

Provide Access to Clean Water

When Samuel Taylor Coleridge wrote “water, water, everywhere, nor any drop to drink,” he did not have the 21st century’s global water situation in mind. But he wasn’t far from correct about the present world’s water situation. Today, the availability of water for drinking and other uses is a critical problem in many areas of the world.

How serious is our water challenge?

Nowadays, the lack of clean water causes more deaths than war.

1) 지금 살고 있는 사람들 여섯 중 하나는 물에 충분히 접근할 수 없고, 그 수의 두 배는 씻을 때 필요한 물이 부족해 건강하지 못한 환경에서 살고 있다.

→

In some countries, half the population does not have access to safe drinking water. As a result, people living in these countries have many health problems. Nearly 5,000 children globally die every day from diseases caused by the lack of clean water.

2) 위생을 위한 충분한 물이 있다면, 이 어린이들의 목숨을 구할 것이다.

→

Is water really scarce? Earth is sometimes called “the Blue Planet” because it is covered by so much water. In fact, Earth does contain over a billion trillion liters of water. However, very little of that water is safe to drink. Over 97% of the water on Earth is salt water.

3) 남은 담수 중에서도 2/3는 빙하와 만년설에 갇혀 있다.

→

Most of the rest is trapped in the soil or underground. But that amount is enough for now.

Then why is the water crisis so severe?

4) 왜냐하면 주로 옛날에 저장되어 있던 지하수는 다시 채워지는 것보다 훨씬 빠르게 고갈되고 있기 때문이다.

→

Moreover, it is not always located where it is needed. For example, Canada has far more water than its people need, while the Middle East, North Africa, and many other regions are always in want of water.

5) 특정 나라 안에서도, 브라질과 같이 특정 지역은 충분한 것 이상의 깨끗하고 오염되지 않은 물을 가진 반면 다른 지역은 자주 가뭄으로 인해 고통받는다.

→

And it is not just drinking water that is needed.

6) 마실 물과 개인적인 이용을 위한 물은 사회의 총 물 필요량의 아주 작은 부분이다 - 가정용 물은 주로 전체 물 사용량의 5% 미만을 차지한다.

→

Most of the fresh water we use is for agriculture and industrial activities. In addition, water is also inevitably needed for ecological processes not directly related to human use. Overcoming the crisis in water and sanitation is one of the toughest human challenges of the early 21st century.

So what solutions are out there?

7) 오늘날, 우리는 우리의 증대된 물 수요를 만족할 뿐만 아니라 환경과 생태계에 손해를 막는 더 정교하고 통제할 수 있는 물 공급 방법이 필요하다.

→

One large-scale approach used in the U.S., China, India, and other countries has been to divert the flow of water from regions where it is plentiful to where it is scarce.

8) 그러한 방향전환 프로젝트는 도시들에 단기적인 안정을 주었지만, 광범위하거나 장기적인 해결책으로는 실용적이지 못했고 생태계에 피해를 주는 영향이 있었다.

→

Another problem is that diverting water to some people often means less for others, and this can become an explosive political issue potentially.

Another approach that can be applied is desalination. Desalination is extracting the salt from seawater. Desalination is not a new idea and is already used in many regions, particularly in the Middle East. Saudi Arabia produces about one tenth of the water produced by desalination in the world. Israel uses desalination technology to provide about a fourth of its domestic water needs. More than 12,000 desalination plants are now in operation in the world.

9) 그러나 담수화 공장은 짓기에 비싸며 구동하기 위해 많은 에너지를 필요로하는데, 이는 담수화가 부유한 국가의 바닷가 도시에만 주로 적합하게 한다.

→ -----

It therefore has limited value for poor countries, where water supply problems are the most serious.

10) 만약 담수화가 신선한 물 공급의 현실적인 방안이 되려면, 각국은 풍부하고 싼 에너지 혹은 공정을 더 효율적으로 만들 수 있는 방안이 필요하다.

→ -----

A different technological approach is used for irrigation systems.

11) 농업 관개는 막대한 양의 물을 소비한다; 개발 도상국에서 관개는 전체 물 사용의 80%를 종종 초과한다.

→ -----

One of the earliest and most widespread forms is flood irrigation. It involves pumping or diverting water to fields so that water flows along the ground among the crops. It is simple and cheap, but also inefficient and wasteful. Improved technologies such as “drip irrigation” can drip water directly onto plants.

12) 그것은 경작물에 물을 더욱 효율적으로 공급하고 작업용수 수요를 크게 줄일 수 있다.

