

## XAVIER HIGH SCHOOL

TRUK, CAROLINE ISLANDS TRUST TERRITORY, PACIFIC 96942

March 30, 1984

Dear Friend,

For 1984 Town Study Project, the Xavier High School seniors, divided into four topic-groups, are honored to present the enclosed three papers which they have compiled during their 7-week survey in town (Moen, Truk). The other topic/report is produced in the form of video tape, which is made available upon request.

Under the supervision of Eichy Keller, one group explored the affects of cholera in Truk the past two years. Another group concentrated on the acceptance and growth of the newer religions in Truk -- this with Father Rakowicz's guidance. Monitored by Dave Branconier, one other group focused their attention on the functions of the state's court house with its problems and conflicts with the local customs. Finally, the 70-min documentary video tape makes an attempt to depict some physical and social changes in Truk in the past five years. If you wish to obtain a copy of this tape, please send either a blank cassette (VHS 120), or \$20.00 check (to help depreciate the production cost) with your request addressed to Mr Vincent DeCola, SJ, who supervised this last group.

On behalf of the seniors and all the rest of school community, we wish to extend our deep appreciation especially to those who have generously helped and supported the seniors in this project. This has been one of the most valuable learning experiences for the seniors, and we gratefully share in their successes.

Sincerely yours,

*James F. Mormad*  
James F Mormad  
Principal

MICRONESIA-PACIFIC COLLECTION  
COMMUNITY COLLEGE OF MICRONESIA  
Ponape State, E. Caroline Islands, 96941

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# CHOLERA IN TRUK

TOWN STUDY PROJECT

Xavier High School

1983 - 1984

Alfred Alfred Jr.

Pantasar Jacob

Iwaiser Fredrick

Narciana Reyes

Martha Namguy

## INTRODUCTION

In August of 1982, a contagious germ known as Vibrio Cholera made its way through the passage of Truk, endangering both the present and the future lives of the entire citizens of this state. Because of the unsanitary living condition common to the people of the islands, the infectious microorganism found Truk to be a favorable home to settle in. Here, shelter was available, food abundant and most importantly, easy prey guaranteed. Truk, therefore, became the germ's ideal paradise.

Once in Truk, the disease began to search for a comfortable home. Within the intestines of living organisms, most preferably those of the people, the disease found comfort and security. Here, it settled down feeding on what was available around it and going about its usual business of fuming its "home" with poisonous substances. This general poisoning of the body -- within which the germ made its home -- caused frequent watery stool and vomiting, a sickness so common in these islands that no special attention was paid to it. After a few days in which the dehydration and changes in body chemistry had intensified (even up to a point where the tissues and blood fluids reduced), the population of the islands witnessed unexpected deaths and illnesses. Thus, they were awakened from their overnight lives of ignorance and illiteracy, consumed with fear, shock and concern.

Meanwhile, the State of Truk was just beginning to enter an era of intense panic and uncertainty. In all the governmental conference halls meetings were being held to discuss emergency aid and immediate mobilization. More resolutions for financial assistance were sent to the U.S. as millions of dollars floated in. On the crowded streets an unending argument broke off between the radicals and the conservatives. The radicals, using such phrases as "our lives are endangered and we demand security" wanted more money. The conservatives, on the other hand, opposed the radicals' view by expressing their loyalty and reluctance to change what the traditions and customs had long set. To them, the "little" millions of dollars recieved was in fact more than enough for security and too much to change their lifestyle considerably if it were to be judged by Micronesian standard.

Within the state itself new changes were being made as more questions raised. As older institutions, both private and public, were temporarily suspended and more new governmental agencies and programs established, the people found a great chance for improvement. However, in the midst of all these changes and progresses there existed a spirit of doubt. Some wondered if these new changes and progresses were being made sincerely for the betterment of these islands or for Truk to increase its dependency upon the Western world.

The issue on cholera had been so compelling that it received a lot of appraisal and evaluation both from within and outside of Truk. Because of the many governmental decisions it involved and the wide aspect of life in Truk it touched, it has stirred up our interest to do a survey on. We are also aware of the fact that the experts on this subject matter have been so tangled up in the professional level of this issue that barely any information is left exposed for the common and ordinary people to grasp. We, therefore, have decided to put out this paper as an attempt to provide some informations for these people who had lived their lives in complete darkness. With this objective in mind, this Cholera group hopes to produce something of value not only to these people but to all of the communities of Micronesia as well.

