

MONEY, CORRUPTION, AND OIL:
THE POLITICS OF RESOURCES IN
CHAD AND CAMEROON

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The Chad-Cameroon Oil Pipeline Project is the single largest case of foreign direct investment in Africa ever. The investment in the 1,040-kilometer underground pipeline is estimated at nearly \$4.5 billion (Brown 7). The purpose of the pipeline is to enable Chad to utilize oil resources discovered in the early 1960s (Gee and Cadot 8) by providing the landlocked nation access to the Atlantic port of Kribi in Cameroon (Walsh). The project involves not only building the pipeline but also drilling three hundred oil wells in the Doba fields of Southern Chad (Brown 7). Over the next three decades the pipeline is expected to transport nearly one billion barrels of low sulfur oil (Mbendi).

The World Bank is a major source of funding in the project, lending \$53 million to Cameroon and \$40 million to Chad. The International Finance Corporation (IFC) has contributed \$100 million to the project and has helped secure \$300 million more in backing from commercial banks (Landry 2). Primary financing for the project comes from ExxonMobil and Chevron, of the US, and Petronas, of Malaysia (Kenety).

While it is certain that these corporations will benefit from the project, the issue remains of whether the pipeline will significantly benefit Chad and Cameroon. On the premise that it would, the World Bank offered funding for the project. This decision remains questionable, as the clear harms of the project lead one to wonder whether the World Bank's quest for development in Africa is nothing more than corporate welfare at the expense of the peoples of Chad and Cameroon. While the World Bank often successfully balances these interests, it is impossible to do so in the case of the Chad-Cameroon pipeline. The harms of the project greatly preclude the realization of its lofty goal of poverty alleviation.

Accordingly, the World Bank should not have funded the Chad-Cameroon pipeline. While the histories of colonial exploitation and internal strife in both Chad and Cameroon have left both nations in dire need of the Group's financial assistance, the Doba Basin oil project does not meet the World Bank's aims of environmental protection, social development, or poverty alleviation. Fundamentally, the project is an environmentally

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unsound policy with both immediate ecological harms and a high risk of future problems. What little potential there is for development and social benefit from this project does not give much hope to the indigenous peoples ousted from their homes along the path of the pipeline, and construction has other, more general, social harms as well. The potential for the pipeline to provide social or economic benefits to the average Chadian or Cameroonian is limited by corruption within both states. Thus, while the project does offer the potential for large returns, particularly to the companies funding the pipeline's construction and corrupt government officials, its current administration offers little hope for substantial improvement in the plight of the poor inside either nation.

It is too late to reverse the negative effects of the oil pipeline; however, sustainable development remains an option for Chad and Cameroon in the future. Such development could take on a number of forms, many of which do not require high levels of government intervention, though those projects that do necessitate more than just local involvement will likely require the people of Chad and Cameroon to turn to non-governmental organizations or foreign governments for assistance.

This paper will first look at the current state of the Chadian and Cameroonian economies in the post-colonial era, as well as briefly discuss the history of the World Bank and its role in the funding of the Doba Basin oil project. Then it will examine the environmental, political, social, and economic implications of the pipeline. Next, the paper will explore the preconditions for sustainable development, as well as the possibility of pursuing more sustainable development options in both nations in the future. The last section of the paper will attempt to extrapolate general lessons to be learned from the case of the Doba Basin oil project.

Background Information: Chad

While 1960 saw the end of France's official colonization of Chad, it did little to limit French influence in the region. The chief of state under French rule, Ngartha (François) Tombalbaye assumed control of the new nation, and French foreign aid continued to provide ninety-five percent of the budget of Tombalbaye's government, at the price of a mere \$20 million per year (Burr and Collins 26). France continued its subsidization of Chad throughout Tombalbaye's regime. The Economist Intelligence Unit (EIU) reports that "for most of the post-independence period there has been little recognizable economic strategy [in Chad]. From the 1960s to the 1980s, governmental policy was characterized by crisis management and financial pillage, as the recurring factional conflicts contributed to a state of near anarchy" (EIU 67). The continual violent conflicts within the nation prevented any meaningful

development until after Idriss Déby seized control in 1990.

Déby's rise to power has come with significant attempts to provide economic reform within Chad. These reforms, as well as the end of the civil war, have been largely responsible for the fact that the Gross Domestic Product (GDP) has increased steadily since 1995.

