



How to Run World Climate in Twenty Minutes

If you have only a short time to run through the World Climate Exercise the scenario below explains how. With limited time, you can't cover all the points, discuss all the insights, or delve into the immersive role-playing drama that longer sessions effectively deliver. For these reasons, when possible, we recommend two or more hours for World Climate. However, in twenty minutes, it is still possible to deliver the main insights. The first thing to do to prepare is to:

- Read over the Facilitation Guide and other materials available [here](#).
- Review the C-Learn or C-ROADS simulation you are planning to use. You may want to watch a [video to see them action](#).

1. Introduce the Game:

Introduce yourself as the UN Secretary General or UNFCCC Executive Secretary. Explain that the participants are delegates tasked with reaching an international agreement to limit global warming to 2°C above preindustrial times by 2100. Split the group into three sub-groups, each to represent one of the three regions—Developed Nations, Developing A (fast developing nations), and Developing B (other developing nations).

Ask the Developing B group to sit on the floor. This is a symbolic way of representing the power imbalances between the more developed countries and the developing nations. As an additional measure, you may also consider asking the Developing B group to give any snacks they may have with them to the event to the Developing A group.

2. Provide Information about Business as Usual:

Display [C-Learn](#) or the three region screen in C-ROADS to the group. Point out the “Business as Usual” (BAU) (i.e., no action) emissions line -- orange, blue, or pink – for each group on the graph on the left. Then mention the BAU atmospheric concentrations and the temperature on the graphs on the right. Note the concentration and temperature goal lines.

3. Engage Participants:

Tell the groups they must choose a year when their sub-group will cap emissions. The groups need a few minutes to chat with their members to make their decision—not more than three minutes.

After three minutes, ask the Developed Nations group to call out their emissions cap year. Enter the number into the Stop Growth Year field for that group, but do not click the “run” button yet. It is important here to ask them to run their “mental simulation,” i.e., what effect do they think their action will have on the global forecast. Write down what their suggested outcomes. Verify to yourself that the value in the Percent Annual Reduction column is zero.) Then click the “run” button. Discuss the effect briefly.

Go through the same steps with the Developing A group and then Developing B group. Moderate discussion among the groups. Issues such as international fairness may emerge. “Yes, but...!” and so on. You can run the simulation several more times, each time entering new numbers.

Your goal as the facilitator is to reach a scenario where overall capping of emissions happens around 2020-2035. At this point, highlight the fact that the atmospheric concentration is still rising. Elicit from the participants how counterintuitive this is--flat emissions yet rising concentrations. Note that this is an opportunity for participants to overcome the common misconception that stabilizing carbon dioxide emissions is sufficient for stabilizing concentrations and temperature.

4. Bring out the Bathtub Simulation:

At this point, with the annual emissions graph becoming level through to 2100, shift to the Bathtub view of carbon dioxide in the atmosphere (button at the far right of the menu bar). Discuss emissions, net removals, and use the analogy of water flowing into and out of bathtub. Ask the audience where greenhouse gas emissions come from (burning fossil fuels, land use, etc), where the net removals go to (oceans, soils, plants), and then show in C-Learn how, if emissions exceed removals, concentrations will rise, i.e., “If we cap emissions at a level that exceeds net removals, concentrations must rise.” Prepare these talking points in advance.

5. Return to Negotiations:

Going back to group discussions, ask the participants to choose years to begin emissions reductions. Enter those numbers, but do not click “run” yet. As a time-saving measure, you can choose annual reduction rates for each group.

UNEP estimates that 3.5% per year reductions are about the maximum amount of reduction that is feasible for countries year after year without damaging impacts on the economy. Re-run the simulation until the group reaches the 2°C goal or time runs short.

6. Reiterate Importance of Relationship of Emissions to Net Removals:

Point out the graph of atmospheric concentrations, on the right of the screen, in the ~2°C scenario that you just created, where the red line is basically flat. Ask, “If this line is flat, what can we say about emissions and removals?” Elicit the response that emissions and net removals must be equal. Confirm this by going back to the Bathtub simulation (button on the far right of the screen) and show the result there. The emissions and net removals lines should converge (graph on the left). Carbon dioxide concentration line should be flat or going down (black line on the graph to the right). And the text inside the bathtub at the bottom of the screen should say the concentration has stabilized and, possibly, is now falling.

7. Reiterate Overall points:

- If we cap emissions above net removals, concentrations must rise.
- To stabilize CO₂ levels, we must reduce emissions on the order of 80% by 2050, to the point where emissions equal removals.
- As the participants can see from the international dynamics, the geo-political challenges around fairness, historical responsibility, future economic development, and international cooperation are significant.
- We can achieve an outcome to avoid the unmanageable and manage the unavoidable. It won’t be easy but it will be worth it.

8. Conclude. With practice, this exercise can be completed in about twenty minutes.