Because of the lack of recorded informations that were necessary for our paper, we were forced out of our own library into the offices and sometimes the homes of knowledgeable persons where we conducted direct interviews. These were the people who participated in some of the programs established for the campaign against the cholera epidemic. We were very much privileged to have most of the involved people such as the doctors, special advisors to the Governor, and heads of relevant public agencies giving us what we needed. At other times when we observed the Cholera II Task Force meetings. From all that we have gathered, we have done a little assessing wherever we found necessary.

#### GENERAL HISTORY

In August 1982, cholera hit Truk severely. This was, indeed, the first time that a crisis of this sort ever hit this developing state. Accordingly, touched and moved a lot of people and created many rumors. In the other states of Micronesia these rumors dispersed, putting a bad impression on the communities of



Truk. When these rumors eventually became naturally accepted beliefs, the most probable truth was revealed by some representatives from the two international medical organizations, World Health Organization and communicable Disease control. This theory, however, seemed related to a few of the rumors set earlier, some which seem equally reasonable to that revealed by the medical experts.

### The origin of cholera

One hypothesis stated that cholera had long existed in Truk since the time of our late ancestors, but people really were never aware of it due to primitive medical knowledge. It went on to assume that during the old days sanitation was so excellent that almost nobody died from the disease which existed in small quantity then. From the evidences gathered, we agreed that this argument was not all-true if one was to judge between the sanitation of our ancestors against ours. It is obvious that today we are more aware of our personal hygiene.

Another rumor was directed to the diversion of a Japanese fishing vessel which supposedly carried a Japanese cholera victim to Pulpap. This assumption accused this Japanese man as the first carrier of the cholera disease to Truk. According to medical records, the presence of cholera was first confirmed in Moen during the month of August, a few days before the existence of cholera in Pulpap was announced. Thus, we find this view to be invalid.

The third and most logical conclusion which was first exposed to the general public by medical experts proclaimed that cholera might have been imported from some of the Asiatic countries where serious cases are common. This assumption further accused the countries which retain over-seas commercial contract with Truk prior to 1981. Such countries includes Phillipines, Thailand, Korea, and Japan, which all own cargo vessels that legally anchored in the lagoon of Truk.

### The Spread of the Disease

It is believed that one of the cargo vessels carrying an Asiatic flag about seven months before August of 1982, dumped its waste materials into the sea. Present among the garbage was this bacterium we know of as vibrio cholera. According to one of the local doctors, the germ can live in salt water for as long as eight months, provided it is fed. Once in the sea, it was swept away into

some shores where it awaits its victim. An unfortunate fellow picked it up, probably through marine food like clams and fish, and went off to attend some risky and unsanitary activities in which the disease was eventually passed on. The same process was then exercised by later victims. Eventually the disease reached an epidemic level.

We found it logically safe to conclude that cholera originally began its "invasion" from the district center of Truk on Moen. Early in the month of August the first patient, an Iras resident from the outer islands was detected. It is reported that after he was infected, the patient left on a field trip to his island of Pulap. There he hoped to attend a funeral gathering. With him were food which he carried for the feast and, of course, the contagious germs. The disease was transmitted during the feast. As the crowd left home a few of them were already infected. Around the same time the germ was just beginning to disperse on Moen.

Personal cleanliness is poor on the islands of Truk. In the bushes, on the shores, and into the ocean people "dump garbages". The process of making food is seen to be unsanitary. Drinking water are left exposed. In the sea, more and more of the bacteria infected fish, clams, and other sea lives. In the fishing markets, customers come in to buy fish that have been contaminated. Because of these, the germ dispersed in an unpredictable manner. From oceanic food, other types of food exposed to flies, and from persons who have the sickness, cholera was eventually transmitted uncontrollably.

#### CAMPAIGN AGAINST CHOLERA

When the epidemic was just beginning to get out of control, the Governor, from the advise of the experts, established three major programs to be used in the campaign against cholera. The Curative Program, made out of doctors, lab. technicians, and nurses is the first of the three programs created. Obviously this organization primarily deals with the medical detection and treatment of the disease. The second and equally important program is that of Water and Sewer System Construction which is headed by the Rural Sanitation Program. Finally there is the Health Education Program which emphasizes personal neatness and cleanliness both within and out of homes.

