SUSM 701 – Advanced Theories of Sustainability Management

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# Meetings

Online course. All information can be found either in this document or on the course website. No mandatory synchronous meetings.

# Office hours:

By e-mail appointment on Skype or Teams. Because of the asynchronous nature of the course I am happy to schedule individual meetings with course participants. Please let me know by email if you need a meeting and I will schedule it. Also use the ‘Ask the Instructor’ discussion board on the course website. I will respond to questions that are posted. Furthermore, in-person office hours are Wednesdays from 10 am to noon.

# Delivery of course material:

1. According to university policy, the course is mainly delivered asynchronous. However, we will try and explore synchronous options in the first week of the course.
2. Material for this course will be delivered by the D2L system. Go to https://learn.uwaterloo.ca/
3. The course outline is available on the course website (through the D2L system).
4. The material will be uploaded on the course website. We will also use the D2L system to deliver information to students in the course. We expect (assume) that you will be checking the course website regularly (at least every working day).

# Tips for success:

1. Make a schedule and keep track of the hours you invest in the course.
2. Read, watch, and listen to the material and make notes.
3. Plan ahead: check when assignments are due, and tests are scheduled.
4. Get familiar with the online tools for the course (D2L, Teams, Bongo Virtual Classroom, etc.)

# Creating an effective learning environment in class:

Because of university policies and to accommodate all course participants, most of the course will be asynchronous. However, research shows that engagement with the material and in discussions increases the learning. Hence, contribute to discussions, watch and listen to student presentations, and try to be active as much as possible. Offering this course on-line is not a choice during the pandemic. Thus, we have to try and make the best of it.

# Pre-requisite:

Tuition fees arranged. Be aware that you do not have access to the course website without having arranged your tuition fees.

# Calendar description:

Advanced Theories of Sustainability Management SUSM 701 introduces background, concepts and theories of sustainability management.

# Course description:

The objective of this course is to understand theory in terms of epistemology, review major theoretical paradigms in the social sciences, understand the relationship of theory to ontology and methodology, and with regard to theory application in sustainability management. Students should show the capacity to identify, use and potentially build theories in sustainability and in management in relation to their research questions.

# Course Website and Tools:

Course information will be delivered through the D2L system (https://learn.uwaterloo.ca). The system includes Bongo Virtual Classroom that will be used for presentation videos. Furthermore, I will use Teams for meetings. All students have access to MS Office 365. Hence, please setup Teams on your device.

# Course assessment:

**Participation** (10%): The course has a strong focus on active participation. It is expected that the students will be able to actively contribute to the discussion board. Participation is not a case of ‘more is better’. Instead, you should strive to make occasional contributions that reveal your ‘engagement’ with the course material. This may be indicated by comments that make new connections among different parts of the material for the course (that is, the readings, the lectures, the discussions, student presentations, etc.), comments that challenge or support positions in readings and/or lectures, comments that link other experiences to material in the course, comments that relate external world events to material in the course, comments that respond to questions posed in discussions in an informed manner, etc. You are asked to read and think about all of the assigned readings before each meeting; review of ideas and information presented in the corresponding lecture(s) is also required. Do bring your own ideas, arguments and reflections to the discussion board – the quality of the discussion will depend upon students’ preparation. There are also guiding questions in the presentations and in the description of the modules in this document that are triggers for discussion.

**Video Assignment** (5%):Create an up to five minutes video on Bongo Virtual Classroom that responds to the following questions: What is your personal and educational (professional background)? Which sustainability management topic interests you most? What research do you plan to do?

**Reflection Papers** (40%, four papers, 2 pages each, 10% each, length: two pages, 1.5 space)**:**

1. Describe the working title of your planned PhD research and present a brief statement of the specific contributions to academic knowledge that you anticipate making through your doctoral research.
2. Describe the value of your research and the expected results for industry, policy makers, and / or other non-academic people and institutions.
3. What are advantages and drawbacks of the SDGs for addressing sustainability problems? Support your arguments using the literature.
4. Define the major focus of your work and the main bodies of literature and sub-areas that you will use for your research.

**Topic Presentation** (20%, 10% presentation, 10% paper): Students will present the course topic based on a question that has been assigned to student groups and its connection to Sustainability Management using a PowerPoint presentation. The presentation should include an introduction to the topic and a critical discussion based on the readings. The presentation should consist of the following slides: Topic description, Background literature, Conclusions, Relevance for Sustainability Management. Furthermore, the presentation should include two questions (on the last slide) about the topic and its connection to sustainability management that should be answered by the other students on the discussion board. Therefore, I will post the presentations on the course website. See the course website (Topic Presentation) for the students and their topics.

Furthermore, each student of the presentation group submits a two pages paper. The two pages research paper should be structured the same as the presentation.

