



Arno, Arno HVCM Final Report

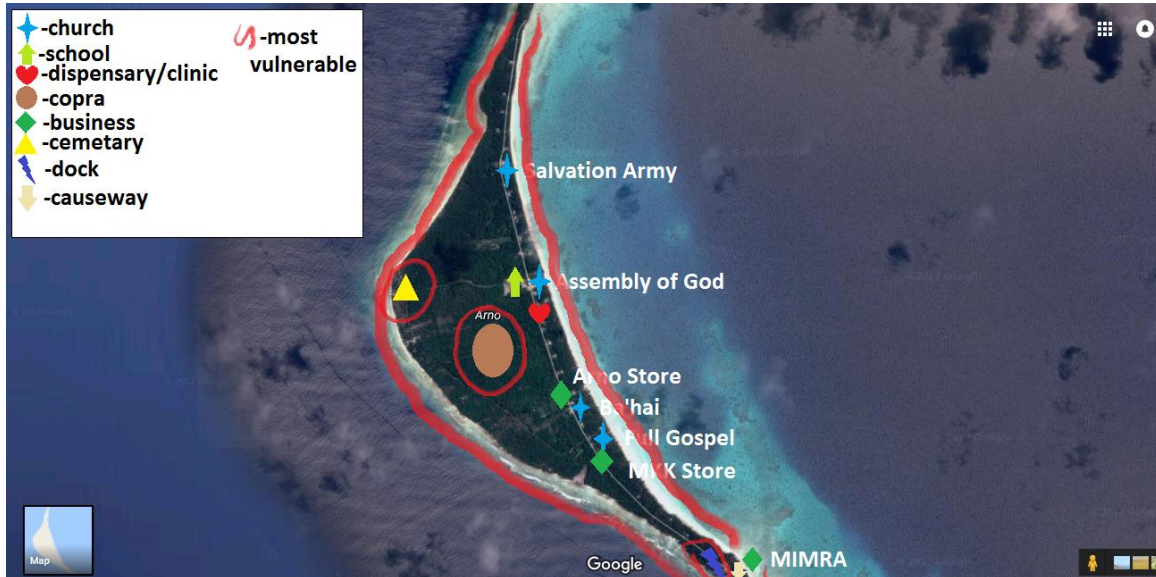
CADRE PLUS

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Spatial (overview of main features)



The Arno community is the main area in all of Arno Atoll. It measures to about 2 miles long. Its dock is the main point of transportation to and from Arno Atoll, and also to its islets. It lies 12 miles away from the capital of the Marshall Islands- Majuro. The main method of transportation to the Arno community is by Kirtake, a boat owned and captained by Ronnie Reimers. There are other boats/ships that occasionally travel to Arno, however Kirtake goes to and from Arno on Mondays, Wednesdays, and Fridays. There can be complications, of course, if the sea is too rough for sailing. Even so, the captain makes arrangements to travel as soon as the water is okay to set sail.

The community holds 34 households and only three businesses stand, all of which are scattered about. It is made up of over 200 people, including Marshallese, American, Pohnpeian, Chinese, Gibertese, Kosraean, and Japanese. Their main source of income is from making copra and handicrafts. These people live mostly off of the island's resources such as local crops, fish, chicken, and pork for food. They also rely their trees to construct houses and other small buildings, such as hut houses for meetings or copra houses. In this community, councilmen and traditional leaders have authority to make decisions. The only education system here is Arno Elementary. Four churches stand today: Full Gospel, Baha'i, Assembly of God, and the Salvation Army. Within these churches are social groups: youth, women, men, board of deacons, etc. There is also a social group outside of church, particularly for the youth of Arno. The main activity the youth group participates in is sports, mostly volleyball.

