SGO2302
Spring2024
Exam Sensor Guidance

The two questions for the SGO2302 exam provide the students an opportunity to think laterally and bring together different aspects of what they learned in the **SGO2302: Environment and Society** course. There is no single "correct" answer, but we expect some essays will be more thorough and well thought through than others and include more references to the course literature.

Both questions ask the students to take an integrative approach to the topic as well as reflect on what such an approach might look like in practice. While creativity in the responses is encouraged, it is important that they answer the core questions.

Students were specifically asked to refer to readings from the course curriculum, which included the Climate and Society textbook. Note that lectures were based on the soon-to-be-published second edition, and the chapters were available on Canvas. They can refer to either the 2019 or 2024 edition. Though no specific number of references to include, the better answers will generally integrate a wider variety of readings, possibly including some recommended readings. However, student can answer the questions adequately with only the main textbook, but we are looking for more depth and details from the readings. It is acceptable to bring in external literature, but students were encouraged to limit this to a minimum and focus on the curriculum. If students mainly reference external literature, this should subtract from their final grade.

Question 1: A Strategy for the Future

This question asks them to think strategically about climate action, with future generations in mind. The background is that the UN decides to create a Ministry for the Future (indicating a greater commitment to addressing climate change and sustainability issues), but that there the director is not yet born. In other words, the deputy and employees' strategies and actions are accountable to the not-yet-here generation(s).

The essay should inform a 5-year strategy plan that addresses several sub-questions

1. **The values that the new Ministry will emphasize, and why they are important.**

   We are looking for mention of values that are likely to be emphasized by future generations, including those that are aligned with Indigenous worldviews. Students may identify important values, such as equity and justice, or emphasize motivations behind values, such as conservation, self-enhancement, openness to change, or self-transcendence. A good answer will discuss how values link to social and cultural norms and beliefs and relate to worldviews and social consciousness. The answers should recognize that Indigenous cultures often emphasize relational or eco-centric values, and thus these may be valued by the ministry's future director.

2. **The two issues that will be prioritized in the strategy document, and why they are important (including in terms of security).**

Much of the class focused on climate change, but biodiversity loss was also emphasized, including its drivers and consequences, including for ecosystem services. However, they may choose social issues such as intersectionality, mental health, climate justice, or focus on urban sustainability, deforestation, regenerative agriculture, sea level rise, or other topics discussed in course readings. They can justify the importance based on lectures and readings, with reference to planetary boundaries, tipping points, SDGs, impacts, including mental health. When discussing why the issue is important for security, they may bring up human security, food security, water security, health security, or housing security.

3. **The measurable results or objectives for ONE of your priorities and three strategies to realize them.**

This is the most substantive part of the question and probably the most challenging because they are asked what they will actually do differently. They should be clear about what needs to shift and how, and to link these to at least two discourses (biophysical, critical, ecocentric, dismissive, and integrative discourses were discussed throughout the course). They may refer to a wide range of objectives and strategies, ranging from reducing vulnerability, adapting, promoting renewable energy, supporting social movements, engaging with transformations. The point is to get them to think very specifically about what needs to change in society and how this can be achieved – and to be aware how these solutions link to different discourses (they may emphasize one discourse and refer to another as either supportive or challenging it). Ideally, they will emphasize integrative approaches that draw together multiple perspectives and appeal to more than one discourse, while addressing the priority area and strategies in a critical manner. Good answers should recognize that the framing of problems influences the types of solutions that are prioritized and emphasize the importance of the social sciences and humanities in informing strategies and enabling transformations to sustainability. They may recognize that a relational approach that recognizes connections between humans and nature, as stressed by many Indigenous cultures. They may also refer to the three spheres of transformation, emphasizing that all of these are important.

4. **A short communication to explain your priorities and strategies to skeptics.**

This is likely to be a short section of the essay that should demonstrate awareness of multiple perspectives and a recognition that scientific information is not enough. Here they should be clear about the need to communicate across different discourses (bringing in the importance of terminology and the role of art). They may demonstrate an awareness of the role of disinformation and misinformation in polarizing debates, and point to ways of transcending this polarization, including by making values more explicit.

5. **Finally, they should reflect on how the Ministry of the Future's Director is likely to evaluate this strategy in 2050.**

In the concluding part of the exam, they should think in terms of how the actions taken today will be evaluated in 2050, especially in terms of what actually shifted or changed, which and whose values were prioritized, and what contributed to a successful or unsuccessful strategy.

