
1. Environmental Policy Analyst	1. Sustainability Consultant	1. International Environmental Consultant
2. Smart City Planner	2. Renewable Energy Project Manager	2. Global Sustainability Manager
3. Renewable Energy Consultant	3. Environmental Data Scientist	3. Renewable Energy Systems Engineer
4. Environmental Data Analyst	4. Smart Grid Engineer	4. International Smart City Planner
5. Public Health Technology Specialist	5. IoT Solutions Architect	5. Environmental Data Scientist
6. Urban Sustainability Coordinator	6. Sustainable Product Designer	6. Global IT Consultant for Sustainability
7. Digital Infrastructure Planner	7. Corporate Sustainability Manager	7. International Climate Change Analyst
8. Environmental Monitoring Officer	8. Green Technology Developer	8. Global Renewable Energy Project Manager
9. Energy Efficiency Program Manager	9. Environmental Compliance Auditor	9. Cross-Border Environmental Compliance Officer
10. Government IT Consultant	10. Energy Efficiency Analyst	10. International Smart Grid Specialist
11. Climate Change Data Analyst	11. Smart City Project Manager	11. Overseas Sustainable Development Officer
12. Sustainable Development Officer	12. Sustainability Analyst	12. Global Environmental Policy Advisor
13. Environmental Compliance Officer	13. Digital Sustainability Coordinator	13. International Green Technology Developer
14. Natural Resource Manager	14. Environmental Software Developer	14. International Environmental Risk Assessor
15. Water Resource Specialist	15. Blockchain Developer for Sustainability	15. Global Urban Sustainability Coordinator
16. Air Quality Analyst	16. Big Data Analyst for Environmental Applications	16. International Environmental Monitoring Officer
17. Waste Management Coordinator	17. Cloud Computing Specialist	17. Overseas Energy Efficiency Program Manager
18. Public Transportation Planner	18. Sustainable Supply Chain Manager	18. International GIS Specialist
19. Energy Policy Advisor	19. Urban Planner	19. Global Waste Management Specialist
20. Environmental Education Officer	20. Environmental Risk Assessor	20. Cross-Cultural Environmental Educator
21. Green Building Inspector	21. Waste Management Specialist	21. International Public Health Technology Specialist
22. GIS Specialist	22. Renewable Energy Systems Engineer	22. Global Natural Resource Manager
23. Public Utilities Manager	23. Eco-Friendly Product Developer	23. International Water Resource Specialist

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement Abroad
24. Community Development Officer	24. Green Marketing Specialist	24. Global Community Development Officer
25. Disaster Management Coordinator	25. Environmental Impact Assessor	25. International Disaster Management Coordinator

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Undergraduate Course Curriculum

DESIGNED BASED ON THE POLICY REFLECTED IN THE NEP -2020

Value Added Course (VAC)

AEC Course ID: **VAC3**

Name of Skill Enhancement Course: **Indian Constitution and Sound Citizenship**

Prior Disciplinary Cluster: Political Science, Sociology, History, Education, and Commerce

SEMESTER: III

Indian Constitution and Sound Citizenship

Objectives of the Course:

- *To provide an in-depth understanding of the Indian Constitution and its historical context.*
- *To analyze the role and responsibilities of citizens in a democratic setup.*
- *To explore the relationship between constitutional provisions and sound citizenship.*
- *To evaluate the impact of constitutional amendments and judicial interpretations on citizens' rights and duties.*
- *To foster critical thinking and analytical skills regarding constitutional issues and civic responsibilities.*

Course Curriculum

Module 1: Foundations of the Indian Constitution

- Pre-independence constitutional developments
- Constituent Assembly debates
- Preamble and its significance
- Fundamental Rights, Duties, and Directive Principles
- Federalism and separation of powers

Module 2: Constitutional Provisions and Civic Responsibilities

- Definition and acquisition of citizenship
- Fundamental rights and their enforcement
- Role of the judiciary in protecting rights
- Fundamental duties of citizens
- Civic responsibilities in a democratic society
- Case studies on citizen engagement and activism

