Rice Straw Power

Moustafa, Yasmine

Water is life and Egypt's main source of water is Nile River. Unfortunately it's not clean enough and unfit for drinking, in addition it will never last forever. Today, the treatment of different forms of polluted water such as: grey water, black water and sea water has entered the front lines of debate. I noticed that the world is facing a threatening future and one of the global as well as local hardest challenges is how to improve clean sources of water. I worked on grey water and solve its problems then i started to scan the previous solutions, but not all of them were satisfactory for all the requirements that we need. Finally, I found my own solution that helps to solve not only one problem but also three grand challenges which are air, water pollution and lack of energy not only that it also produces pozzolanic material to use it in concrete and vitamin "B" . My solution will depend mainly on rice straw burning and its heat to evaporate the water after removing the solids and the organic materials from it, using a biological filtration then I took the gases and produced biodiesel and hydrogen power and took the rice straw ash to make pozzolanic material. I chose this solution because of its available, cheap materials and easy way to use for everyone. After a lot of tests we got our results which were satisfactory enough. I get drinkable water and biodiesel and a huge amount of hydrogen power. I also produced the pozzolanic material which looks like cement.

Awards Won:

First Award of $5,000