Health Services

Due to the financial difficulties in the early stage of the epidemic, the medical teams were at a lack of appropriate manpower and equipments. The local doctors and nurses were all unprepared both in attitudes and in profession to take up the task that was to be imposed on them. Among all of them only one had experienced the medical treatment of a cholera case. This lack of experience was even more depressing when it was found that even the foreign doctors that were working in the Truk Medical Center also lack professional experiences. Generally, both the foreign and local doctors terribly needed some sort of guidance in their ordeal against the epidemic. Beside the problem with experience and profession, there also existed a great difference in the ratio of doctors versus patients. With the growing number of victims and the continual transmission of the disease, the doctors each had to take care of an average of 10 patients- each day, and sometimes a patient may need treatment that last more than a month.

In addition, there were difficulties in supplying the Health Service with necessary medical equipments such as tetracycline, Oral Rehydration Solution, and Ivey. The tetracycline is an antibiotic and therefore active in fighting the disease. It is the most effective medicine used against any sort of diarrhea. The Oral Rehydration Solution, and Ivey are used to help patients gain back lost fluids. Their usage depends on the dehydration a patient went through. The ORS and Ivey also give the body strength to fight the disease. The major problems with the medical supplying was due to the long process of ordering and transporting and receiving which, according to a doctor, takes month from such supplying sources as Fiji, Philippines, Hawaii, and Guam. Sometimes the Health Service ran across situations in which a certain type of medicine is needed but its shipment is recieved later than expected.

To overcome the problem of insufficient manpower, the Governor requested doctors from different sources. In respond to this request, the U.S. Navy in Guam sent Dr. J. Smith, the World Health Organization sent Dr. T. Olakowski and Dr. M. Rao, the Communicable Disease Control sent Dr. S. Holmberg and Dr. Paul Blake, the Red Cross in Hawaii sent two nurses and, the Federated States of Micronesia sent Dr. Kiosi Aniol along with the deputy director of its national Health Services, Carl Dannis. These people actively participated in some of the Federal

Programs against the epidemic and worked full time with the medical teams. Even with these new recruits, there still existed a shortage in the number of doctors because beside doing the job they were recruited for, some of them had to treat other patients with different sickness. As a result, the preventive programs like that of high blood pressure and child rearing were temporarily **banned**. This did help the cholera problem but it eventually created new problems.

In tackling the obstacle of supplying the Health Service with medical needs, the government decided to order medication in such a way that the next shipment was recieved before the present one ran out. In doing so, the three major types of medication were ordered on a two to three months basis, a long enough period of time to complete the long process of ordering, transporting, and receiving of supplies. Each shipment contains 500 bottles of tetracycline (capsule), 500 bottles of tetracycline (suspension), \$20,000.00 worth of IV which sold seperately and a thousand packages of ORS. Other medical needs that Health Service wanted include equipments for laboratory use.

#### The Rural Sanitation Program

The Rural Sanitation Program is the second major program actively depended on for the campaign against the cholera epidemic. The primary objective of this program is to prevent the spread of cholera through the improvement of sewer and water system. With the recommendation of the Governor, the office of the High Commissioner in Saipan sent Natsa Siren, Dale Kay, and their secretary Miss Donna Shuering to head the Rural Sanitation Program. This program, having its head-quarter located nearly the main hospital on Moen, was established during the outbreak of the disease. The RSP has been given an operation budget of \$1.3 million for its first phase which is just about to be completed and \$2.0 million for its second phase which is on the way. With the \$3.3 million, the RSP aimed to build a total of 4,000 tanks which have a 3,000 gallons capacity, 5,234 water seal toilets, 50 hand pumps and 150 solar pumps.