Hazard and Vulnerability Assessment

Table 1/A: Hazard Assessment		
	1. Hazard type	Drought
	2. Warning sign	Plants turn brown, start to die, crops get ruined, no clouds/rain
	3. Forewarning	Rationing of food/water

	4. Speed of onset	Slow
	5. Frequency	El Nino
	6. When	1) 1996 2) 2013 3) 2016
	7. Duration	
	8. Extent	Loss of crops, relocation/search of water, decline in health

Table 1/B: Hazard Assessment		
	1. Hazard type	Typhoon
	2. Warning sign	Clouds, strong winds, high tides
	3. Forewarning	Radio
	4. Speed of onset	rapid
	5. Frequency	Summer, trade winds (winter)
	6. When	1) 1979 2) 1986
	7. Duration	
	8. Extent	Homes destroyed, damaged crops/plants, contamination of water (wells)

Table 1/C: Hazard Assessment		
	1. Hazard type	King Tides
	2. Warning sign	High tides, strong currents
	3. Forewarning	Tsunami warning on radio
	4. Speed of onset	rapid
	5. Frequency	Seasonal (February)
	6. When	1) 2011
	7. Duration	
	8. Extent	Salt intrusion, homes flooded, contamination of water (wells), depletion of land



Information gathered from the Arno community concludes that there are three major natural hazards that occur the most here: drought, typhoon and King Tides. The most common way of receiving forewarnings of such hazards is through the main radio station of the Marshall Islands, V7AB.

Droughts occur most often; the most recent one was that of early 2016 during the El Nino weather. There are no official records in Arno, however the years the community members remember there being drought were 1996, 2013 and 2016. During these times, the people would ration their food and water, and lose a lot of their crops. This would result in relocation to find provisions. During the drought of 2016, IOM provided a reverse osmosis (RO) system that was stationed in the Arno village. The rest of Arno's islets and neighboring communities commute to the RO system, a difficult task because there are few vehicles on island.

There are three natural hazards that have affected Arno for the past hundred years: typhoons, King Tides, and droughts. Typhoons have ruined houses numerous times. As for King Tides, shores are continuously depleting as such hazard occurs every year around the month of February. the community suffers mostly from droughts. Crops and plants are affected by the lack of water, resulting in them being too damaged for the people to live off of. The wells, being the community's main supply of water, become easily contaminated. Thus, illnesses/diseases spread easily but the local doctor's stock of medicine is limited.

King Tide Impacts**Vulnerabilities**

Eat away the land	No sea walls/mangroves
Illnesses spread	Not enough medicine
Debris washed up	Not enough materials for cleanup
Houses destroyed	Not enough building materials
Wells become salty	Nothing to clean water/well
Dock destroyed	No other means of transportation to other islands/atolls

Typhoon Impacts**Vulnerabilities**

Destroys crops	No seeds for replantation
Houses destroyed	Not enough building materials or funds for rebuilding
Wells become contaminated	Nothing to clean water/well/no clean water containers
Drowning/death	No official evacuation centers
Debris washed up	Materials for clean up
Unclean atmosphere	Medicine

Drought Impacts**Vulnerabilities**

Crops/plants	No seeds/fruits for replantation
Water contamination	Nothing to clean water
Little to no water	Limited transportation to center (Majuro) to buy water/not enough water containers
Crops/plants damaged	No way of replanting with no water/seeds/fruits
Illnesses/diseases spread	Short supply of medicine

Hazard and Capacities Assessment



In any case of disaster, the community helps each other to overcome whatever challenges that may come about. For instance, if any type of natural hazard were to occur, the people find the those who were affected of vulnerable and contribute items lost, or provide shelter if their homes were damaged. The village comes together to rebuild if necessary.

King Tide Impacts	Capacities
Dock ruined	Rocks and sand
Shore eaten away	Coastal plantation, coconut tree stumps as temporary "wall"
Graves destroyed	Rocks to form barrier

Homes damaged	Can temporarily relocate to school/churches
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Typhoon Impacts

Capacities

Homes destroyed	Can escape to school/churches
Crops/plants damaged	Can preserve food ahead of time [Bwiro (breadfruit), makon (pandanas), taro, etc.], fish
Illnesses/diseases	Doctor/dispensary
Houses ruined	Trees for wood, coconut palms, dried pandanas leaves for roof

Drought Impacts

Capacities

No rain	Wells
Illnesses/diseases	Local medicine
Crops/plants damaged	Imported provisions/preserved foods

