

# From SDGs to Climate Change

## Integrating SDGs into climate change actions

United Nations University (UNU-IAS)

**Spring 2024**

Location: [Lecture room, 6th floor in the UNU building](#)

Time: 14:00 – 15:40

Lecturer: [Dr Akio Takemoto](#), [Dr Mahesti Okitasari](#), and [Dr Himangana Gupta](#)  
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Office Hours: 9:30-17:30 (by appointment)

### Course Description

*A response to climate change relies on active and responsive mitigation and adaptation fitting within the context of sustainability. Limiting warming to 1.5 °C would require halving emissions by 2030 and achieving net-zero emissions by 2050. This would simultaneously require extensive sustainable development efforts that will enhance both mitigation and adaptation. On the other hand, the Sustainable Development Goals (SDGs) interconnect society's prosperity, human health, quality education, energy savings, wildlife conservation, circular economy, cities' sustainability, correct usage of natural resources, and world peace. From eradicating poverty (SDG 1) to ensuring clean water and sanitation (SDG 6), building sustainable cities and communities (SDG 11), and preserving life below water and on land (SDGs 14 and 15), most SDGs are intertwined with the urgent need to address climate change. Synergizing SDG and climate actions can become a valuable tool to mitigate and adapt to climate change not only until 2030 but can sow the seeds of transformation for the rest of the 21st century.*

*Climate action and SDGs are inherently interconnected, reflecting a shared commitment to global well-being. The synergy lies in recognizing that climate action is not isolated and is integral to a broader sustainable development agenda. This symbiotic relationship emphasizes the importance of integrated efforts in overcoming three key inertias that still hinder progress: the siloed nature of actions on development and climate change, the lack of comprehensive strategy that considers both synergies and trade-offs and investment gaps.*

*Just transition, participatory approaches, and inclusivity at all levels are key in delivering synergistic climate-SDG actions. Implementing mitigation and adaptation strategies calls for a variety of technical and policy solutions across sectors and levels. Simultaneously, placing greater emphasis on non-climate or developmental co-benefits can increase support for climate action measures. Focused efforts on synergies alone risks undermining justice as a core value and leaving vulnerable groups and regions often linked to less synergistic targets behind. Across technical and policy solutions, design, implementation and evaluation, understanding the distributional effects of climate actions and SDG co-benefits are essential to bridging the*

*development-climate silos, designing comprehensive policies and financing actions that leave no one behind.*

## **Course Objectives and Learning Goals**

*This course aims to explore the knowledge and synergy solutions to deliver climate change actions and multiple SDGs in a just and equitable transition. The course overviews the synergies between the international policy framework on climate change and the 2030 Agenda for Sustainable Development. Second, it examines the social, economic, and environmental challenges and synergies associated to climate change mitigation, adaptation, and SDGs co-benefits from just transition lens at the national and local levels. The synergies extend to various areas of transition, such as energy, critical minerals, cities, food security, biodiversity, health, and gender. In contrast, inequity, energy poverty, job loss, biodiversity degradation, and food insecurity have emerged as trade-offs. Third, the course provides an opportunity to understand how distributional effects of climate actions and SDGs co-benefits are essential to designing comprehensive policies that leave no one behind and can sustainably transform society by enhancing synergies and reducing trade-offs with socio-economic impacts. The course is comprised of three components as follows:*

**Component 1:** *Giving an overview of the synergies, policy framework, and just and sustainable pathways on climate change and the 2030 Agenda for Sustainable Development: What are the synergies between addressing climate change and achieving the SDGs, whereby advancements in one can lead to improvements in the others? What are the opportunities from the existing climate change and SDG policy frameworks and actions that can be leveraged to create and deliver synergies? How can justice and leaving no one behind principles be detrimental in achieving synergistic targets?*

**Component 2:** *Exploring just transition implications of the means and pathways by which climate and SDG actions are delivered across sectors and synergistic targets are achieved: How do cross-cutting actions leverage immediate synergies and co-benefits across targets but also risk a disproportionately impacted by failure to achieve other SDGs and climate goals? How can just transition pathways be leveraged to enhance synergies and reduce trade-offs between climate change actions and social, economic, and environmental impacts? What are the mechanisms, governance arrangements, and policies that can facilitate or impede the diverse interests to support transitions that are efficient, sustainable, and equitable?*

**Component 3:** *Synergizing finance to deliver climate change actions that have co-benefits on the SDGs: How can finance mechanisms and tools be designed to enhance synergies between climate change mitigation, adaptation, and SDG co-benefits?*

## **Requirements and Grading Policy**

- *Class participation (10%)*
- *Short report (20%)*
- *Class presentation (30%)*
- *Research paper (40%)*

### *Class Participation*

*The course requires students to attend all classes, to arrive on time, to complete the readings and to participate actively in class discussions. This means speaking during each and every class. At the discretion of the instructor, frequent late arrivals or absences may result in a lower grade.*

### Assignment 1: Short Report

To develop a thorough understanding of the unique contexts, constraints, and priorities of the country that the students will pick, they will be asked to write a short report covering selected climate and SDG measures relevant to achieving the Paris Agreement and SDGs, associated transition issues, and potential co-benefits of synergistic actions in their selected country. Quality visualizations such as charts and graphs are strongly encouraged. Students are expected to revise the assignments based on instructors and classmates' feedback for their research paper.

