

Our Changing Climate

Climate Change Presentation Outline

Climate Central presents Our Changing Climate, an outreach climate change presentation and education resource for meteorologists, journalists, and others. This 55-slide presentation is a guide through the basics of climate change, outlining its causes, impacts, and solutions.

In the presentation, each slide has - where applicable - presenter text, background & notes, and photo credits in their notes section. The presenter text helps outline the key points of each slide, and it is up to the presenter whether they would like to follow the text or use it as inspiration. The background & notes section provides more information on the slide and explains any complex graphics.

At the end of the presentation, there is an “Additional Slides” section. It contains extra slides on specific concepts and local graphics if you would like to further build out your presentation.

Below you can find the outline of this presentation. For slides designated with a ●, a local graphic (from our [media library](#)) is available and linked to in the note section of that slide. Climate Central encourages presenters to incorporate these local graphics so their audience can understand that climate change is not only happening at a global scale but in our backyards.

Every slide is fully editable, allowing the presenter to remove, add, or customize graphics or wording.

Special thanks to Colorado State’s Scott Denning for the simple, serious, solvable framing of the presentation.

Enjoy!

1 | OUR CHANGING CLIMATE

Title slide with warming stripes detail (based on original stripes [from Ed Hawkins](#) at University of Reading, UK)

2 | *Climate Change Is...*

- Introduces the “Simple, Serious, Solvable” framework

3 | SIMPLE

Simple discusses the mounting evidence and well-understood science (since 1800) of climate change

4 | *Simple (cont.)*

- Humans burn fossil fuels, fossil fuels put CO₂ in the atmosphere, CO₂ warms the planet

6-10 | *The Greenhouse Effect*

12 | *Burning More Fossil Fuels*

15 | *Local Decades Of Warming* ●

- Average temperatures on a local scale follow a warming trend

17 | *Future Warming Scenarios*

5 | *Atmospheric Gases - Our Atmosphere*

11 | *Evidence That CO₂ Is A Greenhouse Gas*

13-14 | *Global Temperature & Carbon Dioxide Are Increasing*

16 | *The New Normal: 30-Year Temperature Averages Are Rising* ●

18 | SERIOUS

Serious outlines the impacts of climate change felt today and in the future

19 | *Serious (cont.)*

- Warming due to burning fossil fuels leads to wilder weather and rising seas.

20 | *Small Changes In Temperature Averages, Big Change In Extremes*

21 | **Temperature Records Set by Decade** ●

23 | **Bear Glacier Is Melting**

25 | **Sea Level Rise by Century**

27 | **Local Sea Level Rise Projections (i.e. Charleston, SC)** ●

29 | **More Downpours**

31 | **Hurricanes & Climate Change**

33 | **Hotter Years, Higher Fire Risk** ●

35 | **Extreme Weather**

37 | **Shifting Animals & Ecosystems**

39 | **Food & Farming**

41 | **1.5°C vs 2°C**

- There are drastic impacts with a 0.5-degree difference in the average global temperatures.

22 | **Snowfall Patterns Are Changing**

24 | **Oceans Heating Up**

26 | **Higher Tides, More Concurrent Flooding**

28 | **Warmer Air - More Evaporation**

30 | **Daily Deluge** ●

32 | **Western Drought**

34 | **Serious (cont.)**

- Climate change impacts the people, places, and things that we care about.

36 | **Billion-Dollar Disasters**

- Rise in weather & climate-related disasters costing more than \$1B.

38 | **Health**

40 | **Ways Of Life**

- Climate change is impacting how we live our lives.

42 | SOLVABLE

Solvable outlines the solutions at hand to combat climate change.

43 | **We Need To Make Big Cuts, Fast**

- To stay below 1.5°C, we need to reduce CO2 emissions quickly and drastically.

44 | **Greenhouse Gas Sources, U.S. Emissions By Sector**

- Solutions should focus on the 5 main sources producing greenhouse gases.

45 | **Renewable energy availability - Solar & Wind**

46 | **Solar & Wind Electricity Generation** ●

47 | **Electrification of Transportation**

48 | **Better Buildings**

- Architecture and building design can increase energy efficiency.

49 | **Building Better Soils**

- Better agriculture practices can lower emissions by increasing soil carbon.

50 | **Maintain Carbon Sinks & Flood Buffers**

51 | **The Power Of Trees** ●

52 | **We Have Done Big Things Before**

- We need to make big infrastructure changes as we have in the past.

53 | **Inspirational Leaders & Collaborators**

- Use this slide to showcase who inspires you to fight against climate change.

54 | **Climate Change Is Simple, Serious, But Solvable**

55 | **Acknowledgements**

56 | **ADDITIONAL SLIDES**

Additional slides are available at the end of the main slide deck for those that want to go deeper into the following topics

57-73 | **SUPPLEMENTARY GRAPHICS**

The following slides are premade graphics and topics to add depth to your presentation if desired.

58 | **The Greenhouse Effect**

- Original GIF from slides 6-10 in the main slide deck.

59 | **Alaska's Muir Glacier Is Melting**

60 | **Reconstructing Past Climates With Proxies**

61 | **Carbon Dioxide Is Increasing**

- Carbon dioxide has increased at an unprecedented rate

62 | **Greenhouse Gas Concentrations**

63 | **Greenhouse Gases Last A Long Time**

64 | **10 Hottest Years On Record Global**

65 | **Global Decades of Warming**

66 | **Temperature Anomaly**

- Different agencies came to the same conclusion that global temperatures are rising.

68 | **Temperature vs Solar Activity**

- Recent warming is not because of changing solar activity.

70 | **Human-caused Climate Change Is Widely Agreed Upon**

72 | **Shared Socioeconomic Pathways**

- How rapidly we reduce emissions will dictate how much warming occurs in the decades to come.

67 | **Orbital Cycles (Milankovitch)**

69 | **Global Surface Temperature Departures (ENSO)**

- El Niño is not a primary driver of long term warming.

71 | **How Close To 1.5°C**

73 | **Sea Level Projections Over A Century**

74-79 | **LOCAL + EXTRA GRAPHICS**

The following slides are extra or local graphics categorized by topic.

75 | **Extreme Weather**

- NCEI Climate Extremes Index from 1910-2018
- Weather-related Power Outages Map ●

77 | **Ice & Snow**

- Peak Ice Cover in the Great Lakes
- Snowfall Trends in Winter, Fall, Spring, Summer

79 | **Health Impacts**

- Algal Blooms Infographic
- Poison Ivy Projections
- Pollen Level Projections

76 | **Rising Temperatures**

- Lowest Temperature Each Year ●
- Warming Summer Nights ●
- Days Above X° (threshold temperature) ●
- Seasonal Warming Trends ●

78 | **Sea Level Rise & Ocean Warming**

- Ocean Heat Waves
- U.S. Coastal Flood Days ●
- Heat Accumulation in Air & Land vs Ocean
- Risks at 2 Feet of Coastal Flooding ●

- Transmission Risks of Mosquitoes ●
- PM 2.5 Health Risks
- Stagnant Air Map ●
- Lyme Disease Map