When the project just first began, the head of the RSP realized they could not provide enough water for the entire population of Truk with the few tanks that were completed. So, the people with no tanks were encouraged to drink from rivers, streams, and wells, provided they boiled of cholrinated their drinking

water. In the meantime, a policy was set to build at least one water catchment tank in every village. At the same time, the RSP extended its project into repairing ruined personal water catchment tanks which were built during the Japanese Administration. These were of great help to the villagers because such tanks have up to 25,000 gallons capacity, more than eight times bigger than those provided by the government. (See Table 2, Page 17)

With the few water seal toilets completed to replace over-seas benjoes, it was found that the people failed to make use of them. According to the head of the project, a few of the people were not used to keeping these toilets properly. Having realized this, the RSP took a step farther into emphasizing cleanliness and neatness which centered around proper disposal of oneself. The result of this extension in the project conducted by the RSP proved to be of great significance to the up-coming parts of the sewer system construction. Those who received water seal toilets later never faced the same trouble.

As the program progressed more and more, a problem with the storing and transporting of materials emerged. Once a shipment of about 100 cement bags was destroyed by rain after being stored in an LCU, causing a loss of about \$1,000. As a result the RSP vowed to do work twice as hard so that there would be little need of storing materials. Even with existing materials, the program found problem with transporting them from ships to storage houses and from the storage houses to the people. As a result the RSP started using the public work vehicles which did them little help but created some other problem within the Public Work Department. To stop interfering with the PWD the RSP requested two pick-ups and a boat from the Governor.

### Health Education

When cholera roused into an epidemic stage, a great need for personal hygiene was found. With the recommendation and advice of the experts, the Governor created a new program to emphasize and stress health education, and appointed Chitaro William, the present head of the preventive programs, to direct it. Those who participated in this program went from islands to islands and villages to villages teaching health education. When the public schools opened again after a year of being closed down, health education became a part of their classroom curriculum. In the villages the health education team arranged with the chiefs

and magistrates for people to gather and learn lessons on personal hygiene. During these times, the team distributes pamphlets which explained better sanitary process of preparing food and keeping oneself sterile from the disease. According to one of the heads of the Health Education Program, there were no serious problems with the program except for its lingering need for two assistants health educators who are needed in the Western Islands and the Mortlocks.

### Cholera II Task Force

As the cholera epidemic worsened, the Health Service called upon the organization of a task force to be made up of experts and heads of all the departments and programs established. This organization acted as one body of special advisors to the Governor in almost every aspects involving the epidemic. At first the Governor himself chaired the task force but the Lt. Governor took over. When the Lt. Governor replaced the Governor, the organization was renamed Cholera II Task Force after the epidemic's reappearance. The Task Force was like a "watchdog" which inspected how the existing programs were functioning and the situation on the islands before reporting to the Governor. It gave the Governor recommendations and advices, enabling him to make the final decision. All the closing down of institutions and the banning of unsanitary marketing, the discourging of traveling, and close quarantining of contaminated villages were first introduced by the Task Force.

### THE GOOD EFFECTS OF THE EPIDEMIC

In spite of all the inconveniences that the cholera epidemic has brought to the people, there has been several positive effects that have emerged. The coming of the epidemic enable the leaders to be more aware than ever on the people's shortcomings. Thus, it is only because the epidemic had struck Truk, that people found their government functioning as a system of governing for the people both in name and in action.

Within the government itself, the leaders have realized the potential of such crisis and their strength in fighting it. They have learned from this ordeal that such crisis was defeatable under the assistance of the National Government (F.S.M) and United States. These leaders have become even more aware of their dependency



on the National Government and outside help which did a lot to their success. If a similar or even worse crisis appears in Truk again, the government, most hopefully, will be able to deal with.

In addition, future leaders will remember this incident as a reminder on what could happen when a crisis occur. Meanwhile, on the neighboring States of Micronesia, the same lessons that Truk has learned are also learned, though not vigorously as the Trukese.

Because of the epidemic, there evolved a better attitude toward neatness, more respect toward authority, and a desire to unite as one body to fight against the epidemic. During the epidemic, the people felt an intense need for better sanitary living, so they had adjusted their lives to meet such demand. When the disease had gone down from an epidemic to an endemic stage, the people realized that personal cleanliness and neatness are necessary for healthy life. In other words, they realized that a clean home meant a happy life.

In the course of the presence of cholera, the people found themselves more and more closer to their leaders. It was through these leaders that the people expected guidance and freedom from the plague. As a result, the general public felt, for the first time, the presence and the need of a strong government.

Having seen the seriousness of the disease, the citizens become eager to co-operate and do what was possible to fight the epidemic. Because of this common interest they shared, there existed a spirit of unity among them. If these concepts continue to be present among the people for the many years to come, Truk shall be among the first places to eradicate a cholera epidemic, a goal so unreachable that even the better developed countries of Asia have not yet reached.