Format:

- Arial 12, 1.5 space, justified alignment, double side, references (in-text citation and bibliography can include both reports and academic articles)
- Harvard referencing style
- Maximum of 2,000 words (excluding references)

**Submission deadline of the Assignment 1: Tuesday, June 11<sup>th</sup>, 2024**

### Assignment 2: Class Presentation

In order to encourage a critical engagement with the literature, to practice students' presentation skills and to stimulate class discussion, each student will present on their short-written assignment for no more than ten minutes. The presentations will include proposals for actions to synergize climate change and SDG measures in a just and equitable transition in the selected country.

### Assignment 3: Research Paper

The research paper should be a synthesis of the pre-existing assignments providing an overview of climate and SDG measures, associated transition challenges, and potential co-benefits of synergistic actions in the selected country. It must cover relevant Sustainable Development Goals for the country and provide an overview of interventions taken by the government and non-state actors to address trade-offs and enhance synergies between climate change mitigation/adaptation actions and SDG measures, to create socioeconomic co-benefits in a just and equitable transition in the country. Also, propose what research is needed to understand the problems related to leveraging just transition and delivering climate/SDG co-benefits.

Format:

- Arial 12, 1.5 space, justified alignment, double side, references (in-text citation and bibliography can include both reports and academic articles)
- Harvard referencing style
- Maximum of 3,500 words (excluding references)

**Submission deadline of the Assignment 3: Sunday, July 21<sup>st</sup>, 2024**

## **Course Outline**

Lecture No.	Frame work	Title	Date	Instructors/Invited Speakers if any
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1	Overview	Introduction to the course - Broad perspective on the synergies between climate change and SDGs: Action, timelines, and implementation	Tuesday, April 2, 2024 ~ 14:00-15:40	Dr. Akio Takemoto Dr Himangana Gupta
2		An overview of the 2030 Agenda for Sustainable Development	Tuesday, April 9, 2024 ~ 14:00-15:40	Dr Mahesti Okitasari
3	Climate Change and Society Implementing synergies: Just transition and leaving no one behind	Just transition in energy sector	Tuesday, April 16, 2024 ~ 14:00-15:40	Dr Akio Takemoto and Dr Mark McCarthy Akrofi
4		Just transition in food system	Tuesday, April 23, 2024 ~ 14:00-15:40	Dr Eric Herve H Ponthieu and Dr Akio Takemoto
5		Climate change and sustainable energy (Affordable and clean energy)	Tuesday, April 30, 2024 ~ 14:00-15:40	Dr. Masachika Suzuki
6		Just transition, inclusive development, and leaving no one behind	Tuesday, May 7, 2024 ~ 14:00-15:40	Dr Mahesti Okitasari
7		Sustainable consumption and production and circular economy: Critical Minerals	Tuesday, May 14, 2024 ~ 14:00-15:40	Dr Upalat Korwatanasakul & Dr Akio Takemoto
8		Gender, SDGs, and climate change	Tuesday, May 21, 2024 ~ 14:00-15:40	Dr Himangana Gupta
9		Climate change and green-blue cities	Tuesday, May 28, 2024 ~ 14:00-15:40	Dr Juan Pastor Ivars
10		Biodiversity, food security, and climate change	Tuesday, June 4, 2024 ~ 14:00-15:40	Dr Himangana Gupta
11		Biodiversity, health, and sustainability nexus in the context of climate resilience  <b>Assignment 1: Short report due</b>	Tuesday, June 11, 2024 ~ 14:00-15:40	Dr. Maiko Nishi
12	Finance for SD	Integrated finance: SDG budgeting and integrated national financing framework (INFF)	Tuesday, June 18, 2024 ~ 14:00-15:40	Dr Mahesti Okitasari
13		Subnational finance for sustainable development	Wednesday, June 26, 2024 ~ 14:00-15:40	Dr Kanako Morita
14		Assignment 2: Class presentations – Group 1	Tuesday, July 2, 2024 ~ 14:00-15:40	Dr Akio Takemoto, Dr Himangana Gupta
15		Assignment 2: Class presentations – Group 2	Tuesday, July 9, 2024 ~ 14:00-15:40	Dr Akio Takemoto, Dr Himangana Gupta

## Course Readings

*Students are expected to actively contribute to class discussions based on the material provided. The lecturer reserves the right to update the reading list throughout the course and will alert students to the changes in class.*

### Course Readings by each Lecture

Lecture No.	Recommended Readings
1	<p>Introduction to the course – Broad perspective on the synergies between climate change and SDGs: Action, timelines and implementation: This lecture provides an understanding of how the climate goals are broadly linked to SDGs. It discusses the need for achieving synergies, through both national and global strategies. It talks about horizontal and vertical levels of governance and streamlining finance to achieve synergy between multiple goals.</p> <ul style="list-style-type: none"> <li>• Governance and National Implementation of the 2030 Agenda: Lessons from Voluntary National Reviews, UNU-IAS Policy brief No18, 2019</li> <li>• Third Global Conference on Strengthening Synergies Between the Paris Agreement and the 2030 Agenda for Sustainable Development. (2022). <a href="https://www.un.org/sites/un2.un.org/files/the_third_global_conference_report_11.08.2022.pdf">https://www.un.org/sites/un2.un.org/files/the_third_global_conference_report_11.08.2022.pdf</a></li> <li>• IPCC. (2007). The dual relationship between climate change and sustainable development. <a href="https://archive.ipcc.ch/publications_and_data/ar4/wg3/en/ch2s2-1-3.html">https://archive.ipcc.ch/publications_and_data/ar4/wg3/en/ch2s2-1-3.html</a></li> <li>• WMO. (2021). Climate Indicators and Sustainable Development: Demonstrating the Interconnections. World Meteorological Organization. <a href="https://library.wmo.int/doc_num.php?explnum_id=10804">https://library.wmo.int/doc_num.php?explnum_id=10804</a></li> </ul>
2	<p>An overview of the 2030 Agenda for Sustainable Development: This lecture provides an overview of the 2030 Agenda for Sustainable Development processes at the global, regional, national and local level. It discusses the governance and policymaking aspects of implementing, monitoring and following up the SDGs, simultaneously looking at how countries are progressing in their efforts to localize the SDGs. It looks at how these SDG processes connect to other international frameworks with emphasis on climate actions, their synergies and interactions. The lecture also offers examples of emerging research and approaches towards governing the SDGs.</p> <ul style="list-style-type: none"> <li>• Biermann, F., Kanie, N., Kim, R.E. (2017) Global governance by goal-setting: the novel approach of the UN Sustainable Development Goals. <i>Curr Opin Environ Sustain</i>, 26: 26-31. <a href="http://dx.doi.org/10.1016/j.cosust.2017.01.010">http://dx.doi.org/10.1016/j.cosust.2017.01.010</a></li> <li>• Forestier, O., Kim, R.E. (2020) Cherry-picking the Sustainable Development Goals: Goal prioritisation by national governments and implications for global governance. <i>Sustain Dev</i>, 28(5): 1269-1278. September/October 2020. <a href="https://doi.org/10.1002/sd.2082">https://doi.org/10.1002/sd.2082</a></li> <li>• Fukuda-Parr, S. (2016) From the Millennium Development Goals to the Sustainable Development Goals: shifts in purpose, concept, and politics of global goal setting for development. <i>Gender &amp; Development</i>. doi: 10.1080/13552074.2016.1145895</li> <li>• Fukuda-Parr, S., McNeill, D. (2019) Knowledge and Politics in Setting and Measuring the SDGs: Introduction to Special Issue. <i>Global Policy</i>, 10, Supplement 1, January 2019. doi: 10.1111/1758-5899.12604</li> <li>• Nerini, F., Sovacool, F., Hughes, B., Cozzi, N., Cosgrave, L., Howells, E, Tavoni, M., Massimo, T., Zerriffi, J., Milligan, B. (2019) Connecting climate action with other</li> </ul>

