Research report

Forum:	ECOSOC 1
Issue:	Finding ways to support LEDCs in supplying clean energy and drinking water
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Introduction

Clean drinking water and clean sustainable energy, two internationally recognized basic human needs. And with “clean water and sanitation” (SDG6) and “Affordable and clean energy” (SDG7) being official United Nations Sustainable Development Goals the salience of these human needs has been furthermore established. For the average inhabitant of a MEDC as most of the attendees of the conference, it is understandable and forgivable that so many overlook the urge for and importance of clean drinking water and energy in, presumably, predominantly LEDCs.

Clean drinking water and clean sustainable energy are both classed as basic services, yet governments, although the world making greater and greater efforts and progress of making both widely available, continuously are unable to provide such basic services including the two that are at the centre of our attention this conference. Our future task is to concoct and figure out solutions in order to with post-haste, but in a controlled manner, achieve the ultimate, ideal objective of achieving the UNSDGs by 2030. For this conference though we should focus on the matter at hand: finding ways to support LEDC’s in supplying clean energy and water.

Clean drinking water and clean sustainable energy effect the way of life more than most perhaps seem to fathom. Clean drinking water is not merely and principally utilized as drinking water, as one would assume reading the term, but additionally gets utilized in hygiene facilities, which have incomprehensible influence on the status quo of hygiene globally. Less obvious, however, equally as important is the accessibility to energy. Huge progress in accessibility to energy has successfully been accomplished, and the energy efficiency is constantly improving as renewable energy is being used increasingly. Improving this is still indeed needed for 2.8 billion people, who need safer and cleaner cooking fuels and technologies.

Definitions of key terms

MEDC

More Economically Developed Country, a diplomatically preferred term over, exempli gratia: rich country, first world country, western country, et cetera.

LEDC

Less Economically Developed Country, a diplomatically preferred term over, exempli gratia: poor country, third world country, et cetera.

Basic services
Basic services are services that provide basic human needs such as, but not limited to clean drinking water, sanitation, hygiene, energy, healthcare, education, et cetera.

The Grid
An electrical grid, electric grid or power grid, is an interconnected network for delivering electricity from producers to consumers. (https://openei.org/wiki/Definition:Electric_grid)

Rural electrification
The supplying of electrical power to rural and remote areas.

Drought
Dryness, due to insufficient amounts of both surface water and groundwater.

Waterborne diseases
Illnesses caused by viri, and bacteria ingested by contaminated water or by encountering faeces.

Irrigation
Distribution of water for watering crops.