#### THE PROGRESSES

The major programs that were established for the physical improvement of the islands during the cholera epidemic were the Rural Sanitation Program, the Health Education Program, and the Beautification Program. It must be noted that the entire population of Truk took part in these programs. It was because of the unending participation of the people that all the three programs were successful.

### The Rural Sanitation Program

The RSP, running a project that involved the entire 5,500 families in Truk, provided 11 personels from Ponape Agriculture and Trade School (PATS), Micronesian Occupation Center (MOC), construction of water-seal-toilets and water catchment tanks. All the necessary equipments that require expenses were provided by this program. Labor was done by members of each family under the supervision of either of the 11 personels. As of January 31, 1984, 328 water catchment tanks and 113 water-seal-toilets that has been completed are now in usage. Meanwhile, 513 more WCT and 1,141 more WST were in the process of construction. In addition to these, 6 hand pumps and 33 solar pumps are now in operation.

### The Health Education Program

The Health Education program, operating on a budget allocated by the government, has been progressive in educating the necessity of sanitation to the people of the islands. This program was not given a fixed budget. With the request of the Chief Health Educator, the Governor has been giving money to the department after evaluation of the requests.

From the lessons taught by the Health teams, the general public began to gain appreciation for sanitary living. Presently, it has been noted that within most of the houses, a separate closet for cleaning up equipment has been built. Within this closet are basins for washing hands, cooking and feeding utensils, soaps, and other necessities required for cleanliness. It has been further observed that these items are really being use properly.

### The Beautification Program

The Beautification Program which depended on communities' effort and not government funding, involved religious and social groups. Leaders from major religious and social organizations were picked by the Governor to help and participate in the management of this project. Furthermore, leaders from certain villages in Moen had been picked to head a certain part of the project conducted by this Beautification Committee. The program was created to establish an awareness within the general public on the islands' needs for physical clean-up and setting an example for the people from the other islands.

The Beautification Program had a great success in the clean-up of the district center on Moen. The project involved transporting of free soil provided by generous families from lands to places where decorations were to take place. It also includes planting of flowers and trees, picking up of empty cans and bottles of weeding of grass.

### THE EPIDEMIC

The early October of 1982 marked the highest stage of the epidemic with 410 confirmed cases. The other Micronesian states had started to admit travelers off Truk with medical clearance. Some states went a step further, demanding certain medical check-ups and treatment, that each traveler must take. Some of these medical proposal contradicted with some of the policies of the Health Service in Truk which was now under the supervision of qualified doctors from the two international medical organizations, WHO and CDC.

### Travelling Restriction

For a while the states of Ponape ordered that Truk to Ponape travelers must be swapped three days before their departure. Being extra careful so Truk won't be accused of transporting the disease, the medical experts carefully looked into the proposal and found that it has a weak spot. It was found that within the three days after the traveler was swapped, there was considerable possibility that he may catch the sickness. So, another treatment was added to that already practiced. Not only were travelers swapped but, they were also medically treated with tetracycline as well.

Other states within Micronesia insisted that travelers off Truk must go into some other states with more sophisticated equipment like Hawaii before getting to their target. This was done as requested and no negative comment was made by the Truk State's Health Service. With all these careful medical treatment of travelers, Truk State, as of now, has never been accused of transporting the disease into another state.

Some people who were swapped before their journey later complained that the treatment was silly and inhuman. A rumor was then spread saying that the swapping practices were primitive and out of date. This same rumor suggested that injection

and more up to date medical equipment are needed. As a counter-argument to this rumor, a special advisor to the Governor on medical matters convinced the leaders that the government is not going to take unnecessary measure which will eventually cost unreasonable expenses if it can do just the opposite.

### EFFECTS ON ECONOMY

#### Tourism

When traveling was restricted, the economy of Truk staggered. Prior to September 1982, tourism had an average monthly rate of 603 tourist. During and after the epidemic, it had dropped to 344 average monthly tourists. This result in a 50% drop in the number of tourists coming in from the foreign countries. Although actual figures on revenues generated from tourism were never collected due to certain inconveniences and confidentiality, that were beyond our control, we have estimated a 50% decrease in the revenues from tourism.

