

CACHE

CACHE is a form of computer memory that serves as a temporary storage area for frequently accessed data. CACHE allows the impermanent storage and retrieval of data that would otherwise require more resources to retrieve from the original source of the data.

The proposal intends to take this concept and utilize it to convert existing infrastructure within coastal cities.

Our planet is currently facing huge shifts in our climate and natural environment. Global temperatures are rising, once fertile fields across the world are lost to widespread drought, and flooding is predicted to trespass upon inhabited land and forcing people to migrate.

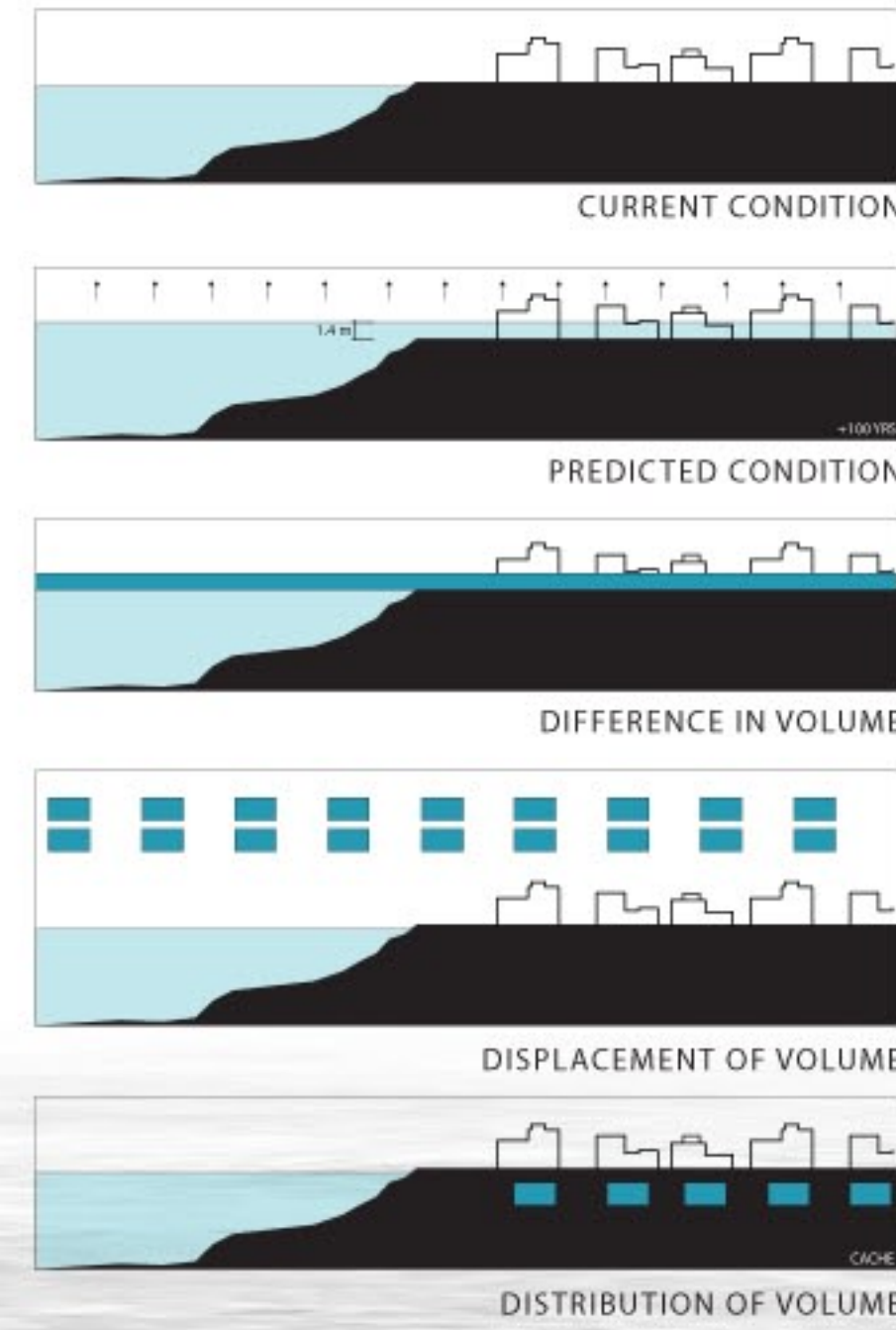
Global warming is one of the major reasons for this significant change in the world's natural conditions. Due to increased air pollution caused by industrialization and the release of harmful greenhouse gases attributed to the consumption of fossil fuels, these gases remain trapped in our atmosphere, preventing heat radiation from escaping and ultimately warming the globe. As world temperatures increase, thermal expansion of sea water and melting glaciers and ice sheets further exacerbate the issue.

