

Disaster Management Plan Patong Municipality of Phuket

(as of 20 May 2008)

I. Landslide, Inundation and Flashflood

1. Background

The global warming conditions caused natural phenomena such as El Nino throughout the world and Thailand has also been impinged on this phenomena. Besides, Thailand is situated in tropical zones and is normally been affected by natural disaster and caused loss of lives and properties especially in the southern part of Thailand. Phuket is one of the Andaman coastal provinces and has frequent rainfalls for 8 months. As a result, it is necessary to provide emergency response plan in advance. Since watershed areas are saturated before landslide, flashflood and inundation.

2. Current Situation

PMP has its areas approximately 16.4 square kilometers and the main areas are mountainous while basin areas are very expensive. Because of the above mentioned reasons, people live in crowded areas, PMP residents and entrepreneurs build up their living places and invade natural resources zones. Moreover, the heavy downpours is the major cause of landslides because lack of plants covering the soil surface.

From the Department of Mineral Resource's research regarding using GIS, finding the chances of landslide and flashfloods in PMP due to the heavy rains.

3. Objectives

- 3.1 To provide the prevention measures and coordinate among concern agencies including the main responsibility agencies and operation units. Moreover, the effective and timely responses will prevent and correct flood and landslide.
- 3.2 To reduce losses of lives and properties
- 3.3 To evacuate the victims to safety areas systematically without panic.

4. Procedures for Emergency Management

4.1 Ad Hoc Center Establishment

Set up Civil Defence Commanding Center (Ad Hoc Directing Center) for landslide, flashflood and inundation at Patong Municipality, Phuket and PMP Mayor takes charges as a commander until the assistance procedure ending.

4.2 Incident Commander Set up

Enable to transfer Commanding Center to the incident areas according to properly command, direct and control disaster situation.

4.3 Before disaster

4.3.1 Information & Data Collection

- Update and revise landslide and inundation data and information and shelter areas annually by Disaster Prevention Division and Civil Works Division PMP

4.3.2 Emergency Plan Preparation

- Prepare Landslide and inundation Emergency planning with the concerned agencies collaboration by Disaster Prevention Division, PMP

4.3.3 Vigilant Team Establishment

- Provide Vigilant Team for monitoring the weather and receiving information from Department of Meteorology 24 hours by Disaster Prevention Division, PMP

4.3.4 Mobile Unit Team Set Up

- PMP Mobile Unit Team is composed of officials, vehicles, equipment such as flashlights, fireworks and whistles

4.3.5 Early Warning System Installation

- The concerned government agencies will install Early warning system and manual rain gauge in risk prone areas and assign Mr. Disaster Warning to record the amount of rainfalls and monitor the situation for public warning.

4.3.6 Flood Prevention Measures

- Install water pumps at flood risk prone areas by Sanitary Works Division, PMP
- Prepare water drainage areas and reservoirs at the watersheds and designate officials to survey canals, drainage and spillways at the mountains by public works Division, PMP. In case of discovering any blockage and sediments, PMP officers must correct such problems and report to their supervisors.

4.3.7 Exercises Drills

- Conduct landslides and inundation evacuation drills at least twice a year.

4.3.8 Public Relations and Information Dissemination

- Disseminate weather forecasting and warning of Department of Meteorology to the public for disaster preparedness by Public Relations Division, PMP.

4.3.9 Shelter Assessment

- Arrange the shelters for victims and provide the evacuation routes to safety places by PMP.

4.4 During Disaster

Procedures

- 4.4.1 Whenever vigilant team at Disaster Prevention Division, PMP receives report of landslide or inundation occurrence in the specific areas, it has to press the button to report the person in charge and report urgently to the supervisor respectively.
- 4.4.2 PMP Mayor works as a Civil Defence Commander at PMP orders mobile unit teams to assist the victims and evacuate them to safety places.
- 4.4.3 Disaster Prevention Division, PMP is in charge to control disaster situation. However, if the incident is beyond its capability, PMP needs to request the assistances from nearby agencies such as Katu Municipality, Phuket Provincial Office, Local Road Department, Disaster Prevention and Mitigation, Phuket Office etc. Besides, PMP reports the situation to Katu District and Phuket Province from time to time until the situation gets back to normal stage.
- 4.4.4 The vigilant team coordinates with Patong Electricity Authority to cut off the electricity while disaster occurs according to the Civil Defence Commander (PMP Mayor) order.
- 4.4.5 The roads and traffic are controlled and prohibited unconcerned people to disaster areas by policemen from Katu District.
- 4.4.6 The policemen will be assigned to protect victims' properties and work together with Civil Defence Volunteers for victims' security.
- 4.4.7 Patong Hospital and Medical Team of Health and Environment Division, PMP responsible for medical treatment at the shelters.
- 4.4.8 City Patrol Division and Disaster Prevention Division, PMP under the supervision of Municipal Clerk Office will provide vehicles to evacuate victims to safety areas.

