

GGR 338 HIF:

Environmental Problems in Developing Countries

Department of Geography and Planning, University of Toronto

Course Instructor: Dr. Jeffrey N. T. Squire

Class Time: Thursdays 12-2pm

Class Location: SS 2106

Office hours: Thursdays 2.30-4.30 or by appointment

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Course description

This course addresses a broad range of environmental issues confronting the developing world with a view toward highlighting some of the innovative programs and strategies aimed at addressing these challenges. The course is thematically organized and loosely corresponds to what might be described as dominant environmental issues including: waste management; climate change; deforestation; air pollution; water contamination; human health and; land degradation. The course links theory to practice by subjecting current environmental planning and management concepts to a critical scrutiny through a set of linked case studies. Specific case examples are drawn from Africa, Asia, the Caribbean, Latin America and the Middle East. Classes will involve a combination of lectures, videos and weekly discussions of the assigned readings. For the assigned readings, students are required to focus on the key concepts, theoretical assumptions, and empirical evidence provided by each author.

Intended Learning Outcomes

This course has been designed to provide students with:

- 1) An in-depth understanding of some of the major environmental problems confronting developing countries and the forces that create such issues
- 2) An awareness of some of the ways in which environmental challenges are being addressed in the developing world
- 3) Ample knowledge of socio-cultural, economic and political factors that shape environmental governance in developing countries

- 4) Substantial information regarding some of the major obstacles militating against good environmental governance in the global south

Required course texts

There is no required textbook for this course. A course pack will be available at the University of Toronto Bookstore. Links to the readings will also be posted on blackboard. It is the responsibility of students to access all required readings via the utoronto library database.

Lecture Topics and Weekly Readings

Week 1 (Sept 17): Introduction to the Course

- GGR338 H1F Course Syllabus

Week 2 (Sept 24): Waste Management

- Rotich K. Henry, Zhao Yongsheng, Dong Jun: Municipal solid waste management in challenges in developing countries-Kenyan case study. *Waste Management* 26 (2006) 92–100.
- Xinwen Chi, Martin Streicher-Porte, Mark Y.L. Wang & Markus A. Reuter. Informal Organic Waste recycling. A sector review with special focus on china. *Waste Management* 31, (2011). 731-742

Week 3 (Oct 1): Biomedical Pollutants in the Environment

- Z. Bendjoudi, F. Taleb , F. Abdelmalek & A. Addou (2009). Healthcare Waste Management in Algeria and Mostaganem department. *Waste Management* 29 (2009) 1383–1387
- Sohrab Hossain, Amutha Santhanam N.A. Nik Norulaini & A.K. Mohd Omar (2011). Clinical solid waste management practices and its impact on human health and environment - A review. *Waste Management*, 31(2011) 754-766
- Squire, Jeffrey (2013). Biomedical pollutants in the urban environment and implications for public health. *ISRN Public Health*. Volume 2013, Article ID 497490, 5 pages <http://dx.doi.org/10.1155/2013/497490>

Week 4 (Oct 8): Mining and the Environment

- Herman Gibb and Keri Grace O’Leary (2014). Mercury Exposure and Health impacts among individuals in the artisanal and small scale mining community: a comprehensive review. *Environmental Health Perspectives* volume 122 | number 7 | July 2014

- Jane Newbold (2006). Chile's environmental momentum: ISO 14001 and the large scale mining industry. Case studies from the state and private sector: *Journal of Cleaner Production* 14 (2006) 248-261
- Abraham Kumah (2006). Sustainability and gold mining in the developing world: *Journal of Cleaner Production* 14 (2006) 315-323

Week 5 (Oct 15): Oil Exploration and the Environment

- Gabriel Eweje (2006). Environmental costs and responsibilities resulting from oil exploration in developing countries: The case of the Niger delta of Nigeria: *Journal of Business Ethics* (2006) 69:27–56 _ Springer 2006 DOI 0.1007/s10551-006-9067-8
- M San Sebastián, B Armstrong, J A Córdoba, C Stephens (2001). Exposure and cancer incidents near oil fields in the Amazon basin of Ecuador: *Occup Environ Med* 2001;**58**:517–522

Week 6 (Oct 22): Water Contamination and Pollution

- Peng Xu, Shengbiao Huang, Zijian Wang,, Gustavo Lagos (2006). Daily Intakes of copper, zinc and arsenic in drinking water by population of Shanghai, china: *Science of the Total Environment* 362 (2006) 50– 55
- May A. Massoud, Mutasem El-Fadel, Mark D. Scrimshaw & John N. Lester (2006). Factors influencing development of management strategies for the Abou Ali River in Lebanon. Spatial variation and land-use: *Science of the Total Environment* 362 (2006) 15– 30
- Sunil Kumar Karn & Hideki Harada (2001). Surface water pollution in three urban territories of Nepal, India and Bangladesh: *Environmental Management* Vol. 28, No. 4, pp. 483–496