Module 3: Constitutional Amendments and Judicial Interpretations

- Procedure for amending the Constitution
- Major amendments and their impact
- Role of Parliament and State Legislatures
- Landmark Supreme Court judgments
- Role of the judiciary in constitutional interpretation
- Impact of judicial decisions on governance and society

Module 4: Comparative Analysis and Contemporary Issues

- Comparison with other major constitutions (e.g., USA, UK, Canada)
- Lessons from global constitutional practices
- Issues of constitutional morality
- Balancing rights and security in contemporary India
- Future directions for constitutional reforms

Suggestive Books

- *Granville Austin, "The Indian Constitution: Cornerstone of a Nation", Oxford University Press, 1999, New Delhi*
- *B. Shiva Rao, "The Framing of India's Constitution", Indian Institute of Public Administration, 1968, New Delhi*
- *Durga Das Basu, "Introduction to the Constitution of India", LexisNexis, 2018, Gurgaon*
- *M.P. Jain, "Indian Constitutional Law", LexisNexis, 2018, Gurgaon*
- *Subhash C. Kashyap, "Our Constitution: An Introduction to India's Constitution and Constitutional Law", National Book Trust, 2011, New Delhi*
- *H.M. Seervai, "Constitutional Law of India", Universal Law Publishing, 2015, New Delhi*
- *A.G. Noorani, "Constitutional Questions in India: The President, Parliament and the States", Oxford University Press, 2000, New Delhi*
- *Arvind P. Datar, "Datar on Constitution of India", LexisNexis, 2020, Gurgaon*
- *Upendra Baxi, "The Indian Supreme Court and Politics", Eastern Book Company, 1980, Lucknow*
- *Sorabjee Soli, "Law and Justice: An Anthology", Hay House, 2012, New Delhi*
- *Madhav Khosla, "The Indian Constitution", Oxford University Press, 2012, New Delhi*
- *Parvinrai Mulwantrai Bakshi, "The Constitution of India", Universal Law Publishing, 2018, New Delhi*
- *Pratap Bhanu Mehta, "The Indian Supreme Court and the Art of Constitutional Interpretation", Oxford University Press, 2016, New Delhi*
- *Sudhir Krishnaswamy, "Democracy and Constitutionalism in India: A Study of the Basic Structure Doctrine", Oxford University Press, 2009, New Delhi*
- *Fali S. Nariman, "The State of the Nation: In the Context of India's Constitution", Hay House, 2013, New Delhi*
- *Mark Tushnet, "Advanced Introduction to Comparative Constitutional Law", Edward Elgar Publishing, 2014, Cheltenham*
- *Vikram Raghavan, "Globalization and the Indian Constitution", Cambridge University Press, 2014, Cambridge*
- *Gary Jeffrey Jacobsohn, "The Wheel of Law: India's Secularism in Comparative Constitutional Context", Princeton University Press, 2005, Princeton*
- *A.P. Shah, "Human Rights in India", Oxford University Press, 2017, New Delhi*
- *Rajeev Dhavan, "The Supreme Court of India: A Socio-Legal Critique of Its Juristic Techniques", Eastern Book Company, 1977, Lucknow*

List of Significant Tutorial Modalities	Aspects of Empirical Activities	List of Effective Teaching Modalities
1. Case Study Analysis: Detailed examination of landmark Supreme Court cases.	1. Field Surveys: Conducting surveys on public awareness of constitutional rights and duties.	1. Lectures: Comprehensive lectures by experts in constitutional law.
2. Interactive Debates: Structured debates on contentious constitutional issues.	2. Empirical Research: Collecting and analyzing data on the impact of constitutional amendments.	2. Workshops: Interactive workshops on specific constitutional provisions and their applications.
3. Simulated Constituent Assembly: Role-playing exercises simulating the Constituent Assembly debates.	3. Interviews: Conducting interviews with legal experts, judges, and policymakers.	3. Seminars: Guest lectures and seminars by eminent jurists and scholars.
4. Research Papers: Writing and presentation of research papers on constitutional topics.	4. Community Projects: Implementing civic engagement projects to understand grassroots level issues.	4. Discussion Forums: Online and offline forums for discussing contemporary constitutional issues.