- 4.4.9 Public Relations Division, PMP will disseminate information, broadcast the evacuation routes via radio towers and mobile vehicles to shelters, inform the update situation in order to lessen local residents' panic. Moreover, this division will contact with the media for information distribution.
- 4.4.10 Revenue Division, Health Division and Social Welfare Division, PMP are responsible for providing foods, water for consumption and necessities in the shelters.

4.5 After Disaster

After the situation recovers to normal situation, Mayor as the Civil Defence Commander will assign as the follows;

Rehabilitation

- 4.5.1 Patong Hospital is in charge of medical treatment; nevertheless in case of severe illness the hospital will refer the patients to provincial hospitals.
- 4.5.2 Social Welfare Division and Public Works Division, PMP will survey and investigate the infrastructure damages, losses of live and property for assistance such as death report, injured, estimated damages to property, houses, livestock, agricultural farmlands and etc.
- 4.5.3 Public Relations officials and psychologists to put their extremely and equivalent efforts to alleviate and create victims' confidences by mental treatment. Besides, PMP will also facilitate the victim assistances with government organizations, private sectors, foundation and etc.
- 4.5.4 Social Welfare Division, Revenue Division and Education Division will be designated to provide foods, water consumption and necessities for victims.
- 4.5.5 Social Welfare Division and Education Division will be assigned to provide temporary shelter until victims return to their homes.
- 4.5.6 Municipality Clerk Office and Social Welfare Division will be collaborated and coordinated with Red Cross, Phuket Office, Civil Defence Volunteer, private sectors, foundations, DDPM Phuket Office for victim assistances.
- 4.5.7 Public Works Division will be assigned to repair damages as soon as possible and in case of unable to renovate the severe damages; all debris must be removed for people's safety.

- 4.5.8 Division of Civil Defence Committee at Municipal level will be delegated for basic relief provision by PMP budget. Moreover, the beyond budget allocation will be supported by higher level organization.

5. Related Operation Units

Main Responsible Division

- 5.1 Disaster Prevention Division, PMP

Supporting Operating Division

- 5.2 Public Works Division
- 5.3 Health and Environment Division
- 5.4 Social Welfare Division
- 5.5 Education Division
- 5.6 Sanitary Works Division
- 5.7 Revenue Division
- 5.8 Plan and Policy Division

Co-operation Agencies

- 5.9 Patong Electricity Authorities, Katu District, Phuket
- 5.10 Katu Police Station, Katu District, Phuket
- 5.11 Patong Hospital
- 5.12 Provincial Disaster Prevention and Mitigation Office, Phuket
- 5.13 Foundations
- 5.14 CG members
- 5.15 Civil Defence Volunteer
- 5.16 Provincial Thai Red Cross, Phuket Office
- 5.17 Tourist Security Unit, Royal Thai Navy
- 5.18 Private sectors and entrepreneurs

6. Recommendation

- 6.1 This PMP emergency plan will be affected from...(Dated, year).....
- 6.2 The operation divisions will be restricted to conduct according to the plan and have to provide adequate equipment during disaster.
- 6.3 In case of some problems occur, the officers in charge need to be reported the situation to upper levels.
- 6.4 All related agencies have to summarize conclusion report and evaluate the operation since the beginning procedures to detect some obstacles and problem to propose the revision and recommendations to executive levels for next year.

7. Line of Command

- 7.1 Directing Center (Ad Hoc Center) of Patong Municipality, Phuket for landslide, inundation and flashflood management is composed of
- | | |
|---|--------------------------------|
| 7.1.1 Patong Municipality Mayor | Director |
| 7.1.2 Deputy Patong Municipality Mayor (3 people) | Deputy Director |
| 7.1.3 Municipal Clerk | Deputy Director |
| 7.1.4 Deputy Municipal Clerk | Deputy Director |
| 7.1.5 Division Director | Member |
| 7.1.6 Chief of Administrative Sub-Division | Member |
| 7.1.7 Chief of Municipal Clerk Office | Member and Secretary |
| 7.1.9 Chief of Disaster Prevention Division | Member and Assistant Secretary |
- 7.2 During normal situation, line of command is accordance to the former chain of command. Therefore, Disaster Prevention Division, PMP is responsible for arrangement personal in charge, vehicles, equipment and utilities preparedness under the supervision of Chief of Disaster Prevention Division, PMP. Moreover, DPD, PMP will provide mobile vehicles after receiving emergency calls.
- 7.3 While fire occurs, PMP Mayor as a commander will order all officers to stand by at the Ad Hoc Center excluding the line under Ministry of Defence

8. Communication System

- 8.1 Disaster Prevention Division, PMP Hot line numbers will be reached at 342-600 or 199 and also provide the vigilant team 24 hours
- 8.2 Radio Communication Network System at the frequency 162.550 MHZ is located at Disaster Prevention Division, PMP which is called "Patong Center" and officers are available 24 hours
- 8.3 The concerned agency networks are available from their telephone lists

9. Budget

The central budget is provided for emergency or necessary assistances.