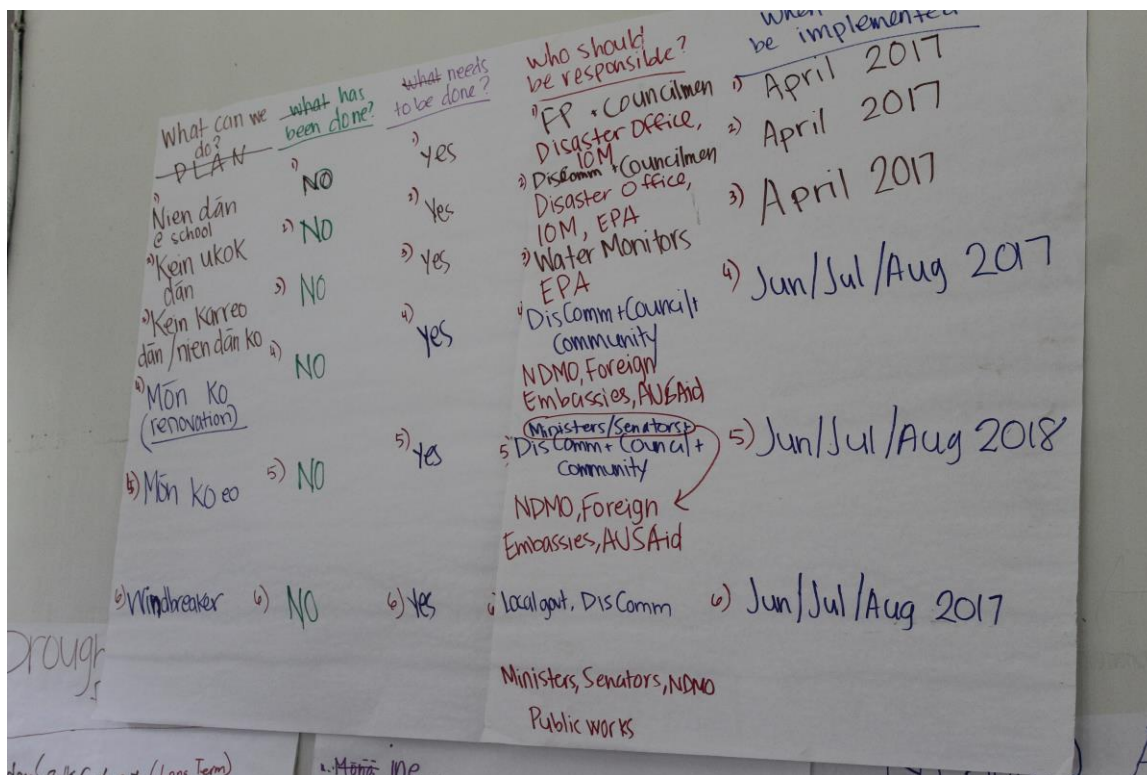
Socio-economic factors affecting vulnerability & assets and access to resources to reduce vulnerability



The community of Arno is made up of people of different occupations. The most common sources of income are copra making, handicrafts, and government jobs (ex. Teachers, police force, councilmen, etc.).

There are only three vehicles running in the community, and few bicycles are personally owned. During heavy rain, it is difficult for people to travel given that most locals go about on foot. It is particularly difficult for teachers and students to go to school through the rain. Consequently, they would miss school.

Community Action Plan



The Arno community came together to form a plan to prepare in case any of the three main hazards are to occur. They have decided to start implementing these tasks this year in April.

What can be done?	Who's responsibility (inside community)?	Outside of Community	When to be implemented
Catchment @ school	DisComm President, Councilmen	Disaster Office, IOM	April 2017
Reverse Osmosis (RO) System	Water Monitors	EPA	April 2017
Materials to clean water/catchments	DisComm members, Councilmen, community members	Disaster Office, Foreign Embassies, AUSAid	Summer 2017
Evacuation Center	DisComm members, Councilmen, community members	Ministers, Senators, Disaster office, Foreign Embassies, AUSAid	Summer 2018
Transportation (truck)	DisComm members, Local government	Foreign embassies, Disaster Office	April 2017
Communication devices	DisComm Communications officers, DisComm	Disaster Office, IOM, NTA	April 2017

	<i>rescue team</i>		
<i>Seawall</i>	<i>Community, local government</i>	<i>Disaster office, Foreign embassies, EPA, Public works</i>	<i>Jan 2018</i>
<i>Emergency Kits</i>	<i>Head teacher, DisComm rescue team</i>	<i>IOM, MOH, Red Cross</i>	<i>March 2017</i>

Summary