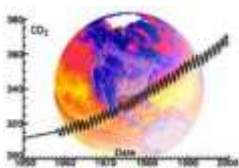


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# Climate Change and Transition Studies



## An Interactive Online Learning Initiative

Designed for IvyMind Consulting, LLC

as a project of the

[The Young Scholars' Online Learning Initiative](#)

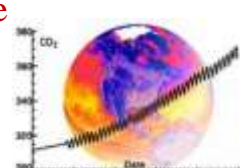
created by

[Timothy C. Weiskel](#)

Research Director, *Cambridge Climate Research Associates*

**Climate Science for Human Survival**

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**Instructions:** In a separate document please respond to these questions. To start with, “copy-and-paste” each question into a document of your own, and then write a brief response to each question.

\* Then, save your file on your computer with the filename:

**“201908xx - [Name] - Questions for Session 4”**

\* Finally, upload this file to the [Dropbox](#) folder with your name on it.

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## Questions for Session 4 – 1 August 2019

### “Climate Change, Soils, Agriculture and the Global Food System”

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After reviewing the [lecture for Session 4](#) (1 August) and the [Slides](#) and [Additional Resources](#) for the session, please read the following questions and write short answers to them in response.

- 1) Floods and prolonged droughts can be devastating to the life of soils. These climate related “extreme weather” events can destroy in just hours what it has taken natural bio-geo-chemical processes thousands or tens-of-thousands of years to create. What are some of the principal ways in which human policies and collective activity have contributed to the vulnerability of soils to these climate-induced extreme weather events?
- 2) What is meant by the abbreviations “HYV” and “HRV?” Why is the difference between these concepts important for understanding the evolution of the global food system in the last seventy five years?
- 3) Some “agricultural experts” have argued that the “green revolution” effectively *solved* the “food problem” over the last half century by following the techniques and policies promoted by Norman Borlaug, the Rockefeller Foundation and the Ford Foundation. Norman Borlaug himself was awarded the Nobel Peace Prize in 1970, and his approach has been largely embraced by the Food and Agricultural Organization (FAO) of the U.N. and the major transnational agribusiness firms like Monsanto, for whom he became an important spokesman in promoting the “gene revolution” in the years before his death in 2009.

From this perspective there does not appear to be great anxiety on the part of political leaders who seem confident that the further application of “green revolution” and “gene revolution” technology can solve food shortage problems that may emerge from our changing climate.

Do you agree with these political leaders and the growth-focused “agricultural experts” they have come to rely upon? Have green revolution techniques and technologies *solved* the global food problem? Or, by effectively ignoring the scientists who have offered an ecological critique of the “green revolution,” have these leaders merely postponed and possibly amplified the food problems the world must now face with climate change?

- 4) What is meant by the growing international phenomena labeled “Land Grabs” or “Land Rushes?” What are the economic forces driving these processes? What are the foreseeable ecological, social and political consequences of this new phase of human-soil interactions? How do you think climate change affect these phenomena and the character of the global food system in the coming years and decades?
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