Course Introduction

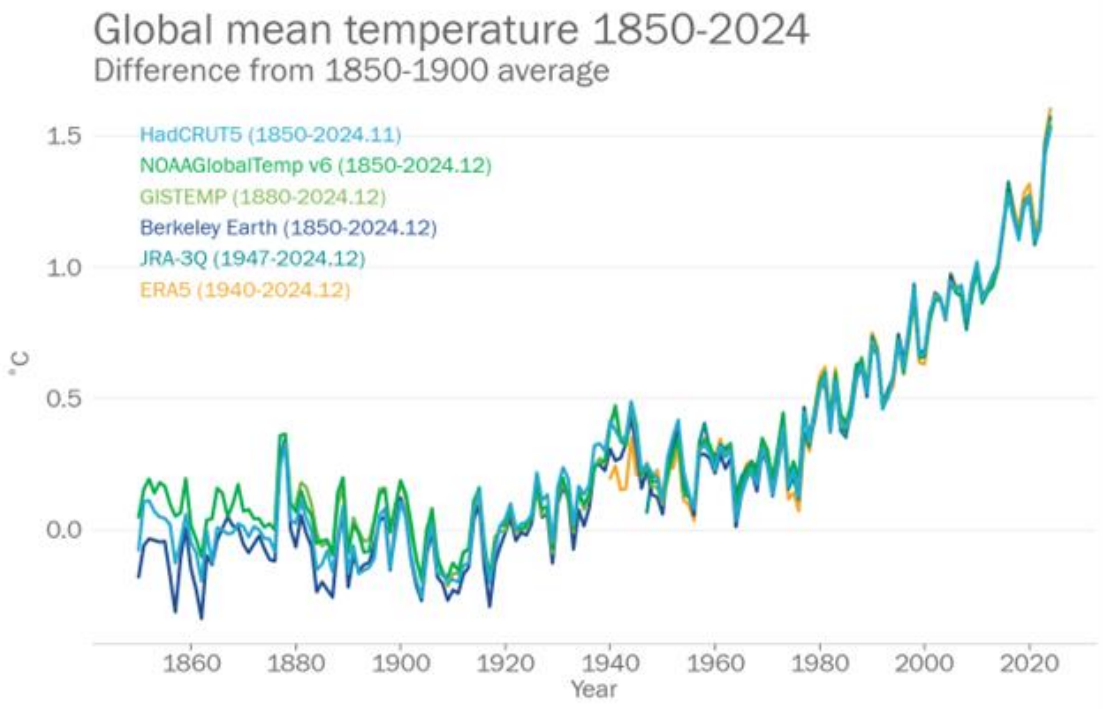
IN 00.41:
Climate Change Challenges and Responses
1(1-0)

