

## **IPCC Seminar course**

0341-4086-01 Select Topics in Atmospheric Dynamics and Circulation

Tuesdays 15-17, Kaplun 205

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Part I:

Read parts of the IPCC 5<sup>th</sup> assessment report:

<https://www.ipcc.ch/report/ar5/>

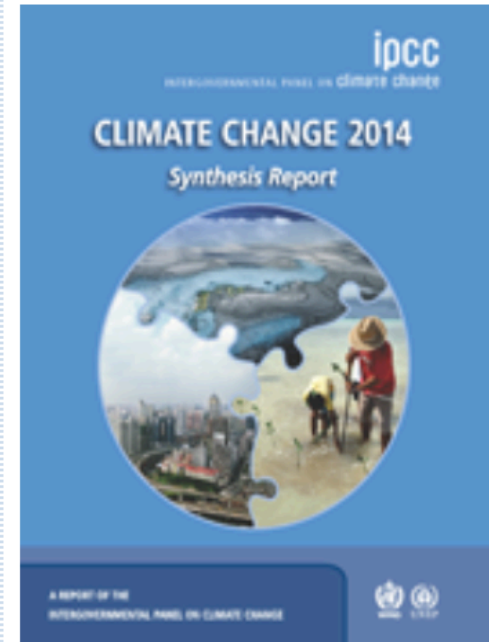
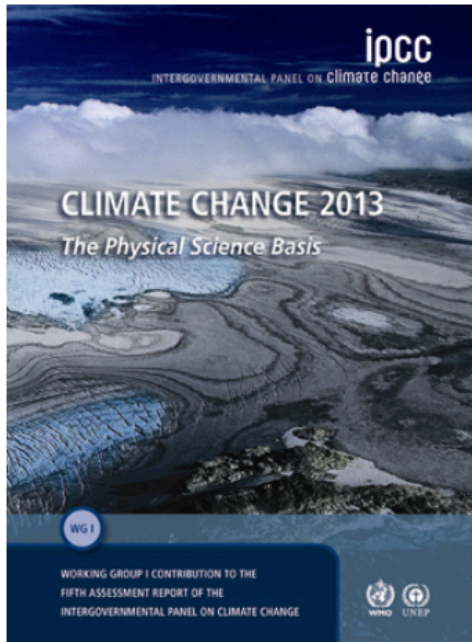
Part II:

Build a 3<sup>rd</sup> year BSc course homework assignment using an idealized model of any aspect of the climate system

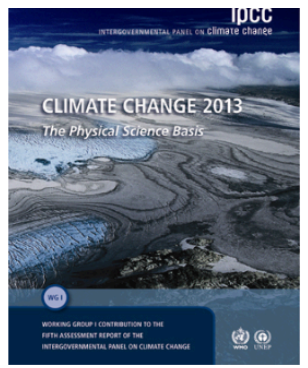
Intro lecture: [Introduction.pdf](#)

Intro reading: [Ghil, 2001: Hilbert Problems for the Geosciences, in the 21st century](#)

Books: TBA



- Working Groups / Task Force
- Activities
- Calendar
- Meeting Documentation
- News and Outreach
- Publications and Data
- Presentations and Speeches
- IPCC Scholarship Programme
- Links
- Contact



- WGII
- WGIII
- SYR
- All AR5

### Quick Links

- Summary for Policymakers (SPM)
- Video ([ar](#) - [en](#) - [es](#) - [fr](#) - [ru](#) - [zh](#))
- Fact Sheet
- Questions about the Report
- FAQ Brochure (30MB)
- All Citations ( [PDF](#) - [Endnote](#) )
- Poster
- All Graphics
- Full Report (375MB)
- Errata
- WGI Report Website

### Report by Chapters

Click to on the link to download the chapter, graphics, authors etc.

