Report on increase in water demand

Business, Management

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Executive Summary

Water is an exceedingly crucial resource required for survival. About three quarters of Earth’s surface is covered by water. However, not all of this water is readily usable for human consumption, agricultural production or for industrial use. According to Glover1 “ only about 3% of all the surface water is fresh, of which only 0. 6% is readily available for use. In fact, only about 0. 018% of world’s surface water is readily available2. Australia is a dry continent, being listed as the driest continent of the world possessing only less than 1 percent of the fresh water in the world3. As in other world continents, demand for water in Australia has also increased putting the continent under stiff competition for fresh water. Increased demand for water has resulted from population growth and, consequently, increased need for agricultural and industrial productivity. Extensive research efforts have been done to address the water problem, which have resulted into water-efficient systems and efficient rainwater harvesting technologies.

Increased use of water-efficient and efficient rainwater harvesting technologies has been recommended for use in Western Australia.

The Premier of Western Australia, Colin Barnett, wants two understand the reasons behind increased water demand for domestic, agricultural and industrial. This will assist in applying researched solutions to problems associated with increased water demand in Western Australia. This paper investigates the key reasons behind increased demand for water in Australia. The paper also explores researched solutions aimed at addressing water shortages arising from increased water demand with no increase in water supply.

Reasons behind Increased Water Demand

Increased demand in water for domestic, agricultural and industrial use has largely been attributed to increased population. Statistics show that Australian population has been on an increasing trend4. Increase in population has led to increased demand for fresh water for consumption and domestic use. Increase in population has also led to increased demand for food, which has resulted to increased agricultural activity and, consequently, increased demand for agricultural production. Similarly, increased population has resulted to growth in processing and manufacturing industries to satisfy the needs of the increasing population5. Consequently, increasing population has resulted to increasing demand for water for industrial productivity. Overall, demand for water has been on the increase. The situation has been made even worse by drought whereby there is no enough rainfall to supply

the continent with water6. The result has been increased fresh water demand with little fresh water supply.

Researched Solutions to Increased Water Demand

Increased demand for water has not been left unattended since enormous amount of effort and financial resources have been used in search for water supplies to meet the increasing water demand. Grey water reuse is one of the researched solutions to increased water demand, which is aimed at meeting the increasing demand for water while solving water shortages problems. Grey water can be used raw or it can be treated for reuse. Raw grey water can be used for various domestic requirements, such as flushing toilets, and garden irrigation7. Raw water reuse minimizes freshwater use making it available for other crucial uses, such as consumption.

Research has also been done on water conservation, which has resulted into water efficient technologies that minimize water use. Such technologies include “ dual flush toilets, flow regulators, water-efficient washing machines and cistern bags/bricks that reduce the amount of water used in toilet flushing.” 8 These systems reduce water usage, which is saved for other applications thereby ensuring sufficient water for the growing population and consequent increase in water demand.

Rainwater harvesting has also been used as a solution for increased water demand. Efficient rainwater harvesting facilities and technologies have been developed to collect rain water and store it for use in domestic consumption, agricultural and industrial productivity9. If not collected, rain water ends up in seas and oceans, where it cannot be used directly as it becomes salty

water. Therefore, collecting rainwater provides safe water for domestic agricultural and industrial use while saving time and energy that would be used to make it fresh after it has reached into the oceans and seas.

Conclusion

Water is crucial natural resource that should be managed properly. Increased water demand for domestic, agricultural and industrial use in Australia has resulted to stiff water competition since Australia is a dry continent with limited fresh water supply. Research efforts to solve the problem have resulted to water-efficient systems that ensure efficient use of water. The efforts have also resulted to efficient rainwater harvesting technologies aimed at increasing water supply through rainwater harvesting.

Recommendations

The following recommendations will help in addressing water scarcity problems associated increasing water demand:

There should be increases production of low-cost water or free water-efficient systems to encourage their use;

There should be extensive campaigns on the use of water-efficient systems to ensure efficient water use;

Extensive campaigns on rainwater harvesting should be conducted to increase water supply; and

People should be encouraged to recycle water and reduce fresh water use, which will reduce fresh water demand.

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