Doctoral Research Programme on Climate Change and Education: UTG WASCAL
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CCE 714: CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT
SYLLABUS

Introduction and objectives

This module of the WASCAL doctoral program examines the links between economic development – sustainable or otherwise – and the environment. The main topics covered are:

1. The meaning and measurement of (sustainable) economic development
2. Is there an environmental Kuznets curve?
3. The measurement and analysis of poverty
4. Sources of economic growth, and the role of natural resources therein.
5. Applying cost-benefit analysis to environmental issues

The formal course description reads: "Pillars of sustainable development; synergies and trade-offs between different sustainable development strategies and options; mutual inter-linkages between different overall development paths; climate action to achieve SDGs."

There will be five three-hour classes (weekdays, 2-5 p.m.), three homework assignments, and a final exam (to be held on Saturday, March 12). The classes will be on-line, and all will use the Zoom address https://suffolk.zoom.us/j/4020900910

My e-mail is jhaughton@suffolk.edu ; please feel free to contact me about any aspect of the course and the material. I will post the assignments, and course materials (readings, mainly), on my web site at https://sites.suffolk.edu/jonathanhaughton/

Grading

The grade for the course will be based on:

a. *Final Exam.* This will be worth 50% of the total grade, and will be open-book.
b. *Three homework assignments.* Worth 45% of the total grade. They are due by the end of the day on Wednesday, Thursday, and Friday respectively, and should be submitted by e-mail.
c. *Class participation*. I expect you to be engaged during the classes. 5% of the total grade.

Reading List and Syllabus

1. The meaning and measurement of (sustainable) economic development

Standard measurements: defining GDP; drawbacks of GDP as a measure of welfare. The need for PPP. The HDI. Patterns of development. Sustainable development (Brundtland). Environmental accounting. Sustainable Development Goals.

Analysis: Why are poor countries poor?

UNDP, *Human Development Report.* See https://hdr.undp.org/en/dashboard-human-development-anthropocene for some interesting interactive tables.

Michael Clemens and Lant Pritchett. 2008. Income per natural: Measuring development as if people mattered more than places. Center for Global Development, Working Paper 143. http://www.cgdev.org/sites/default/files/15552_file_IncomePerNatural.pdf

A short introduction to the Brundtland Report. https://www.youtube.com/watch?v=KIaguVNjZAU

2. Environment: Is there an EKC?

The Environmental Kuznets Curve. Its origins. Where it applies well, and poorly: evidence on particulates, water, forestry, fisheries. Implications. Shifters. Role of population. Economic issues: public goods, externalities.

Analysis: Commons – two shepherds.
Analysis: Fisheries.

Yandle, Bruce, Maya Vijayaraghavan, and Madhusudan Bhattarai. 2002. *The Environmental Kuznets Curve: A Primer*. PERC Research Study 02-01.

Dasgupta, P. et al. 2002. Confronting the environmental Kuznets curve, *Journal of Economic Perspectives*, 16(1): 147-168.

Related readings:

Stern Review on the Economics of Climate Change. 2006. http://www.webcitation.org/5nCeyEYJr The Wikipedia discussion of the report is very good; see http://en.wikipedia.org/wiki/Stern_Review

3. The measurement and analysis of poverty

Technical issues. The poverty line. Poverty measures. Poverty profiles. Poverty targeting. Pro-poor growth. Stochastic dominance. Monitoring and evaluation. Sustainable Development Goals. Malnutrition. Vulnerability. International Comparisons. Multidimensional poverty.

Jonathan Haughton and Shahidur Khandker. *Handbook on Poverty and Inequality,* World Bank, 2009. [The full book is available free on-line via my Web page.] Chapters 1-4.

Haughton and Khandker. 2013. *Notes on Multidimensional Poverty*. [Available via web site.]

Dollar, David and Aart Kraay. 2000. "Growth is Good for the Poor" (see www.worldbank.org/research).

Haughton, Jonathan. 2012. Bubble Rap: Visualizing Poverty Dynamics, *Case Studies in Business, Industrial, and Government Statistics.*

Rwanda studies.

4. Economic Growth: Theory and Empirics

Basic models: Harrod-Domar; Solow. Do natural resources help? Convergence. The legacy of history. Analysis: Does foreign aid help or hurt? Limits to growth. Human, economic, and natural capital.

Pritchett, Lant, "Divergence, Big Time," *Journal of Economic Perspectives*, Summer 1997. p. 3-17.

Mankiw, N. Gregory, David Romer, David N. Weil. 1992. A Contribution to the Empirics of Economic Growth, *Quarterly Journal of Economics*, 107(2): 407-437.

Sachs, Jeffrey, and Andrew Warner. 1995. Natural Resource Abundance and Economic Growth. NBER Working Paper 5398, Cambridge MA.

Williamson, John. 2004. A Short History of the Washington Consensus. Paper commissioned by Fundación CIDOB. http://www.iie.com/publications/papers/williamson0904-2.pdf

Murphy, Kevin M, Andrei Shleifer, and Robert W. Vishny. 1989. Industrialization and the Big Push, *Journal of Political Economy*, 97: 1003-1026.

Young, Alwyn. 2012. The African Growth Miracle. *Journal of Political Economy,* 120(4): 696-739.

Gates, Scott, Håvard Hegre, Håvard Mokleiv Nygård, and Håvard Strand. 2012. Development Consequences of Armed Conflict, *World Development*, 40(9): 1713-1722.

5. Cost-Benefit Analysis

Concept. Measuring benefits and costs over time. Choice criteria. Issues: valuing life, limb, time, recreation, noise, air. Techniques for measuring the value of environmental benefits.

Haughton, Jonathan. Various notes on Cost-Benefit Analysis.

Arnold Harberger. 1971. "Three Basic Postulates for Applied Welfare Economics: An Interpretive Essay," *Journal of Economic Literature*, 9(3): 785-797.

Jonathan Haughton, Douglas Giuffre, John Barrett and David Tuerck. *An Economic Analysis of a Wind Farm in Nantucket Sound*. Beacon Hill Institute, Boston. Submitted to Army Corps of Engineers, May 2004.

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