II. Fire

1. Background

According to Thailand's rapid growth, people applied new technology and increased to employ more hazardous material and chemical for their effective improvement. Moreover, since Thai society expanded and more forest invaded by people caused more migrated to the city. Because of this reason, the urban cities are crowded with commercial buildings, office buildings, residential areas, hotels and industry factories, whereas, the environment is ruined and destroyed by the speedy development.

From the mentioned earlier, the advance technology and productive industry are the main cause of complex disaster such as fire in high rise buildings, chemical leakages and gas explosion, road accident and oil spills.

2. Current Situation

Since the beautiful sceneries of Patong Beach, attracting more local visitors, foreign tourists and entrepreneurs would like to visit and invest in PMP such hotels, entertainment places, small shops, souvenir shops commercial buildings, department stores, pubs and restaurants. PMP society had been changed from rural areas to urban and very crowded without city planning. Houses and small roads had been constructed and caused inconvenient for traffic control and crowded. Commercial billboards structure constructed over the limit and untidy and electric wires installation are very dangerous for fire in city areas.

Consequently, every year climate change situation causes more dried weather from January to May. Besides, dried grasses, reckless grass burning and strong winds are the main causes of fire incident and fire spreads out extensively to households and properties. Moreover, the careless burning of incense for worship could be burned the properties.

3. Objectives

- 3.1 To use as guidelines for fire management and coordinate with other concerned agencies during the operation.
- 3.2 To decrease lose in live and property as well as rehabilitate the damages to normal stage.

4. Procedure

4.1 Ad Hoc Center Establishment

- Establish the Commanding Center (Ad Hoc Center) at PMP for coordinating, commanding, supervising, controlling and directing until disaster situation returns to normal stages.

4.2 Incident Command Set up

- Able to reposition commanding center nearby the emergency sites for easily to command, control, coordinate and collaborate during disaster.

4.3 Before disaster

4.3.1 Vigilant Team Establishment

- Provide vigilant team for receiving emergency calls 24 hours.
- Assign mobile unit team including fire engines, water trucks, portable fire engines and equipments to work 24 hours at Disaster Prevention Division, PMP

4.3.2 Fire Extinguisher Installation in the risk community

- Install fire extinguishers at communities and fire risk prone areas in order to suppress before fire spreads out and mobile unit arrives.

4.3.4 Water Sources Preparation

- Survey water sources such as main water pipeline (trunk main) of Provincial Water Works Authority, Phuket Province, water treatment plant, canal in front of Disaster Prevention Division including seas for severe fire suppression.

4.3.5 Drills & Exercises

- Conduct fire exercise drills with the collaboration of private sectors at least twice a year.

4.4 During Disaster

Procedures

4.4.1 Whenever the vigilant team is received emergency calls and known specific fire incident, in charge official will press the button and inform responsible officials via speakers as well as report to commander respectively.

4.4.2 PMP Fire Commander will dispatch mobile unit team to emergency site and assess situation. In case of beyond PMP's capability, PMP will request assistances from neighboring Municipalities such as Katu Municipality as well as report to district and province respectively.

- 4.4.3 Vigilant team (Radio Communication center officer in charge) will collaborate and phone concerned agencies for example Provincial Water Work Authority for water supply at telephone number 076-321-515, Katu District Police Station at 076-342-721, 076-342-719 or 191 and Electricity Authority to terminate service for operational safety at 076-211-663.
- 4.4.4 Policemen will control traffic and separate irrelevant people from the emergency areas to operate effectively.
- 4.4.5 Policemen will conduct security measures regarding assault against persons and properties at the fire areas and dispatch Civil Defence Volunteers to cooperate with them until the situation return to normal situation.
- 4.4.6 Public Relations Division, PMP will report fire situation to the public and officials' operation to lessen people's panic and release news to media.
- 4.4.7 Dispatch Medical Treatment Team form PMP Health and Environment Division and Patong Hospital to activate the treatment at emergency site and transfer severe patients to hospital for continuous treatment.
- 4.4.8 Public Works Division, PMP will dispatch officials to fire suppression, evacuate residents and property to safety areas.
- 4.4.9 Fire Commander will assign Civil Defence Volunteer Team as well as foundations to collaborate with fire brigade team to put out fire and other matter designation.
- 4.4.10 As soon as fire is extinguished, fire brigade team will be ordered by fire commander to check all equipments and mobilize personnel back to command unit for vehicle condition and equipment inspection for next mission.

