Cole Lopez, Student Participant North High School Des Moines, Iowa

The Marshall Islands

The Marshall Islands consist of 29 atolls and 5 isolated islands located in the North Pacific Ocean. An atoll is a coral island consisting of a reef surrounding a lagoon. The islands consist of 85 sq miles with about 61,800 people. About two thirds of the inhabitants live in two of the islands, with the other islands being sparsely populated due to lack of economic development. In comparison, that is about the size of Washington D.C. divided among many small pieces of land, trying to support 61,800 people.

The Marshall Islands were originally settled by the Micronesians, but little is known of their early history until the arrival of British captain John Marshall, after whom the country was named, in 1778. Japan conquered the islands during WW1, and the islands were at the center of a major Japanese/American battle during WW2. After WW2 the U.S. claimed the Marshall Islands as a U.S. territory. As a U.S. territory, the United States used this land to test nuclear bombs. In 1979 the Marshall Islands become officially an independent island, although its defense is still the responsibility of the U.S. Although not a U.S. territory, the United States still tests missiles bombs on these islands. Two out the twenty nine atolls have been used for nuclear testing, the Eniwetok atoll, and the Bikini atoll. Although the islands receive compensation for these tests, it is said the effects of the earlier nuclear bomb testing still lingers among the people.

The religion in the Marshall Islands is mainly protestant. The majority of the people in the islands are strict religious people who follow the rules of the religion closely. Before the missionaries came the people of the Marshall Islands were covered in detailed tattoos. The process of obtaining these tattoos would typically include a painful ceremony that was extended over a month. Before the people were westernized by outside culture, the natives of the Marshall Islands were self reliant with most of their diet relying on fish.

The economy of the Marshall Islands has experienced significant problems over the past several years. Their GDP growth has been stunted at less than 1%, with a 5% inflation rate. The government is the largest employer, employing over 30% of the work force, and direct aid from the United States still accounts for 60% of the nation's budget. Outside of the two densely populated island of Majuro and Ebeye, the economy is subsistence, mainly comprised of fishing, breadfruit and bananas. Some outside income is provided through the production of copra (dried coconut meat) and handicrafts.

Currently, the islands have several different problems. The gap between the rich and poor is growing at an increasingly alarming rate. Because unemployment is over 60%, the public servants are some of the only people who have enough money to be able to feed their families. It is said that over one third of the elementary children are malnourished due to over consumption of junk food. Imports into the islands far exceed the exports, which are only on a small scale of fishing, and hand crafting.

In the urban areas, issues inside of the household are also becoming an increasing problem. Problems like the average household eating more processed foods instead of healthy, fresh foods, thus causing a large amount of mal-nutrition. The reason for the people eating processed food is because it is quick, and a lot of the time cheaper than to buy and cook fresh foods. The government is also trying to find funding to deal with problems such as teenage

pregnancy, substance abuse, and suicide. Each one of these issues is caused by the everyday poverty that the people. By improving living conditions, a lot of these problems will take care of themselves. By providing a lot of the poor with jobs, there will be less hardships and less depression, automatically reducing suicide rates and substance abuse rates.

Environmental problems also threaten the islands. It is said that if global warming really makes an impact, and the sea levels keep on rising, then the islands will be the first to go underwater due to their low elevation. Some of the natural resources are being polluted due to waste produced by local homes. For example, the Majuro lagoon is being polluted due to large amounts of household wastes, and waste from fishing vessels.

Last year the government of the Marshall Islands declared a state of emergency due to prolonged drought conditions. Then again in July of this year, another state of emergency was declared related to energy shortages due to the recent spike in energy costs. It is obvious that the islands are in a dire situation and that something must be done quickly to address the immediate needs of the population. Equally important, however, is the need to develop a long term economic growth plan which allows the people of the Marshall Islands to improve their standard of living while still maintaining their rich and unique culture. The following paragraphs provide suggestions on how this might be accomplished, starting with definitions of food security and agricultural productivity, which are of vital importance to the objectives stated.

Food security means that the mass population won't have to wonder where their next meal is going to come from. In order for people to be fed properly, they are going to have to import a lot of the food. For example this would mean to raise the income of the Marshall Islands as a nation, at least to the point where every person knows that for the rest of that week, they will have enough money to be fed. I don't believe the people will be able to be as secure as we are in the United States for a while, but each step shows progress and potential.

Agricultural productivity is the amount of useable plants produced by the nation in a certain amount of time. Advancement in agricultural productivity would mean that more food is produced in the same amount of time. This task will be hard for the people of the Marshall Islands. Producing more agriculture will be a challenge in this area due to the fact that space is limited to 70 sq miles,

Because of airport cancellations to the islands, tourism, which should be a significant part of the island income, is on the decline. The coral reefs are an important natural resource that the island has that has a lot of potential. One way to increase tourism in the islands is to build more resorts on the coasts and in those resorts offer scuba diving. Because the area is rich with coral reefs, it would make an excellent vacation spot for scuba diving fans.