→ -----

Already some countries, such as Jordan, have dramatically reduced water use with drip technology. However, this is not a perfect solution because it does not provide enough water to cleanse the soil.

Technologies are being developed, for instance, to improve recycling of waste water so that it can be used for irrigation or industrial purposes. Hopefully, recycled water may someday even be returned to groundwater.

13) 하지만 재활용된 물의 안전을 보장하기 위해서는 매우 효과적인 정수 방법과 철저한 안전장치가 필요하다.

→ _____

Above are large-scale solutions for providing a huge amount of water. However, a small-scale process has also been used to improve water availability and safety.

14) 그것은 작은 증류 기기인데, 특히 사회 기반 시설이 부족으로 물을 효율적이고 경제적으로 분배하여 공급하기 어려운 시골이나 소득이 낮은 지역에 매력적인 접근법이다.

→ _____

15) 현재 진행중인 일부 프로젝트는 어떤 수원에서도 독성의 물질을 제거할 수 있는 저렴한 증류 기기를 만들었다.

→ _____

A unit smaller than a dishwasher can provide daily clean water for 100 people.

Today, the earth's population is seven billion. By 2050, the global population is expected to rise to nine billion.


16) 그 결과로, 세계에서는 커져가는 물 부족 문제를 해결할 방법의 변화에 대해 중요한 요구가 있어 왔다.

→ -----

Albert Einstein once described madness as “doing the same thing over and over again and expecting different results.” Traditional approaches to water use and conservation cannot solve the water crises of the future. We must, as Einstein points out, do something different.

17) 세계의 물 문제는 더 나은 기술과 더 상상력이 풍부한 혁신에 의해서만 해결될 수 있다.

→ -----



◇「콘텐츠산업 진흥법 시행령」제33조에 의한 표시

1) 제작연월일 : 2019년 5월 17일

2) 제작자 : 교육지대(주)

3) 이 콘텐츠는 「콘텐츠산업 진흥법」에 따라 최초 제작일부터 5년간 보호됩니다.

◇「콘텐츠산업 진흥법」외에도「저작권법」에 의하여 보호되는 콘텐츠의 경우, 그 콘텐츠의 전부 또는 일부를 무단으로 복제하거나 전송하는 것은 콘텐츠산업 진흥법 외에도 저작권법에 의한 법적 책임을 질 수 있습니다.

정답

- 1) [정답] One out of every six people living today does not have adequate access to water, and more than double that number live in unhealthy environments because they lack the water they need for cleaning.
- 2) [정답] If sufficient water for sanitation were available, these children would be saved.
- 3) [정답] Of the fresh water that remains, over two thirds is locked away in ice caps and glaciers.
- 4) [정답] Because groundwater, mostly deposited in earlier times, is being exhausted far faster than it is being replaced.
- 5) [정답] Even within specific countries, such as Brazil, some regions have more than enough fresh, unpolluted water while other regions often suffer from droughts.
- 6) [정답] Water for drinking and personal use is only a small portion of society's total water needs — household water usually accounts for less than 5 percent of total water use.
- 7) [정답] Today, we need more sophisticated and controlling water supply methods that do not only meet our increased needs but also prevent damage to the environment and ecosystems.
- 8) [정답] Such diversion projects provide some short-term relief for cities, but they are not practical as widespread or long-term solutions and have ecologically damaging effects.
- 9) [정답] But desalination plants are expensive to build and require lots of energy to operate, which makes desalination suitable

mainly for seaside cities in rich countries.

- 10) [정답] If desalination is going to be a realistic source of fresh water, countries need either abundant, cheap energy or a way to make the process more efficient.
- 11) [정답] Agricultural irrigation consumes enormous quantities of water; in developing countries, irrigation often exceeds 80 percent of total water use.
- 12) [정답] It can provide crops with water more efficiently and significantly reduce agricultural water demand.
- 13) [정답] However, very effective purification methods and thorough safeguards are necessary to ensure the safety of recycled water.
- 14) [정답] It is a small distillation unit, which is a particularly attractive approach in rural and low-income areas, where the lack of infrastructure makes it hard to distribute water efficiently and economically.
- 15) [정답] Some current projects have produced inexpensive distillation units that can remove toxic elements from any water source.
- 16) [정답] As a result, there have been significant calls for a change in the way the world is dealing with growing water shortages.
- 17) [정답] The world's water problems can only be solved by better technologies and more imaginative innovations.