The Study on Comprehensive Disaster Prevention around Mayon Volcano

SUPPORTING REPORT (1)

(Part I : Master Plan)

VIII : Evacuation

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EVACUATION

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EVACUATION

1. REGULATORY BACKGROUND OF EVACUATION

1.1 Calamities and Disaster Preparedness Plan

The Calamities and Disaster Preparedness Plan which was formulated by NDCC in 1988 provides the details for the creation of the operating unit for evacuation services at the regional, provincial, city/municipal, and barangay levels to include the organizational set-up, the personnel selection criteria, the responsibilities and tasks of the units. The main purpose of the evacuation service is to evacuate the populace and properties systematically in case an emergency arises. In addition, the plan also identifies the key organizations which will be involved in the evacuation activities as follows:

Roles of Agencies in Evacuation Activities

Name of Agency	Main Functions
DOST	
- PAGASA	- issues warning on typhoons and floods
- PHIVOLCS	- issues advisories on earthquakes, volcanic activities
DECS	- makes available suitable school buildings as evacuation centers
DOH	- provides medical services
DND	
- OCD	- develops and prepares programs for disaster preparedness
- PNP	- provides security in the evacuation centers
- AFP	- provides transportation facilities and security services
DPWH	- provides transportation and communication facilities, repairs damaged roads and evacuation centers
DSWD	- provides relief , counselling services and training
DOTC	- provides emergency transport services
NHA	- provides emergency or temporary housing facilities
PIA	- assists in disseminating warning
PNRC	- provides emergency relief assistance and training

1.2 Disaster Management Operation Manual

In the Province of Albay, the PDCC has come up with the Disaster Management Operation Manual (July 1998) to serve as a guide on disaster management. One of its important components is the disaster response which outlines the specific

responsibilities of the concerned organizations as well as the evacuation activity flow.

1.3 Disaster Preparedness Plans of the C/MDCCs

With the assistance of the PDCC, the municipalities of Bacacay, Daraga, Malilipot, Sto. Domingo, Tabaco, and Legazpi City have formulated their respective Disaster Preparedness Plans which also present the tasks of the organizations involved in the evacuation related activities. The plans basically follow the PDCC Disaster Management Operation Manual.

2. PRESENT SITUATION

2.1 Institutional Set-Up

Evacuation is considered to be a local function. Hence the City/Municipal/ Barangay Disaster Coordinating Councils in the Study Area are held responsible for matters pertaining to evacuation based on the provisions of PD 1566. The Regional and Provincial Disaster Coordinating Councils are extending logistical support to complement the efforts of the lower DCCs concerning evacuation.

At the C/MDCC level, one of the service teams is the evacuation service team which is composed of a leader and his/her members. The number of members varies, oftentimes more than 15 members due to the involvement of the school district supervisors and principals in a specific city or municipality as team members. At the city and municipal levels, the key positions are usually manned by the LGU official or personnel. The other agency representatives and volunteers act as members of the evacuation service team.

At the BDCC level, the evacuation task team is headed by the team leader with 5 or more members. The members are called block leaders who supervise and expedite the movements of the residents concerned. Volunteers usually extend assistance at times of disasters since the limited Calamity reserve will not allow most of the BDCCs to hire permanent personnel (see the table on the next page).

Seven (7%) of the barangays in the Study Area have not formed their BDCCs (see the following table). In this situation, the barangay council members automatically assume the roles and functions of the BDCC at times of disasters. It is also worth nothing that in the survey on the Calamities and Casualties by Flood and Debris Flow conducted in relation to this Study, 60% of the 1,000 respondents from the Study Area are not aware of the existence of the BDCCs in their respective barangays.

The evacuation systems and procedures are supposedly an integral part of the Operations Manual of the Disaster Preparedness Plan; however, only a few of the Barangay Councils/BDCCs have the written Disaster Preparedness Plans (see the table below). Hence, the barangay leaders/BDCC members usually undertake evacuation systems and procedures based on their previous experiences or from instructions issued by the C/MDCCs at times of disasters.