4.5 After Disaster

Rehabilitation Stage

- 4.5.1 Public Works Division, Municipality Clerk Office will provide vehicles to move victims and properties to shelters.
- 4.5.2 Municipality Clerk Office (Disaster Prevention Division and City Patrol Division), Social Welfare Division, Public Works Division will survey, record and gather injured people, dead persons data. Moreover, they will evaluate damage values such as cost of building and household, consequently, urgent report to supervisors and provincial office.

- 4.5.3 Social Welfare Division, Education Division and Revenue Division will arrange temporary shelters, provide food, consumption water and necessities to victims as well as personnel in charge.
- 4.5.4 Social Welfare Division and Municipality Clerk Office will coordinate, collaborate and facilitate with Provincial Thai Red Cross, Phuket Office, Civil Defence Volunteers, private sectors, Provincial Disaster Prevention and Mitigation, Phuket Office, including foundation viz; Kusoltham Foundation and Ruam Jai Ku Pai Foundation to assist victims.
- 4.5.5 Crime Inspection Police, Kuta District Police Station will investigate fire cause.
- 4.5.6 Kuta District Police will control and block fire scene for crime avoidance until the commander dismiss his order.
- 4.5.7 Public Relations Division will inform public regarding current situation as well as facilitate donations from concerned agencies, foundations and release news to the media.

5. Related Operation Units

Main Responsible Division

- 5.1 Disaster Prevention Division, PMP

Logistics Division

- 5.2 Public Works Division
- 5.3 Health and Environment Division
- 5.4 Municipality Clerk Office
- 5.5 Social Welfare Division
- 5.6 Education Division
- 5.7 Sanitary Works Division
- 5.8 Revenue Division
- 5.9 Plan and Policy Division
- 5.10 Provincial Water Works Authority, Phuket Office

Co-operation Agencies

- 5.11 Patong Electricity Authority, Katu District, Phuket
- 5.12 Katu Police Station, Katu District, Phuket
- 5.13 Patong Hospital
- 5.14 Provincial Disaster Prevention and Mitigation Office, Phuket
- 5.15 foundations
- 5.16 CG members
- 5.17 Civil Defence Volunteer
- 5.18 Provincial Thai Red Cross, Phuket Office

5.19 Tourist Security Unit, Royal Thai Navy

5.20 Private sectors and entrepreneurs

6. Recommendation

6.1 This PMP Fire emergency plan will be affected from...(Dated, year).....

6.2 The operation divisions will be restricted to conduct according to the plan and have to provide adequate equipment during disaster.

6.3 In case of some problems occur, the officers in charge need to be reported the situation to upper levels.

6.4 All related agencies have to summarize conclusion report and evaluate the operation since the beginning procedures to detect some obstacles and problem to propose the revision and recommendations to executive levels for next year.

7. Line of Command

7.1 Directing Center (Ad Hoc Center) of Patong Municipality, Phuket for fire management is composed of

7.1.1 Patong Municipality Mayor	Director
7.1.2 Deputy Patong Municipal Mayor (3 people)	Deputy Director
7.1.3 Municipal Clerk	Deputy Director
7.1.4 Deputy Municipal Clerk	Deputy Director
7.1.5 Division Director	Member
7.1.6 Chief of Administrative Sub-Division	Member
7.1.7 Chief of Municipal Clerk Office	Member and Secretary
7.1.8 Chief of Disaster Prevention Division	Member and Assistant Secretary

7.2 During normal situation, line of command is accordance to the former chain of command. Therefore, Disaster Prevention Division, PMP is responsible for arrangement personal in charge, vehicles, equipment and utilities preparedness under the supervision of Chief of Disaster Prevention Division, PMP. Moreover, DPD, PMP will provide mobile vehicles after receiving emergency calls.

7.3 While Disaster occurs, PMP Mayor as a commander will order all officers to stand by at the Ad Hoc Center except the officials under Ministry Defence.