**SDG Consulting** (Group Assignment, 10%):Develop a concept to address the SDGs for an industrialized country (such as Canada), an emerging country (such as China, India or Mexico), or a developing country (such as Rwanda or Yemen) based on your personal knowledge and the knowledge you acquired this term. PowerPoint Presentation. Students will be assigned to groups.

**Final Paper** (15%): Present a proposal for a research project addressing a sustainability management issue. The presentation includes the working title of your thesis and a brief statement of the specific contributions to academic knowledge, to real-world problem solving and to the SDGs that you anticipate making through your doctoral research. Define the major focus of your work (background, rationale, research questions, and expected results) and the main bodies of literature and sub-areas that you will use for your research. Support your arguments with academic references. Length: 10 pages without references, 1.5 lines.

All presentations and papers have to be submitted through the respective dropbox.

**Summary of ‘due dates’:**

* **Video Assignment:** September 15, 11:55 pm
* **Reflection papers:** Paper 1 due on September 19 (11:59 pm in the Reflection Paper Dropbox), paper 2 due on October 3 (11:59 pm in the Reflection Paper Dropbox), paper 3 due on October 24 (11:59 pm in the Reflection Paper Dropbox), paper 4 due on November 7, (11:59 pm in the Reflection Paper Dropbox)
* **Topic presentations:** Due dates for the respective topic presentations are listed on the course website
* **SDG Consulting Project:** November 26, 11:59 pm in the Group Assignment: How to achieve the SDGs dropbox.
* **Final paper:** Due on December 5, 11:59 pm in the Final Paper Dropbox.

**Academic Integrity:** To maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. http://www.uwaterloo.ca/academicintegrity/. Students who are unsure what constitutes an academic offence are requested to visit the on-line tutorial at: http://www.lib.uwaterloo.ca/ait/

**Research Ethics:** Please also note that the ‘University of Waterloo requires all research conducted by its students, staff, and faculty which involves humans as participants to undergo prior ethics review and clearance through the Director, Office of Human Research and Animal Care (Office). The ethics review and clearance processes are intended to ensure that projects comply with the Office’s Guidelines for Research with Human Participants (Guidelines) as well as those of provincial and federal agencies, and that the safety, rights and welfare of participants are adequately protected. The Guidelines inform researchers about ethical issues and procedures which are of concern when conducting research with humans (e.g. confidentiality, risks and benefits, informed consent process, etc.)’ (http://www.research.uwaterloo.ca/ethics/human/). Recognise, however, that students are instructed NOT to contact any ‘outside organisations’ to complete their written assignments for this course.

**Note for students with disabilities:** The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

**Religious Observances:** Please inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt, please contact your Undergraduate Advisor for details.

**Discipline*:*** A student is expected to know what constitutes academic integrity, to avoid committing academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties, check Guidelines for Assessment of Penalties, http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm

**Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals). See: http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

**Consequences of Academic Offences:** ENV students are strongly encouraged to review the material provided by the university’s Academic Integrity office (see: http://uwaterloo.ca/academicintegrity/Students/index.html).

**Course readings:**

All readings can be acquired and downloaded through the library, through the course website, through course reserves, or are available in the internet. Please become familiar with the use of University of Waterloo’s library. The readings include the comprehensive examination reading list. The comprehensive examination reading list is available on the course website.

# Course overview

# Module 1: What are we doing here or what is a PhD?

* Introduction to the programme
* Why are you in the SUSM PhD programme?
* Introduction to the course
* What is a PhD?

# Module 2: Academic Publishing

* How to write academic publications?
* Quality criteria for academic publications
* Academic databases

# Module 3: Sustainability

## Lecture Content

* Theoretical concepts of sustainability and sustainable development: General approaches, The Brundtland Definition of Sustainable Development and its operationalization
* Weak vs. strong sustainability

## Topic Presentation:

* **Topic presentation (Sep 25):** Describe the different concepts of sustainability and sustainable development

## Core readings

Ayres, R. U., van den Bergh, J.C.J.M., & Gowdy, J. M. (2001). Strong versus weak sustainability: Economics, natural sciences, and consilience. *Environmental Ethics, 23*, 155-168.

Bond, A. J., Morrison-Saunders, A., & Pope, J. (2012). Sustainability assessment: the state of the art. *Impact Assessment and Project Appraisal, 30*(1), 53-62.

Brundtland, G. H. (1987). *Our Common Future*. Oxford, NY: Oxford University Press.

Daly, H. E., & Farley, J. (2011). *Ecological economics: principles and applications*. (Part I). Washington, DC: Island press.

Dietz, S., & Neumayer, E. (2007). Weak and strong sustainability in the SEEA: Concepts and measurement. *Ecological Economics, 61*(4), 617-626. doi: <http://dx.doi.org/10.1016/j.ecolecon.2006.09.007>

Downing, A. S., Chang, M., Kuiper, J. J., Campenni, M., Häyhä, T., Cornell, S., . . . Mooij, W. (2020). Learning from generations of sustainability concepts. *Environmental Research Letters*. doi:10.1088/1748-9326/ab7766

Gibson, R. B. (2006). Beyond the Pillars: Sustainability Assessment as a Framework for Effective Integration of Social, Economic and Ecological Considerations in Significant Decision-Making. *Journal of Environmental Assessment Policy and Management, 8*(3), 259–280.

Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). What is sustainable development? *Environment: Science and Policy for Sustainable Development, 47*(3), 8-21.

Martinez-Alier, J., Temper, L., Del Bene, D., & Scheidel, A. (2016). Is there a global environmental justice movement? *The Journal of Peasant Studies, 43*(3), 731-755. doi:10.1080/03066150.2016.1141198

Nilsson, M., Griggs, D., & Visbeck, M. (2016). Policy: map the interactions between Sustainable Development Goals. *Nature News, 534*(7607), 320.

Williams, A., Kennedy, S., Philipp, F., & Whiteman, G. (2017). Systems thinking: A review of sustainability management research. *Journal of Cleaner Production, 148*, 866-881. doi:https://doi.org/10.1016/j.jclepro.2017.02.002

## Additional Readings

Elkington, J. (1998). *Cannibals with forks*. Gabriola Island, BC: New Society Publishers.

Emerson, J. (2003). The Blended Value Proposition: Integrating social and financial returns. *California Management Review, 45*, 35-51.

Faucheux, S., & Nicolai, I. (2003). From sustainable development to corporate social responsibility: An application to the European aluminum sector. *Int. J. Sustainable Development, 6*(2), 155-169.

Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine, 33*, 122-126.

Gibbs, D. C., Longhurst, J., & Braithwaite, C. (1998). Struggling with sustainability: weak and strong interpretations of sustainable development within local authority policy. *Environment and Planning, 30*, 1351-1365.

Hacking, T., & Guthrie, P. (2008). A framework for clarifying the meaning of Triple Bottom-Line, Integrated, and Sustainability Assessment. *Environmental Impact Assessment Review, 28*(2–3), 73-89. doi: 10.1016/j.eiar.2007.03.002

Harlow, J., Golub, A., & Allenby, B. (2011). A Review of Utopian Themes in Sustainable Development Discourse. *Sustainable Development*, n/a-n/a. doi: 10.1002/sd.522*8*, 103-108.

Porter, M. E., & Kramer, M. R. (2011). Creating Shared Value. *Harvard Business Review, 89*(1/2), 62-77.

United Nations. (2012). The Future We Want (pp. 19). Rio de Janeiro: United Nations. http://www.un.org/en/sustainablefuture/

Vanclay, F. (2004). The Triple Bottom Line and Impact Assessment: How do TBL, EIA, SIA, SEA and EMS relate to each other?. *Journal of Environmental Assessment Policy & Management, 6*(3), 265-288.

# Module 4: The Sustainable Development Goals (SDG)

## Lecture Content

* The Sustainable Development Goals

## Topic Presentation:

* Are the SDGs able to achieve sustainable development or are they a political buzz?

## Core Readings

Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P., . . . Noble, I. (2013). Policy: Sustainable development goals for people and planet. *Nature, 495*(7441), 305.

Sachs, J. D. (2012). From millennium development goals to sustainable development goals. *The Lancet, 379*(9832), 2206-2211.

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., . . . O’Connell, D. (2017). Integration: the key to implementing the Sustainable Development Goals. *Sustainability Science, 12*(6), 911-919. doi:10.1007/s11625-016-0383-3

United Nations. (2015). Transforming our world: the 2030 agenda for sustainable development (U. Nations Ed.). New York, NY: United Nations.

United Nations. (2018). Global indicator framework for the Sustainable Development Goals. New York: United Nations.

## Additional Readings

Agarwal, B. (2018). Gender equality, food security and the sustainable development goals. *Current opinion in environmental sustainability, 34*, 26-32.

Ali, M. M., Hossain, M. K., Chowdhury, A. A., & Nedelea, A. M. (2017 ). Sustainable Development Goals (SDGS): 1 and 5 – Complementary Towards Fulfillment OF Goals Through BNF Grant: An Analysis Among the Beneficiaries. *Ecoforum, 7*(2(15)), 1-13.

Avrampou, A., Skouloudis, A., Iliopoulos, G., & Khan, N. (2019). Advancing the Sustainable Development Goals: Evidence from leading European banks. *Sustainable Development, 27*(4), 743-757. doi:10.1002/sd.1938

Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: An enabling role for accounting research. *Accounting, Auditing & Accountability Journal, 31*(1), 2-24. doi:10.1108/AAAJ-05-2017-2929

Dawes, J. H. P. (2020). Are the Sustainable Development Goals self-consistent and mutually achievable? *Sustainable Development, 28*(1), 101-117. doi:10.1002/sd.1975

ElAlfy, A., Darwish, K. M., & Weber, O. (2020). Corporations and sustainable development goals communication on social media: Corporate social responsibility or just another buzzword? *Sustainable Development, n/a*(n/a). doi:10.1002/sd.2095

Grainger-Brown, J., & Malekpour, S. (2019). Implementing the sustainable development goals: a review of strategic tools and frameworks available to organisations. *Sustainability, 11*(5), 1381.