- Front Matter - [0.8MB](#)
- Summary for Policymakers - [2.3MB](#)
- Technical Summary - [18.1MB](#)

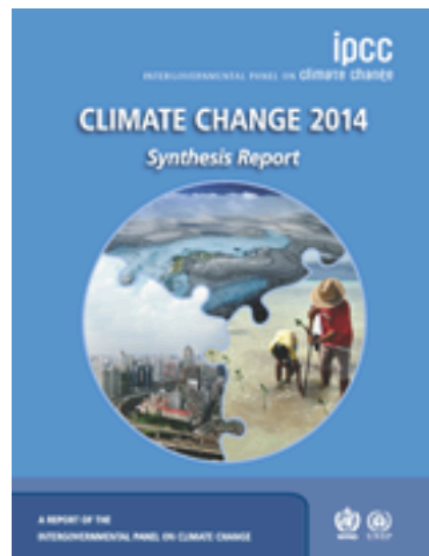
### Chapters

1. Introduction - [4.5MB](#)
2. Observations: Atmosphere and Surface - [38.3MB](#)
3. Observations: Ocean - [48.3MB](#)
4. Observations: Cryosphere - [12.8MB](#)
5. Information from Paleoclimate Archives - [10.8MB](#)
6. Carbon and Other Biogeochemical Cycles - [23.8MB](#)
7. Clouds and Aerosols - [19.2MB](#)
8. Anthropogenic and Natural Radiative Forcing - [18.9MB](#)
9. Evaluation of Climate Models - [24.6MB](#)
10. Detection and Attribution of Climate Change: from Global to Regional - [10.4MB](#)
11. Near-term Climate Change: Projections and Predictability - [14.1MB](#)
12. Long-term Climate Change: Projections, Commitments and Irreversibility - [36.6MB](#)
13. Sea Level Change - [32.9MB](#)
14. Climate Phenomena and their Relevance for Future Regional Climate Change - [10.6MB](#)

### Annexes

- I. Atlas of Global and Regional Climate Projections - [44.7MB](#)
- II. Climate System Scenario Tables - [1.5MB](#)
- III. Glossary - [0.4MB](#)
- IV. Acronyms - [0.1MB](#)
- V. Contributors to the WGI Fifth Assessment Report - [0.2MB](#)
- VI. Expert Reviewers of the WGI Fifth Assessment Report - [0.5MB](#)

- Index [0.2MB](#)
- Errata [5.4MB](#) (Updated 11/12/2015)

[WGI](#)[WGII](#)[WGIII](#)[All AR5](#)

### Quick Links

- [Summary for Policymakers \( 3.2MB\)](#)
- [Video - Video trailer](#)
- [All Graphics](#)
- [Errata](#)
- [Full Report - Download \(10MB\)](#)
- [Synthesis Report website](#)

[Search Report](#)

### Report

When quoting, citing or distributing the Synthesis Report, its SPM or its individual sections, please provide the full reference: IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

- [Cover - \( \[A\]\(#\) / \[B\]\(#\) \)](#)
- [Front Matter - 0.8 MB](#)
- [Summary for Policymakers - 3.2MB](#)
- [Synthesis Report \(longer report\) - 4.5MB](#)
- [Annexes and Index - 0.4 MB](#)
- [Full Report \( 10MB \)](#)
- [Errata - 0.4MB](#)

[+ Full Synthesis Report in UN and other languages](#)[+ SPM in UN and other languages](#)[+ Headline Statements in UN Languages](#)[+ Drafts and Review Materials](#)[+ Presentation](#)

## Structure of IPCC chapter discussion

- Lead student: Summarize the main topic of the chapter, the main issues or questions being addressed.
- Each student: choose one scientific point or controversy brought up, maybe skim the one or two relevant papers, and present to the class with 1-2 slides
- Lead Student: Show how the main results are presented in the Summary for Policy Makers, Technical summary, Synthesis report
- Closing discussion

We have 13 weeks. Excluding 1<sup>st</sup> and last classes, we have 11 weeks.

**Today:** Choose chapters for the next two weeks, and tentative chapters for other weeks

## Idealized model project

Choose a model – what components and aspect of the climate system does it simulate? Which feedbacks? What are the main relevant time scales? What kind of questions can it answer? (Nov 29<sup>th</sup>)

Read for next week (Nov 8<sup>th</sup>): Ghil, 2001: Hilbert Problems for the Geosciences, in the 21st century, Nonlinear Processes in Geophysics (2001) 8: 211–222

**Goal:** Prepare a class assignment using this model, for a 3<sup>rd</sup> year BSc Climate course

- What aspects of the climate system or questions do you want to show with the model?
- Construct a short set of simulations that will demonstrate these aspects/answer these questions
- Download the model and perform these simulations. Add the necessary coding if needed.
- Prepare a written homework assignment, along with sample solutions

**Present** the model to the class in the last meeting – a few slides describing the model and main questions. Jan 24<sup>th</sup>

Assignment due: Feb 21<sup>st</sup>