Unfortunately, Chad remains one of the poorest countries in the world. The Human Development Index (HDI) created by the United Nations Development Program (UNDP) characterizes the nation as one with "low human development" (United Nations, HDI – Chad). This is reflected in HDI data which estimates that as much as 64 percent of the population lives below the national poverty line. Thirty-four percent of Chadians are undernourished, and adult literacy rates approach only about 22 percent (United Nations, HDI – Chad). The EIU reports that "aid and concessional inflows will continue to underpin economic activity in the short to medium term." Post-civil war Chad needs to seek a self-reliant and sustainable economy by reexamining the nation's heavy reliance on foreign aid.

Cameroon

After Cameroon gained its independence in 1960, it began a series of Five Year Economic and Social Development Plans guided by three imperatives: "independence, budgetary equilibrium and priority for development" (Ndongko 149). Six different plans spanned the period from 1961 to 1991.

All of Cameroon's five-year plans have been linked by the ideal of "planned liberalism" (Ndongko 158). However, "the total planned investments for all the Five Year Economic and Social Development Plans have always exceeded available domestic savings" (Ndongko 148). This trend has continued and perhaps contributed to the World Bank's current investment in the Chad-Cameroon pipeline. The lack of available domestic savings, combined with increasing demands for capital, produced a heavy Cameroonian reliance on foreign investment in order to fund local development.

From 1980 to 1985, the United Nations Industrial Development Organization (UNIDO) calculated real GDP growth rates in the region at 7.6 percent per year (UNIDO 2). According to UNIDO, agriculture represented "the cornerstone of Cameroon's economy" and was "the basis of the modest but steady growth achieved before the oil era which started in 1977" (UNIDO 5). Nevertheless, in the late 1970s oil became the major tool for Cameroonian economic growth. During the peak in oil production, 1985, the oil sector made up almost 20 percent of Cameroon's GDP (UNIDO 43).

However, in 1986, collapsing prices for Cameroon's principal exports combined with the progressive overvaluation of the CFA franc against the

dollar to produce an economic crisis. Cameroon suffered “one of the worst economic declines in Sub-Saharan Africa, followed by the sharp 50 percent devaluation of its currency in January 1994” (EIU 14). The EIU reports that “budget deficit became the rule from this point onwards, and the oil account was rapidly exhausted in an attempt to fill the gap” (EIU, 10).

The fiscal deficits that characterized this economic crisis forced the Cameroonian government to resort to massive foreign borrowing (EIU 27).

Since 1996, Cameroon has started to rebound from the economic depression that plagued the country for ten years. Real GDP achieved a positive growth rate of about five percent in 1994, and with the exception of 1997-1998, this growth trend has continued (EIU 18). The EIU reports that development has been driven by both the primary sector such as food, cash crops, and forestry and secondary sectors such as mining, manufacturing, utilities, housing, and public works (EIU 15). Unfortunately, this development has not offered Cameroon escape from its heavy reliance on foreign aid.

Today, Cameroon is a member of the Central African Economic and Monetary Community (CEMAC) that also includes Equatorial Guinea, Gabon, Central African Republic, the Republic of Congo, and Chad. According to the EIU, Cameroon is the most important market in CEMAC. Alone, it accounts for nearly half of the combined GDP and total population of the entire CEMAC region (EIU 15). Nevertheless, Cameroon is still highly in need of development. The UNDP characterizes the nation as one with medium-low human development, which is reflected in HDI data which estimates that as much as 40 percent of the population lives below the national poverty line. Twenty-five percent of Cameroonians are undernourished, although the adult literacy rate is high for the area, nearing 76 percent (United Nations, *HDI – Cameroon*).

World Bank

The World Bank Group was founded in 1944 and has since become one of the world’s largest sources of developmental assistance. “The Bank, which provided \$19.5 billion in loans to its client countries in fiscal year 2002, is now working in more than 100 developing economies, bringing a mix of finance and ideas to improve living standards and eliminate the worst forms of poverty” (World Bank, *At a Glance*). Among the themes for the Bank’s assistance are accelerated debt relief, support of the fight against HIV/AIDS, multidimensional support for poverty reduction, combating government corruption, and protecting the environment (World Bank, *At a Glance*).

Development options such as the Chad-Cameroon pipeline are often reliant on World Bank approval because of the Bank’s status as a leader in developmental investment. The oil companies in Chad clearly stated that

they would not proceed without World Bank approval of the project (Horta 11). The benefits that World Bank involvement bring to the project are clear; first, the World Bank provides political risk insurance, and second, it serves as a catalyst for export-agency funding. The Bank's assumption of this role is particularly important for projects in countries with high-risk ratings (such as in Chad) or for projects that involve international transportation of goods (like the oil transported through the Chad-Cameroon pipeline) (World Bank, *PADI* 27).