	<p>sustainable development goals. Nat Sustain. <a href="https://doi.org/10.1038/s41893-019-0334-y">https://doi.org/10.1038/s41893-019-0334-y</a></p> <ul style="list-style-type: none"> <li>• Dzebo, A., Janetschek, H., Brandi, C., Iacobuta, G. (2019) Connections between the Paris Agreement and the 2030 Agenda. Working Paper September 2019. Stockholm Environment Institute. <a href="https://www.sei.org/wp-content/uploads/2019/08/connections-between-the-paris-agreement-and-the-2030-agenda.pdf">https://www.sei.org/wp-content/uploads/2019/08/connections-between-the-paris-agreement-and-the-2030-agenda.pdf</a></li> <li>• Gustafsson, S., Ivner, J. (2018) Implementing the Global Sustainable Goals (SDGs) into Municipal Strategies: Applying an Integrated Approach, in W. Leal Filho (ed.) Handbook of Sustainable Science and Research, World Sustainability Series, <a href="https://doi.org/10.1007/978-3-319-63007-6_18">https://doi.org/10.1007/978-3-319-63007-6_18</a></li> </ul>
3	<p>Just transition in energy sector: This lecture covers the issues of just transition specifically in the energy sector.</p> <ul style="list-style-type: none"> <li>• Akrofi, M.M., Okitasari, M. (2023) Beyond cost: How urban form could limit the uptake of residential solar PV systems in low-income neighbourhoods in Ghana. Energy for Sus Dev, 74(June 2023), pp. 20-33. <a href="https://doi.org/10.1016/j.esd.2023.03.004">https://doi.org/10.1016/j.esd.2023.03.004</a></li> <li>• Akrofi, M.M., Okitasari, M., Quadrat-Ullah, H. (2023) Are households willing to adopt solar home systems also likely to use electricity more efficiently? Empirical insights from Accra, Ghana. Energy Reports, 10(Nov 2023), pp. 4170-4182. <a href="https://doi.org/10.1016/j.egy.2023.10.066">https://doi.org/10.1016/j.egy.2023.10.066</a></li> <li>• Akrofi, M.M., Okitasari, M., Korwatanasakul, U. (2024) Stakeholders' awareness of urban form effects on rooftop solar PV and its implications for integrated solar energy and urban planning in Ghana. Energy for Sust. Dev., 78(Feb 2024), 101377. <a href="https://doi.org/10.1016/j.esd.2024.101377">https://doi.org/10.1016/j.esd.2024.101377</a></li> </ul>
4	<p>Just transition in food system: This lecture provides the issues of just transition specifically in the food system. It will feature the Farm to Folk Strategy by EU which aims to make food systems fair, healthy and environmentally-friendly.</p> <ul style="list-style-type: none"> <li>• Crippa, M., Solazzo, E., Guizzardi, D. et al. Food systems are responsible for a third of global anthropogenic GHG emissions. Nat Food 2, 198–209 (2021). <a href="https://doi.org/10.1038/s43016-021-00225-9">https://doi.org/10.1038/s43016-021-00225-9</a></li> <li>• Matsushita, K., Snower, D., Yamaguchi, S., Takemoto, A., et al. (2023). Integrated approach for well-being, environmental sustainability, and just transition. Think 7 Japan 2023 Task Force 2 Issue Paper.</li> <li>• European Union (2019). REFLECTION PAPER TOWARDS A SUSTAINABLE EUROPE BY 2030. URL: <a href="https://commission.europa.eu/document/download/3dab8f75-8c9d-4cf2-b215-d9098e69b654_en?filename=rp_sustainable_europe_30-01_en_web.pdf">https://commission.europa.eu/document/download/3dab8f75-8c9d-4cf2-b215-d9098e69b654_en?filename=rp_sustainable_europe_30-01_en_web.pdf</a></li> <li>• European Union (2020). Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system. URL: <a href="https://food.ec.europa.eu/document/download/472acca8-7f7b-4171-98b0-ed76720d68d3_en?filename=f2f_action-plan_2020_strategy-info_en.pdf">https://food.ec.europa.eu/document/download/472acca8-7f7b-4171-98b0-ed76720d68d3_en?filename=f2f_action-plan_2020_strategy-info_en.pdf</a></li> <li>• European Union (n.a.). Strategic dialogue on the future of EU agriculture. URL: <a href="https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/agriculture-and-green-deal/strategic-dialogue-future-eu-agriculture_en">https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/agriculture-and-green-deal/strategic-dialogue-future-eu-agriculture_en</a></li> </ul>
5	<p>Climate change and sustainable energy (Affordable and clean energy): This lecture discusses the needs for sustainable energy in the context of climate change, focusing on population growth, rising emissions, GDP per capita, and GHG pathways. It presents how sustainable energy technologies, including solar energy, wind energy and achieving</p>

