



The Beijing Center

北京中国学中心

Spring 2019 TBC 1600 Environment of China

Credit Hours: 3.0

Class Times and Location: TBA

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Course Description

This course will first introduce general knowledge on environment and sustainability mainly focusing on science and economics. It then will discuss about pollution control and natural resource conservation in China topic by topic. Major topics to be discussed include water pollution, air pollution, energy use and climate change policies, nature conservation, and payment for environmental services in China. Lectures on each topic will be given by the instructor while students are also assigned to read a series of papers under each topic.

Learning Outcome

The main objectives for students to attend this course are as follows:

- To gain a basic understanding of environment and sustainability in general
- To create awareness on the various aspects and issues of environmental pollution in China, particularly focusing on current status, causes, policy solutions.
- To educate means to protect the environment from various types of pollution
- To train students to conduct some hand-on analyses on causes environmental issues in China and propose some potential solutions.
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Textbook

- [1] *Chinese Perspectives on the Environmental and Sustainable Development, 2013* (Ye Wenhui, edits).
- [2] *Annual reports on the state of environment in China* (particularly 2016 and 2017 annual reports) issued by Ministry of Environment and Ecological Protection of People's Republic of China.

Course Requirements

1. Attendance Policy

Students are required to attend class. Course work (including weekly quizzes) cannot be made up except in the case of a serious medical emergency documented in writing and approved by the TBC administration.

2. Grading

- ✓ Middle-term exam: 40%
- ✓ Term-paper: 40%
- ✓ Class attendance and quiz 20%

3. Academic Honesty Statement

Please click the following link to see The Beijing Center's policy on Academic Integrity: <http://thebeijingcenter.org/academic-integrity>

Course Schedule and Reading List

[1] Topic 1: Introduction on environment and sustainability

(2 lectures)

- *Robert Goodland, 1995. The Concept of Environmental Sustainability, *Annual Review of Ecology and Systematics*, 26, 1-24.
- *Hardin, Garrett. "The Tragedy of the Commons." *Science* 162 (1968): 1243-48.
- * Fullerton, D. and Stavins, R., 1998. How economists see the environment. *Nature*, 395(6701),633-434.

[2] Topic 2: Sustainable development: Overview and Chinese Experiences

(2 lectures)

- *Mol, A.P.J and Carter, N.T.,2006. China's Environmental Governance in Transition. *Environmental Politics*, 15(2), 149 – 170.
- * Marc Lallanilla, 2013. China's Top 6 Environmental Concerns. <https://www.livescience.com/27862-china-environmental-problems.html>
- * Wang Lijiang, 2010. The changes of China's environmental policies in the latest 30 years. *Procedia Environmental Sciences* 2 (2010) 1206–1212.
- * Haakon Vennemo, Kristin Aunan, Henrik Lindhjem, Hans Martin Seip, 2009. Environmental pollution in China: Status and trends. *Review of Environmental Economics and Policy*, July.

[3] Topic 3: Water pollution in China and policies for water pollution

(2 lectures)

- *Yong Jiang, 2009. China's Water Scarcity. *Journal of Environmental Management*, 90, 3185–3196.
- * Lian-Jun Bao, Keith. Maruya, Shane Snyder, Eddy Zeng, 2017. China's water pollution by persistent organic pollutants. *Environmental Pollution*, 163,100-108.
- * Dongmei Han, Matthew Currell, Guoliang Cao, 2016. Deep challenges for China's war on water pollution. *Environmental Pollution*, 218, 1222-1233.
- * Yuanan Hu, Hefa Cheng, 2013. Water pollution during China's industrial transition. *Environment Development*, 8, 57-73.
- * Edwin D. Ongley, 2004. Non-Point Source Water Pollution in China: Current Status and Future Prospects. *Environmental International*, 29(3), 299-306.

[4] Topic 4: Air pollution in China, its health impact and policies for air pollution control (2 lectures)

- * Lu Fen, Wenjie Liao, 2016. Legislation, plans, and policies for prevention and control of air pollution in China: achievements, challenges, and improvements. *Journal of Cleaner Production*, 1549-1558.

- * Bryan Tilt, 2019. China's air pollution crisis: Science and policy perspectives. *Environmental Science and Policy*, 92, 275-280.
- * Yingying Zeng , Yuanfei Cao , Xue Qiao , Barnabas C. Seyler , Ya Tang, Air pollution reduction in China: Recent success but great challenge for the future. *Science of the Total Environment*, 663, 329–337.
- * Kristin Aunana, Mette Halskov Hansenb, Zhaohui Liuc, Shuxiao Wangd, 2019. The Hidden Hazard of Household Air Pollution in Rural China. *Environmental Science and Policy*, 93, 27-33.

**[5] Topic 5: Energy use, climate change and carbon market in China
(2 lectures)**

- * Anita Engels, 2018. Understanding how China is championing climate change mitigation. *Nature Communications*. DOI: 10.1057/s41599-018-0150-4
- * Maximillian Auffhammer and Yazhen Gong, 2015. China's Carbon Emissions from Fossil Fuels and Market-Based Opportunities for Control. *Annual Review of Resource Economics*, 7:11–34.
- * Pu Wang^a *, Lei Liub^a * and Tong Wu, 2018. A review of China's climate governance: state, market and civil society. *Climate Policy*, 18(5), 664-679.
- # David Sandalow, 2018. Guide to Chinese Climate Policy, 2018.
<https://energypolicy.columbia.edu/sites/default/files/pictures/Guide%20to%20Chinese%20Climate%20Policy%207-27-18.pdf>

**[6] Topic 6: Natural resource conservation in China
(1 lecture)**

- * China urged to lead way in efforts to save life on Earth.
<https://www.theguardian.com/environment/2018/nov/29/china-urged-lead-way-efforts-save-life-on-earth-un>
- * Yinzhou Huang, Jiao Fu, Wenrui Wang , Jing Li, 2019. Development of China's nature reserves over the past 60 years: An overview. *Land Use Policy*, 80, 224-232.
- * Wu, Jian, Yazhen Gong and Junjie Wu, 2018. Spatial distribution of nature reserves in China: Driving forces in the past and conservation challenges in the future. *Land Use Policy*, 77, 31-42.

**[7] Topic 7: Payment for ecosystem services in China
(1 lecture)**

- *Michael T. Bennett, 2008. China's sloping land conversion program: Institutional innovation or business as usual? *Ecological Economics*, 65, 699-711.
- * Wenxiu Shang , Yicheng Gong , Zhongjing Wang , Michael J. Stewardson, 2018. Eco-compensation in China: Theory, practices and suggestions for the future. *Journal of Environmental Management*, 210, 162-170.
- * Hongbing Deng • Peng Zheng • Tianxing Liu • Xin Liu, 2011. Forest Ecosystem Services and Eco-Compensation Mechanisms in China. *Environmental Management*, 48,1079–1085