# Module 5: The Economy and Sustainable Development

## Lecture Content

* **Topic presentation:** Economy and sustainable development: How do they fit?
* Economic approaches of sustainable development
* Economic development, economic growth

## Core Readings

Allen, R. C. (2011). *Global economic history: a very short introduction* (Vol. 282). Oxford, UK: Oxford University Press.

Binswanger, M. (2001). Technological progress and sustainable development: what about the rebound effect? *Ecological Economics, 36*(1), 119-132. doi:https://doi.org/10.1016/S0921-8009(00)00214-7

Coase, R. H. (1960). The problem of social cost. *Journal of law and Economics, 3*, 1-44.

Costanza, R. (1989). What is ecological economics? *Ecological Economics, 1*(1), 1-7. doi: http://dx.doi.org/10.1016/0921-8009(89)90020-7

Costanza, R., D’Arge, R., De Groot, R., Farber, S. and others (1997)*.* The Value of the World’s Ecosystem Services and Natural Capital. *Nature*. Vol. 387, p. 253-260.

Daily, G. C., Söderqvist, T., Aniyar, S., Arrow, K., Dasgupta, P., Ehrlich, P. R., ... & Walker, B. (2000). The value of nature and the nature of value. *Science (Washington)*, *289*(5478), 395-396.

Dietz, T., Ostrom, E., & Stern, P. C. (2003). The struggle to govern the commons. *Science, 302*(5652), 1907-1912.

Goulder, L. H., & Stavins, R. N. (2002). Discounting: an eye on the future. *Nature*, *419*(6908), 673-674.

Hunt, C., & Weber, O. (2018). Fossil fuel divestment strategies: Financial and carbon related consequences. *Organization & Environment*.

Jackson, T. (2017). *Prosperity wKithout growth: foundations for the economy of tomorrow*: Taylor & Francis.

Kinzig, A.P., Perrings, C. Chapin, F.S. III, Polasky, S., Smith, V.K., Tilman, D., and Turner, B.L. II (2011). Paying for Ecosystem Services - Promise and Peril. *Science*. Vol. 334 (6056). Pp. 603-604.

Krausmann, F., Fischer-Kowalski, M., Schandl, H., & Eisenmenger, N. (2008). The global socio-metabolic transition: past and present metabolic profiles and their future trajectories. *Journal of Industrial Ecology, 12,* 637-656

Ostrom, E. (2015). *Governing the commons*: Cambridge university press.

Pearce, D., Groom, B., Hepburn, C., & Koundouri, P. (2003). Valuing the future. *World economics, 4*(2), 121-141.

Schandl, H., Hatfield-Dodds, S., Wiedmann, T., Geschke, A., Cai, Y., West, J., . . . Owen, A. (2016). Decoupling global environmental pressure and economic growth: scenarios for energy use, materials use and carbon emissions. *Journal of Cleaner Production, 132*, 45-56. doi:10.1016/j.jclepro.2015.06.100

Tietenberg and Lewis (2015). Environmental & natural resource economics (10th ed., Chapters 1-5, 16, 20, 21). Pearson.

Wackernagel, M., Onisto, L., Bello, P., Callejas Linares, A., Susana López Falfán, I., Méndez Garcı́a, J., . . . Guadalupe Suárez Guerrero, M. (1999). National natural capital accounting with the ecological footprint concept. *Ecological Economics, 29*(3), 375-390. doi: <http://dx.doi.org/10.1016/S0921-8009(98)90063-5>

## Additional Readings:

Barbier, E. (2011). The policy challenges for green economy and sustainable economic development. *Natural Resources Forum, 35*(3), 233-245. doi: 10.1111/j.1477-8947.2011.01397.x

Costanza, R. (1991). *Ecological economics: the science and management of sustainability*. New York: Columbia University Press.

Daly, H. E. (1990). Toward some operational principles of sustainable development. Ecological Economics, 2(1), 1-6. doi: 10.1016/0921-8009(90)90010-r

Lovins, A. B., Lovins, L. H., & Hawken, P. (2007). A Road Map for Natural Capitalism. [Article]. *Harvard Business Review, 85*(7/8), 172-183.

Robert, K. H., Schmidt-Bleek, B., de Larderel, J. A., Basile, G., Jansen, J. L., Kuehr, R., . . . Wackernagel, M. (2002). Strategic sustainable development - selection, design and synergies of applied tools. *Journal of Cleaner Production, 10*(3), 197-214.