Information about BDCC

Cities and Municipalities	No. of Respondent Barangays	BDCC Organized		Ave. No. of BDCC Staff		Disaster Preparedness Plan (DPP)		Ave. Calamity Reserve (1998)
		With BDCC	W/o BDCC	Officials	Volunteers	With DPP	W/o DPP	
City								
1. Legazpi	15	13	2	10	16	5	10	17,670
Municipalities								
1. Bacacay	5	4	1	10	31	3	2	35,811
2. Camalig	11	11	-	11	45	1	10	18,644
3. Daraga	13	13	-	11	18	3	10	53,534
4. Guinobatan	14	12	2	11	13	2	12	19,257
5. Ligao	8	6	2	13	16	1	7	16,547
6. Malilipot	10	10	-	11	21	2	8	17,983
7. Malinao	8	7	1	10	9	2	6	13,705
8. Sto. Domingo	9	9	-	10	10	1	8	19,106
9. Tabaco	19	19	-	11	49	3	16	19,971
Study Area	112	104	8 (7%)	11	23	23 (21%)	89 (79%)	23,222

2.2 Evacuation Procedures

The evacuation activities in the Study Area are mainly precautionary type in nature, meaning that the people generally are transferred to a safer place before the impact of disaster threatened their lives. Basically the evacuation activities can be described in the following phases:

(1) Warning

In Albay Province, the institutionalization of the PDMO, which is also acting as the PDCC Secretariat, has made it possible to clearly define the flow of communication between the PDCC and the C/MDCC particularly in the issuance of the notice to evacuate in case of disasters. The PDMO is equipped with the necessary communication (a 24-hour Albay Provincial Radio Communication System, 17UHF Porta Units, 2 base units, 2 repeater sets, VHF hand held radios) and transportation facilities (i.e. rescue vehicle) as well as manpower (around 35), albeit limited, to facilitate the early dissemination of the information to evacuate to the MDCCs concerned.

The PDMO acts as the communication center receiving information from PHIVOLCS or PAGASA or ROCD and other warning agencies as the case maybe and issuing advisories to those concerned which helps minimize incidence of miscommunication and confusion among the PDCC member agencies and the LGUs as well. However, the PDCC and MDCC admit to the existing problem of communication between the municipal government and the barangays particularly those in the remote areas. Hence, the upper DCCs depend mostly on the radio broadcast to relay the evacuation notice to the barangay officials as well as to the affected residents hoping for the timely receipt of such information. Other barangays have to be visited purposely by the LGU staff so that information will be communicated in time.

The results of the community surveys and the PRA sessions showed the high awareness of the residents on the alert signals and warning for typhoon while it is only fair for eruption of volcano.

(2) Order to Move

Mayon volcano eruption and lahar

In the case of the Mayon Volcano eruption, the order to move to evacuation centers will depend on the issuance of the warning by PHIVOLCS. Such decision will depend on the Mayon Volcano Alert signals which explicitly state the areas to be evacuated once a certain alert level will be reached; i.e. Alert 3 = complete evacuation in PDZ; Alert 4 = evacuation of selected HDZ areas and Alert 5 = evacuation of additional or all HDZ areas. The message will be relayed by PDCC to the concerned C/M/BDCCs to facilitate the orderly evacuation of the residents living in the affected areas. Transportation facilities are usually required since the evacuation centers are far from the places where the evacuees live. Public as well as private vehicles are mobilized to transport the residents to the evacuation centers. The residents are sometimes escorted by the local officials in going to the evacuation centers.

Typhoon

The decision that the affected families will have to be transferred to the evacuation centers is issued by the barangay captains with or without the advice from the MDCCs since they can readily assess the situation at hand. The notice to evacuate is disseminated through house-to house visits by the barangay captain, councilors and the block leaders. Each official is in charge of a particular purok which enable the local officials to disseminate the information immediately to the affected residents. Within 48 hours after the issuance of Signal No. 3 for the

typhoon, the residents are expected to transfer to the evacuation center. Within the remaining 10 or 12 hours, the P/MDCC will make the round of visits to confirm if the residents from the critical areas have followed the order to evacuate.

The affected families are advised to bring along evacuation kits such as water, food, medicines, milk for baby, flashlight, AM/FM radio receivers, and clothing. for the 1-2 days stay in the evacuation centers. However, others will not be able to follow such advice due to financial limitations. They will instead rely on the food rations to be provided by the P/M/BDCCs. In some instances, the residents refuse to leave their homes for fear of safety of their properties and livestock. Usually one or two male members of the family will remain in the house to look after their personal belongings and animals unless it is too dangerous for them to stay in the premises. This is due to the fact that the evacuation centers have no provisions nor facilities to house their livestock temporarily with the exception of the municipality of Daraga. Figure VIII 2.1 reflects the Flow of Activities related to evacuation during typhoon.

The community surveys conducted in relation to the Study showed the high awareness of the barangay officials and the residents on the areas prone to disasters due to the eruption of the Mayon Volcano as well as those caused by typhoons and floods. They based their knowledge on their past experiences as well as from the information provided by the barangay officials. Hence, they are aware of the possibility of evacuation once the critical level in both the eruption and typhoon will be reached.

