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Pitcairn: Developing and Transporting the Natural Resources of the Pitcairn Islands

Pitcairn is an isolated island nation located in the middle of the Pacific Ocean ("Asia and Oceania"). Of the four islands that make up Pitcairn, only one is fit for human habitation ("Asia and Oceania"). The habitable island is named Pitcairn which plays host to the nation's entire population of around 50 people who live in the country's only "city," Adamstown ("Asia and Oceania"). The other three islands are named Oeno, Ducie, and Henderson, and although uninhabited by humanity, are overwhelmingly tenanted by an incredible variety of birds, fish, and vertebrates of which some are only found in the Pitcairn Islands ("Asia and Oceania"). Due to the nature of how the islands were formed and their location, they are also lousy with minerals and other natural resources (World Factbook). But the Pitcairn Islands aren't just known for their beautiful scenery and wildlife, they are also known for their incredibly colorful history.

Discovered in 1767 by the HMS Swallow, the island was soon to play host to one of the most notorious stories in naval history ("Pitcairn Islands"). In 1787, the HMS Bounty set sail for the West Indies to transport Breadfruit trees to the British plantations located on the islands. Instead, three years into the voyage Master's Mate Fletcher Christian led a successful mutiny of the crew against the ship's captain ("TallShipBounty.org"). After taking control of the ship and sailing amongst the islands of the area, Fletcher fearing for his life from British authorities fled to Pitcairn Island along with 8 fellow mutineers, 6 Tahitian men, 12 Tahitian women, and one Tahitian baby ("TallShipBounty.org"). This episode became internationally known as "The Mutiny of the HMS Bounty" and led to the settlement of the Pitcairn Islands by mutineers and displaced Tahitian natives ("Pitcairn Island"). On November 30, 1838, the first Pitcairn Constitution was made by a visiting British officer and Pitcairn became a part of the British Empire ("Pitcairn Islands"). Later, Pitcairn was made into a British Settlement under the British Settlements Act of 1887 and has remained a British Settlement ever since, although a new Constitution was made in 2010 ("Pitcairn Islands").

Along with its vibrant past has come an interesting economic situation. Due to changing economic needs, availability, and usability, the economy of Pitcairn Island and the well-being of its citizens have flat-lined. Only through development of the local infrastructure and supply-chain can Pitcairn begin the process of increasing its market access, its efficient use of natural resources, and its standard of living for its inhabitants. The following treatise will define a typical subsistence farm family on Pitcairn Island; explain how the lack of infrastructure development has affected Pitcairn citizens, describe how other major issues will affect the islanders, determine how to address the problems faced by the islanders, and how other organizations and governments can be of assistance.

To begin with, the people of Pitcairn Island can be classified as typical subsistence farm families (World Factbook). Due to their island's isolation, it is completely necessary for these moderately salaried families to take part in only subsistence farming. Luckily for the people of Pitcairn, the island boasts much in the way of fertile soil which allows for the islanders to grow a wide diversity of fruits and vegetables ranging from citrus, sugarcane, and watermelons to bananas, yams, and beans (World Factbook). The waters around Pitcairn Island are filled to the brim with fish of all kinds varying from spiny lobster to Big Eye and Cod, making subsistence fishing a viable option for many of the island's residents (Muljadi). In addition, ever since May of 1998, Pitcairn farmers have been increasingly involved in apiculture ("Pitcairn Islands Products"). This honey is world renowned for its high quality and the bees that produce

that honey are famous for their lack of disease and placidity towards their beekeepers ("Pitcairn Islands Products").

