Hydrotherapy and Soil Treatment Using Agricultural Wastes

Elgarhy, Alaa (School: Dr. Mahmoud Omar School Secondary School for Girls)

According to WHO 12.6 million people die every year owing to unhealthy environment. Therefore, the sustainable use of our ecosystem and preservation of next generation rights became an urgent question. Herein, biodiversity isn’t a cause, it’s the key to our own survival(SDG13) .The master point of this goal is a solution for soil pollution. As reported, about 90% of soil pollution is caused by industerial waste products. That's why, our main beneficiares will be these people who live in villages which is full of industerial pollution and followed by pollution not only in soil but also in water that badly affect the crops. This project aims at providing people with good life from affordable resources to achieve self suffiency. First goal is getting rid of the agricultural waste with sustainable way by burning them in a closed system. Second is using the prepared material in removal of heavy metals (soil treatment) based on the hypothesis of large surface area, porous nature and high adsorption capacity. Furthermore, applying the previous step (soil treatment) without water treatment for the irrigation source will get us again to the same problem(soil pollution), so after that, hydrothrapy for the polluted industrial water by the same prepared material was achieved and its effect was further evaluated. After irrigating with the treated water, the agricultural waste water was tested for utilization in irrigation again. After application of the previous steps, plant quality was assessed. The results of this project is a brief meaning of (waste to wealth).

Awards Won: