HydroHero Simulation – Full Version

Program Specifics:

- **Target audience:** Family groups, educational institutions, corporate groups, etc.
- **Ideal group size:** 25-70 participants
- **Minimum age:** 6
- **Workshop length:** 45-60 minutes, depending on debrief length
- **Desired behavioural change:** Sustained reduced water usage, specifically from an average of 145L pp per day to the average daily usage of 119L pp per day
- **Angle for messaging:** Global scarcity, local sustainability
- **Outcome goals include participants committing to:**
  - … taking shorter showers
  - … turning off water during teeth brushing and shaving
  - … more efficient use of dishwasher and washing machine
  - … more sustainable food defrosting methods

Notes for Facilitators:

- The goal of this simulation is to help Hong Kong families and individuals to appreciate their water access, and to reduce water usage to sustainable levels.
- Our angle for achieving this message is 'global scarcity and local sustainability'. In order to help nurture appreciation for the resources that Hong Kong has, the simulation starts with description of places, such as slums and refugee camps, where there isn't enough water.
- After a global perspective is gained, the simulation pivots to Hong Kong's water, its usage, and what can be done to preserve it.

List of Resources Required:

- Facilitator script
- Access to a speaker and screen to share a short video
- Video footage: Charity Ewun's story (located on simulation website)
- Two 1L water bottles; one with dirty water, one with clean water
- Water containers/buckets marked at 5, 10 and 20L - example in the appendix
- A Q-shaped drum

Activity	Props/Action	Facilitator Script Suggestions and Guidelines
Scene setting **(10 mins)**		*Facilitator welcomes the group, and introduces themselves.* Today, we are going to talk about one of the **most precious** resources today on the whole of the Earth. What do you think it is? *Facilitator elicits answers*. Yes, that's right. Water! *Facilitator uses the following questions and points to help the group understand the global water crisis:* • But first let me ask a question, can anyone here tell me: **what is a slum?** *Facilitator elicits answers from the group.* • Let me explain… **Who here lives in a building?** *Facilitator elicits answers but likely everyone will say yes!* Now, I'd like you to imagine this. A terrible natural disaster destroys your home. Your family and pets are safe, but your home is destroyed. Nighttime is coming, so what do you do? *Facilitator elicits some responses.* At least for the first night, you'll probably make a makeshift home out of resources you can find nearby. Make-shift homes are often called 'slums'. • The **average size of a slum** home is **2m x 2m**. I'll mark this out on the floor for you so you can picture the space – watch my feet! *Facilitator walks two metres in length, and two metres in width.* This is a house. Not a room - but a house. Now, I'd like you to discuss with someone nearby what the benefits, and challenges, of living in a home so small might be. *After a few minutes, the facilitator can elicit some responses – first, the benefits (you would spend lots of time with your family, it would be cosy, etc.) and then the challenges (someone might kick you in their sleep, it's very cramped, you wouldn't have Wi-Fi, etc.).* These are all good ideas. One challenge I can think of is this: Is there a toilet in this slum dwelling? Are there taps? *Participants will all say 'no'.* • Now, **do you have water** in your real-life house? *Likely all participants will say 'yes'!* • And what do you think it means to **'have water'**? (*Facilitator can solicit some answers)* Well, **according to the United Nations, 'having water" means:** – **You have enough of it.** – **It's safe for you to access, whenever you need it.** – **The quality is acceptable.** – **You can afford it.** – **You can use it at home, if you need to** *(Note: everyone should have water that is 'sufficient, safe, acceptable, physically accessible and affordable for personal and domestic use' (Source, accessed 21 May 2024))* • **How many taps** do you have in your home? *Each family will quietly count and feed back to facilitator. The*

	8 people stand up 2 bottles; one with filtered water, one with unfiltered water	*facilitator can encourage the group to think about the taps in all rooms of the house, including the one that connects the washing machine, etc.* • **How many people live in our world**? *Facilitator encourages the participants to settle on the correct answer, which is roughly 8 billion people.* • *Facilitator engages the group in a visual activity, and invites 8 participants to stand, with each person representing a billion people.* 6 billion people have access to water like we do – *the facilitator points to 6 of the 8 people, and invites them to sit down again.* This leaves two billion people. Roughly 1.4 billion people have access to water but not the way you and I do. According to the UN, the definition of having access to water means you have access to a clean, managed source of water at any time, whenever it's needed. However, it could be up to a 30-minute walk - that's up to a 2km walk - from where you are! Imagine being at school or at work - imagine you are thirsty, and then you need to walk 30 minutes to get a drink! This is true for 1.4 billion people. *The facilitator invites one person to sit down, and one person to crouch down to indicate the final (roughly) half billion people on our planet.* • Our last group of people don't even have this – that's 785 million people! Either their water source is more than two kilometres away, or their water source is not clean. Can anyone think of things that might make a water source unclean and unsafe to drink? *Facilitator solicits ideas from the group such as pollution from pesticides, litter, animals using the same water-source, etc.* We are so fortunate in Hong Kong because many of these people around the world have to drink water that looks like this (*Facilitator holds up bottle of unfiltered water)* but we have the privilege of having water that is pure, like this (*Facilitator holds up bottle of filtered, clean water).* In fact, did you know that **Hong Kong tap water is some of the purest water in the world**? This means that in most cases, you can drink it straight from the tap *(source, accessed 21 May 2024).* **BRIDGE** In **some parts of our world**, especially in **Sub-Saharan Africa**, there are many places where people walk on average **2.5 hrs a day to collect water**. Not only do they walk a long distance, but they have to carry the water home as well. Sometimes they start carrying water as young as 3 or 4 years old.
Video – Story **(5 mins)**	Screen, video access	**Let me introduce you to a lady I know of, called Charity.** *Facilitator presses 'play' on the video.*