Tourism also plays a big role in the economic livelihoods of the islanders by giving islanders the chance to supplement their income by taking care of the tourists (Muljadi). But Pitcairn islanders endure on more than just their foodstuffs for economic survival. Typically the biggest earner for the islanders has been the sale of postage stamps, .pn internet domains, and carved wooden curios (World Factbook). Since October 15, 1940, the government of Pitcairn Island has released hundreds upon hundreds of collectible stamps that have been increasingly sought after by philatelists for their uniqueness and rarity ("Pitcairn Islands Philatelic Bureau"). While that supplements the income of the subsistence families associated with the local government, the sale of the wooden curios mentioned earlier plays an even larger role in the economic survival of the citizens of Pitcairn. Wood from the Miro tree is collected from the ever distant Hendersen Island, and shaped into exquisitely beautiful carvings (Muljadi). Unfortunately, productivity and access to outside markets has been greatly hindered by a lack of paved roads and accessible bay areas. Since the islanders cannot sell their foodstuffs and items to the greater world market (due to the inability to reach that wider world market), the aspect of economic growth has been impeded.

Aside from just surviving on farming though, education plays an important role in the life of the islanders. Education on Pitcairn Island is supplied at the country's only school by a teacher brought in from New Zealand (who also edits the local paper) and is both free and compulsory for all children ages five to sixteen of all sexes and races (Muljadi). Notwithstanding, the society found on Pitcairn Island is one greatly shaped by the past influences of the local Seventh Day Adventist Church (Muljadi). Also, because of its isolation, the people of Pitcairn Island make up a very tight-knit community so birthdays and holidays are not just a private affair but an entire island affair usually culminating in a huge feast in the Adamstown Square (Muljadi). Thus the people of Pitcairn can be described as poor subsistence farmers but in all reality they are far more than just average, economically challenged planters.

Pitcairn Island suffers from a lack of infrastructure development that negatively affects all the people living on the island. Area for food production on Pitcairn Island is limited greatly by the island's lack of size and the need to keep large tracts of land undeveloped to maintain the island's beauty. Maintaining the island's attractiveness is incredibly important to the economy of Pitcairn because of tourism. Tourism accounts for over 80% of the island's income, and keeping the tourists happy, by leaving the island as natural as possible, is of tantamount importance to the island's natives (Muljadi). Those farm plots that are retained on the island, though extremely fruitful, are limited in their productivity by an inability to reach them due to a lack of paved roads (Muljadi). Although dirt roads are usually fine for a farming community, they are ill suited to the island farming community of Pitcairn. Because of Pitcairn's year round rain, these roads are usually muddy messes, keeping farmers from reaching their crops which in turn hurts the productivity of those same farms. As to fishing opportunities around the islands, the people of Pitcairn are unable to fully benefit from them due to the lack of a large port and a modern ship presence. Fishermen on the island are limited to small aluminum covered longboats due to Pitcairn Island only having the incredibly small and shallow Bounty Bay to dock at (Muljadi). This in turn keeps the islanders from efficiently maintaining a large fish harvest (Muljadi).

Taken together, the combined effects of partially inaccessible farmland and limited fishing opportunities create a situation where Pitcairn islanders are unable to fully support themselves and must rely on outside food sources to supplement their diets (Muljadi). This situation is, as of now, moderately severe, unchanging, and affecting every person on the island (Muljadi). In the future, this reliance on outside foodstuffs will pose an extremely heavy economic burden for the people of the strapped-for-cash island of Pitcairn. That economic burden will then in turn make the purchasing of food an extremely pricey venture.

But, if steps are taken to build up Pitcairn's infrastructure, this grim future outlook can be avoided. By simply replacing the dirt paths on the island with concrete roads, the farms on Pitcairn Island would be able to supply food at full levels of productivity and efficiency. Basically, by giving the farmers of Pitcairn Island more accessibility to their farms, the island is able to more fully sustain itself. As for the fishermen of Pitcairn Island, the solution is also simple. By extending docks from Bounty Bay into the deeper waters outside of the Bay, fishermen would be able to invest in more modern and larger ships allowing them to increase their fishing harvest. This solution does raise some concern over the dock's probable location in relation to the wreck of the HMS Bounty. The wreck is important in the heritage and history of the Pitcairn Islanders, so protection of it must come first. Fortunately, most of the wreck is located far enough away from the likely location of the docks that no damage would come to it. In addition, many of the artifacts that would have been at risk were raised from the deeps for preservation by an underwater archaeological organization in 1999 (Erskine).

