

## Interactive Activity

### The Differential Impact of Climate Change of World Water Security

#### Objectives:

- To give an experiential sense of the impact of climate change and think about the way it will have differential impacts around the world and across different types of populations
- To translate experience into global policy and learn about trade-offs, regional interests, and global politics
- To reinforce issues about eco-justice, difficult dialogues, and the need for thinking differently about vulnerable populations, the responsibility of the commons and the financial implications of change and policy-making



#### Overview:

Climate change will have different impacts on different populations. This interactive has two aspects: experiencing the differential climate change impacts on water security globally and transforming that experience into an international agreement on water security comprised of at least 3 resolutions. It is possible to only do Part A and replace Part B with a full class discussion reflecting on their experience.

#### Preparation:

- Part 1, admittedly, has some preparation. If you seek to use real water for this project, you will need to set up rain water collection barrels earlier in the year to ensure that you have at least 35 litres of water captured which you can then pour into 7, 5-litre containers for the exercise. An easier alternative to using real water for the majority of the experience, is to create 7 large poster-size water jug shaped cardboard pieces where each will signify an amount of 5 litres of water. However, you will still need a jug of dirty water (small size) and one empty jug (same size) for Station Experience 2 as part of a filtering exercise and 3 small jugs of salt water for Station Experience 3)
- You will need to have supplies for students in Scenario 3 to build 3 small DIY salinator = (bowl, cup, clear plastic or saran wrap, elastic and a rock) – easy instructions at <https://www.youtube.com/watch?v=aYAZWcMaRwM>)
- It would be ideal if Part A could be carried on outside on a playing field [see Field Layout suggestion] – {maybe World Water day?}. Also, could be a great parent-watching event.
- You will need something to act as a filter (fabric, sponge]. This will be used by Team 2.
- You will need a hand pump of some sort. This can either be a manual hand water pump, or something easier to borrow such as a bike wheel pump.
- You will also need to make signs (just use 8.5x11 brightly colored paper) that read “*CLIMATE MIGRANT*”. In total you will need a number equivalent to 50% of the total number of students who are participating in the overall challenge.
- You will need 4 senior students (maybe from the leadership team) or colleagues [they are called Station Coordinators in this document] to join you so that you can assign one to each of the 4 stations to give instructions and ensure students know what they need to do.

## Part 1 – Experiencing Water Insecurity - Framework

Students will be divided equally into 4 groups where they will be assigned to a global water issue and geographic region station. At the station, students will experience two time periods for water in that region (the present, and approx. 2075). Each time period will last 20 minutes. The experience is designed in a relay format so as not to physically challenge any single student.

**Station Experience 1: Sub-Sahara Africa [Focus: water scarcity]** [Supplies for this experience = water jug or water substitute (poster), climate migrant signs for 50% of team, and large space for walking]

Period 1 (present): students will walk a comparably longer distance than other groups and once reaching the water [choose a distance that suits the age group – perhaps the width of a football field for older students], will then have to carry the water back to their “home”.

Period 2 (2075): students will now have to walk twice the distance to get water to take “home”. Some members will be instructed to “migrate” to another region due to lack of water.

**Station Experience 2: Northwest India / North China Plain [diminished groundwater and contaminated water]** [Supplies for this experience – water jug or water substitute (poster), hand pump, filter, jug of dirty water (any small size) and container to catch filtered water, Climate Migrant signs for 20% of team]

Period 1 (present): students will walk to a designated area and then use a hand pump to “pretend” they are extracting water (pump of 50 times per student). At that location, they will then pour water through a filter before returning to their “home base” with “clean” water.

Period 2 (2075): students will walk to same designated area, but because ground water is much lower, wells are far deeper, students will each have to pump 100 times. Some students from this group will be instructed to “migrate” to another region due to lack of water

**Station Experience 3: Caribbean and Island Nations [sea level rise & salination]** [Supplies for this experience = water jug or water substitute (poster), way of marking out large circle (perhaps cones or flags used in PhysEd, or a few rocks), supplies for desalinator, jug of pre-prepared salt water]

Period 1 (present): students are divided into three groups and positioned at various points on the periphery of a large circle. They will need to walk to a central rainwater collection point and pick up a jug of water/poster and return to their “home”. Their team will then carry the water jug back and forth repeatedly throughout the time period.

Period 2 (2075): Due to significant sea level rise, shrink the circumference of the circle drastically with students crowding into a fairly small space. Students are told that water has been heavily salinated due to sea level rise and salination of ground water. So they must desalinate their water, have students break into 3 equal groups and have each build a small DIY desalinator (super easy - <https://www.youtube.com/watch?v=aYAZWcMaRwM>). In this stage, some members will be instructed to “migrate” to another region due to lack of water.

