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Timor-Leste, Malnutrition

### **Timor-Leste: The Fight Against Poverty**

After years of invasion, destruction, and Timorese genocide, Timor-Leste gained their independence on May 20th, 2002 ("Timor-Leste (East Timor) – CJA"). Before Timor-Leste's independence it had been under the control of Portugal, Japan, and Indonesia. In the 1600's Portugal invaded Timor-Leste in order to obtain sandalwood. Then in 1942, during World War Two, the Japanese invaded Timor-Leste, due to conflicts between Japan and Australia. This led to the death of around 60,000 Timor-Leste natives. Japan left the country in 1945, giving Portugal full control over Timor-Leste once again ("East Timor Profile"). On November 28 1975, Timor-Leste was finally granted freedom from Portugal, but less than two weeks later, Indonesia set off to invade the newly formed country. Indonesian rule remained in the country for 25 years. Under Indonesian control, 200,000 Timorese were killed, and 75% of their infrastructure was destroyed ("Timor-Leste (East Timor) – CJA"). With a history full of shock and destruction, the country of Timor-Leste was left with a high poverty rate, with 41% of its population living in poverty (Provo et al.). Without the help of other nations, Timor-Leste's independence may be short lived.

Timor-Leste lies in South East Asia, and has a democratic republic government ("East Asia/Southeast Asia :: Timor-Leste — The World Factbook - Central Intelligence Agency"). The country has a population of 1,352,360, with 32.9% living in urban areas ("Timor-Leste Population (2019) - Worldometers"). Only 25.1% of the land is cultivated. The major crops of Timor-Leste are coffee, rice, corn, cassava, sweet potatoes, soybeans, and cabbage ("East Asia/Southeast Asia :: Timor-Leste — The World Factbook - Central Intelligence Agency"). 97.3% of the farms are smaller than one hectare, which is about 2.471 acres (Inder et al.). The major exports are oil, coffee, sandalwood, and marble. Timor-Leste has an area of around 14,870 kilometers, and has very distinct rainy and dry seasons, including hunger season ("East Asia/Southeast Asia :: Timor-Leste — The World Factbook - Central Intelligence Agency"). With almost no large scale farms, most families live off of subsistence farming and imported goods (Gorton). There is an average of about 5.8 people per household. Out of these households, 23.5% do not have access to electricity, and 23% do not have safe water. Education and healthcare are not freely available. Only 66.4% of adults in Timor-Leste are literate. Due to this, 62% of males, and 56% of females work in the field of agriculture (Gardener). The typical diet of a Timor-Leste native consists of rice, fish, corn, pork, and other vegetables ("East Timorese Dishes: Try The Food Of Timor Leste - Visit East Timor").

After 25 years of war against Indonesia, Timor-Leste natives were left broken spirited. The war had destroyed their home. With the consequences of war along with a lack of potable water, disease, varying weather, and the Hunger season; it is no wonder that 41% of Timor-Leste natives are living in poverty. The biggest effect of this poverty is malnutrition. Though at the surface this doesn't seem like a big issue, its effects last through generations. Malnutrition in women cause many reproduction problems. This could be why Timor-Leste has a high infant mortality rate (Gardener). 56 infants out of every 1,000 live births, die. Also 426 women out of every 100,000 women die while giving birth ("Timor-Leste: Nutrition Profile"). Malnutrition in children cause stunting (low height for age) , anemia (iron deficiency) , and impaired cognitive development. 60% of the children are experiencing stunting, and 44% are underweight ("Timor-Leste: Nutrition Profile"). Malnutrition in Timor-Leste doesn't discriminate between social statuses, 36% of wealthy children are stunted. One of the biggest causes of malnutrition in Timor-Leste is the "Hunger Season". The Hunger Season starts in October and ends in March (Reports), this is around half a year long. The duration of the Hunger Season has been increasing due to climate change. During this season the food security in rural, poor areas decrease (Reports). This means that the natives have to rely on high priced imported foods to survive. This just pulls them back into the cycle of poverty.