Concerns regarding the impact of these solutions on the environment are a non-issue. Considering that the people of Pitcairn depend on tourism for over 80% of their annual GDP, it is incredibly unlikely that the islanders would allow these infrastructure improvements to negatively affect the splendor of the island's natural flora and fauna. With these improvements to the infrastructure of Pitcairn Island, families on Pitcairn will be able sustain themselves more readily and be able to handily afford food from off the island. Accordingly, it is only with development of the island's local infrastructure that outside food dependence can be eliminated and local food independence achieved.

With the island gaining in affluence and food productivity, population growth will become a major issue for the Pitcairn islanders. Several times in the past, Pitcairn Island's population has risen to levels that the island could not support causing families to suffer from a lack of food. In 1856, the population on the island reached 193 people which seriously strained the island's resources (Muljadi). At that time, the problem was solved by an emigration of all 193 people to nearby Norfolk Island (Muljadi). For three years, Pitcairn Island was left uninhabited but in 1859, sixteen of the original islanders returned and began repopulating the island (Muljadi). Once again, in 1936, Pitcairn Island faced an overpopulation problem, but this time the population had topped at 250 (Muljadi). However, this occurrence of overpopulation was to solve itself. Since 1936, Pitcairn has lost close to 200 islanders to emigration to New Zealand (Muljadi).

Historically speaking, Pitcairn Island has been able to solve overpopulation problems by emigration to different locales, but this solution also leaves considerable problems in its wake. Emigration has taken islanders specialized in medicine, law, science, etc. and left the remaining islanders no option but to fill those specialized and necessary positions with paid foreigners. Therefore, to really solve the future problems of overpopulation, over-emigration, and resource scarcity, Pitcairn has to learn to properly manage their islands' resources. For example, one solution would be the establishment of a small settlement on Henderson Island.

Henderson Island is extremely fertile and contains a small fresh water source both of which could very well support a population of around twenty or so Pitcairn Islanders (Muljadi). Historically speaking, Henderson has already played host to human dwellers. Granted, that habitation took place millennia ago by now forgotten Pacific Natives (Muljadi). All that remains of this prior tenancy is several ruined shelters and scattered artifacts and bones (Muljadi). The only difficulty for modern Pitcairn Islanders would come from the fact that Henderson is nearly inaccessible due to its outer shores' being steep limestone cliffs covered by sharp coral (Muljadi). This is nothing that couldn't be solved by simply blasting the few places where docking is possible to enlarge them. Having people on Henderson would also allow the islanders to be able to increase food and curio production, watch over the endangered species on the island, and help tourists who come to visit. Unfortunately, the islands of Oeno and Ducie would be unable to support a micro-colony of any kind due to their small size and lack of natural

resources to support settlers year round (Muljadi). Even with an added settlement on Henderson, Pitcairn Island would eventually face the same problem of overpopulation once again, and once again the only solution available would be for many of the islanders to emigrate. To avoid the problem of losing specialized islanders, an option would be for the government to offer incentive programs for them to stay. Consequently, with the creation of a micro-colony on Henderson Island and the creation of limited emigration policies, Pitcairn Island can work towards solving its future problem with population growth.

As was stated earlier, Pitcairn Island suffers from a lack of infrastructure that severely inhibits its food supply. Also stated earlier was the solution to this problem, which was the construction of paved roads and a larger dock capacity. But paying for these measures will be expensive and the money has to come from somewhere. Because of Pitcairn Island's status as a protectorate of the UK, investment for these developments should initially come from them. The UK has already taken steps in regard to the development of Pitcairn's infrastructure and other services. The projects have included such things as the rebuilding of the island's school, the establishment of a medical building on the island, the building of a sealed concrete road from Bounty Bay to Adamstown, and the acquisition of a regularly scheduled shipping service for the islanders ("Asia and Oceania").