8. Communication System

- 8.1 Disaster Prevention Division, PMP Hot line numbers will be reached at 342-600 or 199 and also provide the vigilant team 24 hours
- 8.2 Radio Communication Network System at the frequency 162.550 MHZ is located at Disaster Prevention Division, PMP which is called "Patong Center" and officers are available 24 hours
- 8.3 The concerned agency networks are available from their telephone lists

9. Budget

The central budget is provided for emergency or necessary assistances

III. Tsunami

1. Current Situation

Tsunami is a series of created by a sudden displacement of large volume of water due to the vertical movement of the sea floor as a result of large thrust-type submarine earthquakes, submarine volcanic eruptions, or coastal landslides. The Pacific Ring of is an area of frequent earthquake.

The increasing number of earthquakes at the present time increases the chance of contributing high risk of tsunami. Similarity to the Indian Ocean tsunami of 26th December, 2004 at 7.50 a.m., measuring 9.3 Richter. The tsunami struck and its epicenter off the coast of Indonesia's Sumatra. The earthquake generated a disastrous tsunami that caused massive destruction in Phuket Province, 279 died, 1,111 injured, and 478 missing. Since then, there were many earthquakes occurred in Patong Beach, but had not damages to lives and properties.

Since Patong Beach, Phuket is a well-known tourist destination, there are at least 4 million tourists visiting per year. Besides, Patong Municipality with the cooperation with concerned government agencies such as Department of Disaster Prevention and Mitigation, National Disaster Warning Center, and Department of Meteorological provide the early warning system, warning towers along the Andaman Coastal to ensure the safety of lives and prepare in advance for future tsunami.

2. Objectives

- 2.1 To provide the disaster preparedness and reduce lose of live and property
- 2.2 To establish a systematic and efficient evacuation procedures which ensure safety without people's panic and confusion while their evacuation.

3. Procedures

3.1 Designated tsunami risk prone area

The vulnerable to tsunami prone areas starting 50 meters from the beach to the coast and it is divided into 7 zones as the follows;

Zone	Tsunami Risk Prone Areas	Safety Zones
1	Prabarami Road, Soi Prabarami 7 - 990 Local residents/entrepreneurs - 50 tourists	Nak Kerd Mountain (distance 500 meters)
2	Chalermprakiat Road/Prabarami Road - 600 Local residents/entrepreneurs - 170 tourists	Nak Kerd Mountain (distance 500 meters)

Zone	Tsunami Risk Prone Areas	Safety Zones
3	Sawadirak Road/ Chalermprakiat Road - 600 Local residents/entrepreneurs - 170 tourists	1. Thru Raduthit 200 years Road, Siam Commercial Bank side (distance 500 meters) 2. PMP kindergarten school field (distance 600 meters)
4	Bang La Road/ Sawadirak Road - 500 Local residents/entrepreneurs - 300 tourists	1. PMP kindergarten school field (distance 600 meters) 2. Soi Sean Sabai (distance 600 meters)
5	Soi Keb Sap, Bang La Road - 300 Local residents/entrepreneurs - 700 tourists	1. Soi Sean Sabai (distance 600 meters) 2. The front of Christine (distance 400 meters)
6	Klong Pak Bang, Soi Keb Sap - 270 Local residents/entrepreneurs - 700 tourists	1. OTOP Center (distance 500 meters) 2. Coconut Y Junction (distance 600 meters) 3. Coral Beach Bridge (300 meters)
7	Tri Trang Beach, Pak Bang Canal - 150 Local residents/entrepreneurs - 20 tourists	1. Coral Beach Bridge (300 meters) 2. Yindee Hotel (800 meters)

3.2 Prevention Measures

3.2.1 **Early Warning System Installation** in 3 locations

- At the roof top, Sun Set beach Resort (Ban Kalim), Patong Beach
- Tourist Information Center, Patong Beach
- At the roof top, Sea View Patong Hotel, Patong Beach

Those above mentioned early warning towers will be received warning dissemination signals directly from National Disaster Warning Center, Nonthaburi Province.

3.2.2 **Observation Tower installation** is to provide tourist and local resident assistance.

3.2.3 **Law Enforcement** for resident building construction controlled, 1 kilometer away from the beach and in risk prone areas.

3.2.3 **Structure Measures** by dams and dykes construction

3.2.4 **Environment conservation and mangrove plantation**

3.2.6 **Training to the public** such as local people, students, entrepreneurs, concerned agencies for raising awareness regarding tsunami in order to self-preparedness.

3.2.7 **Drills and Exercises** at least once a year

3.2.8 **Pictorial Signs, Warning Signs, evacuation route Installation** in order to inform the people and tourists to evacuate to safety place.

3.3 Evacuation Procedure

PMP sets up Ad-Hoc Directing Center (Civil Defence Volunteer Directing Center). PMP Mayor will in charge as a Commander for evacuation procedure.