CACHE recognizes the value of clean drinking water, the dangers of rising sea levels, and the colossal power of collective cooperation on a global scale. CACHE proposes a solution that works in three steps:

- Multiple energy harnessing devices are stationed off the shorelines of coastal cities and produce renewable energy to help alleviate the load on the city's current energy sources while drawing green energy from an untapped sustainable source.
- Desalination plants line the coastal city's shoreline and converts sea water into clean potable water.
- Potable water is delivered to CACHEs city-wide to be stored for daily use. These would help to store water that would otherwise contribute to a higher sea level while providing people with easily accessible water.

CACHE is dependent on both a collective and collaborative effort of all coastal cities and, gradually, all cities around the world. CACHE's maximum success would be attained if cities around the world participate in CACHE to provide clean accessible drinking water for all and prevent potential flooding across the globe.

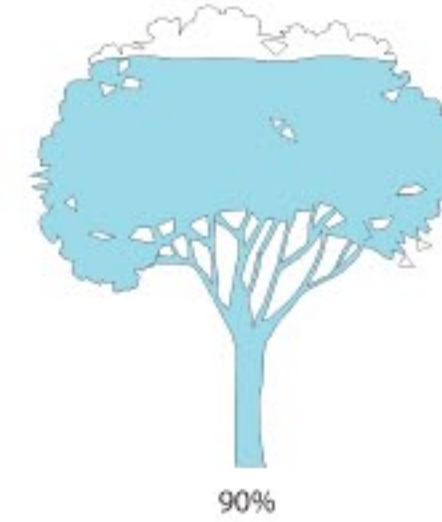
CACHE recognizes the importance of using sustainable design. Energy harnessing devices will convert the natural energy into clean renewable power for the coastal city in order to alleviate the demand of power required to run the desalination plants.