Question 2: The Social Dimensions of Greenwashing

This question asks students to think about the rationale for "greenwashing" among companies that are failing or backtracking on their environmental commitments. They are asked to consider the dominant discourses withing these multinational companies and, in particular, to consider how such companies and their employees are likely to understand climate change from a social science perspective.

1. **The discourse(s) that are likely to appeal to (or resonate with) greenwashing companies the most, and why.**

Here they should emphasize the biophysical discourse or the dismissive discourse, and mention the role of technological optimism, including towards adaptation (they may bring in the potential for geoengineering the atmosphere). They may also note that the critical and ecocentric discourses are unlikely to resonate, and explain why justice and equity issues are often ignored.

2. **The values, worldviews, and beliefs, including views of nature, are likely to be prominent in such companies, as well as whose interests are prioritized and whose are ignored**

Here they can point to values motived by self-enhancement and achievement, dualistic worldviews that emphasize nature as something separate from humans (and which can be controlled and managed), and beliefs, e.g., that climate change is not a serious problem, that technologies will eventually address, or that economic growth is essential, at any cost. They should note that the interests of shareholders as owners are prioritized, and that there is little attention to the impacts on the most vulnerable who have done the least to contribute to environmental problems. They should reflect on ignoring future generations as well, assuming they benefit from economic growth or will be able to adapt. The critical discourse's emphasis on equity and justice should be mentioned. It could also be pointed out that not everyone is likely to hold the same values and views within the company and on the board, and that it is possible to find people within companies who are against greenwashing.

3. **In what ways do leaders of "greenwashing" companies understand the social drivers and impacts of climate change? What perspectives on climate impacts and adaptation are missing from their view?**

   They may point out that the leaders of such companies are likely to pay little attention to the social drivers of climate change and instead focus on environmental consequences as an externality to economic growth. Ignoring the Jevons paradox, they are likely to assume that greater wealth and higher GDP will lead to technological innovations and lower environmental impacts. They are unlikely to look at the root or underlying drivers of environmental problems, as articulated by the critical discourse (inequality, intersectionality, social vulnerability, etc.). Leaders may ignore the systemic perspectives on climate change and assume that they and their investments can adapt. They may also ignore the non-linear nature of climate impacts and the limits to adaptation. They students may point out that the dismissive discourse includes not only

those who are skeptical to the science of climate change, but also those who accept it is changing but dismiss the human causes, or downplay its significance relative to other issues (without seeing the interlinkages between issues.

4. **Potential option or strategy that could transform corporate greenwashing and their justification.**

   This is the “what to do about it” section of the essay. While activists can call out the companies for hypocrisy or inaction, the students may recommend a range of other strategies, such as communication strategies that appeal to their emotions, arts-based strategies, transformative learning, or structural issues such as reporting requirements and penalties.

SGO 2302 Lectures and Readings

Textbook: Leichenko, R. M. and O'Brien, K. 2019. *Climate and Society: Transforming the Future*. Cambridge: Polity Press. (250 pages)

Lectures will be based on:

Leichenko, R. M. and O'Brien, K. 2024. *Climate and Society: Transforming the Future*. Second Edition. Cambridge: Polity Press. (Pre-copy edited manuscript available on Canvas)

Lecture 1 - The Social Challenge of Environmental Change (24 January)

- Leichenko and O'Brien 2019 (Ch. 1)
- Davis, J., Moulton, A.A., Van Sant, L., Williams, B., 2019. Anthropocene, Capitalocene, … Plantationocene?: A Manifesto for Ecological Justice in an Age of Global Crises. *Geography Compass* 13(5), e12438.
- Rockström, Johan et al. "Safe and Just Earth System Boundaries." Nature 619, no. 7968 (July 2023): 102–11. https://doi.org/10.1038/s41586-023-06083-8.
- Sultana, F., 2022a. Critical climate justice. The Geographical Journal 188(1): 118–124.

❖ *Recommended*: Solnit, R. (2023). "Difficult is Not the Same as Impossible." In Solnit, R. and Lutunatabua, T.Y. (eds): *Not Too Late: Changing the Climate Story from Despair to Possibility*. Chicago: Haymarket Books.

