

Lesson Plan: War in A Warming World: Climate Change and the Civil War in Syria

As an **Undergraduate** teacher in the **Social Sciences** or **Environmental Studies**, you can use this lesson plan to teach your students about how human induced global warming can have significant impacts on food and water security and could be a factor contributing to mass human migrations, lead to political instability, and even war. This lesson plan examines how the most severe drought recorded (instrumentally) in Syria's history from 2007-2010 was probably caused due to anthropogenically forced climate change. The drought is thought to have contributed to large scale human migration from farmlands to urban areas and may have been a significant factor in the political unrest and civil war in Syria.

This lesson plan provides teaching resources to introduce how climate change is stressing natural resources in different parts of the world and can lead to political instability, conflict and possibly even state collapse. It focuses on understanding whether the drought in Syria and mass human migrations played a role in the civil war there.

Thus, the use of this lesson plan allows you to teach aspects of **Peace and Conflict Studies**, **International Relations**, **Natural Resource Management**, **Risk Assessment**, **Geopolitics** and **Security** in your **Social Sciences** or **Environmental Studies** classrooms.

Use this lesson plan to help your students find answers to:

- How does climate change affect the internal security of a country?
- Did climate change cause the drought in Syria from 2007-2010?
- What role did food insecurity play in the mass human migration in Syria?
- Discuss whether climate change and the drought contributed to the civil war in Syria?

About the Lesson Plan

Grade Level: Undergraduate

Discipline: Social Sciences

Topic(s) in Discipline: Conflict, Civil War, Geopolitics, Security, International Relations, Risk Assessment, Human Migration, Drought

Climate Topic: Climate and Society; Climate Change and Food Security; Disasters and Hazards; Policies, Politics, and Environmental Governance

Location: Syria

Access: Online

Language(s): English

Approximate Time Required: 60-120 min

1 Contents

1. Reading (10 min)

A reading on climate change caused stress on natural resources and its effect on state fragility. This reading is titled 'Climate Change, the Erosion of State Sovereignty, and World Order' by Francesco Femia and Caitlin E. Werrell.

This can be accessed at:

https://climateandsecurity.org/wp-content/uploads/2017/06/1_eroding-sovereignty.pdf

2. Video (5 min)

A video on climate change as a catalyst for crisis from the Yale Climate Communications series titled 'Drought, Water, War, and Climate Change'

This can be accessed at:

<https://www.youtube.com/watch?v=BbkNcvGHZwc>

3. Video (20 min)

A video from the Showtime series 'Years of Living Dangerously' – a documentary television series on global warming. This video titled 'Dry Season' includes segments on droughts in the Southwest United States, religion and climate change, deforestation in Indonesia, and how drought contributed to the civil war in Syria.

The segment on the war in Syria is reported by Thomas Friedman of the New York Times.

This can be accessed at:

https://www.youtube.com/watch?time_continue=2&v=brvhCnYvxQQ&feature=emb_logo

4. Readings (30-60 min)

A set of readings on Climate Change and the civil war in Syria

Reading 1: A journal article titled 'Climate change in the Fertile Crescent and implications of the recent Syrian drought' by Colin P. Kelley, Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir in Proceedings of the National Academy of Sciences (PNAS). This article drew linkages between climate change, the drought, mass migration, political instability, and civil war in Syria.

This can be accessed at:

<https://www.pnas.org/content/112/11/3241>

Reading 2: A short review article titled 'Is Climate Change Behind the Syrian Civil War?' by Prof Dagomar Degroot at Historical Climatology website.

This can be accessed at:

<https://www.historicalclimatology.com/features/is-climate-change-behind-the-syrian-civil-war>

Optional:

Reading 3: A journal article that did not find significant linkages between climate change and the Syrian civil war titled 'Climate change and the Syrian civil war revisited' by Jan Selby, Omar S. Dahib, Christiane Fröhlich, Mike Hulme in Political Geography

This can be accessed at:

<https://www.sciencedirect.com/science/article/pii/S0962629816301822>

5. Suggested questions/assignments for learning evaluation

- How does climate change affect the internal security of a country?
- Did climate change cause the drought in Syria from 2007-2010?
- What role did food insecurity play in the mass human migration in Syria?
- Discuss whether climate change and the drought contributed to the civil war in Syria?

2 Step-by-step User Guide

Here is a step-by-step guide to using this lesson plan in the classroom/laboratory. We have suggested these steps as a possible plan of action. You may customize the lesson plan according to your preferences and requirements.

1. Topic introduction and discussion

Introduce your students to the lesson plan by discussing how climate change can stress the natural resources of several countries and how this can lead to political instability. Use the reading is titled 'Climate Change, the Erosion of State Sovereignty, and World Order' by Francesco Femia and Caitlin E. Werrell from The Center for Climate and Security: Exploring The Security Risks of Climate Change.

This resource is available at https://climateandsecurity.org/wp-content/uploads/2017/06/1_eroding-sovereignty.pdf

Use the reading to emphasize how human induced global warming can have significant impacts on food and water security and can potentially cause mass human migrations, political instability, internal conflict, and, potentially, even civil wars. Discuss with your students the section titled 'The Six Erosions of State Sovereignty', especially the 'Catch-22 States' and 'Brittle States' in which the 2007-2010 drought of Syria led to massive crop failure, mass human migration and "accelerated Syria's transition from relative stability to being one of the most conflict-ridden states in the world."

