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Algeria, Factor 2. : Water Scarcity

Algeria, How to eradicate unemployment and solve the problem of water scarcity

One of the most amazing thoughts that Dr. Norman Borlaug has ever said was ‘The Green Revolution has an entirely different meaning to most people in the affluent nations of the privileged world than to those in the developing nations of the forgotten world’. A quote that reflects what a lot of people are facing in a world where almost one billion people go to bed hungry every night. That number encompasses everyone from a three year old child to an elderly woman and it affects people from all over the globe, Algeria included... Not really far from the Algerian capital, Muhamad – a young man – used to live with 11 other people before leaving his country for the UK, seven years ago, trying to escape the long years of hunger, water scarcity and bad living conditions in a country listed among 17 African countries affected by water shortage. It is one of the biggest battles that the country is continuing to face and that some people like to call ‘A Desert Nation Fight to Maintain Water Supplies’... An interesting fact about Algeria is that it has always been known for its leading role in natural gas production in Africa. It is the second-largest natural gas supplier to Europe and is counted as one of the top three oil producers in Africa. All of those precious and valuable natural resources that the country has, made a lot of people wonder ‘why is Algeria not as rich as the Arabian Gulf countries? And why are its people starving?’. Well, some recent research states that Algeria's water availability per capita is less than 300 cubic meters per year which puts the country well below the threshold for the U.N. definition of water poverty which means that Water scarcity in Algeria is and has always been a major struggle for the nation throughout the entire history. It is one of the biggest problems hindering the development of the Algerian economy where the majority of Algerian households are facing an increasing number of social and economic challenges. Most Algerians complain about the decline in the quality of basic social services — including education, health care and access to housing. Unemployment rates are too high according to official figures. Most of the jobs created over the last decade are unstable, pay low wages and do not provide any social coverage to increase the numbers of poor people in Algeria just like Muhamad’s case.

Some research has shown that Muhamad’s family is one of the 1.4 million Algerian families living under the poverty line. Some researchers say that there are 9 to 14 million Algerians –

1 out of every 4 – living below the poverty line in the country. This means that the average family size for an Algerian poor family is approximately equal to 8! (given by the calculation: the average number of poor Algerians “ $9m+14m / 2 = 11.5$ ” divided by the number of Algerian poor families $1.4m : “11.5 / 1.4 = 8”$); quite a big number, where a lot of the blame lies with people who have many children, without knowing how they are going to house them. But for many families this is not the case, since a lot of them managed to live all together like Muhamad’s case where the house originally belonged to his uncle. These unfortunate families that represent 23% of the Algerian population have always been subject to bad living conditions. Since they often live in flimsily constructed shanty dwellings and overpopulated suburbs with no running water, electricity or sanitation where people may only eat a homemade bread called ‘Tabouna’ with unsatisfying portions meaning that meeting the basic food and nutritional needs is just impossible. Education is so bad and teachers don’t do their best teaching those kids because many of them do believe that those little young men and ladies were born with no future and were born to die.

Furthermore, a big number of these kids (especially girls) don’t go to school on a regular basis because they have to go for long walks to get water. Some in the south regions, where the temperature could reach more than 104 F, have to walk for 6 or 7 hours just to get water. Inefficient healthcare services are provided in public hospitals where patients would have to wait for several hours to finally hear nurses saying ‘We’re done today, Just come back tomorrow’ or they would do the same basic treatments for every single case, for instance they would probably give you a fever medication while you’re having some sort of dyspepsia or indigestion problems.

Besides, several articles on the internet have talked about the increasing rate of unemployment which reached an all-time high of 29.90 percent for youth unemployment in 2015 (reported by the Office National des Statistiques: ONS) and probably percentages are getting higher these days. Muhamad said 'I left this suburb and Algeria entirely seven years ago, and as far as I heard, the suburb now is full of unemployed youth who have nothing to do but deal in drugs and prostitution.' While some of them would finally migrate led by hopelessness because even if they would stay, whatever certificates they have, they would finally get a low paying job that cannot cover their basic daily needs. 'These young people suffer from the low standard of living and the absence of cultural and social climate to spend their time. The international World Bank note that more than 1/3 of the Algerian population live in poverty, and 70% of them live in rural areas. And 20% of the population live with a daily revenue of 1Dollar per inhabitant' (written by the daily Algerian newspaper Le Quotidien, August 22nd, 2000, p7). In the other hand, it is really unbelievable to see how many are the employees who are not satisfied with their revenues and who are thinking that they would never reach a stable welfare state and a secure future. All of that made 'the access to purchased food' for Algerians especially those 23% living under the poverty line without meaning and without any sense due to the increasing cost of living in Algeria especially when it is about food.

