



INVITATION FOR
PARTICIPATION IN START-UP

WATER FOR LIFE

OUR MAIN GOAL

**Develop a competitive technology for
desalination of water**



WATER SOS

On the one hand water is a simple compound which contains two atoms of hydrogen and one of oxygen (H₂O), on the other hand water is the basis of life on Earth.

Nowadays people need a lot of water for public and domestic requirements and this need is growing very fast. The volume of water consumption depends on the region and living standards, and amounts to 3-700 liters of water a day per person.

According to the analysis of water use over the past 5-6 decades, the annual growth of irretrievable water consumption amounts to 4-5%. The calculations show that with maintaining of such rates taking into account the growth of population and production volumes, people can exhaust all fresh water reserves *by the year 2100*.

CLIENTS

The fresh water consumption approximately amounts to 9 087 bln m³ per year. According to the UN data the deficit of fresh water amounts to 2 300 bln m³ per year, by the year 2025 the fresh water deficit will be 1.3 – 2 tln m³ per year.

Nowadays the main consumers are North Asia, the Middle East, Africa, northeastern Mexico, the most part of the Western states of America, Argentina and Chile, southwestern Europe, the Mediterranean islands and the Australian continent. These territories have unsustainable fresh water supply. Over the past forty years the amount of fresh water per person has decreased almost *by 60%*.

SOLUTION

Nowadays the territories of more than 40 countries feel the deficit of the fresh water, these countries comprise approximately 60% of the entire surface of the terrestrial parts of the globe. This deficit can be overcome with the help of desalination of saline (salt content is more than 10 g/l), brackish (2-10 g/l) oceanic, marine and groundwater reserves which constitute 98% of all water on the globe.

Moreover desalination of water on-site is cheaper than the fresh water which goes through the water pipe-line. In addition to this the state of a lot of fresh water sources is bad, that it will be more expensive to clean them than to desalinate sea water.

Sea water desalination is one of the most dynamically developing sectors of the world economy. In 1990 the world desalination capacity provided 4 million m³ of water a day, in 2000 – 16 million m³ a day. Today in 2017 the capacity provides desalination of 70 million m³ of water a day.

WATER FOR LIFE

Our team "*WATER FOR LIFE*" has developed, patented and is ready to introduce innovative technology for desalination of salty and brackish oceanic, marine and ground waters, developed on the basis of the long-studied, but not previously used cavern effect.

Implementation of the technology proposed by our team "*WATER FOR LIFE*" allows not only to conduct more efficient water treatment but also to reduce its prime cost. And also it will have a favorable financial impact on the region where the desalination complex is located. This is due to factors such as:

- The prime cost of the product, in comparison with the existing cost of water, for the consumers it is possible to make this project investment-attractive, which guarantees attraction of private investors to the region.
- In the process of the operation of the desalination complex and on retention of the market cost of water, it will be possible to direct the fraction of revenue to the infrastructure projects in the region.
- The use of this technology significantly reduces energy costs, and the electricity can be directed to other industries which means new jobs.

COMPARATIVE ANALYSIS OF EXISTING TECHNOLOGIES

	Cavitation method	Reversed Osmosis	Electrolytic Process
<i>Using of filters</i>	no	yes	no
<i>Using of chlorine</i>	no	yes	no
<i>Cleaning volume of saline and brackish water</i>	60-70%	Max 50%	40-45%
<i>Possibility of transportation over long distances</i>	To meet the demand for fresh water consumers located at a distance of up to 400 km from the shore, it is possible to transport water through pipelines.	No, because the prime cost is high, what makes transportation underperforming.	No, because the prime cost is high, what makes transportation underperforming.

	Cavitation Method	Reversed Osmosis	Electrolytic Process
<i>Water quality</i>	Water treated by the cavitation method based on the Super Cavern meets the highest standards of drinking water. And as a result of many researches conducted by scientists, it was proved that the germination of plants irrigated with water passed through the processing in installations operating according to the cavern principle is 30% higher than that of similar plants irrigated with water from any natural source.	Nowadays this is a controversial issue related to the isotope of H (hydrogen) present in marine and oceanic water. The technology of Reversed Osmosis is not capable of filtering out this isotope in contrast to the installations operating according to the cavern principle or Electrolysis. This drawback is related to the principle of the effect on water flow. The isotope H itself has an extremely negative effect on living organisms and is capable of causing cancer. Not for nothing in the Near East fresh water processed by reversed osmosis is used only for irrigation.	There are no complaints about water quality, so the deep purification process is carried out during the desalination process and the water is suitable not only for irrigation but also for drinking.
<i>Ecological Factor</i>	In the process of desalination of marine and oceanic waters, the cavern method has a minimal negative impact on the nature. This is due to the fact that the depth of processing is high enough and allows to efficiently dispose of waste in the form of a relatively small amount of salt solution from which it is possible to extract salt at lower energy costs or, even using tankers, to distribute it in the water mass of the seas and oceans, without harm to the ecosystem.	In the process the ecosystem is irreparably damaged. Desalination forms a large mass of salt solution, which is discharged through the pipelines into the sea or ocean. But since the concentration of salt in the solution is higher than the usual for a particular ecosystem all living organisms within a 2 km radius die.	In the process the ecosystem is irreparably damaged. Desalination forms a large mass of salt solution, which is discharged through the pipelines into the sea or ocean. But since the concentration of salt in the solution is higher than the usual for a particular ecosystem all living organisms within a 2 km radius die.
<i>The cost of the complex with the capacity 60 000 m³ a day. Without taking into account the cost of communications and distribution pipelines</i>	30 million \$	35 million \$	50 million \$



THANK YOU!