	<p>higher efficiency in conventional technologies, can help in climate mitigation. It also talks about sustainable development benefits through the introduction of such technologies.</p> <ul style="list-style-type: none"> <li>• Hernandez, R. R., Jordaan, S. M., Kaldunski, B., &amp; Kumar, N. (2020). Aligning Climate Change and Sustainable Development Goals with an Innovation Systems Roadmap for Renewable Power. <i>Frontiers in Sustainability</i>, 1. <a href="https://www.frontiersin.org/articles/10.3389/frsus.2020.583090">https://www.frontiersin.org/articles/10.3389/frsus.2020.583090</a></li> <li>• Suzuki, M. (2014). Addressing key issues in technology innovation and transfer of clean energy technologies: A focus on enhancing the enabling environment in the developing countries. <i>Environmental Economics and Policy Studies</i>, 16(2), 157–169. <a href="https://doi.org/10.1007/s10018-013-0059-5">https://doi.org/10.1007/s10018-013-0059-5</a></li> <li>• Suzuki, M. (2015). Identifying roles of international institutions in clean energy technology innovation and diffusion in the developing countries: Matching barriers with roles of the institutions. <i>Journal of Cleaner Production</i>, 98, 229–240. <a href="https://doi.org/10.1016/j.jclepro.2014.08.070">https://doi.org/10.1016/j.jclepro.2014.08.070</a></li> </ul>
6	<p>Just transition, inclusive development, and leaving no one behind: This lecture elaborates on the concepts of just transition, inclusive development, and leaving no one behind in the context of climate-SDG synergies and low-carbon economy. The discussion covers what just transition means for different economies (e.g., middle income countries) and the work program on just transition pathways and its intersectionality in selected key areas for implementation, e.g., national strategies and priorities, international cooperation.</p> <ul style="list-style-type: none"> <li>• Denton et al. (2022) Accelerating the transition in the context of sustainable development. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of WG III to AR6 of IPCC. doi: 10.1017/9781009157926.019</li> <li>• McCauley, D. &amp; Heffron, R (2018) Just transition: Integrating climate, energy, and environmental justice. <i>Energy Policy</i>, 119, August 2018, 1-7. <a href="https://doi.org/10.1016/j.enpol.2018.04.014">https://doi.org/10.1016/j.enpol.2018.04.014</a></li> <li>• Newell, P. &amp; Mulvaney, D. (2013) The political economy of the ‘just transition.’ <i>Geogr. J.</i>, 179(2), 132–140, doi:10.1111/geoj.12008.</li> </ul>
7	<p>Sustainable Consumption and Production and Circular economy: Critical Minerals</p> <ul style="list-style-type: none"> <li>• Janardhanan, N., Moinuddin, M., Olsen, S., Murun, T., Kojima S., Takemoto, A., Korwatanasakul, U., Okitasari, M, Goel, S., Moerenhout, T., Narula, K., Sedaoui. R.(2023). Critical Minerals for Net-Zero Transition: How the G7 can Address Supply Chain Challenges and Socioenvironmental Spillovers. Think 7 Japan 2023 Task Force 2 Policy Brief. <a href="https://think7.org/critical-minerals-for-net-zero-transition-how-the-g7-can-address-supply-chain-challenges-and-socioenvironmental-spillovers/">https://think7.org/critical-minerals-for-net-zero-transition-how-the-g7-can-address-supply-chain-challenges-and-socioenvironmental-spillovers/</a></li> <li>• What are ‘critical minerals’ and what is their significance for climate change action? <a href="https://www.lse.ac.uk/granthaminstitute/explainers/what-are-critical-minerals-and-what-is-their-significance-for-climate-change-action/#:~:text=The%20mining%20and%20refining%20of,water%20sources%20from%20leached%20chemicals.">https://www.lse.ac.uk/granthaminstitute/explainers/what-are-critical-minerals-and-what-is-their-significance-for-climate-change-action/#:~:text=The%20mining%20and%20refining%20of,water%20sources%20from%20leached%20chemicals.</a></li> <li>• Environmental aspects of critical minerals in Africa in the clean energy transition (UNEP). <a href="https://wedocs.unep.org/bitstream/handle/20.500.11822/43012/minerals_africa.pdf?sequence=3&amp;isAllowed=y">https://wedocs.unep.org/bitstream/handle/20.500.11822/43012/minerals_africa.pdf?sequence=3&amp;isAllowed=y</a></li> <li>• Critical Mineral Mining and Sustainable Development in Africa. <a href="https://repository.mines.edu/bitstream/handle/11124/176553/Payne-Institute-">https://repository.mines.edu/bitstream/handle/11124/176553/Payne-Institute-</a></li> </ul>

	<p>Commentary-Critical-Mineral-Mining-and-Sustainable-Development-in-Africa.pdf?sequence=1&amp;isAllowed=y</p> <ul style="list-style-type: none"> <li>• Evaluating sustainability impacts of critical mineral extractions: Integration of life cycle sustainability assessment and SDGs frameworks. <a href="https://doi.org/10.1111/jiec.13317">https://doi.org/10.1111/jiec.13317</a></li> <li>• Transforming Critical Mineral Demand for the Just Energy Transition. <a href="https://www.energy.gov/sites/default/files/2023-11/Rachel%20Herring_SAND2023-11056.pdf">https://www.energy.gov/sites/default/files/2023-11/Rachel%20Herring_SAND2023-11056.pdf</a></li> <li>• Critical Mineral Challenges Complicate a Rapid Clean Energy Transition. <a href="https://economics.rikkyo.ac.jp/research/paper/pudcar0000002ed-att/p001-024_77-2.pdf">https://economics.rikkyo.ac.jp/research/paper/pudcar0000002ed-att/p001-024_77-2.pdf</a></li> <li>• Trost, J.N., Dunn, J.B. Assessing the feasibility of the Inflation Reduction Act's EV critical mineral targets. <i>Nat Sustain</i> 6, 639–643 (2023). <a href="https://doi.org/10.1038/s41893-023-01079-8">https://doi.org/10.1038/s41893-023-01079-8</a></li> <li>• Critical mineral sustainable supply: Challenges and governance. <a href="https://doi.org/10.1016/j.futures.2023.103101">https://doi.org/10.1016/j.futures.2023.103101</a></li> <li>• Friend-shoring and critical minerals: Exploring the role of the Minerals Security Partnership. <a href="https://doi.org/10.1016/j.erss.2023.103085">https://doi.org/10.1016/j.erss.2023.103085</a></li> <li>• Hendrix, C., 2023. Political unrest in Africa threatens global critical mineral supplies and their futures. United States of America. Retrieved from <a href="https://policycommons.net/artifacts/4827377/political-unrest-in-africa-threatens-global-critical-mineral-supplies-and-their-futures/5664084/">https://policycommons.net/artifacts/4827377/political-unrest-in-africa-threatens-global-critical-mineral-supplies-and-their-futures/5664084/</a> on 29 Jan 2024. CID: 20.500.12592/7ccc0n</li> <li>• Critical Mineral Supply Constraints and Their Impact on Energy System Models. <a href="https://www.energypolicy.columbia.edu/wp-content/uploads/2023/06/CriticalMineralsSupply-Commentary_CGEP_052323-2.pdf">https://www.energypolicy.columbia.edu/wp-content/uploads/2023/06/CriticalMineralsSupply-Commentary_CGEP_052323-2.pdf</a></li> </ul>
8	<p>Gender, SDGs, and Climate change: As the role of women engagement in climate negotiations become important, this lecture sheds light on current situation at the grassroot level, and how climate change enhances gender inequality. In addition to presenting some case studies showing disproportionate impacts, it shows research trends on this topic, presenting solutions for their engagement, including through empowerment, policy coherence, technology and awareness, and through multi-stakeholder engagement.</p> <ul style="list-style-type: none"> <li>• Gupta, H. (2015). Women and climate change: Linking ground perspectives to the global scenario. <i>Indian Journal of Gender Studies</i>. Available at: <a href="https://www.researchgate.net/publication/282468449_Women_and_Climate_Change_Linking_Ground_Perspectives_to_the_Global_Scenario">https://www.researchgate.net/publication/282468449_Women_and_Climate_Change_Linking_Ground_Perspectives_to_the_Global_Scenario</a></li> <li>• Masika, R. (2002). <i>Gender, Development, and Climate Change</i>. Oxfam. Available at: <a href="https://oxfamilibrary.openrepository.com/bitstream/handle/10546/121149/bk-gender-development-climate-change-010102-en.pdf;jsessionid=9D5C095E571CEF07453DF8D0DE95B697?sequence=1">https://oxfamilibrary.openrepository.com/bitstream/handle/10546/121149/bk-gender-development-climate-change-010102-en.pdf;jsessionid=9D5C095E571CEF07453DF8D0DE95B697?sequence=1</a></li> <li>• Hone, K. (2013). The 'Doha Miracle'? Where are the women in climate change negotiations? <i>E-International Relations</i>. <a href="http://www.e-ir.info/2013/01/18/the-doha-miracle-where-are-the-women-in-climate-change-negotiations/">http://www.e-ir.info/2013/01/18/the-doha-miracle-where-are-the-women-in-climate-change-negotiations/</a></li> <li>• Dimensions and examples of the gender-differentiated impacts of climate change, the role of women as agents of change and opportunities for women. Synthesis report by the secretariat (2022): <a href="https://unfccc.int/documents/494455">https://unfccc.int/documents/494455</a></li> </ul>