In both cases of typhoon and eruption, the residents are very much aware of the identified evacuation sites which could be any of the following places: school buildings, chapel or church, barangay hall, municipal hall, private residences and buildings in their barangays or in the nearby areas. Such knowledge can be attributed to the information dissemination activities of the barangay officials. The barangay officials conduct house-to-house visits to reiterate the evacuation procedures as well as the specific site for evacuation to the affected residents.

The residents are also knowledgeable of the pick-up points that are usually located at the strategic places in the barangays such as the barangay hall, school premises or health centers in case that the evacuation centers are quite far from their homes and vehicles will be required to bring them to safe places.

The children, women, persons with disabilities and the elderly are evacuated first. There is hesitation to bring their other personal belongings to the evacuation centers particularly during typhoons since the residents are afraid that these will

just get wet during the trip since most of the vehicles (trucks) are not properly covered.

A critical factor during the movement phase is the capability of the rescue and first aid team to provide the needed medical treatment on site. There is a problem of the limited skills and equipment for rescue operations and administration of first aid treatment by the rescue teams at the M/BDCC levels. Oftentimes, the rescue teams are not trained to handle emergency cases. They also do not have the basic equipment due to limited funds for disaster preparedness activities. The patient has to be brought to the hospital for proper medication instead of being administered first aid treatment.

(3) Shelter

At the designated evacuation centers, the evacuees are registered and given room assignments. In giving room assignments, the center staff also consider the possibility of allocating rooms to families who express the intention of being together in a room. A leader per room is selected to facilitate monitoring and coordination of the evacuees.

An evacuation center is being managed by at least 5 staff for an evacuation center with acapacity for 300 families or less; and by at least 11 staff for an evacuation center with the capacity for above 300-500 families to look after the welfare of the evacuees (source: DSWD). This guideline is being observed by the Municipal Social Welfare Development Officers in the Study Area. The Principal/Head Teacher/Social Worker assumes the over-all supervision of the evacuation center.

A standard stockpile of food commodities is supposed to be maintained at the evacuation centers from 1 week to 1 month. However, due to limited or absence of storage room in the schools, arrangements have been made with the NFA to supply the needed volume of rice as requested by the DCCs. Milk is usually included to serve infants/children as their primary food supplement. Canned goods are provided to the evacuees if ready-to-eat food is not available. The rate of food assistance while in the evacuation center is as follows: 1 kilo of rice for 6 persons/meal; 1 tin of sardines for 2 persons/meal, 1 cup of milk for 10 persons and additional one (1) pack of 200 grams of milk per infant/day. Ready to eat food usually comprise of the following: boiled rice (1 pouch per person per meal) and viand (1 pouch per 2 persons per meal). Non-food items like clothing, blankets, mats, mosquito nets, kerosene lamps, candles, matches, firewood, flashlights, laundry soap, water and food containers should be stored prior to disaster months (Source: DSWD).

In the evacuation centers the most common types of assistance received by the residents are potable water, medicines, food and clothing. These are primarily provided by the government through the DSWD and the concerned LGUs. Such assistance is complemented by the non-government organizations such as the PNRC, the church-based organizations and other civic organizations.

(4) Return

During typhoons, the residents usually make the decision on their own to leave the evacuation centers once the weather becomes clear and the floods subside in the place where they live. Since the evacuation centers are located near their residences, transportation facilities are not oftentimes provided.

In the case of Mayon Volcano, their stay in the evacuation centers can last up to 3 months until PHIVOLCS lower the alert level for them to return home. The information that they can do so is usually relayed to them by the local officials. They are usually provided with transportation facilities in their return home.

2.3 Standard or Criteria in Identifying the Present Evacuation Sites

The task of providing evacuation centers during disasters is given to the Department of Education, Sports and Culture (DECS) under PD 1566. As such, most of the evacuation centers in the Study Area are the school buildings which are often not provided with the required facilities to meet the needs of the evacuees.

For the Mayon Volcano eruption, the main criterion is that the evacuation centers must be located outside the danger zones. On the other hand, those which are used as evacuation centers during typhoons must be located in areas safe from floods and should have strong roofing to protect the evacuees. The DECS Region V has come up with the updated list of safe evacuation sites. However, there is a need to reassess the situation after the aftermath of Typhoon Loleng last October. Apparently, there are still school buildings located in inundated areas.

2.4 Present Identified Evacuation Centers

The data on the evacuation centers are regularly updated by the PDMO, the DECS and the LGUs. The following table shows a total of 209 evacuation centers in the Study Area were listed by PDMO in 1998. These evacuation centers are identified for both volcanic eruption as well as typhoon and flood related evacuation activities.