World Bank focus on lesser-developed nations such as Chad and Cameroon is the norm—however, the Group's participation in the funding of a transnational oil pipeline is not a frequent occurrence, as the institution "has financed only a handful of transnational petroleum pipelines in the last 25 years" (World Bank, *PADI* 26). Though the Bank has extensive resources for funding development projects and "raises money for its development programs by tapping the world's capital markets, and, in the case of IDA, through contributions from wealthier member governments," these assets are not inexhaustible (World Bank, *At a Glance*). Moreover, the poor economic health characteristic of the nations in need of World Bank assistance leaves those nations little choice but to accept any development option offered by the World Bank. Thus, it is highly important that the Group choose its investment projects with care, and with the best interests of all peoples in mind, though it failed to do so when offering funding for the Chad-Cameroon oil pipeline, as will be demonstrated below.

Implications of the Chad-Cameroon Oil Pipeline

Since its inception, the idea of a pipeline extending from Chad to Cameroon has garnered staunch opposition from environmental and social organizations. The pipeline has been extensively criticized for its immediate harms to the environment, particularly through the destruction of forests and fragile ecosystems. These harms could be significantly magnified by an oil spill, a problem that was not fully considered before the funding of the pipeline. The project also poses clear threats to indigenous groups, as it will intensify general social problems among the peoples of Chad and Cameroon, specifically the spread of AIDS. Additionally, corruption within both countries could leave the poor and disenfranchised without a true benefit from the government's increased oil revenues. This is coupled with the distinct possibility that the pipeline will escalate internal tensions within Chad, increasing the likelihood of another civil war.

The environmental, social, and political harms of the Chad-Cameroon oil pipeline project are clear; less certain is the World Bank claim that the project represents the best development option for Chad and Cameroon

(Horta et al. 5). Closer examination demonstrates that only Chad stands a chance of realizing any true economic gains, but even in Chad, there is little assurance that pipeline revenues will be used in the best interests of all the Chadian people.

The Environment

The pipeline currently under construction between Cameroon and Chad is a striking example of the extent to which humans can cause irreparable damage to their environment. The environmental dangers of building the pipeline are real and have been recognized by other major oil corporations. The Rainforest Action Network reports: "Even the most reprehensible companies such as Royal Dutch/Shell and Elf Aquitaine, have withdrawn from the Chad-Cameroon pipeline project due to environmental and social concerns."

The 1,040-kilometer underground pipeline will run from Chad alongside the Sanaga River to the Kribi Coast of Cameroon, a route that draws great concern because of the fragility of local ecosystems. The areas of Chad and Cameroon that will be adversely affected by the pipeline hold seven types of ecosystems. Although they infringe upon these ecoregions directly through the construction of the pipeline, the oil companies seem to recognize the threat of human encroachment in some respects. In its Induced Access Management Plan, ExxonMobil writes, "It is necessary to limit induced access effects in certain locations of the pipeline route, which has the potential to open up access for hunting, agriculture and timber harvesting" (ExxonMobil, *Induced Access Management Plan*). Listed restrictions include prohibitions on bush meat hunting, and access to some areas will be limited or completely denied. However, the Induced Access Management Plan does not offer a means of enforcement for this policy, and poaching is already a large problem in some of these areas. A policy of strict enforcement, while serving to advance environmental interests, raises the question of propriety because some of the ecosystems affected are major sources of food and medicine for indigenous peoples of Chad and Cameroon. The habitat destruction caused by the pipeline and its construction is likely to exacerbate existing food shortages.

Moreover, the loss of biodiversity from habitat destruction through pipeline construction is inevitable and irreparable. Indigenous Bagyeli medical specialists claim that irreplaceable medicinal plants will be destroyed by the pipeline's construction.

Monetary compensation cannot be used as a substitute for the plants used by indigenous peoples, and the project has the potential to permanently destroy plants that could be valuable to the world medical community as

well.

An additional threat is posed to these regions by the potential for a pipeline leak. It is unrealistic to assume that such leaks will not occur. In fact, oil spills or leaking pipelines are frequent even with today's technology. The U.S. Department of Justice recently settled a case against ExxonMobil (the principal financial investor in the Chad-Cameroon oil pipeline) based on a 1991 oil spill that occurred when a pipeline ruptured underneath the Valencia Golf Course, in Valencia, California.