There are many countries that are taking action to solve this pressing issue. In Senegal, a country in West Africa, what they call Cellule de Lutte Contre la Malnutrition has been created. This is an organization that "defines and implements national nutrition policies" ("Seven African Countries Show How The Battle Against Malnutrition Can Be Won"). In Afghanistan, a country located in the Middle East, there is a program called PDH (Positive Deviance Hearth). The goal of this program is to inform the public on how to effectively feed and care for their children. One of the main focuses of this program is to promote breastfeeding. This is one of their focuses because many families have been misinformed about breastfeeding ("Knowledge Is Power In The Fight Against Malnutrition In Afghanistan | World Vision International"). In Mexico, a country in North America, the PROSPERA Social Protection Program has been created. This is a three tiered action plan to tackle malnutrition in Mexico. They give financial support to families that need it, they provide nutrition packages/supplements to pregnant or lactating women, and children who are under five years old, and lastly they provide scholarships for the schooling of children ("Mexico Tackles Malnutrition With The PROSPERA Social Protection Program"). Timor Leste, like some of the countries mentioned, should create national policies that aim to provide aid to those who are malnourished. They can also make education a priority, to ensure a future generation of innovative workers, much like the PROSPERA Social Protection Program in Mexico. Though other countries have taken great strides in an attempt to defeat malnutrition, greater action will have to be taken in Timor Leste because of the Hunger Season.

My solution for this issue is project Grow food, boost Economy, rebuild Infrastructure, and increase Tourism ( also known as Project GEIT). This is a proposal for a solution I created. Project GEIT is a multi-tiered solution that will focus on a self sustaining country. The idea is to

get Timor-Leste to a point where they will be able to help themselves. Grow food. Each town/village will have community gardens, but not just regular gardens, hanging gardens. These gardens will grow plants that are able to survive in extremely dry and rainy weather, so they have food during both seasons. Crops like rice, tomatoes, eggplants, chillies, sweet corn, shallots, sweet potatoes, yams, taro, cassava, tropical beans, and pumpkins (Cipolla). The hanging gardens will be distributed in small batches throughout each city. This way everyone has access to at least one section. Everyone helping out in the gardens will be required to learn how to take care of them. There will be seminars teaching Timorese citizens how to care for the plants, and there will be a sign near each garden explaining what to do. Anyone who is physically able to help in the gardening process will be required to help out. If someone cannot help due to a physical reason, they will have to help out in another way, such as advertising, or scheduling days for everyone to take care of the gardens. Each garden will use a process called crop rotation to ensure that there is food growing all year round. This will create an increase in food quantity. Once all of the food is collected from the gardens, it will be given to the citizens of Timor Leste. Boost economy. With this new increase in food, the demand for imported foods will decrease. Since less people will be buying imported foods, the money will stay in the country. This will cause an increase in the economy. Once the economy increases, this new money will be used to rebuild the infrastructure that was destroyed during the war, starting with hospitals and schools. Tourism will increase as the country develops more and more, simply because of how beautiful the beaches and other natural areas are. Also to see the new hanging Gardens. As tourism rises, the economy will increase, helping Timor-Leste develop into a wealthier country. Tourism from film makers, volunteers, and business owners would be most beneficial to the economy. Some tourism that would be inappropriate would be from the people who helped invade Timor Leste, it could cause another problem in the country. Though tourism can boost the economy, and bring more publicity to the country, it is not always beneficial. Some downsides to tourism include a disturbance in the peace of the country, and a ruined environment. With this being said, tourism will have to be monitored in order to make sure that the pros outweigh the cons. This cycle will continue. This project will be lead by non-profits, but it will be managed by Timor-Leste natives. It will be funded by donations, grants, and if possible government/UN funding. Community members will play a role in the project by allowing us to use their land to grow gardens, and then taking care of the gardens, and making sure that the food gets distributed evenly. The Timor-Leste government will use the new increase in economy to fund new schools, and hospitals. Few social norms will have to be changed for this project to work, because it was built around what they already do. The cost cannot yet be determined because there may be a lot of trial and error in order to get the project perfected. The project in total should take around 15 years to fully complete and monitor. It will start in the city of Manatuto and spread outwards. Then it will be monitored in order to make sure that the project is in fact beneficial. After the 15 year period, Timor Leste should be able to sustain their growth. (For more information, look at the attached document.)

