Taxation and Environmental Degradation

Taught by Prof. Archie Parnell
(with Guest Lectures by Prof. Abhiroop Chowdhury on Climate Science)

Course Description:

Have you ever wondered what role taxation can play in addressing environmental degradation? And what is India's unique position within the global environmental framework?

After setting the stage with lectures on climate science, this course delves into the critical role of taxation in combating climate change and other environmental degradations. It offers a comprehensive analysis of international agreements, carbon pricing mechanisms, carbon taxes, as well as tax incentives designed to steer economies toward a greener future. From the landmark Paris Agreement to innovative carbon border adjustment mechanisms, we will examine strategies nations are employing – and the challenges they face – in leveraging fiscal policy to achieve existential climate goals.

Why This Course Matters:

Climate change is not just an environmental crisis; it's an economic imperative. The ***Reserve Bank of India*** has stated environmental risks are among the most critical long-term threats to the world, posing significant financial risks to banks and to the stability of domestic and international economies. This course equips you with the knowledge and analytical skills to understand how taxation can be a powerful tool in mitigating these risks and fostering a sustainable economy. The World Bank emphasizes that ***"without India, the world is not getting to Net-Zero,"*** highlighting the critical role of India (and every nation) in global emission reduction efforts. However, this requires not only emissions mitigation but also climate adaptation.

What You Will Learn:

1. **International Agreements & National Commitments:**
    - Trace the evolution of global climate agreements, from the Montreal Protocol (which addressed ozone depletion) to the Paris Agreement.
    - Analyze the Nationally Determined Contributions (NDCs) of major economies like India and the US, examining their targets for emissions reduction and renewable energy adoption. . India has committed to carbon neutrality by 2070. The US had aimed for a "2050 Net-Zero GHG Emissions" target, but President Trump withdrew from the Paris Agreement
    - Understand the "ratcheting up" mechanism of the Paris Agreement, which encourages countries to progressively increase their climate action ambitions.
2. **Carbon Pricing Mechanisms:**
    - **Carbon Taxes:** Explore the design of carbon taxes, assessing their effectiveness in reducing emissions by directly pricing the carbon content of fossil fuels.
    - **Emissions Trading Systems (ETS):** Investigate cap-and-trade systems, where a limit is set on total emissions, and companies can trade carbon permits.
    - **EU Carbon Border Adjustment Mechanism (CBAM):** Analyze this groundbreaking tariff on carbon-intensive imports, designed to incentivize cleaner production globally. The CBAM, set to fully launch in 2026, will initially cover sectors like iron, steel, cement, and aluminum. Other countries, including the UK, Canada, and Japan, are considering similar mechanisms.
3. **Tax Incentives & Subsidies:**

- Examine the array of tax credits, deductions, and grants available for renewable energy projects, clean vehicles, and energy-efficient technologies under the US Inflation Reduction Act (IRA). The IRA includes Production Tax Credits and Investment Tax Credits for renewable energy, with bonus credits for projects meeting wage and domestic content requirements.
- Identify and evaluate "bad" subsidies that encourage fossil fuel consumption and hinder climate mitigation efforts

4. **Climate Change Challenges & Opportunities:**
    - Explore the unique challenges faced by developing countries like India, including the need for technology maturity, massive scale-up of renewable energy infrastructure, and balancing climate action with economic growth and energy affordability.
    - Identify opportunities for innovation, investment, and sustainable development in sectors such as renewable energy, green infrastructure, and carbon capture.
5. **Tax Reform Options & Policy Packages:**
    - Analyze various tax reform options for both developed and developing countries, drawing on recommendations from organizations like the IMF and the UN.
    - Evaluate policy packages that combine renewable energy subsidies with carbon taxes or coal excise taxes, assessing their cost-effectiveness and distributional impacts.
    - Examine India's existing fiscal initiatives affecting climate change, including fuel taxes and coal cesses, and discuss the potential for implementing a comprehensive carbon tax.
6. **Implementation Challenges & Solutions:**
    - Address the administrative, political, and equity challenges of implementing carbon taxes, particularly in developing countries.
    - Explore mechanisms for protecting vulnerable populations from the adverse effects of higher energy prices, such as rebates, public transportation investments, and energy efficiency programs.
    - Discuss the importance of transparent revenue allocation and robust monitoring, reporting, and verification systems to ensure the effectiveness and accountability of carbon pricing policies.
7. **Country Experiences & Best Practices:**
    - Study the experiences of countries like Sweden, British Columbia, Chile, and South Africa in implementing carbon taxes, highlighting both successes and challenges.
    - Learn from best practices in carbon tax design, revenue recycling, and stakeholder engagement.
8. **Other Types of Environmental Degradation:**
    - Examine other international agreements including the Transboundary Air Pollution Convention (1979), the Protection of Ozone Layer Convention (1985), the Montreal Protocol (1987), the Basel Convention on the Control of Transboundary Movements of Hazardous, Wastes and their Disposal (1989), the Convention on Biological Diversity (1992), and the Nagoya Protocol (2010).
    - Discover how taxes, fees and the polluter-pays principle apply to these types of environmental degradations.

Who Should Enroll:

This course is ideal for students in JGLS and JSES interested in understanding the role of taxation in addressing climate change and environmental degradation. This course will provide you with the knowledge and tools to contribute to a more sustainable future.

Course Structure:

The 10-week, four-credit course will consist of lectures, individual student and student group presentations, a research paper, and a final examination. Students will have the opportunity to analyze real-world examples of carbon pricing policies, develop policy recommendations, and engage with experts in the field.

Expected Outcomes:

Upon completion of this course, students will be able to:

- Understand the science and economics of climate change and other environmental degradations.
- Analyze the role of taxation in mitigating greenhouse gas emissions.
- Develop policy recommendations for promoting sustainable development.
- Contribute to informed discussions about the environment and taxation.

Please join us in this critical exploration of how taxation can drive the transition to a low-carbon economy and create a more sustainable future for all.