GREENHOUSE GAS (GHG) WORKSHOP INSTRUCTIONS

In your groups of 4, allocate the roles of:

- Anthropogenic emissions
- Natural emissions
- Natural absorptions
- Instructor/Observer

Please read these instructions out aloud before starting the activity. During the activity, the Instructor/Observer should prompt the group.

1. Ask the **Natural Emissions** to pump to a level of half the capacity of the atmospheric stock, then stop
2. Ask the **Natural Absorptions** to drain the atmospheric stock completely, then stop
3. Ask the **Anthropogenic Emissions** to pump to a level of half the capacity of the atmospheric stock, then stop
4. Now ask the **Natural Emissions** and **Natural Absorptions** to pump in a relationship to maintain the water level at half the capacity of the atmospheric stock. Prompt the emissions to speed up and then slow down and observe the water level.
5. Ask the **Natural Emissions** and **Natural Absorptions** to concentrate on matching their flow rates, rather than looking at the atmospheric stock. This represents **Dynamic Equilibrium**.
6. Now ask the **Anthropogenic Emissions** to pump at a very slow rate, and prompted to increase that rate over a period of time
7. When the atmospheric stock reaches a level about 2cm from the top of the atmospheric stock, the **Observer** will ask the group to troubleshoot how to stop it from overflowing. Keep in mind that the **Natural Emissions** and **Natural Absorptions** should roughly stay the same.
8. You can repeat step 7 to see if other strategies work.
9. Participants discuss the observed dynamics