Another thing that one should mention, is that it is only by going there that the one could feel how unfortunate these people are since they are not only undernourished and deprived of water, in other words deprived of life, but they are also facing some other hard struggles and one of the most severe ones is the freedom of speech and how the food insecurity and water scarcity problems are not brought to media attention because it is banned for Algerians to talk about their issues freely. Actually, this is why people do not hear about these problems to the point that they think that everything is alright. And that's why statistics are always different and wrong on the internet, social media and everywhere. Since most of the Arabian governments don't want to show the dark side of their countries making it impossible for these people to reach out for help, as if it's been said indirectly by the government to all of them 'You were born to live in the darkness so NEVER reach out for help but only fool yourselves and fool the world saying that everything is fine.' To simplify all of that, I probably should say that the Water Scarcity problem has always been standing behind every single other struggle in Algeria since the role of water is vital in our lives and it affects all the sides and the fields.

To begin with, Water Scarcity affects Algeria's agricultural productivity, which contributes about eight percent of gross domestic product (GDP) but is unable to meet the food needs of the country's population. Therefore, some 45 percent of food is imported which means that food prices are being higher just because of the high percentage of importing. 'And cultivation is concentrated in the fertile coastal plain of the Tell region, which represents just a slice of Algeria's total territory'. Altogether, only about three percent of Algerian territory is arable and this makes water scarcity a major barrier to improving agricultural productivity.

Other than that, Water shortage also participated in worsening the issue of unemployment since the government has a lot of other concerns to work on and spend a lot of money on. Such as the water scarcity which made it neglect these teenager's dream of having a job, a stable welfare state and secure future.

Water shortage in Algeria is a nationwide problem; research stated that 'Only 22% of urban residents in Algeria receive water 24 hours per day. 34% receive water only once per day, 24% every second day and 14% only every third day. In some regions water only comes every 10 days, such as in the Bouzeguène District and other districts in the Kabylie region. In Setif in Northeastern Algeria water shortages have led to protests and clashes with the police.'... When he was a little kid, Muhamad used

to go for long walks to get water. Seeing some other cases Muhamad thinks that he was a little fortunate to not live in the desert where some children and mostly girls would walk for longer and much more tiring walks under the heat. But it's important to mention that this made Muhamad not able to go to school every day, miss a lot of classes. And this finally means not being able to pursue a higher educational level to join ultimately all the other unemployed Algerian teenagers and be another passive family member.

Also water shortage which is related to the agricultural productivity, made a lot of families like Muhamad's family be not able to provide the cost of food which is increasing proportionally with the increasing percentage of the imported food (45% imported food by now) which caused a lot of problems..

But some people would wonder ' is the issue improving? ' well, Recent research said that 'the potential of water resources in Algeria is of 17 Billion of m³ (surface water 10 Billion of m³, underground water 7 Billion of m³ mainly in the Sahara). According to Bouguerra [2001], the potential of the surface water resources in the north of Algeria, estimated at 13,500 hm³ per year in 1979, was reevaluated at 12,410 hm³ per year in 1986 and is more currently at only 9,700 hm³ per year'. While France – a country facing Algeria from the north side – which is smaller than Algeria by 4 times has a potential of water resources equal to 204 billion m³/year meaning that the potential water of resources in Algeria is less than it is in France by 12 times. (204 / 17). Finally, observing what was mentioned in the article leads to conclude that water scarcity in Algeria is clearly worsening since water resources are getting less and less year by year (1979: 13,500 hm³/year > 1986: 12410 hm³/ year > now: 9700 hm³/year).

Actually, that could be justified by the dry conditions that have prevailed for the last three decades on all the basin slopes of northern Algeria as testified by the actual state of dams. Urging the government to use the underground aquifers situated to the north of Algeria that are exploited to 90%, with 1.9 Billion of m³ per year. Some aquifers are becoming overexploited and in the Sahara region the extracted volume is valued to 1.7 Billion of m³. Moreover, the agricultural and industrial activities all along the 1200 km coastal zone has led to an increase in the pollution of the existing water resources. And climate changes — higher temperatures and less rain — are predicted for the coming decades in Algeria and the wider region. At the same time, the population is expanding, urbanizing and consuming more water than ever before affecting the water scarcity issue which puts more pressure on the water resources of the country.

Algeria, known as the country most severely threatened by water stress and scarcity by early 2020, should now move to improve its water scarcity problem. Actually, going for a similar move can be very beneficial for a country struggling with a lot of economical, agricultural and social problems. First of all, having more water would definitely mean improving agricultural productivity since the problem of Algeria is that it only has a 3% of arable territory while the rest of the surface needs so much more water and by having this, there will be more food, making the country have less importing percentages of food and at some points, taking into account that Algeria is the biggest Arabian and African country, it could ultimately almost meet the food needs of the country's population. And so, that would decrease the cost of living in Algeria and make food's prices much less expensive. Other than that, by improving that issue, people would have access to water every day, a lot of girls will not have to go for long walks to get water (or sometimes some boys and women), and so they will not be missing their classes, there will not be some people urging their children to work and everyone will have the right to study and be respected. Probably, studying is one of the most important things that these kids (mostly girls) could get because maybe one day some of them will be artists, inventors, philosophers, doctors, writers, engineers, journalists and finally be an effective person in their families, in their communities and the whole society helping other people with some other problems and struggles and shaping a better life for their families. It is unbelievable how many talents and geniuses these countries could lose because of hunger and poverty. Actually, some of them would lose their talents while others would forsake their countries and migrate to other ones in search of a better life and probably Zidane that legendary player that Algeria lost who played for France is one of them.