In order to solve these problems, the Marshall Islands are going to need to make an offer to the people in order to save their country. The idea is to offer the people a choice of staying in their current dwellings, or move to government built apartment building. Although it is a choice, a lot of the poor people might want to make a new start. The first part of the recovery would be to keep the contract with the United States on testing its bombs. This is one of the best sources of income that the islands cannot afford to lose.

This will also cut the cost of living and energy costs due to everyone living in one building. This will also increase the amount of supervision among teenagers thus decreasing suicide rates and substance abuse rates and even decrease pregnancy rates

The first way to increase the income within the islands is to increase local and international markets. The islands already fish, produce handicrafts on a small scale, and export coconut oil. To limit the damage to the environment, strict fishing rules will have to be put into place. Such rules should include an increased limitation on the amount of fish caught per week, and strict guidelines about what is done with the waste of the ship. Dumping the waste into lagoons or the ocean is not acceptable. True, getting rid of the waste may be more costly and take away from some of the added income, but it is a vital to protect the environment while also increasing income.

Handicrafts will need to be produced on a larger scale and will need to find a larger group of people to sell the handicrafts to. The island's handicrafts consist of woven baskets, fans, hats, wall hangings, purses, mats, and coasters. Sales of these products need to be increased, and although the increased income doesn't show the potential for a mass market, it is still one area that can be improved.

Another way to increase the income of the nation would be to build resorts and hotels to attract tourism along the beaches. Encourage the islanders to move into mass apartments built by the government with all the accommodations that each person would need. Due to bad living condition, not a lot of people should have a problem with this. Because this will clear up land, the government should take down all the houses, and clear the land for farming. This will produce more local fruits and vegetables for the local people to consume. This will decrease the amount of malnutrition in infants. The new farming land will also increase the amount of exports available to export to other countries thus earning the nation more income. In addition to scuba diving, the resorts should also offer a line of cruises. Because cruises are popular among Americans and people all over the world today, this would add a significant market to the island without taking up a lot of land.

Another promising market that shows a mass potential for sales is the use of coconut oil in products ranging from hand soaps to laundry detergents. The reason why this area has so much potential is because you can make a mass variety of thing out of coconut oil and it is harmless to the environment. The people of the Marshall Islands already have these items incorporated in their culture. This would cause a larger scale of farms for coconuts. Because more food will be produced on rooftops, this will clear more land for farming of coconuts. The target buyers would be the people of the United States. The people of the United States are currently trying to find new ways to incorporate environmentally friendly items into our daily lives.

Coconut oil based products have the potential to help the economy make a turn around. Although the entire economy can't be based on coconut oil, it will be a major factor in the income of the country. Coconuts can still be sold as a food but mass production should be more focused on producing the oil. Experimentation should be done to find practical and efficient ways of producing these items and exporting them to the United States.

As previously stated, the increasing cost of energy has had, and will continue to have, a major negative impact on the economic situation of the Marshall Islands. As is the case in other parts of the world, alternative sources of energy will be required. Last year, a group of power authorities, entrepreneurs and private businesses in the Marshall Islands began experimenting with the use of coconut oil as an alternative to diesel fuel. One litre of coconut oil can be extracted from every 6-10 coconuts. Research and development in this field must not only be continued, but expanded. With the natural abundance of coconut trees in the area, this could not

only be a means of energy self-reliance for the Marshall Islands, but could also become a major export and source of income for those employed in the industry.

Priority number one it to make sure everyone is fed. Although a lot of food will have to be imported, improvements in farming on the islands will still have to be made. One way of doing this is simply to increase the building of farms. The outer islands, which are sparsely populated, are ideal for this purpose. However, there is currently no reliable means of transporting produce from the outer islands in to the more densely populated islands. At one point in their history, the people of the Marshall Islands were known for their excellent navigational skills, using the stars and stick-and shell charts to guide them. They are also experienced in canoe-building. These dying skills should be developed and encouraged, not only to maintain their culture, but in a more practical sense, to assist in transporting goods and people among the islands.

Although farming needs to be more intergraded within the lives of the people of the Marshall Islands, it is important to realize that because so much of the land is used as living space, and so much of it is split up among many different islands and atolls, the people cannot be fed only from the food produced from the land – imports will still be necessary. Therefore it is vital for the people to increase markets and increase the overall income of the people. Even though the costs will be higher, it is also very important to make sure that the imported food will be healthier than what is currently being imported. Because healthier food is more costly, it will be tougher to obtain and it can't be accomplished in a single big jump.