**Station Experience 4: North America [extreme weather events – flooding, drought] [Supplies for this experience = water jug or water substitute (poster)]**

Period 1 (present): students will not do any walking but they will have to move water (jug or poster) from one side of a table to the other. The challenge is that they will have to move 709 litres of water (average per capita use of water in Canada for domestic purposes – note that actual per capita use if you include agriculture, industry and domestic use is 3,049 litres per capita per day!) which means they will have to shift the jug or poster ( $709/5 = 142$  times).

Period 2 (2075): Both flooding and drought will challenge North American nations. Advise students they are now under a severe boil water advisory which has in some cases lasted for more than 25 years (connect here to some Indigenous communities experience). They will need to bring in water by truck into their community. Forming a relay, they will have to go to a central water station located some distance away to pick up water to bring back to their community. As they have high water demands (709 litres of water per day) they will have to make many trips (142) to get their water, and/or decide to limit water use drastically. The distance each will walk can't be that far – perhaps 10 metres. As an added wrinkle, they will be the unsuspecting recipients of the migrants who have left the other regions – how will they deal with it?

**Experiential Part 1: Action Steps [Total time after set up = 50 minutes]:**

- **Step 1:** Students are assigned to their stations. The Station Coordinator reads to them the quick water scenario for the region and provides instructions for what they must do for the first time period. [5 minutes]
- **Step 2:** The Station Experience at Time Period 1 [2025] begins. While the students carry out the activity, the Station Coordinator will monitor their activity and prepare set up, if any, for the second time period. [20 minutes]
- **Step 3:** Time Period 1 ends, and the Station Coordinator reads the changed water scenario for 2075 and gives instructions for what the students must now do. The Station Coordinator will also randomly select students as per the water scenario to migrate, if applicable. Once the other students begin their activity, those that are told to migrate, will be told to head over to the North American scenario seeking refuge. [5 minutes]
- **Step 4:** The Station Experience at 2075 begins. [20 minutes]

**Part 2: Policy – International Agreement – Framework**

The goal of Part 2 is for students to reflect upon their experience and translate that into an international agreement to create global water security. Upon completion of the “experiential” aspect of the water challenge, students will work in their teams to develop priorities for their region to bring forward at an international meeting on water security. Each group will designate one of their members as a representative at the international negotiation table and the other teammates will serve as advisors as the negotiation unfolds.

Some potential questions for students to consider during the development of their priorities:

- What types of adaptation, mitigation measures are needed to help protect your population from the water realities that they will experience in 2075?

- Will the water security issues be uniform across your nation or will some regions, or some populations be more vulnerable?
- How unique do you think your water challenges are? Are they shared by many others across the globe or are they very unique to your geographic situation?
- How will you afford the technologies, adaptation plans or population relocations given what you understand about the economics of your region?
- Do you think education and awareness building have a role? Is that a national or international process?
- What policies do you need in place to help mitigate the worst-case scenario of 2075?
- What happens if there is not enough water for your population (this includes water for survival, water for growing food, water for industrial activities which might be important for your country's economy)?
- What do you think the international community should do to help you?
- Who has responsibility to ensure your region does not suffer the potential water security scenarios of 2075 that you experienced.

### **Action Steps = Part 2 [2 class blocks (1 hour 40 minutes)]:**

- **Step 1:** Class 1: Students are advised that they have been invited to a “UN Water Security Meeting” where they will be tasked to negotiate a global water security agreement. They are asked to think about their experience from the experiential part of the project and do a bit of research to learn more about the water challenges of their region and to devise 3 priorities for what they would like to see in an International Agreement. The team also identifies one person to serve as delegate and the rest will be strategic advisors. **[full class; 50 minutes]**
- **Step 2:** Class 2: Ready with their 3 priorities, the chosen delegates from each team will go to a “meeting table” and present their region's 3 priorities. Once all priorities have been shared (12 in total), the delegates will go back to their teams and consult with their strategic advisors (other team members). They will discuss the 12 priorities and choose only 5 which they feel makes the best international agreement leading to global water security for all. **[10 minutes]**
- **Step 3:** The delegates will then return to the “meeting table” and share the 5 priorities they want. If all choose the same 5, they can sign an agreement. If they do not agree, the priorities that do not have unanimous agreement will then be debated (note word *debated* not *argued*; *give a time limit of no more than 2-3 minutes for each debated item*) with the debate of each priority of contention led by the regional delegate who first proposed it. Once the debate has been concluded [give it a maximum time limit of 3-5 minutes per contended priority}, the delegates must decide whether any of the debated priorities now have unanimous support. If so they can be added to the list of final priorities (even if that means more than 5). During this meeting, strategic advisors may pass notes into their delegate to give them points as the debate unfolds, but not speak **[20 minutes]**
- **Step 4:** The delegates return to their strategic advisors (team mates) with the final list of priorities divided into those with consensus, and those (which may have amendments) that are still priorities of other regions. They will decide whether to accept the final list or decide not to sign the international agreement. **[10 minutes]**
- **Step 5:** The delegates return to the meeting table one final time and announce their final decision {agree or hold out}. **[10 minutes]**