Singh, S.J. & Eisenmenger, N. (2011). How unequal is international trade? A biophysical perspective. Journal für Entwicklungspolitik (JEP) [Austrian Journal for Development Studies]. Special issue on Bridging the Social and the Natural in Development Studies. Guest editors: Singh, S.J. & Köhler, B. Vol. 26(4). Mattersburger Kreis: Vienna (see course website)

TEEB (2010). *The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB. (for a link see course website “Downloadable Content”)*

UNEP (2011). Introduction. Setting the Stage for a Green Economy Transition. *(for a link see course website “Downloadable Content”)*

Unmüßig, B., Sachs, W., Fatheuer, T. (2012). *Critique of the Green Economy.  Toward Social and Environmental Equity*. Heinrich Böll Foundation, Publication Series on Ecology, Vol. 22 (English edition) *(for a link see course website “Downloadable Content”)*

Victor, P.A. & Jackson, T. (2012). A Commentary on UNEP’s Green Economy Scenario. *Ecological Economics*, Vol. 77, pp. 11-15.

Wackernagel, M., & Rees, W. E. (1997). Perceptual and structural barriers to investing in natural capital: Economics from an ecological footprint perspective. *Ecological Economics, 20*(1), 3-24. doi: http://dx.doi.org/10.1016/S0921-8009(96)00077-8

Wiedmann, T., Schandl, H., Lenzen, M., Moran, D., Suh, S., West, J. & Kanemoto, K. (2013). The material footprint of nations. PNAS Early Edition: [www.pnas.org/cgi/doi/10.1073/pnas.1220362110](http://www.pnas.org/cgi/doi/10.1073/pnas.1220362110)

# Module 6: Sustainable Business and Management

## Lecture Content:

* **Topic presentation:** Business and Sustainable Development: Contradictory or consistent?
* Management: Introduction, the management process (planning, organizing, motivating, controlling ­supply chain management)
* Management: business management approaches and theories
* Social enterprise and social innovation

## Core Readings

Bansal, P., & Song, H. C. (2016). Similar but not the same: Differentiating corporate responsibility from sustainability. *Academy of Management Annals*, annals-2015.

van der Ven, H., Rothacker, C., & Cashore, B. (2018). Do eco-labels prevent deforestation? Lessons from non-state market driven governance in the soy, palm oil, and cocoa sectors. *Global Environmental Change, 52*, 141-151. doi: 10.1016/j.gloenvcha.2018.07.002

Burch, S., Shaw, A., Dale, A., & Robinson, J. (2014). Triggering transformative change: a development path approach to climate change response in communities. *Climate Policy, 14*(4), 467-487. doi:10.1080/14693062.2014.876342

Carroll, A. B. (1999). Corporate Social Responsibility - Evolution of a Definitional Construct. *Business & Society, 38*(3), 268-295.

Collier, P. (2008). The bottom billion (Vol. 129). Oxford: Oxford University Press.

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review, 54*(1), 64-87.

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48*(2), 147-160.

Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *The Academy of Management Review, 20*(1), 65-91. doi: 10.2307/258887

Elkington, J. (1998). *Cannibals with forks*. Gabriola Island, BC: New Society Publishers.

Friedman, M. (1970). The social responsibility of business is to increase its profits. The New York Times Magazine, 33, 122-126.

Gladwin, T. N., Kennelly, J. J., & Krause, T.-S. (1995). Shifting Paradigms for Sustainable Development: Implications for Management Theory and Research. *The Academy of Management Review, 20*(4), 874-907.

Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability…and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society, 35*(1), 47-62. doi: 10.1016/j.aos.2009.04.006

Hacking, T., & Guthrie, P. (2008). A framework for clarifying the meaning of Triple Bottom-Line, Integrated, and Sustainability Assessment. *Environmental Impact Assessment Review, 28*(2–3), 73-89. doi: 10.1016/j.eiar.2007.03.002

Hart, S. L., & Christensen, C. M. (2002). The great leap. *Sloan Management Review, 44*(1), 51-56.

Isil, O., & Hernke, M. T. (2017). The Triple Bottom Line: A Critical Review from a Transdisciplinary Perspective. *Business Strategy and the Environment, 26*(8), 1235-1251. doi:10.1002/bse.1982

Karnani, A. (2007). The Mirage of Marketing to the Bottom of the Pyramid: How the Private Sector can help Alleviate Poverty. *California Management Review, 49*(4), 90-111.

Kotler, P., & Zaltman, G. (1971). Social Marketing: An Approach to Planned Social Change. *Journal of Marketing, 35*(3), 3-12. doi:10.1177/002224297103500302

Lovins, A. B., Lovins, L. H., & Hawken, P. (2007). A Road Map for Natural Capitalism. *Harvard Business Review, 85*(7/8), 172-183.

