

Course Information					
Year	AY 2025-2026	School	UNU-IAS		
Course Title	From SDGs to Climate Change				
Instructor & Contact Information	Mahesti Okitasari, Himangana Gupta ( <a href="mailto:okitasari@unu.edu">okitasari@unu.edu</a> , <a href="mailto:gupta@unu.edu">gupta@unu.edu</a> )				
Term/Day/Period	AY 2026 Spring / 7 Apr – 21 Jul 2026 / 2 <sup>nd</sup>				
Category	Elective course	Eligible Year	1 <sup>st</sup> year and above	Credits	2
Classroom	Lecture room, 6th floor in the UNU building	Campus	UNU-HQ, Tokyo, Japan		
Main Language	English				
Class Modality Categories	On-Campus				
Course Code	622170				
Level	Graduate-level	Types of lesson	Lecture		

Syllabus Information	
Subtitle	Integrating SDGs into Climate Change Actions
Course Description	<p><i>Limiting warming to 1.5 °C requires extensive efforts that will enhance both mitigation and adaptation. Most SDGs are intertwined with the urgent need to address climate change. Synergizing SDG and climate actions can become a valuable tool not only until 2030 but can sow the seeds of transformation for the rest of the 21st century. 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 inertia that still hinder progress: the siloed nature of actions on development and climate change, the lack of a comprehensive strategy that considers both synergies and trade-offs, and investment gaps.</i></p> <p><i>Just transition and inclusivity at all levels are key to delivering synergistic climate-SDG actions. Focused efforts on synergies alone risk 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.</i></p>
Objectives and Learning Goals	<ul style="list-style-type: none"> <li>• <i>Explore the synergies between the international policy framework on climate change and the SDGs, offering relevant theories, approaches and methodology in emerging research and real-world examples</i></li> <li>• <i>Examine the social, economic, and environmental challenges and synergies associated with climate change mitigation, adaptation, and SDG co-benefits from just transition lens. The synergies extend to various areas of transition, such as energy, critical minerals, cities, food systems, biodiversity, health, and gender. In contrast, inequity, energy poverty, job loss, biodiversity degradation, and food insecurity have emerged as trade-offs.</i></li> <li>• <i>Understand how the 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.</i></li> </ul>

### Requirements

The course requires students to attend all classes, to arrive on time, to complete readings and to participate actively in class discussions. This means asking questions and sharing knowledge in every class. At the discretion of the instructor, frequent late arrivals or absences may result in a lower grade. Please note that the first session is of particular importance and cannot be missed. Students are also strongly encouraged to regularly follow the latest news on climate change and sustainable development issues, as these events will be reflected in the class discussions. Relevant reporting archives will be shared by the instructor during the class. The expected working hours per week are five hours, including pre-readings, lecture attendance, and review for assignments.

### Course Outline

Lecture	Outline (Contents and schedule are subject to change)
1	Orientation and course overview
2	Overview of the 2030 Agenda for Sustainable Development
3	Climate-SDGs synergies
4	Demand side solutions to climate actions and SDGs
5	Just transition, inclusive development, and leaving no one behind
6	Climate and SDG finance – Integrated finance and budgeting
7	Gender, SDGs, and climate change
8	Just labor transition and industry
9	Assignment 1: Class presentations
10	Biodiversity, food security, and climate change
11	Just urban transition, injustices and nature-based solutions
12	Climate and biodiversity finance
13	Biodiversity, health, and sustainability nexus in the context of climate resilience
14	Sustainable energy and just transition in the energy sector – Financial and technological perspective
15	Assignment 2: Class presentations *Assignment 3: Policy brief due on 21 Jul