Inventory of Safe Evacuation Centers 1998

Cities and Municipalities	Estimated		Land Area		Estimated		No. of Safe Evacuation Centers	Est. Total		Est. Popu-lationat Risk/ Evac. Center	Est. Floor Area/ Evacuee	No. of Evac. Center per km^2
	Popu-lationin 1998	%	km^2	%	Popu-lation at Risk	%		Floor Area m^2	%			
City												
1. Legazpi	155,786	21.70	153.70	11.67	81,191	18.47	49	5,400	12.75	1,657	3.25	0.32
Municipalities												
1. Bacacay	61,050	8.50	112.20	8.52	31,722	7.22	19	5,760	13.60	1,670	3.4	0.17
2. Camalig	55,130	7.68	130.90	9.94	31,161	7.09	13	4,908	11.59	2,397	2.04	0.10
3. Daraga	97,135	13.53	118.60	9.00	44,302	10.08	28	4,314	10.19	1,582	2.72	0.24
4. Guinobatan	69,624	9.70	203.00	15.41	45,354	10.32	11	3,840	9.07	4,123	0.93	0.05
5. Ligao	83,316	11.60	245.40	18.63	61,217	13.93	9	2,520	5.95	6,801	0.37	0.04
6. Malilipot	28,585	3.98	53.60	4.07	20,698	4.71	16	4,080	9.63	1,293	3.15	0.30
7. Malinao	35,482	4.94	107.50	8.16	29,271	6.66	17	9,360	22.10	1,721	5.43	0.16
8. Sto. Domingo	27,320	3.81	76.00	5.77	18,635	4.24	12		-	1,552		0.16
9. Tabaco	104,539	14.56	116.40	8.84	75,941	17.28	35	2,169	5.12	2,169	3.09	0.30
Study Area	717,967	100.00	1,317.30	100.00	439,492	100.00	209	42,351	100.00	24,965	24	1.84

Source: Provincial Disaster Management Office (PDMO)

Since the identified evacuation centers are not really intended to provide temporary shelter to the evacuees, the available facilities are insufficient to meet the needs of the evacuees creating discomfort specifically among the children, women, persons with physical disabilities and the elderly. This is particularly experienced during the Mayon Volcano eruption, which entails staying at the evacuation centers for at least 3 months at times. Some of the schools like the Albay Central School and the Gogon Elementary Schools were provided with additional facilities like comfort/bath rooms and communal kitchens for use of the evacuees during the 1993 eruption. However, the facilities have been in dilapidated state since these are not properly maintained after serving its intended purpose.

There are no funds allotted for maintenance of facilities by DECS and the school authorities, are seeking the assistance of the local government on this matter. Some of the evacuation sites do not even have water facilities. The LGUs have to facilitate the delivery of water by fire trucks to the evacuation centers. The maintenance of sanitation is also aggravated by the lack of water supply and the situation adds to the discomfort of the families in the evacuation centers. The toilet facilities are also not sufficient to meet the needs of the evacuees.

Due to the limited available school buildings, it is common that a classroom (around 56sq.m.) will provide accommodation to 10 families or around 55 individuals. Such a situation usually results to overcrowding and lack of privacy, common complaints expressed by the evacuees. In the 1993 eruption of Mayon Volcano, there was also the absence of back-up generators in case the power is cut off. The stay of the evacuees in the schools for prolonged period has also an effect on the studies of the schoolchildren. The teachers have to come up with remedial measures so that classes will be able to continue under the circumstances. Such measures include the merging of classes, having three shifts of classes in one day or conducting classes outside of the schoolrooms.

The existing evacuation centers have no space available for the livestock of the evacuees. It is only in Daraga that the LGU has designated an animal sanctuary (1,000sq.m.) for the livestock of the affected families. The said sanctuary is located around 5km away from the evacuation center. The transport of the animals is arranged by the Municipal Agriculturist Office (MAO). The feeds provided by the evacuees are also complemented by the MAO while the animals are in the sanctuary.

2.5 Seminars and Drills

PD 1566 mandates the regular conduct of drills as an integral component of disaster preparedness and mitigation activities. In the Study Area, the conduct of such drills is being spearheaded by the PDCC in close collaboration with the Office of the Civil Defense. OCD is the organization primarily tasked with coordinating the disaster management functions at all levels of DCCs and monitoring the overall implementation of PD 1566.

Based on the survey results, the seminars and drills being provided to the residents are focused on general subjects like eruption of the volcano, functions of the BDCC, alert and warning signals, fire drills and rescue operations.

The evacuation drill entails the bringing together of representative families from several barangays in one site. They are told to bring provisions (food, water, clothing, kitchen utensils, etc.) and do a simulation of the evacuation procedures under the supervision of the concerned agencies. The Philippine National Red Cross (PNRC) which also plays an important role in the conduct of such drills is also involved in providing courses on first aid to equip the volunteers with the knowledge and skills in handling emergency cases during the evacuation process and during the stay of the families in the evacuation centers.