One of the projects the UK currently has in the pipeline is the construction of an alternate harbor or the upgrading of Bounty Bay's current facilities ("Asia and Oceania"). Further funding of the harbor projects can be found in loans or donations from the cruise lines which regularly stop at Pitcairn Island. These cruise lines are limited to how many people they can send over to the island by the smallness of the Pitcairn's port. Cruise lines would benefit from investing in extending Pitcairn's harbor facilities because more of the cruise line's tourists would be able to stop over at the island. These "expeditions" do cost money so not only would the islander's benefit from the increased economic activity of more tourists, but the cruise lines would also garner more revenue from those tourists who wish transportation to the island.

The improvement of Pitcairn's roads would require investment from a different set of sources. Investment for the implementation of paved roads on Pitcairn Island could be from both the UK and the World Bank. Improving Pitcairn's roads would have a significant positive impact on both food productivity and tourist visit-ability. Farmers would be able to more readily visit their plots of land and visitors would able to reach the more isolated parts of the island with much greater ease. Not only would the people of Pitcairn benefit economically once again from tourists but they would also be involved in the construction of those roads which would create an even greater sense of island unity. The accomplishment of these two projects would result in the economic renewal of Pitcairn Island and a better ability to access international markets.

The implementation of these infrastructure improvements would result in Pitcairn Island accomplishing Goals 7 and 8 (Goal 7: Ensure Environmental Sustainability and Goal 8: Develop a Global Partnership for Development) of the United Nation's Millennium Development Goals or MDGs for short ("Unstats | Millennium Indicators"). By merely having international corporations and other countries invest in Pitcairn's infrastructure and then leaving Pitcairn to its own devices, the world can ensure that both Pitcairn and the people that call the islands home will be both economically and agriculturally taken care of.

In conclusion, by upgrading the infrastructure on Pitcairn Island, both food productivity and basic economic income would increase proportionally. Again, this advancement of Pitcairn's infrastructure would include the building of concrete roads to replace the old, dirt paths and the construction of an extended dock from Bounty Bay in order to allow larger ships to dock with the island. Not only will these developments vastly improve agricultural stability for the island's subsistence farming families, they will also lead to those same families enjoying economic affluence equal to that of American middle class families. This affluence will in turn lead to even more investment opportunities on the island.

Unfortunately, as stated earlier, this economic revitalization and larger availability of food will also lead to an overabundance of people on the island. The previously proposed solution to this future problem was twofold. Part one of the solution included the creation of a micro-colony on Henderson Island to alleviate overpopulation on the main island of Pitcairn. This micro-colony would accommodate around twenty Pitcairn Islanders and would serve the additional functions of assisting any tourists wishing to visit Henderson, actively producing even more food and curios, and keeping an eye on the endangered animal species that call the island home.

Part two of the solution was a modified version of emigration. Historically, when Pitcairn Island became overpopulated, large portions of the population would take it upon themselves to immigrate to other distant islands to alleviate the problem. The modified emigration suggested previously in this treatise, still used emigration to lighten the population burden on Pitcairn Island, but also included a provision to retain islanders specialized in specific professions like doctors, lawyers, etc. Usage of this two-pronged solution would guarantee control over the problem of overpopulation when it eventually occurs on Pitcairn Island. When steps are ultimately taken to implement the solutions set forth in this treatise to upgrade Pitcairn's infrastructure, several MDGs will be accomplished. Those MDGs include Goal 7: Ensure Environmental Sustainability and Goal 8: Develop a Global Partnership for Development. Completion of these goals will show the United Nations and the rest of the world that Pitcairn is an island nation that has the potential to become an economic power in the Pacific. Of course for Pitcairn to become this commercial authority, monetary investment from outside sources will initially be required. Investment will come from the United Kingdom, World Bank, and even the cruise ship industry. These diverse investors will form the financial base for the up-and-coming economic, agricultural paradise of Pitcairn Island.

Realization that a tiny island settled by mutineers, shipwrecked sailors, and enslaved natives can someday become a paradise is simply mind boggling. Indubitably this vision of Pitcairn Island can only be attained through the help of foreign investment, but ultimately it will be up to islanders themselves to realize this vision for their future. Certainly the descendants of the greatest mutineers in all of naval history can make the changes to their infrastructure necessary for them to reap the greatest of all bounties: security and prosperity.

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