9	<p>Climate change and green-blue cities: The benefits of a green and blue infrastructure will be introduced, in concrete when mitigating and adapting to climate change. The case of Kanazawa city will be explained.</p> <ul style="list-style-type: none"> <li>• Alebel , Pastor-Ivars, Juan and Sahle, Mesfin, (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. <i>Environmental Management</i>, 71(June 2023), 1255-126.</li> <li>• Bai, Xuemei, Richard J. Dawson, Diana Ürge-Vorsatz, Gian C. Delgado, Aliyu Salisu Barau, Shobhakar Dhakal, David Dodman, Lykke Leonardsen, Valérie Masson-Delmotte, and Debra Roberts. “Six research priorities for cities and climate change” <i>Nature</i> 555, no. 7694 (2018): 23-25.</li> <li>• Cocks, ML, &amp; Shackleton, C.M. (Eds.). (2020). <i>Urban Nature: Enriching Belonging, Wellbeing and Bioculture</i> (1st ed.). Routledge. Chapter 2: Pastor-Ivars, Juan. The veil, the clearing and the flow New commons of Japanese traditional gardens in Kanazawa city <a href="https://library.unu.edu/cgi-bin/koha/opac-detail.pl?biblionumber=41947">https://library.unu.edu/cgi-bin/koha/opac-detail.pl?biblionumber=41947</a></li> <li>• Connop, Stuart, Paula Vandergert, Bernd Eisenberg, Marcus J. Collier, Caroline Nash, Jack Clough, and Darryl Newport. “Renaturing cities using a regionally-focused biodiversity-led multifunctional benefits approach to urban green infrastructure.” <i>Environmental Science &amp; Policy</i> 62 (2016): 99-111.</li> <li>• Kabisch, Nadja, Niki Frantzeskaki, Stephan Pauleit, Sandra Naumann, McKenna Davis, Martina Artmann, Dagmar Haase et al. “Nature-based solutions to climate change mitigation and adaptation in urban areas: perspectives on indicators, knowledge gaps, barriers, and opportunities for action.” <i>Ecology and Society</i> 21, no. 2 (2016).</li> <li>• Malcolm, Stephanie E. Austin, Lea Berrang-Ford, and James D. Ford. “Public health adaptation to climate change in large cities: A global baseline.” <i>International Journal of Health Services</i> 46, no. 1 (2016): 53-78. (Available on JSTOR with a free personal account, up to 100 article each month)</li> <li>• Nick Watts et.al Health and climate change: policy responses to protect public health. <i>The Lancet</i>, Volume 386, Issue 10006,2015, Pages 1861-1914</li> <li>• PASTOR-IVARS, Juan. ed. (2019) <i>Restoring Kinship with Nature through Japanese Gardens: The Challenge to Achieve a Sustainable Commons in Kanazawa</i> UNU-IAS OUIK, Kanazawa, Japan. 132pp. <a href="https://ouik.unu.edu/wp-content/uploads/Booklet5-Restoring-Kinship-with-Nature-through-Japanese-Garden.pdf">https://ouik.unu.edu/wp-content/uploads/Booklet5-Restoring-Kinship-with-Nature-through-Japanese-Garden.pdf</a></li> </ul>
10	<p>Biodiversity, food security, and climate change: This lecture discusses the climate-biodiversity-food nexus in terms of policy interlinkages, drivers and impacts, carbon offsets and various sub-nexuses linked to SDGs. It discusses case studies highlighting nature-based solutions on-the-ground that can effectively address climate, food, and biodiversity objectives, while contributing to SDGs holistically.</p> <ul style="list-style-type: none"> <li>• Basics: Connecting biodiversity and climate change mitigation and adaptation: Report of the second ad hoc technical expert group on biodiversity and climate change: <a href="https://www.cbd.int/doc/publications/ahteg-brochure-en.pdf">https://www.cbd.int/doc/publications/ahteg-brochure-en.pdf</a></li> <li>• Climate change, biodiversity and nutrition nexus: <a href="https://www.fao.org/3/cb6087en/cb6087en.pdf">https://www.fao.org/3/cb6087en/cb6087en.pdf</a></li> <li>• IPBES and IPCC workshop report: <a href="https://www.ipcc.ch/site/assets/uploads/2021/07/IPBES_IPCC_WR_12_2020.pdf">https://www.ipcc.ch/site/assets/uploads/2021/07/IPBES_IPCC_WR_12_2020.pdf</a></li> <li>• UNFCCC COP 21 decision on alternative policy approaches: <a href="https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/sbsta_42_agenda_item_4_alternative_policy_approaches_auv_template.pdf">https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/sbsta_42_agenda_item_4_alternative_policy_approaches_auv_template.pdf</a></li> <li>• Smith, P., Calvin, K., Nkem, J., Campbell, D., Cherubini, F., Grassi, G., Korotkov, V., Le Hoang, A., Lwasa, S., McElwee, P., Nkonya, E., Saigusa, N., Soussana, J.-F., Taboada, M. A., Manning, F. C., Nampanzira, D., Arias-Navarro, C., Vizzarri, M., House, J., ... Arneth, A. (2020). Which practices co-deliver food security, climate change mitigation and</li> </ul>