		As you saw in the video, Charity works in Hong Kong, but she is from Nigeria. When she was as young as 4, she helped her mother carry water, up to 2.5 hours a day. When she was little, she carried only a small amount but soon she was able to carry more. Even now, when she goes home to visit her family, she helps them to carry their daily water. **BRIDGE: There are many like Charity around the world, and today we are stepping into their shoes, learning what it's like to not have access to clean water.**
Water X-perience **Activity 1** **(10 mins)**	Three water containers (5L, 10L and 20L) Safety briefing	*Facilitator gives instructions for the first activity, using the following guidelines:* • *Participants line up in smaller groups in front of the container whose water is closest to their age.* • *Participants are shown how to pick up a water container safely, lifting with their legs. See note at the end of this script for guidelines on heavy lifting.* • *Participants carry the water, moving from the line up to a marked spot, and back again. The marked spot should be roughly 5 m away from the starting point - or 10 meters if the participants queue up at both sides.* • *The activity is like a relay – when one member of the family has carried their water, the next person tries, etc. As in real life, when collecting water, participants should not run.* *NOTE: Participants with disabilities or known injuries, or who are pregnant, should be advised not to participate in the activity. They may observe.* *Once everyone has completed the relay, the facilitator encourages the group to give each other a round of applause and then to gather around him or her again.*
Bridge to global context **(5 mins)**		**You all did a great job** – well done! What we've just done, though, is **relatively speaking nothing** compared to what some people in our world have to carry every day. According to the United Nations' SPHERE standards, **the minimum** amount of water that a person needs in a day is **5 L / person/ day** (*facilitator indicates the smallest water container)* • How many people are in your family? Do the math and work out how many of these water containers you will need as a minimum! *Group does the math, assisted by facilitator.* **The average amount of water a person needs per day, however, is 20 L** (*facilitator indicates largest water container).*

		• Now how many of these water containers will your family need? Now, let me ask you some questions: • What would it feel like to carry that amount of water for 2-5 kms? *Facilitator gathers responses.* • I think we can all agree that this would be very difficult – and there are 785 million people who live like this. **Bridge: This is not ok, so how do people cope**? How do you carry water for a whole family to use? Some communities, sometimes with help from local or international charities, can establish water pipelines and wells, while others use resources such as this **Q-shaped drum.**
Water X-perience **Activity 2** **(5 mins)**	1 or 2 Q-shaped drums	*Facilitator gives instructions for the second activity, using the following guidelines:* • *Participants gather around the facilitator and are invited to sit, where appropriate.* • *The facilitator chooses 2 or 3 participants to try lifting, using the correct technique, the Q-shaped drum. The facilitator asks them to estimate how heavy the drum is, and how far they might be able to carry it before they would need to put it down.* • *Then, the facilitator looks for another participant who may struggle to carry a large water container a long distance (i.e. a small child, etc.) and chooses them to help him or her showcase how the Q-shaped drum works.* • *The facilitator explains how the Q-shaped drum works – it's designed to carry enough water for a family, for a day, but can be rolled along the ground, instead of being carried.* • *The facilitator asks the chosen participant to pick it up off the ground (likely demonstrating that they are unable to!), but then also asks the participant to help roll it, demonstrating that they are well able to move it.* • *The facilitator uses the Q-shaped drum to showcase solutions that can be brought to areas of water scarcity and encourages participants to think about how they can engage in these solutions.* • *NOTE: If desired, a relay walk can be set up, similar to the water container carrying activity above, where participants have an opportunity to move the Q-shaped drum themselves. If so, the facilitator must clearly explain the proper technique for moving it safely (see appendix). This may be omitted, though, with adult-only groups, or if enough Q-shaped drums are not available.*