General overview

Water

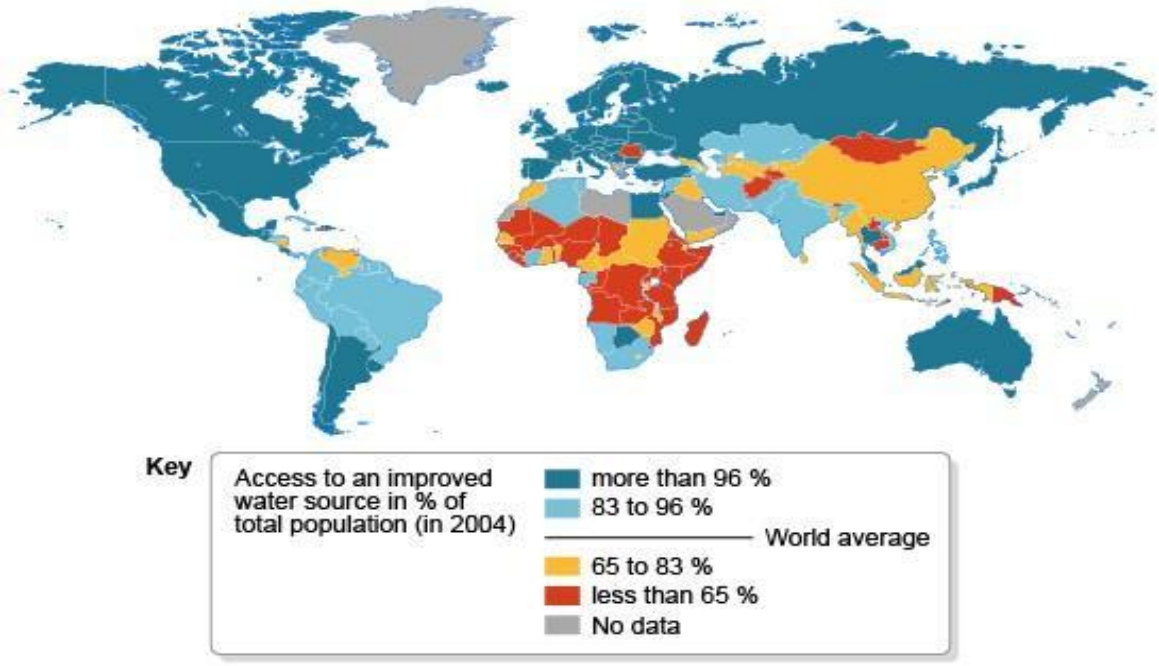
History

The earliest proof of the pursuit of clean drinking water dates to ancient Egypt, researchers have found Sanskrit writings, which date back to around 15th century B.C. describing various water treatment methods including: the boiling of water with fire, under the sun and with a piece of heated metal, and the filtration of water through sand and gravel. Also, on the tombs of Egyptian rulers Amenophis II and Rameses II, which date back to around the same time, respectively, images of, presumably, water purifying apparatus, as seen in the illustration above. The Bible also describes water purification. And the ancient-Roman aqueducts obviously give of a very

clear message of intent. The necessary mistakes have also been made with the purification and transportation of water, hence the lead poisoning that plagued the Roman elite and, in all probability, sped up the fall of the Roman empire, which was caused by certain beverages that were cooked in lead vessels, and the usage of lead pipes that transported ‘clean’ water into their homes.

Current situation

Water management has now been a problem for an elongated period in LEDCs, especially in rural areas which suffer from the inept and feeble infrastructure, irrigation and water purification means. Safe water is only accessible to 87,5% of people on earth, which seems a lot, but in



practice this leaves almost a billion people without clean drinking water, resulting in almost 700.000 child deaths per year, around 2000 per diem, caused by waterborne disease contracted from contaminated water, they have had to consume out of pure necessity and helplessness. *See below for a map indicating the percentage of each nation’s population with access to clean water:*

Obstacles faced

Education is of undeniable importance when trying to solve loads of issues, however in this particular instance education could potentially be an absolute gamechanger to solving the

problem. Momentarily, in the LEDCs inhabitants are ignorant to all different techniques of water purification despite these being relatively simple and require very little materials. People knowing basic things like these would drastically reduce the amount of people gaining waterborne disease. Often, the people are not even able to identify clean from dirty, contaminated water, and even if they are, it is not clear to them what the consequences are and the severity of the waterborne diseases that could easily result from drinking contaminated water. But also, the local hospitals and clinics are not educated enough in order to treat the patients properly, unaware of methods to treat disease and only being able to detect the disease after it is too late to cure the patient. The combination of these two separate entities being unknowing of this seemingly simple, obvious, and important information, is truly alarming and raises the question why there is not more attention going towards education, however it does clarify why waterborne disease is such a great problem.

Poverty is of course also one of the prominent factors of this certain problem. Because of poverty LEDCs are not able to afford significant resources necessary to purify and manage water, and so are only able to manage the problems short term whilst this long-term problem cries for a long-term solution for sanitation and hygiene.

Apart from insufficient recourses and knowledge, water shortages (droughts) also contribute largely to the current problems. The scarcity of water makes it to naturally become burdensome to manage and purify, also becoming stocks on the international markets. According to www.etftrends.com/: “water stocks are some of the safest investments on the market.” Thus, making water even less accessible to locals.

Two challenges that tie in well together are the insufficient irrigation and transportation of water and improper sewage disposal, because both usually take place in large-scale cities in LEDCs and are a result of poor water management. The first challenge usually occurs when water has to be transported over long distances to large-scale cities with high-density populations and when there is no main or consistent water source, hence making an efficient transportation method costly to both set up and maintain, explaining why this has not yet been done yet in many LEDCs, yet, where they have been able to achieve a system alike, significant amounts of water have not been lost or contaminated in the process, unlike LEDCs where this has not been done. Improper sewage disposal is a huge cause of all the contaminated water in the LEDCs, it can easily be resolved with money, but specific expertise will also be needed if one would try to solve the issue, and this expertise is unfortunately, usually not available in most LEDCs.

Knowing this, you could probably imagine the detrimental effects the lack of water has on agriculture: inability of farmers to grow crops, resulting in inability to sell local food, resulting in expensive import of food, resulting in a large part of people’s income being spent on food. This

once again proves that the problem is a lot more complicated than simply people having nothing to drink.

