Singing in the Shower...Recovering Water

Lopez Caceres, Fabian
Barrios- Cordova, Alicia

The water situation in the Atacama region is entering a critical stage, especially in the north of Chile, which is supplied by groundwater. "In the fourth sector of the watershed, where the city of Copiapó is located, water has run out." (Ex-Government Representative of Atacama, Ximena Matas), this demonstrates the seriousness of the effects of the drought in this city of 160,000 inhabitants, the first to suffer the direct impact of the scarcity of water (http://www.chilesustentable.net). Hence, we need to change many of our habits, in such a way to protect this water resource, by implementing a technological innovation which allows us to recover volumes of water not used in daily activities. The present proposal identifies the daily activity of "showering", as the activity that will allow us to recover water; whilst people showering wait for the water to reach the desired temperature, a significant amount of water is lost without being used, which at our school was 41.6 m3 per month. An automated technological innovation was developed which allowed the recovery of volumes of water that are lost whilst waiting for the water to warm up. The technological innovation allowed the recovery of volumes of water that at our high school was 9.7 litres at the desired temperature of 30 °C and 13.6 litres in the case of 36 °C. Taking into account that the region has 290.581 inhabitants (INE, Census 2012), a recovery of 2,828 m³ of water per day would be feasible.

Awards Won:
Fourth Award of $500