Team 45:

Exercise 1: In teams, brainstorm methods to gain relevant engineering understanding of a global context you are not familiar with.

1. Go there yourself
2. Focus group of people from the culture
3. Use network of people who have been to the place
4. Talk to other engineering forms in the country
5. Research issues in local newspapers
6. Follow someone on a normal day (with their permission)
7. Use trusted sources … documentaries
8. Survey the people – what do they need?
9. Internet to tourist sites
10. Travel guides
11. Books
12. Talk to / hire experts
13. Talk to / hire locals

Exercise 2: As a team, identify 3-4 sub-problems that need to be considered to distribute the water from the iceberg. What factors need to be considered in water distribution? What issues could affect the design? Also, generate a list of concerns you identify as having negative impact on the success of the project.

1. Iceberg will melt
2. How much will be lost while processing/moving
3. How to distribute among the people
4. Is there a water distribution system in place already which could be used to distribute? Otherwise need to design that
5. Affect ocean currents/ ecosystems surrounding the iceberg/Sierra Leone coast
6. Getting the water from the iceberg inland
7. Ice pirates
8. Disposable water bottles – ethics

Exercise 3: Take a few minutes in teams to brainstorm and consider how cultural factors might affect interaction with your designs. What kinds of interactions might exist? What might they look like? What would you need to know to improve these interactions?

1. Once the iceberg is there… how do you get the water to the people… get the people to drink it.
2. Will there be nervousness about the source of the water
3. Mode of transportation: water bottle? Draw own water?
4. Distributed by locals?

5. Different taste of the water
6. Run out before everyone gets some?
7. Use of the water… drinking? Cooking? Bathing? Agriculture? Industry?
8. Education on process used
9. Where do they go to get the water? Is there polluted water closer than the clean water?
10. Significance of the current polluted water? Cultural value?
11. Who gets the water? Only women/children? Who to educate?
12. Find a trusted person within the villages to distribute the water

Exercise 4: In teams, brainstorm some communication issues or other potential dangers for the Ice Dream project. How could you design your system to eliminate potential dangers or lower the need for communication of dangers?

1. Water bottles – caps are choking hazards – make caps bigger?
2. Overhydration – increase water distribution slowly
3. Plastic melting from bottles, contaminating water – change storage method
4. Purification – purify at distribution site