Week 7 (Oct 29): Midterm test. No assigned readings

Week 8 (Nov 5): Smog and Air Pollution

- Xianglu Han, Luke P. Naeher (2006). A review of traffic-related air pollution exposure assessment studies in the developing world. *Environment International*, 32 (2006) 106 – 120
- Kirk R. Smith. Fuel combustion, air pollution exposure and health (1993): The situation in developing countries: *Annu. Rev. Energy Environ.* 1993. 18:529-66

Week 9 (Nov 12): Climate Change

- Paul Collier, Gordon Conway & Tony Venables (2008): Climate Change and Africa. *Oxford Review of Economic Policy*, Volume 24, Number 2, 2008, pp.337–353
- Ole Mertz, Kirsten Halsnæs, Jørgen E. Olesen & Kjeld Rasmussen: Adaptation to climate change in developing countries. *Environmental Management* (2009) 43:743–752

Week 10 (Nov19): Deforestation, Desertification and Forestation

- T. Mitchell Aide, Matthew L. Clark, H. Ricardo Grau, David Lopez-Carr, Marc A. Levy, Daniel Redo, Martha Bonilla-Moheno, George Riner, Mari'a J. Andrade-Nuñez, and Mari'a Muniz (2013). Deforestation and reforestation of Latin America and the Caribbean (2001-2010). *BIOTROPICA* 45(2): 262–271 2013
- Zhongcheng Jiang, Yanqing Lian, Xiaoqun Qin (2014). Rocky desertification in southwest china: impacts causes and restoration. *Earth-Science Reviews* 132 (2014) 1–12
- Lise Tole (2001). Jamaica's disappearing forests: Physical and Human Aspects. *Environmental Management* Vol. 28, No. 4, pp. 455–467

Week 11 (Nov 26): Agriculture, Food Systems and the Environment

- R.K. Rattan, S.P. Datta, P.K. Chhonkar, K. Suribabu and A.K. Singh (2005). Long term impact of irrigation with sewage effluents on heavy metal content in soils, crops and groundwater. *Agriculture, Ecosystems and Environment* 109 (2005) 310–322
- Miguel A. Altieri, Nelso Companioni, Kristina Cañizares, Catherine Murphy, Peter Rosset, Martin Bourque and Clara I. Nicholls (2009). The greening of the barrios: urban agriculture for food security in Cuba. *Agriculture and Human Values* 16: 131–140, 1999.

Week 12 (Dec 3): Environment and Health

- Garg A, Dhiman RC, Bhattacharya S, Shukla PR (2009). Development, Malaria and Adaptation to Climate Change: A case study from India: *Environ Manage.* 2009 May;43(5):779-89. doi: 10.1007/s00267-008-9242-z. Epub 2009 Jan 6.
- Xiaoping Wang & Denise L. Mauzerall (2006). Evaluating impacts of air pollution in china on public health: Implications for future air pollution and energy policies. *Atmospheric Environment* 40 (2006) 1706–1721

Assessment of Learning & Due Dates

Assignment	Weight	Due Date
Critical Reflection Paper	15	October 1 st
Mid-Term Test	20	October 22 nd
Research Proposal	10	November 5 th
Final Term Paper	25	December 3 rd
Final Exams	30	TBA

Critical Reflection

This assignment requires you to write a critical reflection piece on a particular environmental issue pertaining to the developing world that is of concern or interest to you. The paper should be between 4-5 pages long and must include: a) the nature of the issue; b) why the issue is of concern or interest to you c) steps being taken to address the issue and d) what you think must be done about the issue. Students with no environmental issue in mind are encouraged to select a topic from the lecture components or weekly readings. This assignment constitutes 15% of your final grade and is due in class on October 1, 2015. In addition to submitting hard copies, you are also required to submit electronic copies of their assignments in the course drop box on the due date.

Mid-Term Test

An in-class mid-term test will be administered on October 22nd. The test would be based on readings, class discussions and lecture materials covered from weeks 1-6. The mid-term test constitutes 20% of your overall grade and therefore, it is imperative that you prepare adequately.

Research Proposal

You are required to submit a brief (not more than five pages) research proposal in advance of your major paper. This assignment is worth 10% of your overall grade and is due in class on November 5, 2015. Please be sure to include the following in your proposal:

- A tentative title, which reflects something about the argument or question being explored, rather than merely the topic;
- The tentative argument to be developed. This statement should demonstrate that you have, at least in part, read and understood the arguments in the sources from your reference list.
- An indication of how the paper will be organized (list of sub-headings) to develop the overall argument (think about why each section is relevant);

- A reference list of at least five academic sources.

Final Term Paper

For this assignment you are required to write an essay between 4,500-5,000 words including bibliographic information on a topic related to any of the central themes of the course. Students can also select their own topics with the approval of the course director. This paper is worth 20% of your overall grade and is due on December 3rd. The research paper must have the following main features:

- An abstract not exceeding 250 words
- A title that reflects the argument or question being explored
- A table of contents
- A list of references or works cited, a minimum of 10 scholarly journals and/or books

You are strongly encouraged to adapt your paper to a country-specific case study or other relevant example. In addition to submitting hard copies, you are also required to submit electronic copies of their assignments in the course drop box on the due date.