#### Marine Resources

Because of the fear for cholera other countries which held commercial bonds with Truk grew reluctant to continue these ties during the existence of such a disease. Consequently, the exportation of sea products ( excluding fish ) dropped from \$ 569.71 to \$ 313.72 average sale, causing a loss of \$ 256 every month. Within the entire 18 month period that cholera was present in Truk a total of \$ 5,646.96 receipt and \$ 4,608 shortage resulted from exportation. The \$ 4,608 shortage resulted from the suspensor of commercial ties and the discouraging of people from eating fish. If there was no cholera, then Truk would have received an approximate amount of \$ 10,254.96.

Meanwhile, the two leading organization in exporting fish-the Federation of Fishing Cooperation and Marine Resources, a governmental agency-endured a 50% drop in their sales, Within the entire 18 months of the cholera "invasion", the

Truk Federation of Fishing Cooperation made a total sale of \$126,720. The total sale of the previous 18 months period prior to the epidemic was \$248,850. This caused a total loss of \$122,130.

The Marine Resources, on the other hand, received a total sale of \$203,204.00

within the period of the cholera epidemic. It's previous average sale within the same interval was \$248,852.92. This caused then a shortage of \$45,648.92.

### Budget

The entire money that had been received to fund the programs established to eradicate the cholera epidemic, came directly from the U.S in three separate phases. The first two phases occurred during the first "invasion" of the disease beginning in August of 1982 until July of 1983. The third phase immediately followed the first two.

During the first phase, \$2.675 million was requested and received. 1.6 million of the grant was sent by the U.S congress for the development of 4,000 water seal toilets and 1,100 water catchment tanks. The Environmental Protection Agency provided \$550 thousand for the construction of 50 hand pumps. The remainder of the entire budget which is \$525 thousand was granted from the United States' House Urban Development for the construction of 150 solar pumps and other related projects.

Later on during the same phase, a total of \$14.9 million was asked for the establishment of new projects and reorganization of the older ones. When this request was received in the U.S, explanation and elaboration for the spending plan was demanded from the United States. The request was sent back to the Truk States Government. The United States considered the amount requested to be unusually higher than what was expected. After looking more into the proposal the Truk government decided to cut down \$6.4 million from the request. Part of the money was to be spent on water wells, drillings, and Drill equipment. The \$6.4 million cut down in the request implied the Truk government; lack of awareness on their first request, making unnecessary proposal. Out of the remaining \$9.5 proposed and requested for the reorganization of the older programs, \$2.0 million was promised by the United States' Department of Interior. Yet, even up to the present day this money has not been received.

During the reappearance of cholera in July of 1983, a need for the prevention of the disease in other areas was found. The government pleaded an amount of \$2.4 million to create these needed preventive programs. Out of the \$2.4 million pleaded, \$1.625 million was granted. The different sources which contributed

this money were the Capital Improvement Project, Office and Management, U.S Educational Department and Environmental Protection Agency. The \$1.625 million was appropriated for Health and Medical care, general clean up of Truk, more toilets and 35 school furnitures. \$111 thousand for Health Education, \$168 thousand for school's cooking equipments, and \$440 thousand for desalination were never received or ignored. (See Graph 3, Page 12.)

### REACTIONS OF THE PEOPLE

When the epidemic had reached its highest peak with 17 cases involving death, the people began to react to it differently. Generally it was fear and regret that hit the majority of the population; yet, a few of the minority went a little deeper into the matter to grasp some bright light out of it. The responses of the people was influenced by how much they were involved in the struggle for the survival of all. Those who were heavily involved in the struggle found the epidemic to be a blessing; a disaster that improved Truk in many ways. Those who isolated themselves, however, found the disease to be a curse in every ways.

As we investigated the reactions of the leaders, we found out that all of the 50 we interview (100%) felt the need for unity to fight the epidemic. 43 of the 50 (86%) felt an obligation to work to the fullest of their potentials. The other 14 perscent (8) did not felt obligated, yet they worked their best because they saw the others doing so. Present in their midst was a patriotic feeling of loyalty toward their country and the feeling of a common cause. Devoted as they were, the leaders kept assuring each other that a time will come when the epidemic shall be eradicated. Two out of the three, who believed in the immediate eradication of cholera strongly, took it for granted that the general public had already got the willingness to put a lot of effort on the campaign.

