



# Abu Dhabi Polytechnic

## Students' Graduation Project Abstract

<b>Department:</b>	EMET	<b>Semester:</b>	Spring-2022
<b>Project Title:</b>	Water Condensation Unit		
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### Abstract:

Water shortage is one of the world's most pressing issues today. Ignoring the fact that water occupies and over two-thirds of the Surface (roughly 70%), pure water for drinking and performing out routine activities remains rare (only about 2.5 percent). The serious matter of Water shortages is primarily a problem for states with long coastlines and islands states. Those who lack sufficient freshwater resources like rivers and streams. As a fact, most of this Desalinating water of sea water is used to fulfill countries' water needs, however it is an incredibly costly process. It's also potential that this desalination will fail, leading to severe water crisis shortage. This seems to be precisely what happened previously in the Maldives. As just a consequence, there is a pressing need for Countries like the Maldives and many others rely mainly on distillation facilities to meet their water needs and to find better water generation methods to meet those needs security.

The goal of this project is to tackle this issue. The humidity in coastal areas is quite high (around 70-80 percent). Using a humidifier device, fresh air in coastal areas can be used to meet people's water needs. Moreover, the solar insolation in such places is quite high throughout the year. This could be used to supply the humidifier with power it needs. As a result, solar can be used to obtain drinkable water from the air. Atmospheric Water Generator is the title of such a gadget.

Capturing air humid could be done in one of two ways. The air temperature is lowered to the dew point that use the cool condensation method. Dispersants absorb water in the air inside the evaporator process. Variations in atmospheric conditions will lead to alterations in water production. For this technique, we can use any form of energy. The method produces no waste and has no chemical reactions, keeping it environment friendly.