Matten, D., & Moon, J. (2005). Corporate Social Responsibility. *Journal of Business Ethics, 54*(4), 323-337. doi: 10.1007/s10551-004-1822-0

Mintzberg, H., & Westley, F. (2001). Decision Making: It's Not What You Think. *MIT Sloan Management Review, 42*(3), 89-93.

Morrow, D., & Rondinelli, D. (2002). Adopting Corporate Environmental Management Systems:: Motivations and Results of ISO 14001 and EMAS Certification. *European Management Journal, 20*(2), 159-171. doi:10.1016/S0263-2373(02)00026-9

Porter, M. E. (1991). America's Green Strategy. *Scientific American, April*, 168.

Porter, M. E., & Kramer, M. R. (2006). Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review, 84*(12), 78-92.

Porter, M. E., & Kramer, M. R. (2011). Creating Shared Value. *Harvard Business Review, 89*(1/2), 62-77.

Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal, 40*(3), 534-559.

Seyfang, G. (2009). The new economics of sustainable consumption. Minería transnacional, narrativas del desarrollo y resistencias sociales. Buenos Aires: Biblos.

Starik, M., & Kanashiro, P. (2013). Toward a Theory of Sustainability Management:Uncovering and Integrating the Nearly Obvious. *Organization & Environment, 26*(1), 7-30. doi:10.1177/1086026612474958

Weber, O., & Feltmate, B. (2016). Sustainable Banking and Finance: Managing the Social and Environmental Impact of Financial Institutions. Toronto, ON: University of Toronto Press (Chapters 1 and 9).

Wright, C., & Nyberg, D. (2017). An inconvenient truth: How organizations translate climate change into business as usual. *Academy of Management Journal, 60*(5), 1633-1661.

## Additional Readings

Beu, D., & Buckley, M. R. (2001). The Hypothesized Relationship Between Accountability and Ethical Behavior. *Journal of Business Ethics, 34*(1), 57-73. doi: 10.1023/a:1011957832141

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How Well Do Social Ratings Actually Measure Corporate Social Responsibility? *Journal of Economics & Management Strategy, 18*(1), 125-169. doi: 10.1111/j.1530-9134.2009.00210.x

Chih, H.-L., Chih, H.-H., & Chen, T.-Y. (2010). On the Determinants of Corporate Social Responsibility: International Evidence on the Financial Industry. *Journal of Business Ethics, 93*(1), 115-135. doi:10.1007/s10551-009-0186-x

Dahlsrud, A. (2008). How Corporate Social Responsibility is Defined: an Analysis of 37 Definitions. *Corp. Soc. Responsib. Environ. Mgmt., 15*, 1-13. doi: 10.1002/csr.132

Freeman, R. E. (1984). *Strategic Management: A stakeholder approach*. Englewood Cliffs, NJ: Prentice-Hall. (p. 1-30)

Freeman, R. E. (1994). The Politics of Stakeholder Theory: Some Future Directions. *Business Ethics Quarterly, 4*(4), 409-421. doi: 10.2307/3857340

Husted, B. W., & Allen, D. B. (2006). Corporate Social Responsibility in the Multinational Enterprise: Strategic and Institutional Approaches. *Journal of International Business Studies, 37*(6), 838-849.

Magretta, J. 2012. What management is: How it works and why it’s everyone’s business (2nd Edition; pp. 19-42). New York, NY: Free Press. First Chapter: Value creation: From the outside in (downloadable on the course website).

Mintzberg, H. (1971). Managerial work: Analysis from Observation. *Management Science, 18*(2), B-97-B-110.

Moon, J. (2007). The contribution of corporate social responsibility to sustainable development. *Sustainable Development, 15*(5), 296-306. doi: 10.1002/sd.346

Peloza, J. (2009). The Challenge of Measuring Financial Impacts From Investments in Corporate Social Performance. *Journal of Management, 35*(6), 1518–1541. doi: 10.1177/0149206309335188

Robbins, S.P., DeCenzo, D.A., Coulter, M., & Anderson, I. 2014. Introduction to management and organizations. In Fundamentals of management (7th Cdn Ed.; pp. 2-15). Don Mills, ON: Pearson Education Canada (downloadable on the course website).

# Module 7: Industrial Ecology

## Lecture Content

* **Topic presentation:** Why should we care about materials?
* What is industrial ecology?
* What is the problem?
* Life cycle assessment

## Core Readings

Allwood, J. M., Ashby, M. F., Gutowski, T. G., & Worrell, E. (2011). Material efficiency: A white paper. Resources, Conservation and Recycling, 55(3), 362-381.

Chertow, M. R. (2000). The IPAT Equation and Its Variants. *Journal of Industrial Ecology, 4*(4), 13-29. doi:10.1162/10881980052541927

Costa, D., Quinteiro, P., & Dias, A. C. (2019). A systematic review of life cycle sustainability assessment: Current state, methodological challenges, and implementation issues. *Science of The Total Environment, 686*, 774-787. doi:https://doi.org/10.1016/j.scitotenv.2019.05.435

Finnveden, G., Hauschild, M. Z., Ekvall, T., Guinée, J., Heijungs, R., Hellweg, S., ... & Suh, S. (2009). Recent developments in life cycle assessment. Journal of environmental management, 91(1), 1-21.

Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production, 114*, 11-32. doi:10.1016/j.jclepro.2015.09.007

Graedel and Allenby (2003). Industrial ecology (2nd ed., Chapters 1, 2, 18, 19, 22). Pearson.

Graedel, T. E., Harper, E. M., Nassar, N. T., & Reck, B. K. (2015). On the materials basis of modern society. *Proceedings of the National Academy of Sciences, 112*(20), 6295-6300.

Hawkins, T. R., Singh, B., Majeau‐Bettez, G., & Strømman, A. H. (2013). Comparative environmental life cycle assessment of conventional and electric vehicles. Journal of Industrial Ecology, 17(1), 53-64.

Hellweg, S., & Mila i Canals, L. (2014). Emerging approaches, challenges and opportunities in life cycle assessment. Science, 344(6188), 1109-1113.

Hertwich, E. G. (2005). Consumption and the Rebound Effect: An Industrial Ecology Perspective. *Journal of Industrial Ecology, 9*(1‐2), 85-98. doi:10.1162/1088198054084635

Hertwich, E. G. (2011). The life cycle environmental impacts of consumption. *Economic Systems Research, 23*(1), 27-47. doi:10.1080/09535314.2010.536905

Ivanova, D., Stadler, K., Steen-Olsen, K., Wood, R., Vita, G., Tukker, A., & Hertwich, E. G. (2016). Environmental Impact Assessment of Household Consumption. *Journal of Industrial Ecology, 20*(3), 526-536. doi:10.1111/jiec.12371

Kleijn, R., 2000. IN = OUT: The trivial central paradigm of MFA? Journal of Industrial Ecology 3, 8–10.

McDonough, W., & Braungart, M. (2010). *Cradle to cradle: Remaking the way we make things*. New York: North point press.

O’Brien, M., Doig, A., & Clift, R. (1996). Social and environmental life cycle assessment (SELCA). The International Journal of Life Cycle Assessment, 1(4), 231-237.

Tukker, A., & Jansen, B. (2006). Environmental impacts of products: A detailed review of studies. Journal of Industrial Ecology, 10(3), 159-182.

# Module 8: Earth Systems, Energy, and Climate Change

## Lecture Content

* **Topic presentation:** Why do we need to care for climate, water, biodiversity, and energy?

## Core Readings

Beck, S., & Mahony, M. (2018). The IPCC and the new map of science and politics. *Wiley Interdisciplinary Reviews: Climate Change, 9*(6), e547. doi:10.1002/wcc.547

Burke, M., Craxton, M., Kolstad, C. D., Onda, C., Allcott, H., Baker, E., . . . Tol, R. S. J. (2016). Opportunities for advances in climate change economics. *Science, 352*(6283), 292-293. doi:10.1126/science.aad9634

Chan, S., Boran, I., van Asselt, H., Iacobuta, G., Niles, N., Rietig, K., . . . Wambugu, G. (2019). Promises and risks of nonstate action in climate and sustainability governance. *Wiley Interdisciplinary Reviews: Climate Change, 10*(3), e572. doi:10.1002/wcc.572

Devezas, T., LePoire, D., Matias, J. C. O., & Silva, A. M. P. (2008). Energy scenarios: Toward a new energy paradigm. *Futures, 40*(1), 1-16. doi:http://dx.doi.org/10.1016/j.futures.2007.06.005

Figueres, C., Schellnhuber, H. J., Whiteman, G., Rockström, J., Hobley, A., & Rahmstorf, S. (2017). Three years to safeguard our climate. *Nature, 546*(7660), 593-595.

Hsiang, S., Kopp, R., Jina, A., Rising, J., Delgado, M., Mohan, S., . . . Houser, T. (2017). Estimating economic damage from climate change in the United States. *Science, 356*(6345), 1362-1369. doi:10.1126/science.aal4369

Kunreuther, H. C., Michel-Kerjan, E., & Ranger, N. (2013). Insuring future climate catastrophes. *Climatic Change, 118*(2), 339-354.

Lewis, Simon L. and Mark A. Maslin, 2015. "Defining the Anthropocene" Nature. Vol. 519, pp. 171-80

MacKenzie, D. (2009). Making things the same: Gases, emission rights and the politics of carbon markets. *Accounting, Organizations and Society, 34*(3), 440-455. doi:https://doi.org/10.1016/j.aos.2008.02.004

Norde, W. (1997). Energy and entropy: a thermodynamic approach to sustainability. *The Environmentalist*, *17*, 57-62.

Smil, V. (2017). *Energy and civilization: a history*. Boston, MA: MIT Press.