Meanwhile, 27 out of 50 interviewed average citizens, worried as they were, helped whenever possible. Eight more were eager to help out in any of the programs established, but did not get any chance. Surprisingly enough, all the 50 interviewed candidates loved to see all the progresses being made. We realized that the majority of the common people lived with a fear that surpassed their eagerness to see progress.



## CONCLUSION

This mark the conclusion of the four weeks' research on the profile of the cholera epidemic in Truk based on data and interviews collected.

The disease in itself was a complete disaster. Among all the places it could have hit Truk, the most populated and unsanitary of them, was chosen. Thus, it spread so rapidly here that the people were scared even up to a point where they lost their desire to live.

Educationally, the epidemic took a year away from the educational lives of the students, making them a year older and no more educated. This really created frustration and anger among them. This was an impact so heavy on them that they could hardly stand it.

Socially, the discouragement of traveling isolated the families from seeing each other. The banning of social gathering, the discouraging of traditional festival and practices and the limitation of religious practices created even more frustration and anger. From all these there evolved a general feeling of insecurity.

Economically, Truk lost money and commercial contract. This put a negative impact on the future of the state. It probably will have to start all over again from the very beginning in order to get back to normal.

Surpassing all these problems and inconveniences is the fact that more than twenty innocent people died from the disease. Not only did they died innocent but also they died young. These people could have lived to be of great help and pride to the state but they were cheated -- or were they?

However, out of all these curses, there existed a cleaner, a neater, and a more sanitary Truk. A Truk where cholera hit only for the people to prove themselves. From all the mobilizing, tackling, and struggling with the ordeal, the leaders proudly showed the earth a true sense of duty and leadership. On the other hand, the people were gaining a realization for the essence of cooperation among themselves, and most especially with the government. With this, they proved their unique sense of pride, of tolerant, faithfulness and endurance. In their ordeal the people of Truk especially verified themselves to be more the people of "Chuk"

CHOLERA CONFIRMED CASES1982      # of case

September ----- 111

October ----- 410

November ----- 164

December ----- 146

1983      # of case

January ----- 42

February ----- 18

March ----- 8

April ----- 11

May ----- 3

June ----- 0

July ----- 16

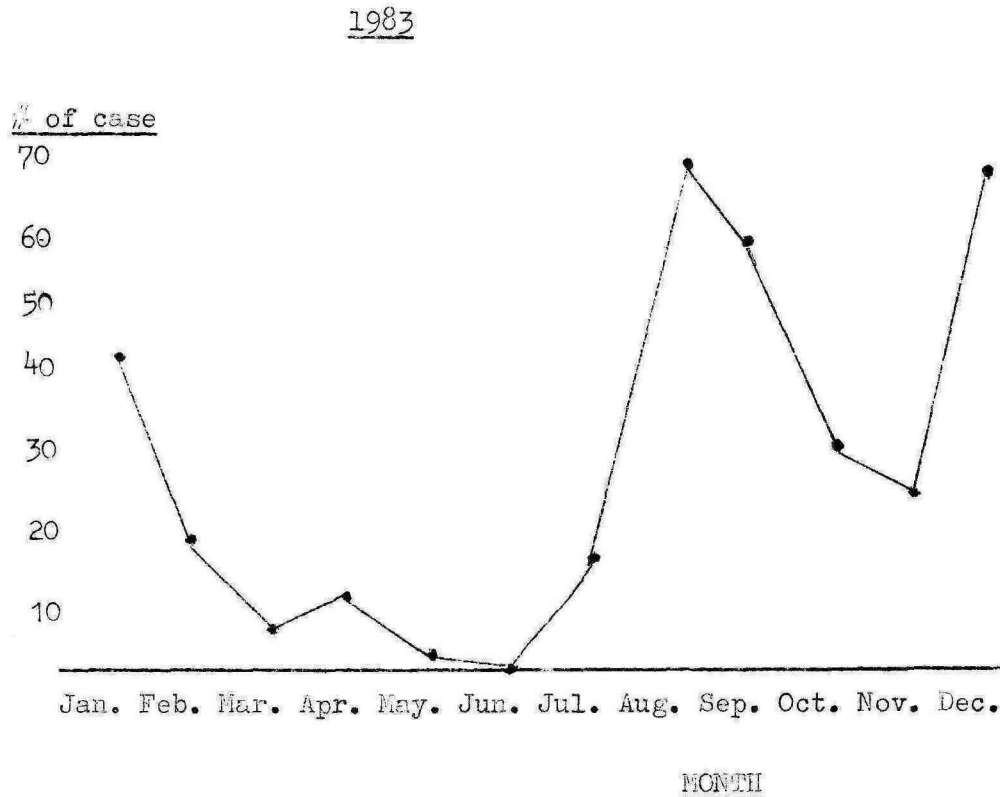
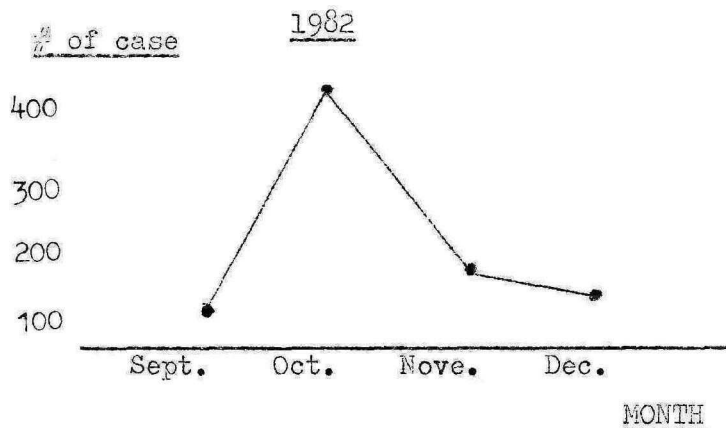
August ----- 69