In 1997, the Bureau of Emergency Assistance of the Department of Social Welfare and Development (DSWD) in collaboration with the Social Welfare and Development Training Institute (SWADTRI) has come up with the Family and Community Disaster Preparedness (FCDP) Modules. This was an attempt to integrate the various training programs being conducted by the department in relation to disaster management. The modules are envisaged to provide tools for provincial/city/municipal social welfare development workers and trained volunteers in the conduct of family preparedness sessions and community teams at the barangay level.

The FCDP is comprise of eight modules on vital topics related to disaster management for families and communities especially those in the high risk areas. In Albay Province the DSWD Region V office has since adopted the training modules in the conduct of the training activities on disaster management at the municipal and barangay levels. The module on Disaster Preparedness, Response and Rehabilitation covers the topics on the following: (a) roles and functions of service providers in disaster preparedness, response and rehabilitation; (b) operationalization of the relief and rehabilitation service committee; (c) management of stockpile; (d) management of evacuation centers; and (e) operationalization of community kitchen.

The Department of Education, Culture and Sports (DECS) is also involved in the promotion of disaster awareness and preparedness through the inclusion of lessons on this topic in the social studies and scouting subjects of the students. The children are taught the basic lessons on disasters, first aid, etc. in these subjects.

Based on the interview survey to BDCC officials, a number of BDCC staff have participated in drills on disaster preparedness and other subjects. However, the frequency of BDCCs that did not participate is also significant. With a very poor participation rate, the BDCCs can not be expected to re-echo whatever skills gained on disaster preparedness. This could probably one factor why the participation rate of barangay residents on the same subject is also poor.

3. PROBLEM RELATED TO EVACUATION SYSTEM

The problems concerning the evacuation system can be summarized as follows:

- number of evacuation center and floor area thereof are not sufficient in every municipality and barangay under present condition of hazard occurrence;
- majority of the barangays have no written disaster preparedness plans which should be the basis for the evacuation systems and procedures at the barangay level;

- limited communication facilities to link the remote barangays with their MDCCs;
- limited awareness of the residents on the alert signals for the eruption of the volcano;
- the existing evacuation centers are not designed nor equipped with the necessary facilities to meet the requirements of the evacuees;
- the number of safe evacuation centers is decreasing since the structures are mostly located in hazard-prone areas;
- limited resources of the LGUs to construct more appropriately designed evacuation centers or to improve existing ones; and
- low participation of the barangay/BDCC officials and community residents on seminars on disaster preparedness and evacuation drills.

4. PLANNING FOR EVACUATION

(1) Concept of Planning

The basic concepts adopted to plan evacuation are as follows:

- Existing evacuation center is enlarged to accommodate all the evacuee
- Existing evacuation center should be enhanced to provide more comfortable circumstance
- Emergency shelter should be provided for those who have lost the chance to go to evacuation center
- Evacuation plan should provide livestock sanctuary to protect livestock of evacuee

(2) Criteria for Planning

- Standard area of evacuation center is 3.52m^2 per person
- Standard number of toilet in evacuation center is 1/100 person
- Standard number of toilet in evacuation center is 1/100 person
- Standard number of emergency shelter is one per major rivebasin
- Standard number of livestock sanctuary is one per municipality

(3) Adopted Evacuation Facility

The contemplated main evacuation facilities are evacuation center to accommodate evacuee included installation of water supply and toilet. In this addition, those planned are emergency shelter in the field and livestock sanctuary to save livestock owned by evacuee. The estimated necessary numbers are presented in the following tables:

- Evacuation center (extension of existing center)

Bacacay	m^2	4,567
Camalig	m^2	27,511
Daraga	m^2	10,409
Guinobatan	m^2	30,186
Ligao	m^2	7,452
Malilipo	m^2	30,028
Malinao	m^2	1,175
Santo Domingo	m^2	18,309
Tabaco	m^2	32,854
Legaspi	m^2	42,268

- Installation of water supply facility to evacuation center (faucet)

Bacacay	m^2	19
Camalig	m^2	92
Daraga	m^2	41
Guinobatan	m^2	114
Ligao	m^2	29
Malilipot	m^2	4
Malinao	m^2	103
Santo Domingo	m^2	57
Tabaco	m^2	77
Legaspi	m^2	154

- Installation of toilet facility to evacuation center

Bacacay	nos	10
Camalig	nos	50
Daraga	nos	23
Guinobatan	nos	44
Ligao	nos	1
Malilipot	nos	93
Malinao	nos	3
Santo Domingo	nos	53
Tabaco	nos	53
Legaspi	nos	129

The breakdown of necessary extensions and installations are presented in the attachment tables in Supporting Report (2), Chapter XIX. Figure VIII 4.1 shows the locations of evacuation center.