List of Significant Tutorial Modalities	Aspects of Empirical Activities	List of Effective Teaching Modalities
		5. Group Projects: Collaborative projects analyzing constitutional amendments and their societal impacts.

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement in Abroad
1. Indian Administrative Service (IAS)	1. Corporate Legal Advisor	1. International Human Rights Organizations (e.g., Amnesty International)
2. Indian Police Service (IPS)	2. Legal Consultant for NGOs	2. United Nations (UN) Legal Departments
3. Indian Revenue Service (IRS)	3. Compliance Officer in Corporates	3. International Criminal Court (ICC)
4. Indian Foreign Service (IFS)	4. Legal Analyst in Law Firms	4. International Court of Justice (ICJ)
5. Indian Forest Service (IFoS)	5. Intellectual Property Rights (IPR) Specialist	5. World Trade Organization (WTO) Legal Affairs
6. Public Prosecutor	6. Contract Manager	6. International Labour Organization (ILO) Legal Departments
7. Legal Advisor in Government Departments	7. Human Resources Legal Advisor	7. World Bank Legal Department
8. Judge (after qualifying judicial exams)	8. Real Estate Legal Advisor	8. International Monetary Fund (IMF) Legal Department
9. Law Officer in Public Sector Undertakings (PSUs)	9. Media and Entertainment Legal Advisor	9. Global Law Firms (e.g., Baker McKenzie, Clifford Chance)
10. Human Rights Commission	10. Banking and Finance Legal Consultant	10. Legal Consultant for Multinational Corporations (MNCs)
11. National Commission for Women	11. Insurance Law Expert	11. International Arbitration Specialist
12. State Public Service Commissions	12. Cyber Law Consultant	12. Legal Advisor in International NGOs
13. Ministry of Law and Justice	13. Environmental Law Specialist	13. European Court of Human Rights
14. Election Commission of India	14. Mergers and Acquisitions Legal Advisor	14. Legal Researcher in International Think Tanks
15. Lok Sabha/Rajya Sabha Secretariat	15. Corporate Governance Consultant	15. Legal Officer in International Governmental Organizations (IGOs)
16. Central Vigilance Commission	16. Litigation Specialist in Law Firms	16. Compliance Officer in Global Companies
17. Comptroller and Auditor General (CAG) Office	17. Arbitration and Dispute Resolution Expert	17. International Environmental Law Specialist
18. Central Bureau of Investigation (CBI)	18. Legal Researcher in Think Tanks	18. Immigration Law Advisor
19. Directorate of Revenue Intelligence (DRI)	19. Policy Advisor in Private Research Organizations	19. International Maritime Law Expert
20. Legislative Assistants to Members of Parliament (LAMP)	20. Data Privacy Officer	20. Legal Advisor in International Development Agencies

Students will get opportunity for placement in Government Sectors	Students will get opportunity for placement in Private Sectors	Students will get opportunity for placement in Abroad
21. Law and Legislative Affairs Departments in States	21. International Trade Law Expert	21. Trade Law Consultant in Global Trade Bodies
22. Indian Legal Service	22. Employment and Labor Law Consultant	22. International Media and Communication Law Specialist
23. Union Public Service Commission (UPSC)	23. Health Law Advisor	23. Cross-border Data Privacy Consultant
24. National Green Tribunal (NGT)	24. Education Law Specialist	24. Legal Expert in International Education Organizations
25. Central Information Commission	25. Technology Law Advisor	25. Legal Advisor in International Financial Institutions