MODES OF CONTAINMENT



65%

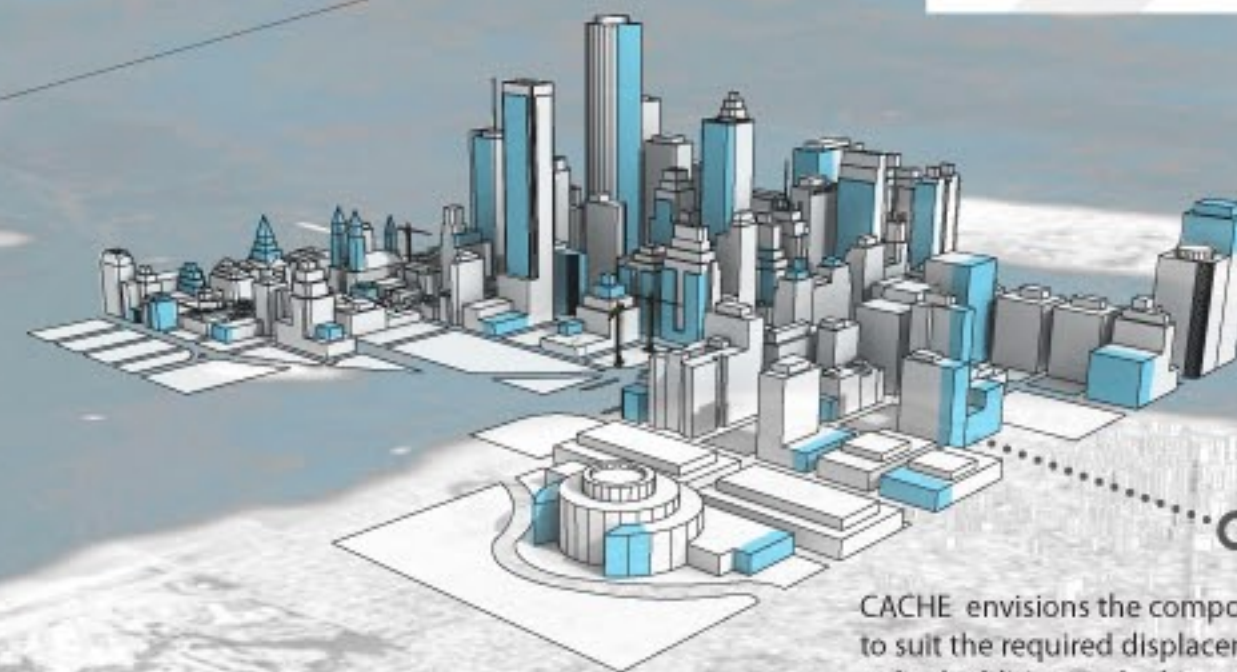


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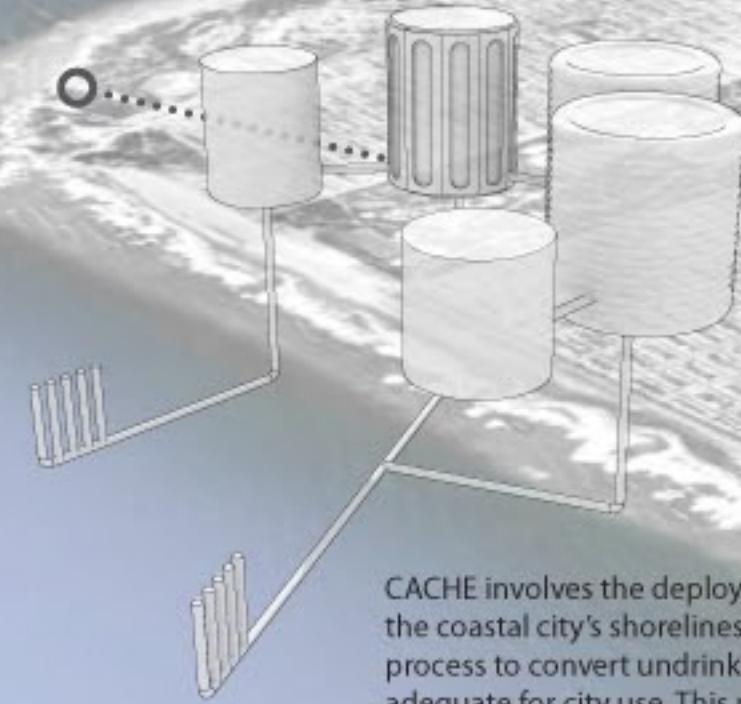


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CACHE would help provide clean drinking water so that people can drink the recommended daily amount. Also, watering and maintaining city vegetation would contribute in the containment of water. CACHE opens the possibility of using city structures as large water storage areas to help displace water.



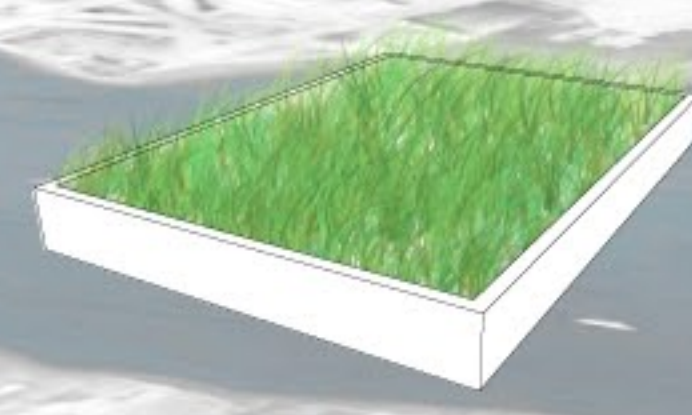
CACHE envisions the composition of cities to be retrofitted to suit the required displacement of converted sea water. A radical addition to the hierarchy of program allows for the contribution to the intended collective global effort.



CACHE involves the deployment of desalination plants along the coastal city's shorelines that would use a multi-stage flash process to convert undrinkable sea water into potable water adequate for city use. This potable water can be delivered to the city's inhabitants via existing water infrastructure.



POTABLE ●●●●●●●● GREY ●●●●●●●● BLACK ●●●●●●●●
CACHE WATER USE



CACHE could be implemented by either using individual free-standing structures to act as water containers or embedding storage vessels within the structures themselves.