ExxonMobil has prepared an Oil Spill Response Plan that identifies areas of high concern and lays out a response plan for these areas that calls for immediate action. (ExxonMobil, *General Oil Spill Response Plan*) However, the Environmental Defense Fund points out that: "The oil from Chad's Doba fields is low quality, high sulfur and very thick. In addition to pumps, this will require heating of the pipeline to move the oil. Both the heating and high sulfur content increase the risk of pipe corrosion" (Walsh).

It is clear that the security of the pipeline from leakage cannot be guaranteed. The possibility of an oil spill brings the threat of enormous environmental harms to both Chad and Cameroon.

ExxonMobil has established an Environmental Foundation that gives Cameroon \$3.5 million a year to mitigate the harms of the pipeline (ExxonMobil, *Environmental Foundation*). While this program assures Cameroon money specifically earmarked for biodiversity conservation efforts, this money cannot bring back species that have already been destroyed, such as those relied upon by the Bagyeli Pygmies for medicinal purposes. Moreover, this Environmental Foundation is limited to Cameroon; no such program has been created for the protection of the environment in Chad.

Social and Political Implications

In addition to the clear environmental harms of pipeline construction, several social problems will be exacerbated by the Doba Basin project. While it is undeniable that some individuals will benefit from the Chad-Cameroon oil pipeline, it is also true that the indigenous peoples forced to leave their homes along the pipeline's route have been significantly disadvantaged. The pipeline will cause the loss of livelihood for, and the resettlement of, as many as 1,000 people (Gee and Cadot 12). This process is already largely underway, as the project was approved before many local peoples were consulted or given adequate information.

ExxonMobil touts consultation as one of its major achievements, stating, "During the first full year of construction, the project conducted over 900 village consultation meetings, involving more than 30,000 people, in

addition to periodic meetings with local and international NGOs” (ExxonMobil, *Consultation*). What ExxonMobil fails to reveal is that much of this consultation was tainted by menacing state action (Djiraibe and Thenard).

The lack of adequate consultation and genuine indigenous cooperation also leads one to question the efficacy of ExxonMobil’s consultation-based compensation programs. These programs, provided by the oil companies, are designed to compensate indigenous peoples for the loss of their land and livelihood. However, a case study of the Bagyeli Pygmy communities impacted by the Chad-Cameroon oil-pipeline project, conducted by the Forest Peoples Project (a non-profit NGO), shows that many members of the community did not understand the pipeline and did not know if they were entitled to compensation. If they did know they were due compensation, they were unsure about how to obtain the compensation from the government (Nelson, Kenrick, and Jackson). The study demonstrates a clear gap in the conveyance of information by the oil companies to the indigenous peoples in Chad and Cameroon.

Additionally, the problems of compensation programs extend far beyond simple informational gaps. The Forest Peoples Case Study further describes how neighbouring indigenous tribes forced the Bagyeli off their land before compensation was given. Those tribes then took the compensation for themselves, which illustrates the extent to which tensions exist among indigenous peoples.

In recognition of the harms imposed upon indigenous peoples by the pipeline, an ExxonMobil Indigenous Peoples Plan will seek to direct \$600,000 to aid the Pygmies adversely affected by the pipeline over the next 28 years. The \$600,000 will be placed into a trust, and the interest earned from this trust will be administered in addition to compensation (ExxonMobil, *Indigenous Peoples Plan*). Intended programs include basic literacy and education initiatives, the improvement water supplies, and hygiene assistance. According to ExxonMobil, the Pygmies will be asked to propose these programs themselves. (ExxonMobil, *Indigenous Peoples Plan*). However, recent calculations by Canada’s Halifax Initiative (a coalition of development, environment, faith, rights, and labor groups) show that “the amount to be spent per person would be less than \$3 per year. Over the life of the project this is equivalent to less than \$100 per person over thirty years, assuming the population remains stagnant” (Halifax Initiative). Additionally, the already established problems of inadequate information distribution and inter-tribe tensions are likely to offset what little benefit the Indigenous Peoples Plan will provide.

Moreover, compensation programs fail to consider the fact that some of the resources destroyed by pipeline construction cannot be compensated for,

a problem that is exemplified in the analysis of irreplaceable medical resources discussed previously. The pipeline will also eradicate several sites that are considered to be sacred by some indigenous peoples (Nelson, Kenrick, and Jackson). Compensation cannot remedy these harms and will likely prove inadequate to remedy the problem of the displacement of nearly 1,000 indigenous peoples.