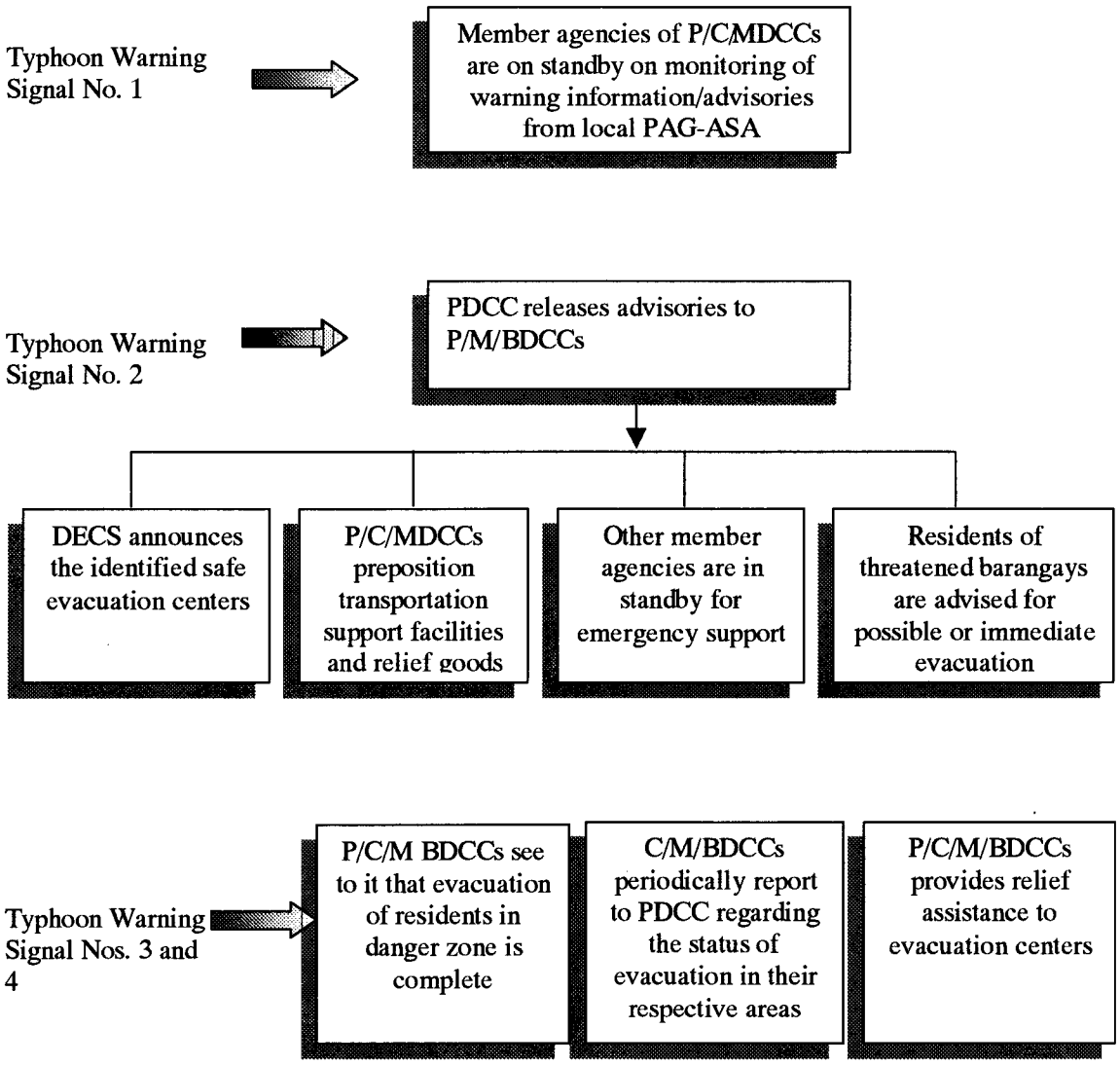
- Emergency shelter

Bacacay	nos	-
Camalig	nos	2
Daraga	nos	1
Guinobatan	nos	2
Ligao	nos	1
Malilipot	nos	2
Malinao	nos	-
Santo Domingo	nos	3
Tabaco	nos	3
Legaspi	nos	2

