

# An integrated solar-driven system produces electricity along with fresh water in arid regions

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## Introduction

Streams and rivers can be found everywhere. They originate from springs, melt water, and even lakes, and flow up to the mouth of an estuary, usually into another channel or ocean [1]. The characteristics of rivers and streams change during their journey from source to mouth. The temperature of the source is considerably lower than the mouth. The water is clearer and has higher oxygen content [2]. Freshwater fish such as trout and heterotrophs can be seen. Towards the middle of the stream/river, its width increases and biodiversity also increases [3]. Many aquatic plants and algae can be found. The lack of resources to operate sewage treatment plants has contributed to increasing pollution in most places [4]. Technology that harnesses natural resources is the only way to solve this problem. One of these technologies is an artificial floating island. It can treat polluted river water along its course. According to research, the Pune city river is a perfect example of polluted rivers in India [5]. The main source of water pollution is untreated or partially treated sewage discharge. Artificial floating islands (AFI) can be effectively used in water bodies containing organic pollutants. Therefore, AFI can prove to be an ideal system for controlling river pollution in India [3]. AFI helps protect river ecosystems.

## Description

It is a robust and sustainable technology for treating rivers. Freshwater is essential to life, but it is a finite resource. Only 3% of all water on earth is freshwater [1]. Freshwater is essential for nature and human communities, but it is threatened by many factors, including overexploitation, polluted runoff and global warming. With this in mind, WWF works with communities, businesses and others to reduce pollution, increase water efficiency, protect natural areas, and provide clean water and resources sufficient to support wildlife, ensuring a healthy future for creating all things [4]. Water is an amazing element. It is unique because it exists in nature as a solid, liquid, or gas. As the temperature

of lakes, oceans, rivers and streams increases, some of the water changes from liquid to gas and collects in clouds of water vapour. As these clouds pass over colder oceans and land, some of the water falls out as rain or snow [2]. Rain or snow that falls on land either flows into the lowlands that supply the aquifer or water table, or flows down hills to form headwaters. These sources become streams, which become rivers and lakes. Eventually, these waters flow into the ocean and start circulating again. Water can be divided into salt water and fresh water.

## Conclusion

Saltwater makes up 97% of all water and is found primarily in our oceans and oceans. These freshwater habitats cover less than 1% of the Earth's total surface area, but are home to 10% of all known animals and up to 40% of all known fish species. Despite their importance to life, as a source of drinking water, to sustain crops by irrigation, to provide food in the form of fish, to power homes through dams, and to transport goods on barges, instead, freshwater habitats are disappearing at an alarming rate. The increasing value of water, concerns about water quality and quantity, and issues of access and denial have given rise to the concept of resource geopolitics or 'hydro politics'. In this context, water is a strategic resource along with oil and certain minerals. The increasing scarcity and value of water resources will only exacerbate the proliferation of water policies and related international conflicts. Some countries rely heavily on flows from other countries. Botswana, Bulgaria, Cambodia, Congo, Egypt, Gambia, Hungary, Luxembourg, Mauritania, the Netherlands, Romania, Sudan and the Syrian Arab Republic all derive more than 75% of their available water supplies from their upstream neighbors.

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## Conflict of interest

The author declares there is no conflict of interest in

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