Social harms, however, are not limited to those that will be borne by the indigenous tribes displaced by pipeline construction. For example, the potential for exacerbation of the epidemic stems from the rise in prostitution that is already occurring near construction areas (Gee and Cadot 13). The World Bank notes that the oil company consortium is making efforts to mitigate the spread of AIDS by monitoring the HIV status of workers, distributing free condoms, and offering educational information about the disease. (World Bank, *AIDS and the Chad-Cameroon Oil Pipeline Project*). However, it is unclear how effective these programs will be, and, until they are fully implemented, it is certain that AIDS infection rates will continue to climb in Chad and Cameroon.

Another troublesome aspect of the pipeline project is the rampant corruption that exists in the governments of Chad and Cameroon. In addition to the questionable elections of the leaders of both countries, both governments are reported to have committed such human rights abuses as "extrajudicial killings, torture, abuse, rape, limiting freedom of the press and arresting opposition politicians and other civilians" (Rainforest Action Network). These violations of human rights demonstrate the lack of integrity that comes with the actions of the Chadian and Cameroonian governments. Already, the one member of the Chadian Parliament who voiced substantial opposition to the project, Yorongar Ngarléji, was arrested. International pressure has since secured his release. This corruption is of great concern given that the revenues of the oil pipeline project are to be administered by the Chadian and Cameroonian governments; there is very little guarantee that the revenues from the oil pipeline will go to aid citizens of Chad and Cameroon who are not members of the nations' elite. Ironically, these are the people who are probably most in need of social assistance as they are the ones who are not currently reaping the benefits of government corruption.

Additionally, corruption in both countries has engendered fierce opposition to the leaders of both countries. While the civil war in Chad has ended, violent skirmishes have broken out in northern areas of the countries several times since 1998 (EIU 61). Many of these skirmishes have been related to protests of the pipeline or President Déby's corruption. President Déby was reelected to another term in 2001; however, suspicions of election fixing are high both within Chad and throughout the rest of the international community. If the pipeline does continue to harm indigenous peoples, or

adversely affect others through processes such as inflation, there is a very real possibility that more violent conflicts will occur in the future.

Economic Implications

The World Bank projects oil revenues from the project of \$1.82 billion for Chad and \$550 million for Cameroon over the next few decades (World Bank, *PAD I* 18-19). This section will examine the probability that these revenues will translate into poverty relief, first in Cameroon and then in Chad.

The potential for poverty alleviation in Cameroon is slim, due to the comparatively small amount of revenue that the project will bring to the people. A study conducted by the University of Warwick calculated that the project income will only amount to approximately four dollars a year per resident of Cameroon over the lifespan of the project (Price et al.). This assumes a completely equitable distribution of the resources and no administrative costs.

However, as evidenced by the corrupt practices found in the Cameroonian government, it is not reasonable to believe that distribution will be equitable. No programs are being established within Cameroon to ensure that this revenue will be handled responsibly and fairly. Moreover, the high levels of debt owed by the Cameroonian government make it unlikely that all of this revenue will be used for poverty alleviation. Thus, the direct economic benefits of the project are likely to prove non-existent or minimal for most of the Cameroonian peoples. The only true economic aid that the project will provide to Cameroon is the development of infrastructure used in pipeline construction and oil production. However, the previously discussed environmental implications of infrastructure development arguably outweighs the benefits it may bring.

At the same time, the economic risks of such a project are genuine. As demonstrated above, oil spills are a very real possibility. The coastal economy alone is estimated to be provide Cameroon \$8.3 billion a year (Price et al). While the costs of recovery from an oil spill would be the primary responsibility of the oil companies, an oil spill in the coastal region could endanger the economic well being of those who depend upon coastal resources for their livelihood.

Potential for Sustainable Development in Chad and Cameroon

Indeed, it can be seen that the opportunity for more environmentally friendly sources of revenue exist within Chad and Cameroon and ought to be explored more fully in the future. This section of the paper will begin by outlining the preconditions essential to sustainable development. It will contin-

ue with a discussion of feasible development options within Chad and Cameroon and will conclude with a look at the general lessons that can be drawn from the case study of the Doba Basin oil project.