### Course Readings

- Pörtner et al. (2022) Technical Summary. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. doi:10.1017/9781009325844.002
- Pathak et al (2022). Technical Summary. In: Climate Change 2022: Mitigation of Climate Change. doi: 10.1017/9781009157926.002
- 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
- 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
- United Nations (2024) Synergy Solutions for Climate and SDG Action: Bridging the Ambition Gap for the Future We Want. <https://sdgs.un.org/sites/default/files/2024-07/UN%20Synergy%20Solutions%20for%20Climate%20and%20SDG%20Action-3.pdf>
- UNFCCC (2022) 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. <https://unfccc.int/documents/494455>
- Secretariat of CBD (2009) Connecting biodiversity and climate change mitigation and adaptation: Report of the second ad hoc technical expert group on biodiversity and climate change: <https://www.cbd.int/doc/publications/ahteg-brochure-en.pdf>
- IRENA (2023), Geopolitics of the energy transition: Critical materials, International Renewable Energy Agency, Abu Dhabi. [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/Jul/IRENA\\_Geopolitics\\_energy\\_transition\\_critical\\_materials\\_2023.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2023/Jul/IRENA_Geopolitics_energy_transition_critical_materials_2023.pdf)
- Gupta, J., Bai, X., Liverman, D. M., Rockström, J., Qin, D., Stewart-koster, B., Rocha, J. C., Jacobson, L., Abrams, J. F., Andersen, L. S., McKay, D. I. A., Bala, G., Bunn, S. E., Ciobanu, D., Declerck, F., Ebi, K. L., & Gifford, L. (2024). A just world on a safe planet: a Lancet Planetary Health – Earth Commission report on Earth-system boundaries, translations, and transformations. 5196(24). [https://doi.org/10.1016/S2542-5196\(24\)00042-1](https://doi.org/10.1016/S2542-5196(24)00042-1)

- 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 sustainable development goals. *Nat Sustain*. <https://doi.org/10.1038/s41893-019-0334-y>
- 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. <https://www.sei.org/wp-content/uploads/2019/08/connections-between-the-paris-agreement-and-the-2030-agenda.pdf>
- Cohen, B., Cowie, A., Babiker, M., Leip, A., & Smith, P. (2021). Co-benefits and trade-offs of climate change mitigation actions and the Sustainable Development Goals. *Sustainable Production and Consumption*, 26, 805-813. <https://doi.org/10.1016/j.spc.2020.12.034>
- Dagnachew, A. G., & Hof, A. F. (2022). Climate change mitigation and SDGs: modelling the regional potential of promising mitigation measures and assessing their impact on other SDGs. *Journal of Integrative Environmental Sciences*, 19(1), 289-314. <https://doi.org/10.1080/1943815X.2022.2146137>
- Carley, S., & Konisky, D. M. (2020). The justice and equity implications of the clean energy transition. *Nature Energy*, 5(8), 569–577. <https://doi.org/10.1038/s41560-020-0641-6>
- Peretto, M., Eichhammer, W., & Süsner, D. (2024). Just energy transition in coal regions: Innovative framework for assessing Territorial Just Transition Plans. *Renewable and Sustainable Energy Transition*, 100101. <https://doi.org/10.1016/j.rset.2024.100101>
- Crippa, M., Solazzo, E., Guizzardi, D. et al. (2021) Food systems are responsible for a third of global anthropogenic GHG emissions. *Nat Food* 2, 198–209. <https://doi.org/10.1038/s43016-021-00225-9>
- Alebel, M., Pastor-Ivars, J., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 71(June 2023), 1255-126. <https://link.springer.com/article/10.1007/s00267-023-01790-4>
- Folke, C. (2006). Resilience: The emergence of a perspective for social–ecological systems analyses. *Global environmental change*, 16(3), 253-267.
- Liu, J., Hull, V., Godfray, C., Tilman, D., Gleick, P. H., Hoff, H., Pahl-Wostl, C., Xu, Z., Chung, M. G., Sun, J., & Li, S. (2018). Nexus approaches to global sustainable development. *Nature Sustainability*, 1(9), 466–476. <https://doi.org/10.1038/s41893-018-0135-8>
- Wüstenhagen, R., Menichetti, E. (2011) Strategic choices for renewable energy investment: Conceptual framework and opportunities for further research. *Energy Policy*, 40, 1-10. <https://doi.org/10.1016/j.enpol.2011.06.050>

**Reference**

**Grading Policy**

Rate	%	Evaluation Criteria
Assignment 1: Class Presentation	20	Understanding and Application of knowledge from lectures (50) Quality of analysis (30) Discussion, argumentation, and validation (20)
Assignment 2: Class Presentation	40	Understanding and Application of knowledge from lectures (50) Quality of analysis (30) Policy relevance (20)
Assignment 3: Policy brief	30	Quality of synthesis (40) Discussion, argumentation, and validation (30) Policy relevance (20) Style, format & originality (10)
Class Participation and Discussion	10	Discussion during the class, Q/A Attendance in-person

**Note / URL if any**