Bridge to Hong Kong context **(5 mins)**		*Note: The facilitator places all water containers in front of the guests (5L, 20L and the Q- drum, if available, and then points to them in the discussion below).* Let's think about our own city now. Gather with your family members and discuss: If the minimum usage per person is **5L,** and **20L is the average goal, how many litres of water** do you think we use per person in HK? *Facilitator asks families to share their guesses.* According to the Water Supplies Department, the average amount of water we use per person per day is 145 litres. That's more than all of these containers combined! Some people use up to 300 litres per day. When you multiply 145 litres by 7.5 million people, that's more than 1 BILLION litres per day…. And that number is unsustainable. The Hong Kong Government believes that **119 L per person per day is the sustainable target** for our population size. So how could we save water at home? Turn to your families and discuss. Which rooms in your house use water, and what could you do to help save water in each room? *The families then have a brief discussion.* *Facilitator note: Sink taps in HK typically flow at 4 litres per minute. Showers flow at 10 litres per minute.* *The facilitator elicits responses and helps participants to list out the below items:* • *Kitchen: Washing dishes. Do we wash under running water, or in a bowl? Dishwasher. Do you think it's more efficient to run the dishwasher half full or full? Did you know, some people, when they're defrosting items from their freezer, place them under running water for **thirty minutes!** That's 120L of water.* • *Bathroom: Which is better, a shower or a bath? That's a trick question, because it depends on how long you take. Showers flow at 10 litres per minute, so if you have a long shower, you can use more water than a bath. But you are correct, shorter showers are best.* • *When we brush our teeth, do we have the tap on or off while we're brushing? We often waste water when we leave the tap running when we brush our teeth or shave, or by having dripping taps. EXAMPLE: WSD estimates 4L of water usage per one minute of leaving the tap flowing, so that's 8L for 2-minute teeth-brushing exercise.*

		• *Laundry: we often waste water when we start the washing machine without waiting for a full load. EXAMPLE: WSD estimates that 60L of water can be saved on doing a full load VS multiple half-loads.* *NOTE: Facilitators can be aware that HK uses salt water in many toilet systems around the city, so fresh water is not necessarily wasted here.* **BRIDGE** Let's have a think now about how we can be water-saving heroes.
Reflection & Action **(5 mins)**		As we finish, I would like everyone to come up and grab one of these (f*acilitator holds up the HydroHero Pledge to use as a guideline)* and a pen. Be careful, because these pieces of paper can help us do amazing things! I would like you to read, or talk through, all the topics covered here, ticking each box as you do. And, if you agree, I would like you to sign the HydroHero Pledge, indicating that you would like to become HydroHeroes. As a world, we only have a limited amount of water, and all of us need to do our part to steward it! Whatever our age, we all have ways in which we can help to save this planet's water. *Facilitator helps everyone to sign the HydroHero Pledge, and to take a selfie with their Pledge, if this is desired.* Lastly, we have a gift. Everyone who would like one is allowed to come and get a sheet of stickers. These stickers are special. You may put one on yourself, because you have agreed to become a HydroHero, but the rest of the stickers are for you to take home, and place around the house as a small reminder of our goal to help Hong Kong and to become true HydroHeroes! You can take a photo with the water containers and your HydroHero Pledge, if you like. Let's use what we need, but don't waste it! Thank you for coming, everyone!

APPENDIX

IMPORTANT: Health and Safety Notes for Heavy Lifting

- Participants with disabilities or known injuries, or who are pregnant, should be advised not to participate in the activity. They may observe.
- Participants should be shown how to lift a heavy object by bending their knees, as follows:

Source, accessed 12 April 2024

- Participants should not be allowed to run while carrying anything heavy.

Guidelines for moving the Q-shaped drum:

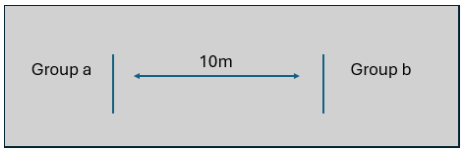
- Walk slowly with the drum, acknowledging that it will pick up speed as it rolls and may hit the back of the legs of the person who is rolling it.
- To avoid the above, walk slightly to the side of the drum.
- Stop before the designated end point and move the rope from the position of pulling, to the position that will allow the person to tug the drum back, so as to safely stop it on time.

Sample Water Containers:

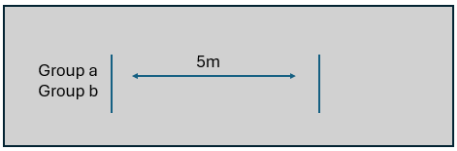
Same Water Bottles with Filtered and Unfiltered Water:

Suggested lay-out for water-carrying activity

Example 1:



Example 2:



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