Lecture 2 - Climate Change: Is Scientific Knowledge Enough? (31 January)

- Leichenko and O'Brien 2019 (Ch. 2)
- Armstrong McKay, D.I., et al., 2022. Exceeding 1.5°C global warming could trigger multiple climate tipping points. *Science* 377(6611): eabn7950.
- Lewandowsky, S., 2021. Climate Change Disinformation and How to Combat It. Annual Review of Public Health 42(1): 1–21.
- Moser, S.C. and Dilling, L., 2011. Communicating climate change: Closing the science–action gap. The Oxford Handbook of Climate Change and Society. Oxford: Oxford University Press, 161–74.

❖ *Recommended*: Hassol, S.J., 2023. The Right Words Are Crucial to Solving Climate Change. Scientific American.

Lecture 3 - Discourses and Frames of Environmental Problems and Solutions (7 February)

Leichenko and O'Brien 2019 (Ch. 3)

- O'Brien, K. 2018. Is the 1.5°C Target Possible? Exploring the Dynamics of Social Transformations. COSUST 31: 153-160 Available online (7 pages)
- Dryzek, J. 2013. Making Sense of Earth's Politics: A Discourse Approach. Chapter 1 (Pages 3-23) in Dryzek, John. 2013. *The Politics of the Earth: Environmental Discourses* Oxford: Oxford University Press. (21 pages)
- Rice, J., Long, J., and Levenda, A., 2022. Against climate apartheid: Confronting the persistent legacies of expendability for climate justice. Environment and Planning E: Nature and Space 5(2): 625–645.

❖ *Recommended*: Wildcat, D.R., 2009. *Red alert! saving the planet with indigenous knowledge*. Golden, CO: Fulcrum. Chapter 2, The Truth is Not Inconvenient – It is Deadly.

Lecture 4 - The Role of Worldviews, Beliefs, and Emotions (14 February)

- Leichenko and O'Brien 2019 (Ch. 4),
- Bentz, J. 2020. Learning about Climate Change in, with and through Art. *Climatic Change* 162: 1595–1612.
- Schlitz, M. M., Vieten, C., and Miller, E. M., 2010. Worldview transformation and the development of social consciousness. *Journal of Consciousness Studies* 17(7–8): 18–36.
- Hamilton, J., 2022. "Alchemizing Sorrow Into Deep Determination": Emotional Reflexivity and Climate Change Engagement. *Frontiers in Climate* 4: 786631.

❖ *Recommended*: Riedy, C. 2019. The Witnesses. Pages 1- 15 in K. O'Brien et al (eds) Our Entangled Future: Stories to Empower Quantum Social Change. (15 pages) E-book.

Lecture 5 - The Social Drivers of Environmental Change (28 February)

- Leichenko and O'Brien 2019 (Ch. 5),
- Freire-González, Jaume. 2021. "Governing Jevons' Paradox: Policies and Systemic Alternatives to Avoid the Rebound Effect." Energy Research & Social Science 72: 101893. https://doi.org/10.1016/j.erss.2020.101893.
- Stoddard, I. et al., 2021. Three decades of climate mitigation: Why haven't we bent the global emissions curve? *Annual Review of Environment and Resources* 46(1): 653–689.
- Szigeti, C., Toth, G., & Szabo, D. R. (2017). Decoupling–shifts in ecological footprint intensity of nations in the last decade. Ecological Indicators, 72, 111-117. Available Online (7 pages)

❖ Barros, B., Wilk, R., 2021. The outsized carbon footprints of the super-rich. *Sustainability: Science, Practice and Policy* 17, 316–322.

Lecture 6 - Climate Change and Energy (6 March)

- Leichenko and O'Brien 2019 (Ch. 6),
- Blondeel, M., Bradshaw, M.J., Bridge, G., Kuzemko, C., 2021. The geopolitics of energy system transformation: A review. *Geography Compass* 15, e12580.
- Newell, P.J., Geels, F.W., Sovacool, B.K., 2022. Navigating tensions between rapid and just low-carbon transitions. Environmental Research Letters 17(4): 041006.
- Welsby, D., Price, J., Pye, S., & Ekins, P. (2021). Unextractable fossil fuels in a 1.5 C world. Nature, 597(7875), 230-234. Available online (4 pages)

❖ Timperley, J., 2021. Why fossil fuel subsidies are so hard to kill. Nature 598(7881): 403–405.