2. Discuss Climate Change, The Drought and Civil War in Syria

Use two videos to explain to your students the linkages between global warming and changes in weather patterns leading to the most severe drought instrumentally recorded in the history of Syria. Explore whether the drought contributed to civil and political unrest in Syria. Your

students may first watch a short video (5 min) on climate change as a catalyst for crisis from the Yale Climate Communications series titled 'Drought, Water, War, and Climate Change' available at

This can be accessed at:

<https://www.youtube.com/watch?v=BbkNcvGHZwc>

Next, ask your students to watch a video from the Showtime series 'Years of Living Dangerously' – a documentary television series on global warming. This video titled 'Dry Season' includes segments on droughts in the Southwest United States (reported by Don Cheadle), religion and climate change (reported by Katharine Hayhoe), deforestation in Indonesia (reported by Harrison Ford), and how drought may have contributed to the civil war in Syria. You may choose to have your students watch just the sections pertaining to Syria which are interspersed in the video. The segment on the war in Syria is reported by Thomas Friedman of the New York Times. This resource can be accessed at

This can be accessed at:

https://www.youtube.com/watch?time_continue=2&v=brvhCnYvxQQ&feature=emb_logo

3. Extend understanding

Next, provide your students with a journal article titled 'Climate change in the Fertile Crescent and implications of the recent Syrian drought' by Colin P. Kelley, Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir in Proceedings of the National Academy of Sciences (PNAS).

This resource can be accessed at <https://www.pnas.org/content/112/11/3241>

This article from 2015 first drew linkages between climate change, the drought, mass migration, political instability, and civil war in Syria. The authors separated the natural variability of Syrian climate from anthropogenically induced climate change and concluded that warming and drying weather trend was caused due to human influence.

Ask your students to summarize and discuss the main findings of this research article. You may choose to provide them with a short and simpler review article titled 'Is Climate Change Behind the Syrian Civil War?' by Prof Dagomar Degroot at Historical Climatology website to further their understanding.

This resource is available at

<https://www.historicalclimatology.com/features/is-climate-change-behind-the-syrian-civil-war>

Optional:

The work of Kelley et al. (2015) is often cited as an example of climate change contributing to civil war. However there has been some debate around their findings. A recent journal article from 2017 titled 'Climate change and the Syrian civil war revisited' by Jan Selby, Omar S. Dahib, Christiane Fröhlich, Mike Hulme in Political Geography challenged the findings of Kelley et al. (2015). The authors report that they did not find significant linkages between climate change and the Syrian civil war.

You may choose to ask your students to read both articles and to discuss and debate whether there is scientific evidence for linking the drought in Syria from 2007 to 2010 with anthropogenically forced global warming. And if the drought caused large scale human migration, led to political unrest and finally the civil war. You may emphasize to your students the scientific process which often involves divergent views.

4. Questions/Assignments

Use the tools and the concepts learned so far to discuss and determine answers to the following questions:

- How does climate change affect the internal security of a country?
- Did climate change cause the drought in Syria from 2007-2010?
- What role did food insecurity play in the mass human migration in Syria?
- Discuss whether climate change and the drought contributed to the civil war in Syria?

3 Learning Outcomes

The tools in this lesson plan will enable students to:

- learn about climate change and security of a country
- understand the role of climate change in altering weather of a region
- understand how climate change can cause droughts
- discuss climate change and how it is affecting food security and causing potential mass human migrations
- discuss whether climate change can lead to civil war

4 Additional Resources

If you or your students would like to explore the topic further, these additional resources will be useful.

1. Reading; 'The Weaponization of Water in a Changing Climate'

By Marcus D. King and Julia Burnell in *Epicenters of Climate and Security: The New Geostrategic Landscape of the Anthropocene*. Eds. Caitlin E. Werrell and Francesco Femia (2017).

This can be accessed at:

https://climateandsecurity.org/wp-content/uploads/2017/06/8_water-weaponization.pdf

2. Reading; 'Migration and Displacement in a Changing Climate'

By Robert McLeman in *Epicenters of Climate and Security: The New Geostrategic Landscape of the Anthropocene*. Eds. Caitlin E. Werrell and Francesco Femia (2017).

This can be accessed at:

https://climateandsecurity.org/wp-content/uploads/2017/06/12_migration-and-displacement.pdf

5 Credits/Copyrights

All the teaching tools in our collated list are owned by the corresponding creators/authors/organizations as listed on their websites. Please view the individual copyright and ownership details for each tool by following the individual links provided. We have selected and analyzed the tools

that align with the overall objective of our project and have provided the corresponding links. We do not claim ownership of or responsibility/liability for any of the listed tools.

1. Reading; 'Climate Change, the Erosion of State Sovereignty, and World Order'

By Francesco Femia and Caitlin E. Werrell from [The Center for Climate and Security](#): Exploring The Security Risks of Climate Change.

2. Video; 'Drought, Water, War, and Climate Change'

From the [Yale Climate Communications](#) series.

3. Video; 'Years of Living Dangerously'

From the Showtime series, [The Years Project](#).

4. Reading; 'Climate change in the Fertile Crescent and implications of the recent Syrian drought'

Journal article by Colin P. Kelley, Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir in [Proceedings of the National Academy of Sciences \(PNAS\)](#).

5. Reading; 'Is Climate Change Behind the Syrian Civil War?'

Review article by [Dr Dagomar Degroot](#), Georgetown University on the [Historical Climatology](#) website.

6. Reading; 'Climate change and the Syrian civil war revisited'

Journal article by Jan Selby, Omar S. Dahib, Christiane Fröhlich, Mike Hulme in [Political Geography](#) on ScienceDirect.

7. Additional Resources

[The Center for Climate & Security](#)