Necessary Preconditions

In order for any development to provide relief to suffering peoples, certain preconditions must be met. Among these necessary preconditions are peace, exemplified by the Chadian economy's failure to grow during its thirty year civil war; respect for human rights, without which money does little good; equality and the fair distribution of wealth, to ensure that development does not advantage some at the expense of others; and the participation of all peoples in decision making processes, to ensure that development truly meets the needs of local communities. However, even decisions made in a fair and democratic way can sometimes prove damaging to peoples and the environment in the long-term. Thus, we see that sustainable development requires more than the conditions outlined above.

The sustainability of development is dependent upon its ability to keep the future in mind, so that development at one point in time does not prevent development by others at a later point in time. The long term environmental harms of the Chad-Cameroon oil pipeline preclude it from meeting this criterion for sustainability. The social and political costs of the project mean that the development that does occur is unlikely to significantly alleviate poverty for all of the peoples of the two nations. In the future, Chad and Cameroon must seek alternative forms of development that do not share the harms of the oil pipeline, or present additional problems in terms of sustainability.

In order for this development to occur, the nations of Chad and Cameroon, as well as the World Bank, must recognize the incongruity of imposing post-industrial logic on pre-industrial nations. Without a functional infrastructure and legitimate governance, large-scale foreign investment options like the Chad-Cameroon pipeline are doomed to produce the types of harms demonstrated by this case. Perhaps this means that Chad and Cameroon must limit investment to enterprises that are willing to pursue sustainable development, or even forego foreign corporate investment altogether. The World Bank must take more care to reconcile the needs of indigenous peoples with the desires of large multinational corporations.

The pursuit of alternative, sustainable forms of development offers the potential for the long-term protection of currently undeveloped areas in a way that industrialization and foreign investment projects like the Doba basin oil project cannot. Industrialization, though it holds more potential for urban areas that can absorb large population, would destroy the fragile local

communities common in Chad and Cameroon and force many indigenous peoples to abandon their traditional role as hunter-gatherers (Rainforest Action Network). Rather, development must ensure that the region in question is able to retain its traditional heritage. Advocates of development must also seek to reconcile the lifestyles and needs of indigenous peoples with the need for development.

The Potential for Sustainable Development

This section will discuss three major ways in which Chad and Cameroon could pursue sustainable development: local entrepreneurship, ecotourism, and alternative agricultural practices. It will conclude with an examination of the main difficulties associated with these forms of developments, and will discuss how these obstacles could be overcome.

One type of sustainable development that has been successful in many other developing nations of the world is the pursuit of local entrepreneurship. Rather than requiring foreign investors to establish their own businesses within a nation, this type of development offers indigenous peoples the opportunity to establish their own businesses and pursue foreign investment if necessary. Several types of local entrepreneurship are possible; this paper will focus on entrepreneurship that uses either the renewable goods of local ecosystems or recycled goods.

The flip side of the problem of biodiversity loss for the traditional medicine peoples of tribes illustrates just one of the possibilities for local entrepreneurship. Pharmaceutical entrepreneurship, while realistically requiring foreign investment, seeks to use the traditional medicinal knowledge of indigenous peoples to the benefit of the pharmaceutical industry as a whole. While at first this idea might seem far-fetched, one need only remember that one of today's most potent medicines for treating Hodgkin's disease or childhood leukemia was derived from the rosy periwinkle, "an old standby of witch doctors in Madagascar" (Rheingold). If the indigenous peoples of Chad or Cameroon were interested in pursuing pharmaceutical entrepreneurship, several corporations already exist for them to approach.

One such corporation is Shaman Pharmaceuticals. Founded in 1989, the corporation attempts to bridge the gap between modern pharmaceutical companies, such as its largest principal investor, Eli Lilly, and indigenous *shamans* (traditional healers) (White). In return for indigenous knowledge, Shaman Pharmaceuticals provides immediate aid to indigenous peoples. The corporation "devotes 20% of its ethnobiological field research budget to financing local projects that are proposed by the native people themselves — clean water systems, Western medicine for ailments not treated by local healers, legal expertise for land conservation battles" (White).

In the past, Shaman Pharmaceuticals has used independent NGOs such as the Healing Forest Conservancy to oversee the distribution of these benefits. This helps the corporation to avoid dealing with corrupt governments, such as the ones of Chad and Cameroon. Additionally, if any of the indigenous traditions prove to be profitable, Shaman's director of ethnobiomedical field research, Thomas Carlson, promises that "a percentage will be distributed among the indigenous people" (Rheingold).