	<p>adaptation, and combat land degradation and desertification? <i>Global Change Biology</i>, 26(3), 1532–1575. <a href="https://doi.org/10.1111/gcb.14878">https://doi.org/10.1111/gcb.14878</a></p> <ul style="list-style-type: none"> <li>Behnassi, M., &amp; Gupta, H. (2022). Managing the Food Security, Biodiversity, and Climate Nexus: Transformative Change as a Pathway. In M. Behnassi, H. Gupta, M. Barjees Baig, &amp; I. R. Noorka (Eds.), <i>The Food Security, Biodiversity, and Climate Nexus</i> (pp. 15–34). Springer International Publishing. <a href="https://doi.org/10.1007/978-3-031-12586-7_2">https://doi.org/10.1007/978-3-031-12586-7_2</a></li> </ul>
11	<p>Biodiversity, health and sustainability nexus in the context of climate resilience: This lecture contextualizes the nexus approach to landscape and seascape management in the era of climate crisis. It introduces the theoretical and methodological development concerning biodiversity, health, and sustainability nexus. It also discusses several cases of landscape and seascape management where nexus approaches are practiced in enhancing both ecosystem and human health while ensuring climate resilience.</p> <ul style="list-style-type: none"> <li>Folke, C. (2006). Resilience: The emergence of a perspective for social–ecological systems analyses. <i>Global environmental change</i>, 16(3), 253–267.</li> <li>Liu, J., Hull, V., Godfray, C., Tilman, D., Gleick, P. H., Hoff, H., Pahl-Wostl, C., Xu, Z., Chung, M. G., Sun, J., &amp; Li, S. (2018). Nexus approaches to global sustainable development. <i>Nature Sustainability</i>, 1(9), 466–476. <a href="https://doi.org/10.1038/s41893-018-0135-8">https://doi.org/10.1038/s41893-018-0135-8</a></li> <li>Nilsson, M., Griggs, D., &amp; Visbeck, M. (2016). Policy: Map the interactions between sustainable development goals. <i>Nature</i>, 534(7607), 320–322. <a href="https://doi.org/10.1038/534320a">https://doi.org/10.1038/534320a</a></li> <li>Nishi, M., Natori, Y., Dublin, D. (2021). Resilience in landscapes &amp; seascapes: Building back better from COVID-19. <i>UNU-IAS Policy Brief 2021</i>, 26, 1–4. <a href="http://collections.unu.edu/eserv/UNU:8409/UNU-IAS-PB-No26-2021.pdf">http://collections.unu.edu/eserv/UNU:8409/UNU-IAS-PB-No26-2021.pdf</a></li> <li>Nishi, M., Subramanian, S.M., Gupta, H. (2022). Introduction. In: Nishi, M., Subramanian, S.M., Gupta, H. (eds) <i>Biodiversity-Health-Sustainability Nexus in Socio-Ecological Production Landscapes and Seascapes (SEPLS)</i>. Satoyama Initiative Thematic Review. Springer, Singapore. <a href="https://doi.org/10.1007/978-981-16-9893-4_1">https://doi.org/10.1007/978-981-16-9893-4_1</a></li> <li>Weitz, N., Carlsen, H., Nilsson, M., &amp; Skånberg, K. (2018). Towards systemic and contextual priority setting for implementing the 2030 agenda. <i>Sustainability Science</i>, 13(2), 531–548. <a href="https://doi.org/10.1007/s11625-017-0470-0">https://doi.org/10.1007/s11625-017-0470-0</a></li> </ul>
12	<p>Integrated finance: SDG budgeting and integrated national financing framework (INFF): This lecture discusses the funding gap and disjointed approach challenges to climate and SDG finance, and initiatives towards an integrated approach at the global-national levels. It covers SDG budgeting, INFF, and strategies at policy level (e.g., role of LT-LEDS) and project level (e.g., JETP) to synergise climate-SDG finance.</p> <ul style="list-style-type: none"> <li>Kreibiehl, S. et al. (2022) Investment and finance. In IPCC, 2022: <i>Climate Change 2022: Mitigation of Climate Change. Contribution of WG III to AR6 of IPCC</i>. doi: 10.1017/9781009157926.017</li> <li>Iacobuță, G.I., et al. (2022) Aligning climate and sustainable development finance through an SDG lens. The role of development assistance in implementing the Paris Agreement. <i>Global Env Ch</i>, 74, May 2022, 102509. <a href="https://doi.org/10.1016/j.gloenvcha.2022.102509">https://doi.org/10.1016/j.gloenvcha.2022.102509</a></li> </ul>
13	<p>Subnational finance for sustainable development: This lecture covers two aspects of sustainable finance for sustainable development by using some cases. One is sustainable finance regarding financial stability, and another is exploring effective ways to achieve sustainable development (Ferri and Acosta, 2019).</p>