There could be many obstacles that could prevent this project from working out. There could be governmental resistance, where the government doesn't want help. In this case, we will have to appeal to the public, and get them to be apart of the change. Citizens can play a huge role in changing the mind of the government. They can create petitions, and conduct peaceful protests. There could also be citizen resistance. Considering that they have been invaded multiple times, and had to endure Timorese genocide, it is understandable for them to be hesitant before taking help. In a situation such as this, we need to help them realise that our main goal is to help them out. Another issue would be if the project didn't get the funding needed for it to work. To solve this, we would need to find donors, and sponsors. We could also apply for grants. Communication could also be a big barrier. Their official languages are Portuguese and Tetun ("East Timor Languages"). It may be hard for the natives and the volunteer to communicate with each other.

Through all the conflict that Timor-Leste has been a part of with in just the last century, it has come far. Though Timor-Leste is one of the poorest countries in the world, it is possible to pull them out of poverty. With the hope of the natives it will not be long until Timor-Leste becomes a developed country. With current projects such as Sustainable Livelihoods Program, and maybe future projects like Project GEIT, there is no doubt that the economy will bloom, and the country will go back to the fully functioning country it was before the war.

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## **Project G.E.I.T**

### Grow Food

Community hanging gardens have been around for a long time, and they have been an effective way to feed those who cannot afford food. This project will start with the city of Manatuto because it has the smallest population in Timor-Leste. This way we can see what works and what does not work before we get to the bigger cities. There are four towns/villages in this city. There will be a garden in each town that will feed about 500 people each, because the city of Manatuto has about 2000 citizens. This city will be monitored for about a year, we will see the change in malnutrition, and birth mortality, and the economy. If nothing changes, we will seek for a new solution. If things do improve, we will continue the same process throughout the whole country. It will be funded by donations, grants, and if possible governmental funding. Many of the plants will be sprouted by volunteers in the United States and elsewhere who are willing to be a part of the change. The hunger season will be the biggest risk factor because we need to make sure that all the food that is grown can grow in ever changing weather conditions. Crops like rice, tomatoes, eggplants, chillies, sweet corn, shallots, sweet potatoes, yams, taro, cassava, tropical beans, and pumpkins. With an increase in food production, there should be a bloom in the economy.

### Increase Economy

Once the gardens start to come into effect, they should be able to replace the overpriced food that is purchased from out of the country during the hunger season. This means that more of their money will be spent in the country, and when you spend money, you help increase the economy. It will also pave a path for stronger workers. Once people are able to eat properly, they will be able to work longer and harder, this means that more quality products will be produced, and more money will be made. Then they will be able to spend the money in the country. They will also be able to create businesses like a basket weaving business. Basket weaving is a form of art commonly created in Timor-Leste, these baskets can then be sold outside of the country, this will mean more money is coming into the country. Once the economy has increased, the country will be able to rebuild their infrastructure.

### Rebuild Infrastructure

Once the economy starts to pick up, the money will be used to rebuild their infrastructure, starting with schools and hospitals. This will give everyone an equal opportunity for education,



and it will provide a local hospital for everyone to use. Once rebuilt, issues like birth mortality, and widespread diseases will be lowered. After the schools and hospitals are built, the country can rebuild what was lost, because of the multiple invasions. They can also build new buildings for new businesses.

### Increase Tourism

This won't be a very hard task because Timor-Leste is naturally a very beautiful country, whether it is their culture, or their beautiful land, there has always been a reason for people to visit. One of the only reasons that I have seen, for why Timor-Leste is not a tourist hot spot, is because the country is not advertised. In fact, I didn't know that Timor-Leste existed until I researched it. By advertising the country, more people will know about it. This will lead to more people visiting the country. With an increase in tourism, comes an increase in economy. This will set the country into the cycle of a self sustainability.