Another instance of entrepreneurship based on the use of locally available renewable resources is found in the example of the Tagua Initiative of Esmeraldas, Ecuador. Founded in 1990 by the Washington D.C.- based environmental organization Conservation International, the business uses Tagua nuts to make buttons, jewelry and other goods. As "the nuts are sustainably harvested...the industry does not present any harm to the forest" (White). The program has been a huge success; companies such as L.L. Bean and J. Crew use the buttons produced by the initiative in many of their products providing over one thousand local Tagua nut harvesters with an attractive outlet for their crop (White). The manufacturing of products from the nuts has provided numerous jobs for local inhabitants of Esmeraldas, and created an incentive for them to protect the threatened Ecuadorian forests. Certainly, the substantial biodiversity found in Chad and Cameroon offers native peoples there a similar opportunity for sustainable development.

Yet another realistic option for development in both Chad and Cameroon is ecotourism. The International Ecotourism Society defines ecotourism as "responsible travel to natural areas that conserves the environment and sustains the well-being of local people" (International Ecotourism Society). Given the fragility of the ecosystems threatened by the Doba Basin oil pipeline, this requirement of responsibility and sustainability initially seems unattainable for the regions of Chad and Cameroon. However, Dr. Bruce Weaver of Cornell University's School of Tourism and Hotel Management believes that the ability of ecosystems to sustain tourism can actually have a positive correlation to the number of visitors. He states: "At the most basic level, such an argument can be made simply because a greater volume of visitors results in higher revenue flows (as, for example, through entry and other user fees) that can be used to more effectively manage the park" (Weaver).

Several instances illustrate this theory in the United States. For example, the US National Park Service is currently working on a plan to prohibit cars in Yosemite vValley and the south rim of the Grand Canyon. Heavy car traffic in these areas has caused environmental degradation, though the large number of visitors to these areas offers a potential solution to the problem it creates. The National Park Service is planning to implement a mass transit system alternative that will allow the number of tourists to the area to

increase above current levels, while at the same time mitigating the harms that those visitors would otherwise impose (Weaver).

Moreover, the ability to concentrate visitors in small regions of protected areas will ensure that the majority of those areas are not debilitated by tourism. The vast majority of visitors to South Africa's Kruger National Park only ever travel to about four percent of the total land area (Weaver). Ecotourism that uses revenue to increase carrying capacity and concentrates visitors on small portions of protected land offers the potential for ever-increasing revenue generation.

Numerous attractions for ecotourists exist within both Chad and Cameroon. The Kribi region threatened by the construction of the oil pipeline is "one of the rare cases in the world where waterfalls flow directly into the ocean" (Walsh). Clearly, Cameroon is an attractive area in which to institute sustainable ecotourism.

Chad, too, has numerous resources to offer ecotourists, including two national parks, seven wildlife reserves, and the Fitri biosphere reserve (Haramdi and de Koeijer). These reserves are characterized by high levels of biodiversity and thus have a high probability of attracting tourists. In addition to these natural attractions, the capital of Chad is likely to prove of great interest to travelers. Likewise, ecotourism has the potential to generate revenue through the sale of locally made goods.

Locally made goods can be made through renewable ecosystem resources, as demonstrated by the Tagua Initiative, but alternatives do exist. "Something out of Nothing" is a small business in South Africa that could serve as an example for the peoples of Chad and Cameroon. The company currently "employs 65 people in a unique enterprise. Using discarded materials such as plastic bottles and cans, they create a wide range of ingenious products. Beverage cans are cut into strips and flattened, holes are punched into them and they are sewn together to create caps, aprons and handbags" (Johnston).

Recycling used goods would not only aid those profiting from the sale of goods, but might work to the advantage of everyone in the nation; neither country has had the resources to devote to creating infrastructure for waste management.

Given the high dependency of the Chadian and Cameroonian economies on agriculture, development should also focus on improving the potential for sustainable agricultural practices. Cuba offers an excellent example of the advantages and even the necessity of sustainable agricultural practices. The small island nation was forced to develop these practices when trade collapsed with the socialist bloc in late 1989 and 1990. "Cuban agriculture was faced with a drop of more than 80 percent in the availability of fertilizers and pesticides, and more than 50 percent in fuel and other energy

sources produced by petroleum” (Rosset). In dire need of alternatives to chemical fertilizers, the Cuban peoples turned to low cost, locally produced substitutes such as biopesticides, biofertilizers, compost, and natural enemies (Rosset). These substitutes proved invaluable for Cuba; they led to increased production for ten of the thirteen basic items in the Cuban diet and in only five years had effectively remedied the food shortage plaguing the nation since the collapse of its trading partners (Rosset). This nation exemplifies the extent to which natural pest and crop management strategies can be beneficial to troubled agricultural economies.