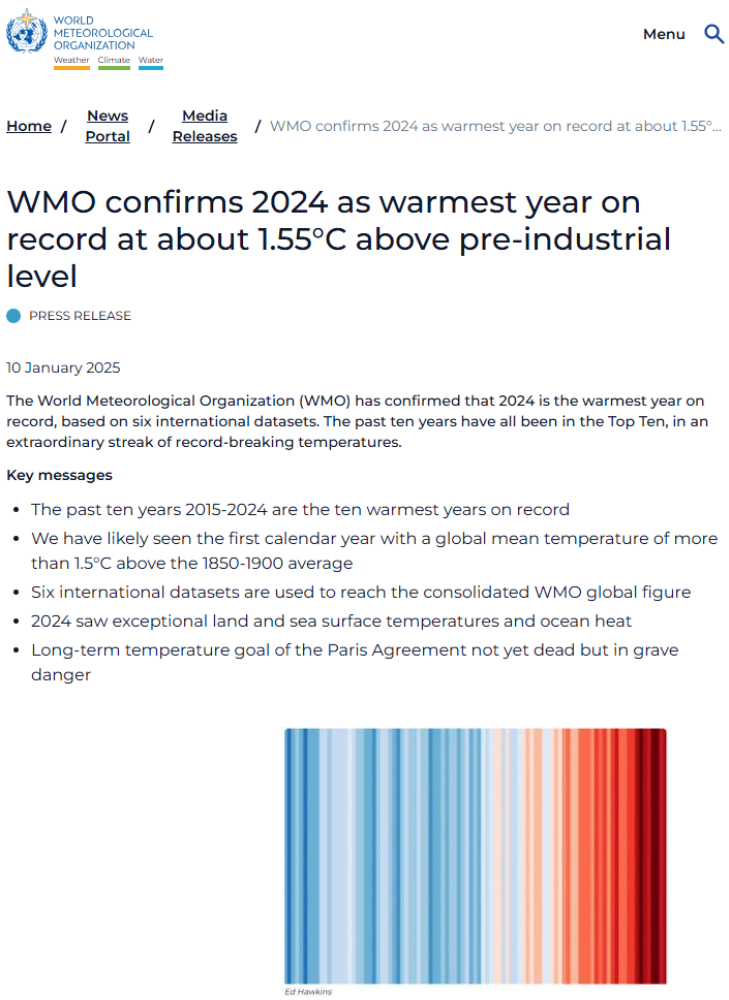
Prof. Shobhakar Dhakal
Dr. Bindu Nath Lohani
Prof. Rajendra Shrestha

14 January 2025

- The global average surface temperature was 1.55 °C (with a margin of uncertainty of ± 0.13 °C) above the 1850-1900 average
- Ocean warming in 2024 played a key role in the record high temperatures

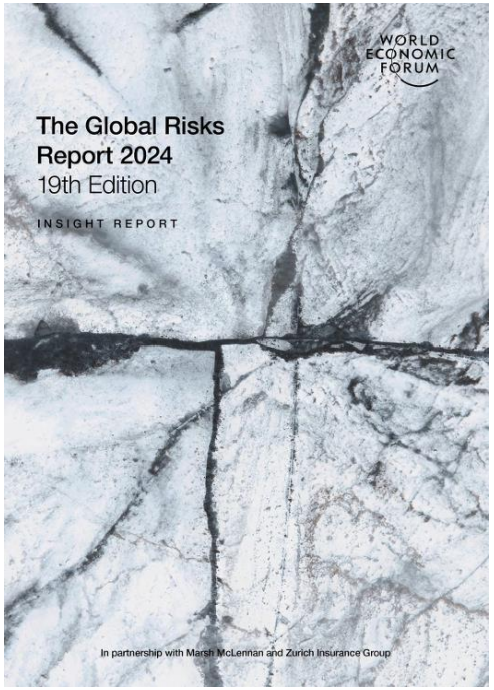
Note: Individual years pushing past the 1.5 degree limit do not mean the long-term goal is breached





https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level

2 years		10 years	
1st	Misinformation and disinformation	1st	Extreme weather events
2nd	Extreme weather events	2nd	Critical change to Earth systems
3rd	Societal polarization	3rd	Biodiversity loss and ecosystem collapse
4th	Cyber insecurity	4th	Natural resource shortages
5th	Interstate armed conflict	5th	Misinformation and disinformation
6th	Lack of economic opportunity	6th	Adverse outcomes of AI technologies
7th	Inflation	7th	Involuntary migration
8th	Involuntary migration	8th	Cyber insecurity
9th	Economic downturn	9th	Societal polarization
10th	Pollution	10th	Pollution



Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

Findings from annual Global Risks Perception Survey, which brings together the collective intelligence of nearly 1,500 global leaders across academia, business, government, the international community and civil society.

WORLD ECONOMIC FORUM

https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

AIT

IN 00.41: Climate Change Challenges and Responses 1(1-0)

Course objective

to provide a wide-ranging contemporary debate and progresses linked with climate change for enhancing students' knowledge base and critical thinking in their respective field of profession.

