**Introduction**

With the inevitable increase in global population, we face the issue of uncontaminated, drinkable water, and an inability for many to access this resource. It is essential that we further our advancements in current filtration technologies. Here is a brief summary of the current desalination processes that exist, and growth needed in order to make these methods practical to implement in impoverished nations.

**Facts**

- 95% of the world’s water is stored in polar ice regions
- 2% of the water in the world is stored in polar ice regions
- 1% of fresh water is available for plants, animals, and humans
- Filters away “good” minerals
- High output of fresh water
- Highly scalable
- Can ensure supplies during droughts
- Can reduce dependence on rainfall
- Improve health standards
- Can help settlement in less populated areas
- Simple concept

**Methods**

### Categories of Desalination

**Thermal Treatments**
- Active Solar Distillation
- Passive Solar Distillation

**Membrane Treatments**
- Reverse Osmosis
- Nanofiltration
- Electrochemical

**Evaporation**
- Solar Distillation

**Nano-filtration**

**Electrochemical**

**Reverse Osmosis**

**Solar Distillation**

**Conclusion**

Desalination processes are becoming increasingly important as a way to provide clean water for millions of people around the world. While there are many different methods available, each has its own advantages and disadvantages. The choice of method will depend on a variety of factors, including the availability of resources, the size of the population to be served, and the cost of implementation. As technology continues to advance, we can expect to see new and improved desalination processes emerge, making it possible to provide clean water to even more people in the future.