Final Exams

The Final Exam will cover concepts and issues covered in the readings and lectures. It will be a two-hour exam and a variety of question formats will be used including short answer and longer essay questions. The main objective of the final exam is to test your understanding of what we have covered in the course and to assess your ability to communicate understanding of the material in an organized, coherent manner in written format. The final exam will take place during the exam period (between December 11th and 22nd). Additional information will be posted on the course Blackboard site and discussed in class.

Email policy

If you'd like to contact me outside of my scheduled office hours, please direct all course-related questions to me at jeffrey.squire@utoronto.ca and I will respond to your emails as promptly as possible. However, please be advised that I usually receive many emails each day that require a response therefore, it may take me a day or two to reply to your message. Note also that email is the official channel of communication between the University and its students. You are required to check your *utoronto* email account regularly; I recommend that you check for course-related emails at least twice a week. If you use another email service (e.g., gmail), it is your responsibility to ensure that mail sent to your utoronto account is forwarded to your other account.

Submission of assignments

Check the requirements in the schedule above regarding submission of electronic and/or hard copies for each assignment. Hard copies are to be submitted to the course teaching

assistant during class hours. By submitting an assignment for this course, you are agreeing to the following:

- You have properly referenced and footnoted all ideas, words or other intellectual property from other sources used in the completion of this assignment.
- You have included a proper bibliography, which includes acknowledgement of all sources used to complete this assignment.
- The assignment was completed by your own efforts. You did not collaborate with any other person for ideas or answers (with the exception of group projects)
- This is the first time you have submitted this assignment or essay (either partially or entirely) for academic evaluation.

Turnitin: If necessary, plagiarism detection software (e.g., Turnitin) will be used to screen assignments in this course for proper citation, referencing and instances of plagiarism. This is being done both as an educational activity for you and to verify that use of all material and sources in assignments is documented. You will be able to submit your assignments to Turnitin multiple times so that you can see how the software has analyzed your writing, and so that you can make adjustments if portions of your text are flagged as being problematic.

Accessibility: The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: disability.services@utoronto.ca or <http://studentlife.utoronto.ca/accessibility>

Late policy: You are expected to take account of the possibility of computer or printer failure in planning your time. Emailed or faxed assignments will not be accepted. The penalty for late assignments is **5 %** of the total possible mark per day, including weekends and holidays. I will not accept assignments more than 5 days after the due date unless we have a prior arrangement.

When You Cannot Meet a Course Requirement Due to Illness or Other Reasons: There will be no unpenalized extensions on assignments except for illness, severe personal extenuating circumstances, or weather emergencies. When you find yourself unable to meet a course requirement because of medical, compassionate or other reasons, please advise me in writing by email; make sure to include your full name in your message. Where possible, you must contact me in advance of the assignment due date, but otherwise as soon as possible after the due date. As a rule, you must provide appropriate documentation, for example, a note from your doctor indicating the dates during which you were ill, and describing the severity of your illness. *Manage your time carefully. Pressure of work alone is not an acceptable reason for seeking an extension without penalty.* Extensions will be granted in the case of illness or other emergencies,

with appropriate documentation. For medical exemptions, only an official U of T form will be accepted (available online here: <http://www.illnessverification.utoronto.ca/>). Please consult your college registrar if you are having difficulties during the term that prevent you from completing your course work. For non-medical emergencies, they may be able to provide a letter documenting your situation.

My Teaching Philosophy and Practices

My teaching philosophy is predicated in the view that education is a tool for facilitating meaningful change in society. My role as an instructor is therefore to inspire, motivate and encourage my students to build, develop and enhance their critical thinking skills. I assist my students to translate knowledge acquired in the classroom into positive action. I do so by striving to make learning a dynamic and inspirational experience for both myself and my students. In other words, your learning is my utmost priority. I also recognize that students have diverse learning styles and as such, I take an interactive approach to the delivery of course materials. My course delivery incorporates videos, visual aids, group work, guest speakers, brainstorming, case studies, jigsaw, think, pair, share and where appropriate, field trips. Therefore, my approach to teaching is primarily interdisciplinary. The interdisciplinary approach assists me in illustrating how concepts and theories learned in class can be connected to broader socio-economic as well as political issues. In order to assist you in developing and enhancing your critical thinking skills, I encourage your participation, comments, and questions during class activities. To ensure that I am keeping up with the learning needs of my students, I encourage students to provide me with feedback on a regular basis through emails, in-class evaluations and informal conversations. This system allows me to make adjustments and respond favourably to the learning needs of my students.

My Expectations of You as a Student:

I expect my students to arrive on time, attend all classes, and be respectful of themselves, their colleagues and the instructor. As a student, you are expected to complete the assigned readings, and to participate actively and consistently in class. No TEXTING is allowed in class! Internet usage is restricted to course related activities. Chatting on Facebook and other social media sites is deemed disruptive and impermissible in this class. I expect you to turn off your laptop and mute your mobile before class. If you need access to course materials stored on your laptop during a class, then you can turn it on – otherwise please leave it off.