September ----- 55

October ----- 29

November ----- 17

December ----- 69



T A B L E 2

PROPOSED DISTRIBUTION OF W.C.T AND W.S.T FOR THE FIRST AND SECOND PHASE  
OF THE RURAL SANITATION PROGRAM

<u>EMPIRES</u>	<u>#OF W.C.T 3,000 GAL./UNIT</u>		<u># OF W.S.T CONCRETE RISER</u> <u>WITH PLASTIC BOWLS</u>	
	<u>Phase I</u>	<u>Phase II</u>	<u>Phase I</u>	<u>Phase II</u>
N. Nomoneas	100	261	623	0
S. Nomoneas	307	916	952	0
Faichuk	301	914	1,191	0
Mortlocks	238	600	814	814
Weito	41	89	109	109
Halls	70	115	162	162
Westerns	64	105	149	149
TOTAL	1,100	3,000	4,000	1,234

OTHER ITEMS TO BE CONSTRUCTED

Solar system: 150

Wells, hand pump: 50

NUMBER OF UNITS INITIATED AND COMPLETED AS OF JANUARY 31, 1984

COMPLETED TO DATE

1. Water catchment: 328
2. Water seal toilet: 913
3. Solar system: 33
4. Wells, hand pump: 6

"ATTACK ON CHOLERA"

<u>PLAN</u>	<u>AMOUNT</u>	<u>SOURCE</u>	<u>WHAT FOR</u>
<u>Amount</u>	<u>Authorized</u>		
1.6M	1.6M	U.S. congress	4,000 W/S
550K	550K	EPA	1,100 F/C
			50 H/P
300K	300K	HUD	150 S/P
225K	225K	HUD	956 F/G
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TOTAL 2,675M	2,675M		
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1M			5,000 W/S
4M			11,700 W/T
3.2M			200 Cores
300K			200 S/P
150K			Doctors and Lab. Tech.
250K			Medicines
350K			Medical Supplies
250K			Lab. Equipment
1.6M			Wichap Water
2.8M			Dublon Water
500K			Well Drilling
1.5M			Drill Equipment
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TOTAL 14.900			

"CHOLERA II"

<u>Amount</u>	<u>Authorized</u>	<u>Source</u>	<u>What for</u>
590K	55K	CIP	Health/Med
186K	174K	C+M	Garbage (Truk)
111K			Health Education
51K	51K	EPA	Toilets
480K	391K	ED.	35 Schools-Furnitures
158K			Cook Equipment
400K			Deasalination
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TOTAL 2,435M	1,625M		

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TOTAL: \$20.0 Million (U.S.)