4. Operation Procedures

4.1 Before Disaster PMP Operation

4.1.1 Collaboration with concerned Agencies

PMP with the collaboration with other concerned agencies such as Royal Thai Navy, Police, Patong Hospital, private sectors, Amateur Radio Association and etc. have prepared Tsunami Master Plan including evacuation procedures. This master plan is revised every year.

4.1.2 Tsunami Exercises and Drills

PMP has conducted tsunami drills with the public and private sectors including schools and related agencies at least once a year.

4.1.3 Brochures and Manual Distribution

PMP has distributed brochures and tsunami protection manual to the public regularly.

4.1.4 Public Relations

PMP will provide the knowledge of evacuation procedure by broadcasting via radio towers, leaflets, brochure or mobile van.

4.1.5 Training

Education Division, PMP will disseminate tsunami knowledge to school students, local residents and entrepreneurs how to handle disaster and procedures for their safety.

4.1.6 Public Awareness, Disaster Preparedness and Environment Development in disaster risk prone areas

4.1.7 Safety Area Designated and Shelters

4.1.8 Pictorial Signs, Tsunami Evacuation Sign and Evacuation Routes Establishment

4.1.9 Search and Rescue Team and rescue Equipment Preparation

PMP will set up SAR team and rescue equipment in advance for rescue operation such as flashlights, fireworks, whistles, safety jackets, ropes and Radio Communication equipment and etc.

4.1.10 Vigilant Team Establishment

Radio Communication Officers, PMP will observe and listen to the situation from National Disaster Warning Center, radio stations, Televisions around the clock.

4.1.11 Food and Necessity consumption Preparation

4.1.12 Early Warning Installation

- Observation Towers, PMP will provide beach guards along the Patong Beach for tourists' security.
- Early Warning Towers Installation which will receive warning signals directly from National Disaster Warning Center, Nonthaburi via satellites.

4.2 During Disaster

When National Disaster Warning Center informs the public regarding the chances of tsunami in risk provinces via media such as T.V. and radio stations including satellites via warning towers and mobile phones, basic telephone lines, people will be evacuated to safety shelters. As a Director of Ad-Hoc Center (Civil Defence Director), PMP Mayor will assign, order, control and facilitate to evacuate people according to tsunami plan as the follows;

4.2.1 Pubic Relations

PR Division, PMP will inform warning information to the public via radio towers in communities. PMP Vigilant vans will disseminate the tsunami warning messages to people and tell them to calm down and evacuate to shelters along evacuation routes as their drill practices.

4.2.2 Incident Command System

- **PMP Mayor** is in charge as a commander and he will order to evacuate according to tsunami plan.
- **Evacuation Team** will Prioritize special needs people to evacuation such as disability people, old people, children and women.
- **Evacuation Team with the collaboration of PMP** will prepare the list of evacuees by zones.
- **Security Team, Policemen and Civil Defence Volunteer** will mobilize human resources to protect public and people properties until the disasters get back to normal situation.

4.2.3 Supporting Unit (Logistics) will facilitate for shelter preparation, food, drinking water, consumption and necessities to the victims and operational officers. Besides, the supporting unit will contact concerned agencies to support infrastructure and donation system for victim assistance systematically, rapidly and equitability.

4.2.4 Public Relations Division, PMP and Evacuation Team will inform updated disaster situation for reducing people's panic.

****** In case of tsunami is not occur in Patong Beach, PMP Mayor will end the evacuation and inform people to evacuate back to their places.*

4.3 After Disaster

4.3.1 Evacuation Back Procedure

1. People

After being be informed by PMP Mayor regarding tsunami will not have chances to occur, or the situation is over, people will prepare to evacuate back to their homes and collect their belongings. The officers will notify people to the point of evacuation back.

2. Community Leaders

They will work closely with PMP evacuation team to orderly and systematically prioritize evacuees.

3. Vehicles and evacuee list

Evacuation Team and Search and Rescue Team will prepare vehicles and evacuation list.

4.3.2 Rehabilitation and Recovery

1. Damage Assessment

PMP will survey for death people, injured and missing people and assess the value of loss of properties and lives. Furtherly, the officers will urgently report the damage assessment to their supervisors.

2. Rehabilitation Stage

After surveying damages, PMP and concerned agencies such as Electricity Authority, Patong and Water Works Authority, Phuket will rehabilitate damages household and infrastructure as soon as possible.

5. Incident Command at Normal Situation and during disaster

The chain of Command system will keep to the line of command in each organization whereas the tsunami warning is informed all concerned agencies will implement under PMP Mayor, Civil Defence Volunteer Directing Center. Except for Military will be supervised under Ministry of Defence.