Learning Outcomes

- Describe the contemporary and relevant climate change issues
- Discuss the impact and vulnerability associated with climate change
- Analyze available mitigation and adaptation options
- Explain the required enabling environment (climate finance, policies) for addressing climate change issues

“tentative” Seminar topics/day/time

Topic	Lecture topic	Date	Speaker(s)
0	Course introduction	14 Jan, Tue 2-4 pm	Prof. Shobhakar Dhakal, Prof. Rajendra Shrestha, Dr Bindu Nath Lohani, AIT
1	Climate Change and International Climate Negotiations: where do we stand and where to go from here?	16 Jan, Thu 2-4 pm	Prof. Shobhakar Dhakal, AIT
2	Sustainable Development: historical evolution, milestones, and Current Status	21 Jan, Tue 2-4 pm	Dr Bindu Nath Lohani, AIT
3	The Challenge: financing lower-carbon, climate-resilient development	23 Jan Thu 3 pm	Ms. Sarah Colenbrander, Director, Climate and Sustainability Programme, ODI, UK
4	Asian Energy Perspectives /Outlook	28 Jan Tue 2-4 pm	Dr Priyantha D.C. Wijayatunga, Senior Director, Energy Sector Office, Asian Development Bank, Manila

“tentative” Seminar topics/day/time

Topic	Lecture topic	Date	Speaker(s)
5	Cities and Climate Change: Challenged for climate resilient cities	30 Jan Thu 2-4 pm	Mr. Srinivasan Popuri, Chief, UN-Habitat Multi Country Programme Office, Regional Office of Asia and the Pacific, UN Building, Bangkok
6	Circular economy and decarnomization	4 Feb Tue 2-4 pm	Dr. Prasad Modak, Managing Director, Environmental Management Centre Pvt Ltd Director, Ekonnect Knowledge Foundation (EMC, India)
7	Climate Technology Needs Assessment in Asia		Prof. Rajendra Shrestha, AIT
8	Pursuit of the carbon neutrality and resource management in the corporate sector	6 Feb Thu 2-4 pm	Dr. Yongping Zhai, Senior Advisor, Tencent Holdings, China

“tentative” Seminar topics/day/time

Topic	Lecture topic	Date	Speaker(s)
9	Food Systems Transformation for Climate Change Mitigation and Sustainable Development		Dr Prajal Pradhan, Assistant Professor, University of Groningen, the Netherlands
10	Adaption needs and Nature-based Solutions for Addressing Climate Change and Poverty		Mr Robert J. Dobias, Advisor at Climate Change Center, National Research Council of Thailand
11	Climate science communication		Andrej Mahecic/ Jonathan Lynn, Head/Former-Head of Communications and Media Relations, Intergovernmental Panel on Climate Change (IPCC)
12	Integrating top-down and bottom-up approaches for climate adaptation: Concept and application		Dr. Carl Fredrich, International Institute for Applied Systems Analysis (IIASA), Austria OR Florian Kraxner
	Assignment presentation Climate policies: typology and practices		Students – moderated by Dr. Bindu Lohani, Prof. Shobhakar Dhakal and Prof. Rajendra Shrestha
13	Final exam		

Learning resources

- ❑ No textbook
- ❑ Several reference books, journals, other resources given in course catalogue
- ❑ Lecture presentation file (also containing list of readings) will be made available before the lecture

Grading :

- Participation and interaction in class (30%)
- Final exam (40%) - Closed book
- Assignments (30%)

Class Schedule:

Tuesday/Thursday: 2-4 pm

ET 108 (THIS MIGHT CHANGE)

Zoom Meeting (THIS MIGHT CHANGE)

https://ait-ac-th.zoom.us/j/5787222404?pwd=R0NsWEtxcEJ5OUUzUmtibGRjTmk1QT09

ID: 578 722 2404

Password: 527538

Getting lecture materials:

From Moodle

Search course: IN00.41 Climate Change Challenges and Responses

Or go to

School → SERD → ED82 - Climate Change and Sustainable Development

Self-enrollment key: CCCR@25Jan

Contact for course-related inquiry: shobhakar@ait.ac.th