Important step into the direction "Change Climate Change"

Project Jordan

WeatherTec Newsletter

WeatherTec has broken the 30 year negative trend of declining precipitation. This is an exceptional achievement against Climate Change.

Background

Rainfall amounts can be affected seriously by the climate change due to the global warming. Climatological studies showed that the rainfall trends varied from region-to-region in the world. Global Climate Models analysis predicted a decrease in rainfall amounts around 30 N latitude belts (Mitchell et al., 1990).

This is considered to be extremely dangerous for the subtropical countries including Jordan, which could cause the expansion of desert area. This fact prompted officials and decision-makers in the kingdom to think about using the advantage scientific methods and modern technologies to overcome the problem of water scarcity.

In May of 2016 the Hashemite Kingdom of Jordan applied the Ionization Technology provided by WeatherTec Services GmbH. Four stations are operated in the northwestern part of the Kingdom, along the northeastern part of the Jordan Valley. The operation covers an area of approximately 10'000 km2. The stations are positioned between Irbid in the north and the Dead Sea in the south with an extension of 100 km.

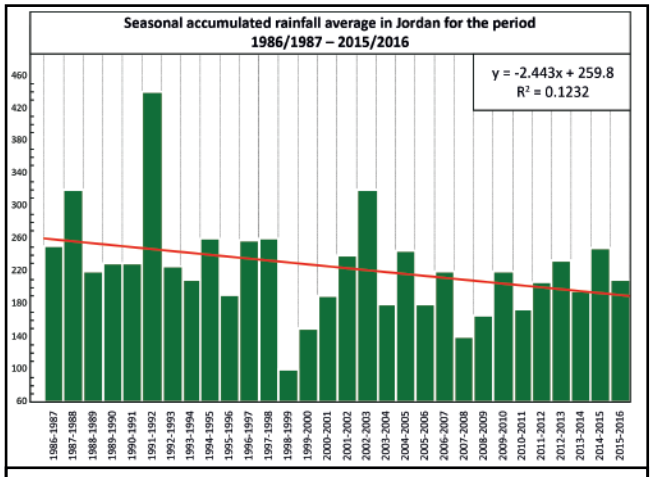

Figure 1: Seasonal accumulated rainfall average in Jordan for the period 1986/1987 – 2017/2018

The main target of the project in its first operation phase, which lasted until end of December 2016, is to study the extent of Jordan nature's response to this technology, and the ability of this technology to increase average rainfalls in the influenced areas (areas of operations) in order to fill the dams, increase irrigation and groundwater, finally providing water for agriculture, human daily usage and industry.

The influenced area was also the same one of the second operation phase which commenced on end of November 2017 and lasted until the end of the 20172018/ rain season. This phase aimed to more evaluation of the results of operations, especially in the spring season and the extension further into the desert region to the East.
calculated trend.

Breaking the Trend of Less Precipitation

To notice the impact of WeatherTec Rainfall Enhancement Technology, the following statistics are of importance: WeatherTec operation influenced the decreased precipitation trend in Jordan. Figure 1 shows the average seasonal precipitation (mm) in Jordan in the previous 30 years before the beginning of WeatherTec operations (19862016/2015 – 1987/) and the calculated trend.

The average seasonal precipitations decreased from 259.8 mm in season 19861987/ to 186.6 mm in season 20152016/, which is a decline of - 28 %. Regarding the water volume the seasonal reduction of 2.443 mm per year are totaling to 24.4 mm per decade.

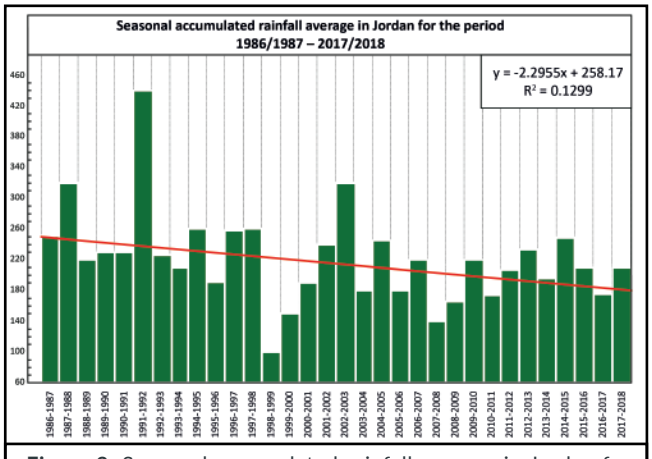

Figure 2: Seasonal accumulated rainfall average in Jordan for the period 1986/1987 – 2017/2018

Figure 2 shows the seasonal rainfall average in Jordan until 2018, includes the last two years, which witnessed WeatherTec operations. The graphic shows that the seasonal rainfall trend has been changed and the decrease in rainfall improved to 2.295 mm after WeatherTec operations; the reduction in seasonal rainfall averages decreased by 0.148 mm.

Modern calculations with a more holistic approach analyzing the whole influence of rainfall on the entire ecosystem of a region or country take the full rainfall amount into consideration.

This is of increasing importance as the water is not only influencing the sector of “managed water”, but strongly the humidity in the different levels of the lower atmosphere. It has a direct influence on nature (at night and in the morning for all plants, but especially for agricultural one) and on the wellbeing of humans and animals.

Finally, the achievement of the Ionization technology of WeatherTec has proven its capability to make a change: to stop and reverse the 30 year negative trend of less precipitation in the second driest country on earth.

This is a first successful step in the direction of “Change Climate Change”.