In order to make farming an actual source of food for the people, they are going to have to use rich fertile soil for the soil on the farms. Rich soil is found across the islands, but isn't being used to its full potential. With rich soil and more farming land, the people of the island will be able to obtain a significant part of their daily meals from the island.

One way to increase food production in the urban areas is to make farms on the rooftops of the buildings. Whether the people want to live in the massive apartment building, or not, each resident dwelling can have a mini farm on the roof. The reason for building farms on the tops of the roofs is to maximize the usage of space. Because a lot of space will be used for living buildings, office buildings, and government buildings, there is little space left for agriculture.

In order for gardens on rooftops to produce a measurable outcome, people will have to move into the large apartment buildings. The shacks that the people are currently living in now are not structurally sound enough to support that weight on the ceiling. The rooftop of the new apartment building will have to be equipped with irrigation and/or drainage systems. The irrigation system can be as simple as an extra water line leading to the ceiling that is then connected to a hose. Because of recent droughts, this extra water line will be necessary. Although it will be necessary to have in place, the plants will receive a lot of rain from the natural rainfall. Because the natural rainfall varies from sixty inches per year to one hundred eighty inches per year depending on location, the rooftop gardens will also need a drainage system. The best drainage system for the excess water would be to construct an area under the clay where the water gathers. This area should lead to a pipe that connects with the rest of the building's drainage system. The soil that is ideal for this project would have to be rich, fertile soil that is laid about seven inches thick on top of the clay.

To increase the health of the people as well as the vegetation, water treatment plantations are necessary. One small treatment plant for everywhere the land is densely populated, heavily farmed, or has a lot of tourism. It is also important to treat the water that is the runoff from the

increased farming. Harmful chemicals from fertilizer have the potential to affect the water supply. For this reason, although farming is important, it is also important not to over use the land and exhaust all resources.

This will also cut the cost of living and energy costs due to everyone living in one building. This will also increase the amount of supervision among teenagers thus decreasing suicide rates and substance abuse rates and even decrease pregnancy rates.

The addition of factories could also greatly improve the region. Although over sea jobs aren't popular in the United States, if the United States should go anywhere, the Marshall Islands is on the top of the list. The idea of adding factories to the islands is a risky idea due to the sensitive environment, but could be the most plausible way to increase the amount of people fed. Environmentally friendly factories to freeze fish to export to other countries or a factory to convert coconuts into coconut oil could drastically drop the unemployment rate.

Whether it is a large factory, increase in the production of the islands, or an increase in tourism, something has to be done quickly to save not only this culture, but also the people who live within it. It is the responsibility of everyone, especially the United States, to help these people through their immediate crisis and provide hope for the future. It was the western civilization that introduced our new ways of living that disrupted the traditions that these people have been practicing for thousands of years, so it must be the western civilization that helps solve the problems created by this new culture.

Works Cited

- "Culture of MARSHALL ISLANDS." <u>Countries and their cultures</u>. 3 July 2008 http://www.everyculture.com/ma-ni/marshall-islands.html.
- "Gap between rich and poor in Marshall Islands widens." <u>Radio New Zealand International</u>. 22 Apr. 2003. 16 June 2008 http://www.rnzi.com/pages/news.php?id=4467&op=read.
- "Is Hardship Really a Problem in the Marshall Islands?" <u>Asian Development Bank</u>. 23 July 2008 http://www.adb.org/documents/reports/priorities_poor/rmi/rmi0200.asp?p=ctryrmi.
- "Marshall Islands." <u>CIA World factbook</u>. 4 Sept. 2008. 15 Aug. 2008 http://www.cia.gov/library/publications/the-world-factbook/geos/rm.html.
- "Marshall Islands declares 'economic emergency' over energy crisis." <u>AFP</u>. 3 July 2008. 24 July 2008 http://afp.google.com/article/aleqm5ikbtl6ql61wolgugiolrl146wabg.
- "Marshall Islands." <u>The New York Times</u>. 23 Aug. 2008

 http://topics.nytimes.com/top/news/international/countriesandterritories/marshallislands/index.html.
- "Nuclear Test Sites." <u>Atomic archive</u>. 13 July 2008 http://http://www.atomicarchive.com/almanac/testing.shtml>.
- "Oil prices cause Marshall Islands to declare emergency." <u>Taipei Times</u>. 5 July 2008. 3 Aug. 2008 http://www.taipeitimes.com/news/worldbiz/archives/2008/07/05/2003416552.
- Rowa, Aenet. "Marshall Islands' Pre-schoolers Have High Rate of Vitamin Deficiency." Yokwe

 online. 25 July 2003. 4 Aug. 2008

 http://www.yokwe.net/modules.php?op=modload&name=news&file=article&sid=507.