- UNEP Inquiry, 2016a: Inquiry into the Design of a Sustainable Financial System: Definitions and Concepts – Background Note. UNEP, Nairobi, Kenya. 19 pp. <https://unepinquiry.org/publication/definitions-and-concepts-backgroundnote/>
- United Nations, Inter-agency Task Force on Financing for Development, Financing for Sustainable Development Report 2023: Financing Sustainable Transformations. (New York: United Nations, 2023), available from: <https://developmentfinance.un.org/fsdr2023..>
- Kreibiehl, S. et al. (2022) Investment and finance. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of WG III to AR6 of IPCC. doi: 10.1017/9781009157926.017
- Giovanni Ferri and Bonnie Annette Acosta. 2019. Sustainable Finance for Sustainable Development., CERBE Working Papers from CERBE Center for Relationship Banking and Economics No. 30. <https://repec.lumsa.it/wp/wpC30.pdf>

## Important Information

### Class Conduct & Etiquette

*Students are expected to arrive on time and not to engage in disruptive behavior during class. This includes, among other things, private side conversations, the use of mobile phones and other electronic devices, or the reading of newspapers. Mobile phones should be switched off and stored in the bag. We wish to create an atmosphere of open and tolerant discussion in the classroom and request students to recognize every individual's right to have an opinion. The lecturer and other students should be treated with dignity and respect, particularly in discussions on contentious political issues where a diversity of opinion will likely arise. However, we also recognize that there are limits to tolerance and the lecturer reserves the right to request disciplinary action against any student who violates this policy or repeatedly shows disruptive behavior in class.*

### Computer Use in Class

*The use of computers (including tablets) in the classroom is restricted to taking notes, reading the course material or searching for course-related information on the internet. Any disruption of the class by cell phones, instant messaging programs or other communication devices will not be tolerated. The lecturer reserves the right to revoke this permission if a student is found using a computer for any non-course related activities.*

### Plagiarism & Academic Misconduct

*Please be aware that the consequences of plagiarism are severe, and students found guilty of academic misconduct will be punished in accordance with UNU's academic honesty policies. The lecturer reserves the right to run all assignments through an anti-plagiarism software provided by the UNU. If evidence of academic misconduct on the assigned presentations, the mid-term exam or the final essay should be found, the assignment will receive a failing grade. In case of repeated violations of academic conduct, the student may receive a failing grade for the entire course and will be reported to the appropriate authorities for disciplinary action.*

## **Invited Speakers/Lecturers Bio**

*Eric Ponthieu (Lecture 3)*

*Strategy Director of the Fair Trade Advocacy Office (FTAO), Adjunct Professor at Bologna and Firenze Universities, and Associate Lecturer at Ca'Foscari University*

*Eric Ponthieu holds 28-year professional experience in EU sustainable development policy- and decision-making, communication, R&D and teaching. He has wide range of interrelated areas of expertise including sustainable development, environment, climate, food and agriculture, sustainable consumption, energy, transport, information society, urban sustainability, R&D and innovation. He is the author of a book on climate governance (Springer, October 2020) and holds a vast teaching experience including as Associate lecturer at Ca'Foscari university and regular Visiting Professor (more than 15 universities as hosts since 2006)*