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Burkina Faso, Factor 16: Education

### **Burkina Faso: Environmental Education for Tomorrow**

A small arid and landlocked country in Western Africa, Burkina Faso is a country with high birth rates, low life expectancies, and an even lower literacy rate. The country is small, dwarfed by its neighbors Mali and Niger, and is only about the size of Colorado. It has a population of just over 17 million, an over 20% increase from the estimated 14 million living there just a decade ago, with the majority of people still farming the land for a livelihood. With this heavy reliance on agriculture, and proximity to the Sahara desert, increasing desertification is a growing concern. These risks only exasperate the food instability fears in the area. An old French colony formerly known as the Upper Volta, gaining independence in 1960 led to a shaky political climate that carries on to this day. Blaise Compaoré, the leader since 1987 was ousted after riots and political unrest in 2014. Afterwards Michael Kafando, previously the Foreign Minister, was put in as an Acting President for the time being. However people were displeased by this and so in 2015 there was a military coup, but this made surrounding areas nervous and after pressure from several external groups the acting president was quickly returned to power. Then in November of 2015 former Prime Minister Roch Marc Christian Kabore was elected as the new democratic President. While things have been looking up in January 2016 an Al-Qaeda led attack in Ouagadougou, Burkina Faso's capital city, which killed 30 and wounded 56, shows that while the country is on good terms with most of its neighbors, it is not isolated from the terror attacks on the rise in the Sahel area.

This government instability has affected the allocation of national funds to areas that need them. The average family still works on the small family farm of about 5.5ha or 13.6acres, not all of which can be used due to poor soil. The agricultural industry is the main industry for the entire country, with 70% of the population living in rural areas. According to the organization Our Africa "the main crops are cereals, rice and fonio (a wild grass seed), as well as crops such as sweet potatoes, cassava, beans, peanuts and other nuts". A staple food eaten both in the country and the cities is To, a paste made of millet or corn flour. Rice, while remaining a luxury in many villages is also widely consumed, with supplements of beans or tubercles (a root-like plant). Livestock-raising is also an important activity, with animals such as goats, sheep and cattle, farmers also raise pigs, camels, chickens, ducks and guinea fowl. Burkina's main agricultural export is cotton. However sesame seeds, beans and mangoes are also key earners. There is such an abundance of mangoes in Burkina Faso that unfortunately many of the mangos go to waste for lack of time and labor to properly harvest and sell the fruit.

The demographic situation is also a growing point of tension. The rapidly expanding nation is still set in the traditional patriarchal family, with a male head of household and women having many children. The average woman in Burkina Faso has six children, giving the average family eight or more people to one home. The average age of a citizen in Burkina Faso however is 15 years old. With over half their population as young dependents, the workforce is going to see a rapid population increase over the next few years, and if the population continues to expand as it is right now the current population will grow exponentially, in a way the country currently cannot handle.

Even with the political unease, demographic, environmental, and health worries, the biggest problem facing Burkina Faso is also an opportunity to improve their country and its issues, Education. For decades Burkina Faso has been one of the countries with the lowest literacy rate. Currently only about 20% of adults can read, 30% of men and only 15% of women. Education however is what can solve, or at least improve most of the country's other major issues. The WHO reported that in 2009, there were roughly 920 doctors in the entire country, less than one doctor for every 10,000 people, and the number of doctors entering the workforce is not increasing nearly as fast as the population. It has been proven that the more education women have the fewer children they have, sending girls to school could help curb the risk of an upcoming population crisis by reducing the current birth rate. The farm work, typically done by all able family members, can take time away from the children that do go to school, who may skip days or weeks during harvest, or the farms needs can decide if the children even go. By increasing education the average farmer, who may only have 5 years of formal education, could better understand how to adapt their farming methods to help prevent rapid desertification.

However the education situation in Burkina Faso is improving, primarily due to the fact that education is valued among large portions of the population. While only 20% of their population over 15 can read, half of their population is under 17, and in children under 15 the education rate is 58% a dramatic increase in the upcoming education levels. For younger children the numbers are even better with almost 90% of primary aged students currently enrolled. In places where malnutrition is high the school provided meal has been a powerful incentive to send children to school. Even with these huge gains the education system still has areas to improve on now that they have the students.