Last but not least, Algeria would also benefit from having better workers since improving water scarcity should improve food production and make education be better and provided for everyone leading the country to benefit from the best of the best workers who would help with increasing the production and improving services in all the fields. And so, the country would have more resources of money other than oil while having less issues to worry about such as food importing and a lot of other things making the country put its first steps into the developed world.

Finally, all of that will provide the country with a lot of money that would help with creating some new job opportunities and so decrease the percentage of unemployment and reduce the number of poor people in Algeria which is huge.

It has always been better to solve two problems at one time with a single action, in other words to kill two birds with one stone, and this actually can be done if we try to solve the water scarcity problem by involving all these unemployed teenagers in the process and so solving the problem of unemployment. I do believe that the desalination of sea water can provide the best solution to one of the most urgent and vital problems and of balancing and enhancing water resources. And here there are a lot of choices that the government can go for but probably one of the most effective ones is the solar distillation — a process where solar energy is used to distill fresh water from saline water for drinking purposes and other applications. The work on active solar distillation system was carried out by many researchers. It is well known that in solar distillation, the radiation from the sun evaporates water inside a chamber at a temperature higher than the ambient. The principle of operation is the greenhouse effect provided by the glass cover. Energy balances are made for each element of still; solar time, direction of beam radiation, clear sky radiation, and optical properties of the cover, convection outside the still, convection and evaporation inside are accounted. All of that can even be done with way cheaper ways since Algeria could benefit from her 29.90 percent of unemployed youth that some of them might be geniuses, others might be skilled and passionate about technology while others could be so strong and help with moving everything around and setting the equipment. Algeria could even recruit big scientists and teachers from all around the world and open a big sector in major universities for students to study that specific field and be specialized in it and for a country similar to Algeria where a lot of people are fluent in three languages meaning that they are intelligent or at least that their minds are full of imagination, culture and of thoughts coming from different backgrounds, that may turn them brilliant researchers in this field. And so, they would probably make some new innovations that would effectively decrease the cost of that process and perhaps some countries would be interested in these innovations and that would make the country earn a lot of money. Other than that Algeria could also collaborate with some Arabian Middle Eastern countries such as Saudi Arabia or Qatar where this process has been done for years and years and try to work together on creating new distillation technologies.

Besides, I've always been amazed by that quote that says 'There's no tool for development more effective than the empowerment of women'. Actually, water scarcity in Algeria made the country lose a lot of its talented, strong, intelligent, brilliant, smart and innovative young ladies who were not at school studying and developing their critical thinking and skills to be one day the source of a brilliant thought and idea. It's always been said that 'Empowered women will change the world'. Indeed, empowering women and increased girls' school attendance, level of education and literacy rates, as they no longer need to miss school to secure water for their families would make Algeria have a lot researchers, thinkers and innovators in different fields which will benefit the country and especially their communities. And that way, every single person in the nation would be positively affected throughout all of these girls taking an effective role in society because they no longer have to endure the systematic oppression that they were victims of due to poverty and poor living conditions. For instance, having more girls attending school would increase the chances to have actresses, women dramatists and women writers and actually those roles are one of the most important roles in societies since it touches everyone. A writer can bring all the world to his world throughout his books and share his dreams and then those dreams will grow bigger and be shared by a lot of other people and only then will that dream turn into reality. And so is the role of dramatists since they shape personalities for their plays and come with impressive stories which might touch the spectators and make them share

the same vision of the dramatist or probably that play may awaken something in their minds, some details that they would not think about and this is when these problems of water scarcity, poverty, hunger can be addressed to finally bring all people together for the better of their country to stand up and raise up these issues.

Overall, I believe that by this point we've established that water scarcity and what follows that, are colossal issues in Algeria as they would be in any other country facing a phase of transition and going through a rough patch in terms of economic stability. But the bright side of this story is that people are actually trying to look for lasting solutions that will slowly but surely improve the global status of Algeria compared to its neighboring countries which can only be achieved through getting the youth involved! And by that I mean anyone ranging from little kids to young struggling students because education about these issues starts from the cradle and never really stops at any point. Another thing that is really important to consider is that women have a very important role in this stage since they will be the building stones to the path that is going to lead to success on this very important mission hence why it is crucial to include them in this process since they have so much to give to the country and ultimately they have the right to participate if they desire to, just like their male counterparts so they should not be denied this opportunity solely based on their gender. To conclude, Algeria is a great country with its fair share of problems that the population is trying to work through with the resources available and throughout what was said it could slowly make its way to a greater future.

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