6. Communication system

6.1 National Disaster Warning Center (NDWC)

NDWC is a main responsible government agency to disseminate via satellite early warning to all concerned agencies 24 hours at the normal stage and during disaster.

6.2 Communication System

PMP is abided by the conception of rapid, updated, convenient and efficient communication system from many channels which are supplementary and supporting one another.

ANNEX

Annex A

A-1 PMP Civil Defence Commander

i. Personnel in charge for landslide and inundation Emergency Planning of PMP

Name	Position	Office Telephone Number	Mobile Phone
1. Mr.Pian Keesin	PMP Mayor	076- 342-694	084-4481336
2. Mr.Somchai Burarak	Deputy PMP Mayor	076-340-345	089-5947382
3. Mr.Chairat Sukaban	Deputy PMP Mayor	076-342-694	081-8916256
4. Mr.Worarat Tongyon	Deputy PMP Mayor	076-344-495	084-3070788
5. Mrs.Amporn Maneesri	PMP Mayor Consultant	076-345-203	089-8129601
6. Mr.Phunsak Naksena	Municipal Clerk	076-342-080	081-8946493
7. Mr. Supat Ratanasamahan	Deputy Municipal Clerk	076-345-608	089-1973335
8. Mrs.Somchit Limpatanawong	Deputy Municipal Clerk	076-34-2080	089-9689137
9. Mrs.Boonsong Nawarak	Acting Chief of Municipal Clerk Office	076-344-972	081-8949078
10. Mr.Sompol Kwanyeun	Acting Director of Civil Works Division	076-342-630	089-7330737
11. Mr.Supanat Mirin	Acting Director of Sanitary Works Division	076-345-371	089-1911998
12. Mrs.Uthaiwan Phensawat	Director of Revenue Division	076-345-775	
13. Police Corporal Wirat Chinda	Director of Public Health Division	076-345331	081-8968963
14. Mr.Samreung Potchatarn	Director of Education Division	076-342-078	081-979-9984
15. Ms.Mantita Chailert	Director of Policy and Plan Division	076-345-456	081-8945054
16. Mrs.Boonsong Nawarak	Acting Director of Social Welfare Division	076-345-204	081-8949078
17. Mr.Wisit Metasoontornpoj	Chief of Disaster Prevention Division	076-342-600	084-0613019
18. Mr.Sompong Jiamtua	Acting Chief of City Patrol	076-340-843	081-8946747

Name	Position	Office Telephone Number	Mobile Phone
19. Mrs.Taweepol Promkeao	Chief of Public Relations	076-344-275	081-6770121
20. Mr.Surasak Chantaluk	Chief of Electricity Division	076-342-278	087-2806487
21. Patong Hospital	Director	076-342633	
22. Katu Police Station	Commander	076-342719 076-342721	
23. Patong Electricity Authority	Manager	076-211663	
24. Water Works Authority	Manager	076-321515	
25. Royal Thai Navy Security		076-341197	
26. Mr.Chairat Sukaban	Chair of Civil Defence Volunteer	076-342600	081-8916256
27. Mr.Chotenarin Kerdson	Chief DDPM Provincial Office, Phuket	076-273019	089-9696756
28. Mr.Krisada Tansakul	Chief of Hotel Society		081-6933240

ii. Personnel according to landslide and inundation Emergency Planning of PMP

Responsibility	Responsible people	Office Telephone
Procedures		
1. Directing Center		
1.1 Facilitate, direct, control and monitor operational officers to work according to landslide and inundation Emergency Planning	1. PMP Mayor (Mr.Pian Keesin)	076-342-694
	2. Deputy PMP Mayor (2.1 Mr.Chairat Sukban) (2.2 Mr.Somchai Burarak) (2.3 Mr.Woranat Tongyon)	076-342-693
1.2 Correct and solve problems	3. Municipal Clerk (Mr.Phunsak Naksena)	076-342-080
1.3 Provide recommendation and collaborate with other related agencies	4. Deputy Municipal Clerk (Mrs.Somchit Limpatanawong)	076-342-080
	5. Acting Director of Public Works Division (Mr.Phunsak Naksena)	076-342-630
	6. Director of Public Health Division (Police Corporal Wirat Chinda)	076-344-106
	7. Acting Director Sanitary Works Division (Mr.Supanat Mirin)	076-345-371