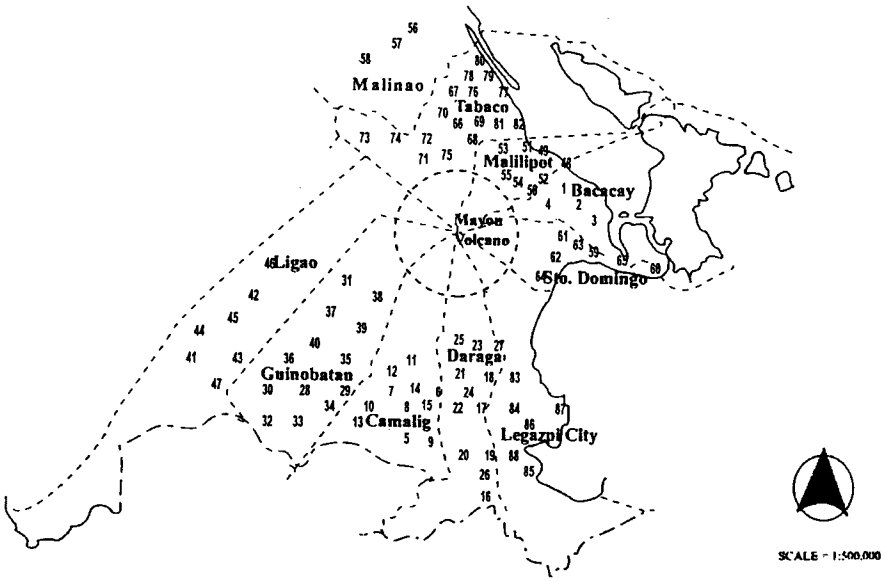
Figure VIII 4.2 shows the proposed site of emergency shelters with siren warning system.

- Livestock sanctuary

Bacacay	nos	1
Camalig	nos	1
Daraga	nos	-
Guinobatan	nos	1
Ligao	nos	1
Malilipot	nos	1
Malinao	nos	1
Santo Domingo	nos	1
Tabaco	nos	1
Legaspi	nos	1



COMPREHENSIVE DISASTER PREVENTION AROUND MAYON VOLCANO IN THE REPUBLIC OF THE PHILIPPINES	**Figure VIII 2.1** **Flow of Activities During Typhoons**
JAPAN INTERNATIONAL COOPERATION AGENCY	



No.	Evacuation Centers
1	Bacacay East Central School
2	Barangay Hall
3	Bayandong Elementary School
4	Hindi Elementary School
5	Baligang Elementary School
6	Barangay Hall
7	Bariw Elementary School
8	Camalig North Central School
9	Comon Elementary School
10	Cotmon Elementary School
11	Ilawod Elementary School
12	Libod Elementary School
13	Palanog Elementary School
14	Provincial Engineering Office
15	Taladong Elementary School
16	Anislag Elementary School
17	Bañag Elementary School
18	Barangay Hall
19	Bascaran Elementary School

No.	Evacuation Centers
20	Binitayan Elementary School
21	Busay Elementary School
22	Culliat Elementary School
23	Kilicao Elementary School
24	Daraga North Central School
25	Namantao Elementary School
26	Tagas Elementary School
27	Upper Malabog Elementary School
28	Barangay Chapel
29	Barangay High School (Site I)
30	Barangay Hall
31	Bubulusan Elementary School
32	Bicol University College of Agriculture and Fisheries
33	BUCAF Auditorium
34	Day Care Center
35	Guinobatan East Central School
36	Guinobatan West Central School

No.	Evacuation Centers
37	Lower Binogsacan Elementary School
38	Maipon Elementary School
39	Muladbucad Pequeño
40	Travesia Elementary School
41	Barangay Hall
42	Binanoan Elementary School
43	Ligao East Central School
44	Ligao West Central School
45	Ligao Municipal Technical Vocational School
46	Nabonton Elementary School
47	Tambo Elementary School
48	Binitayan Elementary School
49	Calbayog Elementary School
50	Malilipot Central School
51	Sta. Cruz Elementary School
52	San Francisco Elementary School
53	San Isidro East Elementary School

No.	Evacuation Centers
54	San Jose Elementary School
55	San Roque Elementary School
56	Balading Elementary School
57	Barangay Hall
58	Malinao Central School
59	Barangay Hall
60	Gajo Evacuation Center
61	Salvacion Evacuation Center
62	San Andres Elementary School
63	San Fernando High School
64	Sto. Domingo Central School
65	Sto. Domingo Municipal High School
66	Bantayan Elementary School
67	Baranghawon Elementary School
68	Barangay Hall
69	Barangay Hall
70	Chapel
71	Matagbac Elementary School