Lecture 7 - Biodiversity and Land-use Change (13 March)

- Caro, T., Rowe, Z., Berger, J., Wholey, P., and Dobson, A., 2022. An inconvenient misconception: Climate change is not the principal driver of biodiversity loss. *Conservation Letters* 15(3): e12868.
- Feng, X., et al. 2021. How deregulation, drought and increasing fire impact Amazonian biodiversity. *Nature* 597(7877): 516–521.
- Gosnell, H., 2022. Regenerating soil, regenerating soul: an integral approach to understanding agricultural transformation. *Sustainability Science* 17: 603–620.

❖ *Recommended*: Fraanje, W. and Garnett, T., 2022. Rewilding and its implications for agriculture. *TABLE*. Available at: https://tabledebates.org/building-blocks/rewilding-and-its-implications-agriculture [Accessed September 17, 2023].

Lecture 8 - Climate Change Impacts and Vulnerabilities (20 March)

- Leichenko and O'Brien 2019 (Ch. 7)
- Adger, W.N., Barnett, J., Brown, K., Marshall, N., and O'Brient al., K., 2013. Cultural dimensions of climate change impacts and adaptation. *Nature Climate Change* 3(2): 112–117.
- Allison, E.A., 2015. The spiritual significance of glaciers in an age of climate change. *Wiley Interdisciplinary Reviews: Climate Change* 6(5): 493–508.

- Thomas, K., et al. (2019). Explaining differential vulnerability to climate change: A social science review. *Wiley Interdisciplinary Reviews: Climate Change*, *10*(2), e565. Available Online (18 pages)

- *Recommended*: Eriksen, S.H., 2022. Is my vulnerability so different from yours? A call for compassionate climate change research. *Progress in Human Geography* 46(6): 1279–1297.

Lecture 9 - Climate Change and Security (3 April)

- Leichenko and O'Brien (Chapter 8)
- Galway, L.P., Esquega, E., and Jones-Casey, K., 2022. "Land is everything, land is us": Exploring the connections between climate change, land, and health in Fort William First Nation. *Social Science & Medicine* 294: 114700.
- Kaczan, D.J. and Orgill-Meyer, J., 2020. The impact of climate change on migration: A synthesis of recent empirical insights. *Climatic Change* 158(3-4) 281–300.
- Semenza, J.C., Rocklöv, J., and Ebi, K.L., 2022. Climate change and cascading risks from infectious disease. *Infectious Diseases and* Therapy 11(4): 1371–1390.

❖ Chapron, G., Epstein, Y., and López-Bao, J.V., 2019. A rights revolution for nature. *Science* 363(6434): 1392–1393.

Lecture 10: Adapting to Environmental Change (10 April)

- Leichenko and O'Brien (Ch 9)
- Ajibade, I., 2019. Planned retreat in Global South megacities: Disentangling policy, practice, and environmental justice. *Climatic Change* 157(2): 299–317.
- Eriksen, S.H., Nightingale, A.J., and Eakin, H., 2015. Reframing adaptation: The political nature of climate change adaptation. *Global Environmental Change* 35: 523–533.
- Whyte, K., 2017. Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes* 55(1): 153–162.

❖ *Recommended*: Schipper, E.L.F., 2020. Maladaptation: when adaptation to climate change goes very wrong. *One Earth* 3, 409–414.

Lecture 11: Transforming the Future (17 April)

- Leichenko and O'Brien (Ch. 10)

- Bennett, N.J., Blythe, J., Cisneros-Montemayor, A.M., Singh, G.G., and Sumaila, U.R., 2019. Just transformations to sustainability. Sustainability 11(14): 3881.
- Gram-Hanssen, I., Schafenacker, N., and Bentz, J., 2022. Decolonizing transformations through 'right relations.' Sustainability Science 17(2): 673–685.
- O'Brien, K., et al. 2023. Fractal approaches to scaling transformations to sustainability. *Ambio* 52: 1448-1461.

❖ *Recommended*: Macy, J. and Johnstone, C., 2022. A*ctive Hope: How to Face the Mess We're in with Unexpected Resilience and Creative Power*, revised edn. Novato, CA: New World Library. Introduction and Chapter 10: Daring to Believe it is Possible