The two major troubles associated with sustainable development options are the lack of funding to turn development ideas into reality and the lack of knowledge on the part of the Chadian and Cameroonian peoples about the existence of such options. Many of the options presented in this paper, particularly those related to sustainable agriculture, are not resource intensive, and the others will eventually generate enough revenue to provide for themselves. Short-term funding solutions may be necessary, though increasing international recognition of the need for sustainable development may serve to provide developing nations with an adequate source of capital.

The lack of information about development options is a problem that will only be remedied with time and hard work; fortunately, numerous governmental and NGOs are already attempting to provide a solution. The UN has recently created a Division for Sustainable Development that is sure to assist developing countries all over the world in gaining access to both information and economic resources (United Nations Division for Sustainable Development). In addition, two organizations devoted to sustainable development exist in each of the two countries already (Project Cooperating for Cooperation, Cameroon and Chad). Furthermore, the Peace Corps has a strong presence in Cameroon which is already devoted to aiding agriculture and small businesses and which has sent over 2500 volunteers to Cameroon since 1962, providing free assistance to the nation (Peace Corps, Cameroon). The Peace Corps used to have a strong presence in Chad as well, but the organization left the nation in 1998 because of internal tensions (Peace Corps, Chad). The corruption and shortsightedness evident in the Chadian and Cameroonian governments make it unlikely that sustainable development resources will come from within the nations; thus, it is to these organizations that the peoples of Chad and Cameroon must turn.

Lessons to Be Learned from the Chad-Cameroon Pipeline

The case study of the Chad-Cameroonian oil pipeline offers two major lessons for the World Bank, the nations themselves, and the rest of the world. First, analysis shows that good intentions on the part of the World Bank are

not enough to ensure successful or sustainable development. In the future, the World Bank must take care to ensure that these good intentions are met with detailed examinations of the risks associated with development, a willingness to involve local peoples in development projects, transparency in government procedures, and an equitable system for the distribution of wealth associated with the development. Significant political and social reforms need to be made in both Chad and Cameroon before this is a realistic possibility. Because these reforms are unlikely to occur in the immediate future, contributors of developmental investment to these countries should also seek to establish a system of oversight to limit the harms of corruption.

Furthermore, the project demonstrates the need for long-term sustainable development options, as opposed to oil-related investments. Oil, while a renewable resource, takes an extensive amount of time to regenerate, and the revenue from the pipeline project will only be available during the projected 30 year lifespan of the oil supply. Additionally, the harms associated with the construction of the oil pipeline in Chad and Cameroon are not necessarily unique to these nations. The potential for habitat destruction exists wherever development requires large-scale construction, as is always the case with oil pipeline production. The World Bank should take note of the problems associated with the Chad-Cameroon oil pipeline and seek to invest only in less environmentally and socially damaging projects in the future. This is especially true given the high likelihood that impoverished nations will sanction almost any foreign investment that promises short-term gains for the decision makers of those nations, regardless of its effect on the citizens.

Conclusion

The history of colonialism in Chad and Cameroon left these nations unprepared to the harsh economic realities of independence. Colonial rule enhanced divisions among the peoples of these diverse areas, as well as ensured that the newly formed countries would rely on foreign nations for economic investment. This social division and economic dependence are among the more serious problems affecting both nations today.

The Chad-Cameroon oil pipeline project is riddled with severe environmental, social, and political harms for the peoples of these nations. These troubles have already adversely impacted the peoples of these nations and limit the efficacy of the pipeline's promised poverty alleviation programs.

This project offers insight to the role that the World Bank plays in international investment. Clearly in this case it was a role that favored the interests of large corporations over the interests of those in dire need. While it is too late to reverse the construction of the pipeline linking Chad and Cameroon, it is not too late for Chad and Cameroon to pursue other, more

sustainable, forms of development. The World Bank's future attempts to aid developing nations must be politically responsible, ecologically sustainable, and socially sound in order to provide any tangible benefits. The financing and construction of the pipeline extending from Chad to Cameroon in sub-Saharan Africa has never met these requirements and thus should never have been pursued.

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