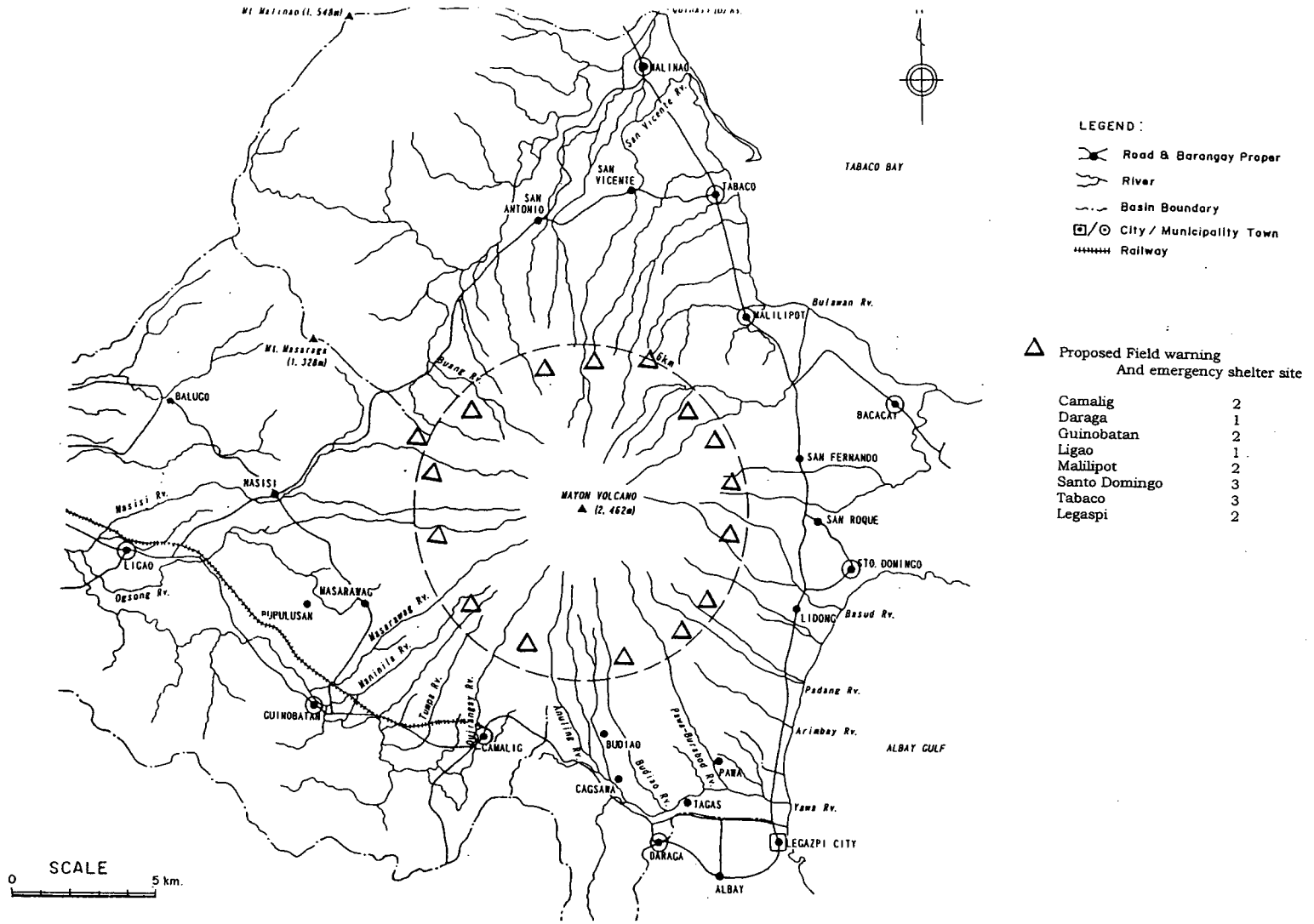
No.	Evacuation Centers
72	Pinagbobing Elementary School
73	Panal Bangkilingan Elementary School
74	Quinastillohan Elementary School
75	San Antonio Elementary School
76	San Antonio Barangay High School
77	San Isidro Elementary School
78	San Lorenzo Central School
79	Tabaco National High School
80	Tabaco North Elementary School
81	Tabaco South Elementary School
82	Tagas Elementary School
83	Albay Central School
84	Bagumbayan Elementary School
85	Bitano Elementary School
86	Cabangan Elementary School
87	Gogon Elementary School
88	Taysan Elementary School

COMPREHENSIVE DISASTER PREVENTION AROUND MAYON VOLCANO IN THE REPUBLIC OF THE PHILIPPINES

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure VIII 4.1

Location of Evacuation Centers in the Study Area



COMPREHENSIVE DISASTER PREVENTION AROUND MAYON VOLCANO IN THE REPUBLIC OF THE PHILIPPINES

JAPAN INTERNATIONAL COOPERATION AGENCY

Figure VIII 4.2

Proposed Site for Siren Station and Emergency Shelter