The student to teacher ratio is unbalanced with a 55-1 ratio. Another major problem is the fact there is a still disparity in Burkina Faso, both in access to schools and healthcare. In the handful of major cities the rate of enrollment is far higher than in the countryside, almost 95% compared to about 75-80%, and hospitals and healthcare are more affordable and accessible. Boys are also still being enrolled at higher rates than the girls at about a 10% difference in rural areas. This is an important problem because when women are higher educated they have less children, and may get a job to support their family before, or even when they have children. In Burkina Faso if the population growth does not slow soon there will be serious consequences for the future agriculture and standard of living. Research shows that where women are highly educated effective methods of farming increase dramatically, as a result of women also engaging in the dissemination of improved techniques. There are programs in place that give food products to families for each girl they send to school each month, encouraging families to send girls and keep them in school.

There is also the issue of the price of schools. The school price in Burkina Faso varies but state schools are far cheaper than private ones. This means as parents can't afford to send their children to an expensive school but still want to send them, a population problem sprouts up. The state schools, while officially free, are underfunded, overcrowded and understaffed. The schools often have far too many children for the number of teachers available.

Even with all these setbacks Burkina Faso's future actually looks quite bright. At the current time there are several separate and effective studies and experiments in agriculture being tested in Burkina Faso that are cutting edge in stabilizing the food supply. The problem is that even with these successes the information is difficult to pass on when most farmers can't read. The only way to spread the new knowledge is in person and by hand. Even though this help will take an immense amount of time and

manpower to teach these new methods it could be done, but they may not have that much time. The impending issue facing Burkina Faso is the rapid desertification of the arid regions surrounding the Sahara, the Sahel. The increasing desertification of the Sahara will be a growing problem in Sub-Saharan Africa, in countries like Burkina Faso in the upcoming decades. Growing at about 10cm or 4in. a year affecting the arable land in Burkina Faso and its neighbors. This affects the water sources as well, as the groundwater is not replenished, and many people get their water from underground well, or even ponds. That water is also used for crops, increasing food insecurity in the area as water levels decrease.

Several agencies are making progress in addressing these issues. One such organization is Reseau Marp Burkina (RMB), a non-profit organization that collaborates with both national and international groups, and has been working on helping farmers improve their agricultural methods. So far the group seems to be very successful, creating and facilitating forums, to brainstorm solutions and spread information. Another good program Farmer Managed Natural Regeneration, or FMNR, has been using techniques such as building stone walls, and small nutrient pockets dug in the ground, to collect rainwater and stop run off. These and other techniques have helped build up farming land that might otherwise be considered unusable. Most of the techniques are ones created by successful farmers in the area, now being spread to other farmers nearby.

The International Development Association (IDA) has also been working in Burkina Faso to increase their agricultural competitiveness, both in the plants and crops they grow as well as how much of the land is usable. They started working in 2007 and have been quite successful in growing Burkina Faso's exports and productivity. According to IDA through financing more than 1,100 kilometers of rural roads have been rehabilitated, connecting agricultural production sites to the markets. However with the increased population since the beginning of the program, the growth needs to be even more successful than before.

Another program that is demonstrating how schools benefit the local community is the World Food Programme (WFP) It is a program aiming to provide food to school children in the Sahel region. Recently in Burkina Faso the group has partnered with a group of local small-scale yogurt producers to provide yogurt to school children near them. This is a big deal for many children, with the average meal in the area being made up primarily of a corn flour paste and vegetables, this sweet flavored yogurt is a real treat. Many parents in Burkina Faso and other parts of the Sahel have been getting more and more incentives to send their children to school, which is leading to the steadily increasing education rate for children in the country, and the WFP's two daily meals are certainly helping. This program shows how programs within schools can improve the entire community.

The major limitation to the above mentioned programs is the limited ability to spread quickly. With a population where most adults cannot read it is difficult to easily spread the information and knowledge of these programs. The programs and information spread slowly as many times they must be conveyed in person each time. This takes a lot of time and manpower, which means the programs cannot work to their maximum potential.