Spaargaren, G., & Mol, A. P. J. (2013). Carbon flows, carbon markets, and low-carbon lifestyles:reflecting on the role of markets in climategovernance. *Environmental Politics, 22*(1), 174-193. doi:10.1080/09644016.2013.755840

Steffen, W., et al. 2015. Planetary Boundaries: Guiding Human Development on a Changing Planet. Science 15 January, DOI 10.1126/science.1259855.

Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., . . . Schellnhuber, H. J. (2018). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences, 115*(33), 8252-8259. doi:10.1073/pnas.1810141115

Stephan, B., & Paterson, M. (2012). The politics of carbon markets: an introduction. *Environmental Politics, 21*(4), 545-562. doi:10.1080/09644016.2012.688353

Tol, R. (2016). The impacts of climate change according to the IPCC. *Climate Change Economics, 07*(01), 1640004. doi:10.1142/S2010007816400042

Vörösmarty, C. J., McIntyre, P. B., Gessner, M. O., Dudgeon, D., Prusevich, A., Green, P., . . . Davies, P. M. (2010). Global threats to human water security and river biodiversity. *Nature, 467*, 555. doi:10.1038/nature09440

von Bertalanffy, L. (1972). The History and Status of General Systems Theory. *Academy of Management Journal, 15*(4), 407-426. doi:10.5465/255139

Xu, Y., & Ramanathan, V. (2017). Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes. *Proceedings of the National Academy of Sciences, 114*(39), 10315-10323. doi:10.1073/pnas.1618481114

# Module 9: Regional Economic Development and Innovation

## Lecture Content

* **Topic presentation**: What is the connection between regional economic development and sustainable development?

## Core Readings

Christopherson, S. (2011). Green dreams in a cold light. In A. Pike, A. Rodriguez-Pose, J. Tomaney, *Handbook of Local and Regional Development*, 371-380.

Gibbs, D., & O’Neill, K. (2017). Future green economies and regional development: a research agenda. *Regional Studies*, *51*(1), 161-173.

Hammer, J., & Pivo, G. (2017). The triple bottom line and sustainable economic development theory and practice. *Economic Development Quarterly*, *31*(1), 25-36.

Healy, A., & Morgan, K. (2012). Spaces of innovation: learning, proximity and the ecological turn. *Regional Studies*, *46*(8), 1041-1053.

Hudson, R. (2007). Region and place: rethinking regional development in the context of global environmental change. *Progress in human geography*, *31*(6), 827-836.

Morgan, K. J. (2011). The green state: sustainability and the power of purchase. In A. Pike, A. Rodriguez-Pose, J. Tomaney, *Handbook of local and regional development*. London: Routledge.

Portney, K. E. (2013). Local sustainability policies and programs as economic development: Is the new economic development sustainable development?. *Cityscape*, 45-62.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*(2), 155-169. doi:10.1007/bf01405730

Truffer, B., & Coenen, L. (2012). Environmental innovation and sustainability transitions in regional studies. *Regional Studies*, *46*(1), 1-21.

# Module 10: Ecology, Natural Systems, and Resilience

## Lecture Content

* **Topic presentation**: What do we need to know about ecology, natural systems and resilience to conduct sustainability management research?

## Core readings

Folke, C. (2006). Resilience: The emergence of a perspective for social–ecological systems analyses. *Global Environmental Change, 16*(3), 253-267.

Haberl, H., Fischer-Kowalski, M., Krausmann, F., & Winiwarter, V. (Eds.). (2016). *Social ecology*. (Part I). Cham, Switzerland: Springer International Publishing.

Odum, E. P., Odum, H. T., & Andrews, J. (1971). *Fundamentals of ecology* (Vol. 3). Philadelphia: Saunders Philadelphia.

Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., . . . Foley, J. A. (2009). A safe operating space for humanity. *Nature, 461*(7263), 472-475.

Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. (2004). Resilience, adaptability and transformability in social--ecological systems. *Ecology and society, 9*(2), 5.

Westley, F., Olsson, P., Folke, C., Homer-Dixon, T., Vredenburg, H., Loorbach, D., . . . van der Leeuw, S. (2011). Tipping Toward Sustainability: Emerging Pathways of Transformation. *AMBIO: A Journal of the Human Environment, 40*(7), 762-780. doi: 10.1007/s13280-011-0186-9

# Module 11: SDGs revisited: What can academic researchers contribute to the SDGs

## Lecture Content

* The SDSN network (external presentation by Jon Beale, Manager Sustainable Development Solutions Network (SDSN) Canada
* Group work: SDG consulting: Develop a concept to address the SDGs for an industrialized country (such as Canada), an emerging country (such as China, India or Mexico), and a developing country (such as Rwanda or Yemen) based on your personal knowledge and the knowledge you acquired this term.

# Module 12

## Lecture Content

* Final Paper