Energy

Energy, a seemingly abstract term, which is heard a lot in different contexts. In the context of this research report and issue, when we talk about ‘energy’, we are referring to electricity or electric energy. Now imagine, for instance, that you are studying for a test, and you are feeling hungry, your work productivity is most likely going to be inferior to your productivity when you are studying with a full stomach. Energy is a resource that enables people to do (more productive) work. Another example is the energy that goes into a fan that helps you cool down when it’s hot, also enhancing your work productivity. On a larger scale energy enables farmers to do more productive work by powering machines et cetera. Now you should be able to understand how big the role of energy is in our society.

Current situation

The problem mostly takes place in sub-Saharan-Africa, but also in certain regions of Asia, South America, and the Middle East, which should not get forgotten or left behind suffer under the consequences of insufficient energy supply. Causing this are three main factors: Cost, accessibility, and education.

The first factor and the factor where everything comes down to is costs. It is a fact that energy costs money, and as the problem exists in LEDCs it is not a surprise that there is little of this important resource. A modern powerplant costs al lot of money to run but can obviously be profitable, as seen in MEDCs. However, in MEDCs the demand for energy is a lot higher than in LEDCs, making energy prices affordable, thence the demand in LEDCs in lower and that would make energy prices completely unaffordable, and this way not solving anything. Also because of a lot of economical and political instability in many LEDCs these countries are relatively unattractive for investors.

The second factor, accessibility, is, looking at geographical facts, not surprising as most LEDCs have rural areas with low population density, and poor infrastructure. According to the UN 1 billion people have no access to electricity and around 700 million of these people live in Sub-Saharan-Africa.

The third factor is education, or lack of education rather. In most LEDCs the populations do not have enough knowledge on the matter, to solve the problem autonomously, by, exempli gratia: building efficient and reliable energy-grids and power-plants. However, without sufficient energy it is difficult to educate the population properly, thus there being a positive feedback loop LEDCs need help getting out of.

Major parties involved

United Nations Development Program

The UNDP was created in 1965 to achieve sustainable human development and to aid countries to eliminate poverty, thus improving quality of life for everyone on earth.

LEDCs

LEDCs are of course the focus of this issue. The problems described in the report mostly apply to LEDCs. LEDC governments will have to be cooperative, but should not be left alone in the struggle, as we must remember the limited resources they will have.

World Health Organization (WHO)

WHO is the UN body responsible for everything surrounding public health, thus they play a big role in the battle against waterborne diseases. WHO also has a special department that focuses on wate called Water and Sanitation Health (WSH), which wishes to decrease the impact of waterborne diseases.

Previous attempts to solve the issue

- An obvious attempt to solve the problem is of course the establishment of the SDG program in 2015, which among many other goals includes SDG 6, clean water and sanitation, and SDG 7, affordable and clean energy.
- Many MEDCs have also got their own projects running in LEDCs, most notably Canada and the United Kingdom.
- Lighting Africa, an initiative of the International Finance Corporations (IFC) and the World Bank, attempts to accelerate development of markets for a clean off-‐-grid lighting production in sub-‐-Saharan Africa. It is an attempt to provide very small-scale electricity. This is by ways of solar panels for example. Along with elementary supply of electricity it provides Business Development Support, for the people to set up businesses. This initiative gives people in LEDCs access to very small-‐-scale means of generating electricity. The problem with the Lighting Africa is that the solutions that are provided are all off-‐-grid. This means the programme only provides a short-term solution. Because the grid is not used or expanded this does not provide a long-term solution. If the people

would get their energy from the grid these people would benefit from expansion of the grid and would be able to benefit from a much larger amount of electricity, thus increasing mechanisation. ‘Give a man a fish and he can eat for a day. Give a man a fishing-‑-rod and he can eat for years.’ Is applicable here.

Timeline of Key Events

1957 The first ever commercial nuclear powerplant, Pennsylvania

2002 World summit on Sustainable Development in Johannesburg
2012 Access to clean drinking water is declared o be a basic human right by the UN

2012 International conference on water management in Africa

2015 Introduction of the Sustainable Development Goals

Possible solutions

- Improve education, presumably the most important step we must take, to tackle the problem at the core.
- Unfortunately, funding is also very much needed if we want to solve the issue. For example, funding of electricity companies or investments in better infrastructure, water conservation technologies, desal plants, easier grid access. However, funding is unlimited within MUN ROP, so we encourage you to avoid the word funding and rather write clauses about such as, but not limited to better infrastructure, water conservation technologies, desal plants, easier grid access.

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