With all of these programs and the surging trend towards increasing education Burkina Faso has an opportunity to solve several big problems at once. Organizations such as RMB and IDA could begin a new branch of programs, which could spread new agricultural knowledge and methods through school programs to the next generation in farming communities. This in school knowledge of how to improve their family's lands and their community could be both a push towards education, land and food security.

Parents could see how sending their children to school could benefit them in the immediate future. Educating this new generation in preserving the land would do so much for the slowing of the desertification of the Sahel.

A program of this sort would not be a particularly difficult for larger organizations, like the ones mentioned. All that would be necessary for a pilot scheme would be training a few extra people to go to the local primary schools to teach the older children. This could provide jobs for the growing ranks of last born children in a family who won't be needed on the family farm as they become adults. This is one of the reasons unemployment is an especially prevalent problem, because the farming based economy only needs so many farmers, so many people are entering the workforce at once. At each school it would also be best to have some type of medium sized garden or a planting plot, in order to accurately demonstrate how the new styles would be helpful in farming. Initially there may be some resistance or uncertainty from parents in regards to the methods being taught, so the example of the schools garden could help show the effectiveness. The crops from the local school garden could also provide an extra bit of fresh food to the students.

A program of similar nature has been shown to work in farming communities in America; the 4-H program. The program began in the early 1900s as a way to increase youth pride in farming and the farming communities, as well as to spread new agricultural practices more easily through communities. As children have been found to be more open to new practices, and share these practices with their families. Over time this program overwhelmingly succeeded in their goals and is going on to its 115<sup>th</sup> year as an organization. Now however there has been a shift so the program deals with not only agriculture and new agricultural practices but also leadership education, and programs in encourage the sciences. If a similar program were to be set up in Burkina Faso it stands to reason a similar turn could occur if the country continued to develop to a higher level over time.

To establish the startup scheme could at first be funded in a few schools in a few villages to assess the feasibility. The instructors could be put on government salary, or because that can be unreliable the program could apply for some international aid to start up. Startup seeds and other basic supplies could be provided by the government, or by either internal or international donations. To save money the first schools could be placed in an area accessible for established organizations such as IDA and RMB to either train instructors or have some of their members go to the schools to teach. After establishment a way to include ordinary citizens and the new working age population, free or reduced training for positions in the program could be offered to students in the top their classes at local schools, so they are rewarded for doing well and can give back into their own communities, while also bringing money into the community. This also is a proactive way to lessen the chances of a Brain Drain, if the brightest students can be rewarded with opportunities.

By combining of the two major social issues in the country, education and agricultural security, Burkina Faso can and brighten their nation's future. Many of the children, especially the girls, in school right now, aspire to teach in their own and nearby villages, and a program teaching about agriculture would aid in this goal. By training local people in search of jobs the program can help all ranges of people in the small village communities.

Burkina Faso is a country at a fork in the road. With the massive population boom, political instability, and increasing risks from the desertification of the Sahara the country could be tilting towards ruin. On

the other hand the average GDP is rising, there has been a huge jump in education rates for the younger generation, and there are many programs being created to improve both life and farming in the area. The country has the chance to continue their upward trajectory towards a more successful tomorrow, with better agriculture and a more educated population, but that very same population could be their downfall.

There is a massive influx of new workers arriving at working age in Burkina Faso, if the country can come together and have this new workforce fully employed the national GDP could skyrocket. However if these young people cannot find work, cannot find a way to support families, or continue education there is going to be a demographic crisis, with too many unemployed, and too many new children being born, the political situation would only worsen, and a power vacuum could emerge. The likelihood is that there will be a large migration of these young people to cities in the upcoming years, where education will be even more important to their success and livelihood.

The bright side though is that the people of Burkina Faso believe in education and improvement. The cultural value of education has grown exponentially in the last decade. Parents want their children to be successful, want them to be educated and knowledgeable. That understanding with the combination of the increasing number of programs to improve agricultural practices and agricultural knowledge in the country means Burkina Faso has a strong base. If the country can use this base to start bringing their education to the world average, combating rapid population growth and the encroachment of the Sahara, they could begin to emerge as a country. Burkina Faso would tap into its great potential and begin to look at a much greater tomorrow.

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