Responsibility	Responsible people	Office Telephone
	8. Director of Revenue Division (Mrs.Uthaiwan Phensawat) 9. Director of Education Division (Mr.Samreung Potchatarn) 10. Acting Chief of Municipal Clerk Office (Mrs.Boonsong Nawarak) 11. Acting Chief of Policy and Plan Sub-Division (Ms.Mantita Chailert) 12. Acting Chief of Social Welfare (Mrs.Boonsong Nawarak) 13. Chief of Administrative Office (Mr.Wisit Metasootornpoj)	076-345-775 076-342-078 076-344-255 076-345-456 076-345-204 076-342-600
2. Emergency Receiving Calls and Operation Center Unit		
2.1 Receive Emergency Calls and report to commander	1. Chief of Administrative Office (Mr.Wisit Metasootornpoj)	076-342-600
2.2 Prepare Evacuation by Search and Rescue Team	2. Acting Chief of Disaster Prevention Sub-Division (Mr.Paitoon Polrop)	
2.3 Coordinate with concerned agencies such as Patong Electricity Authority	3. Radio Communication Officers	
2.4 Monitor and follow-up the weather forecasting and amount of rainfalls closely and report to commander		
2.5 Control the operation procedure according to the plan		
3. Logistic Units		
3.1 Provide sufficient tools and equipment by Public Works Division and Sanitary Works Division.	1. Acting Chief of Public Works (Mr.Phunsak Naksena) 2. Acting Chief of Sanitary Works (Mr.Supanat Mirin)	076-342-630
3.2 Support and facilitate vehicles, officials during victims and property evacuation and assist evacuees back by Public Works Division, Municipality Clerk Office (City Patrol Works, Disaster Prevention Division)	1. Acting Chief of Public Works (Mr.Phunsak Naksena) 2. Acting Chief of Municipal Clerk Office (Mrs.Boonsong Nawarak)	076-342-630 076-344-255

Responsibility	Responsible people	Office Telephone
3.3 Provide officials to survey and gather damages information including losses of lives properties to report the commander by Public Works, Clerk Municipality Office and Social Welfare Division	1. Acting Chief of Public Works (Mr.Phunsak Naksena) 2. Acting Chief of Municipal Clerk Office (Mrs.Boonsong Nawarak)	076-342-630 076-344-255
3.4 Arrange temporary shelters at Kalim school by Social Welfare Division and Education Division	1. Director of Social Welfare Division (Mrs.Boonsong Nawarak) 2. Director of Education Division (Mr.Samreung Potchatarn)	076-245-204 076-342-078
3.5 Provide consumption water, food and necessities including donation from the public until the victims enable to back to their normal lives by Social Welfare Division, Revenue Division and Education Division	1. Director of Social Welfare Division (Mrs.Boonsong Nawarak) 2. Director of Revenue Division (Mrs.Uthaiwan Phensawat) 3. Director of Education Division (Mr.Samreung Potchatarn)	076-245-204 076-345-775 076-345-078
3.6 Facilitate and co-ordinate with Provincial Thai Red Cross, Civil Defence Volunteer, public sectors, foundations and Provincial Budget Bureau Office to afford victim assistances by Social Welfare Division and Clerk Municipality Office	1. Acting Director of Social Welfare Division (Mrs.Boonsong Nawarak) 2. Chief of Clerk Municipal Office	076-345-205
3.7 Public Relations Division is responsible for public dissemination as the follows Before disaster Inform local residents to follow-up and closely observe weather broadcasting from Department of Meteorology	Acting Director of Plan and Policy Division (Ms.Mantita Chailert)	

Responsibility	Responsible people	Office Telephone
<p><i>During disaster</i></p> <p>Disseminate and update disaster situation besides inform and facilitate for residents' evacuation to safety areas. Moreover, notify victim assistance process to local residents in order to reduce their panics.</p> <p><i>After Disaster</i></p> <p>Provide psychologists and public relations officials to conduct mental treatment and ensure victims' confidence regarding equal government and private sectors assistances.</p> <p>Facilitate victim assistance according to their requirement</p> <p>Release disaster information to medias</p> <p>4. Co-operation Agencies</p> <p>4.1 Order Patong Electricity Authority to break electric circuit according to PMP Civil Defence Director commanding</p> <p>4.2 Facilitate traffic flow and arrange for the safety of the evacuees and their properties including providing Civil Defence Volunteers to operation collaboration</p> <p>4.3 Provide medical treatment by Patong Hospital and Public Health Division, in case of beyond their capabilities will transfer the patients to provincial hospitals.</p>	<p>Manager of Provincial Electricity Authority (Patong)</p> <p>1. Superintendent Katu District Police Station</p> <p>2. Chair of Civil Defence Volunteer (Mr.Chairat Sukaban)</p> <p>1. Director of Patong Hospital</p> <p>2. Director of Public Health Division (Police Corporal Wirat Chinda)</p> <p>1. Chair of Civil Defence Volunteer (Mr.Chairat Sukaban)</p> <p>2. Chair of Foundations</p>	

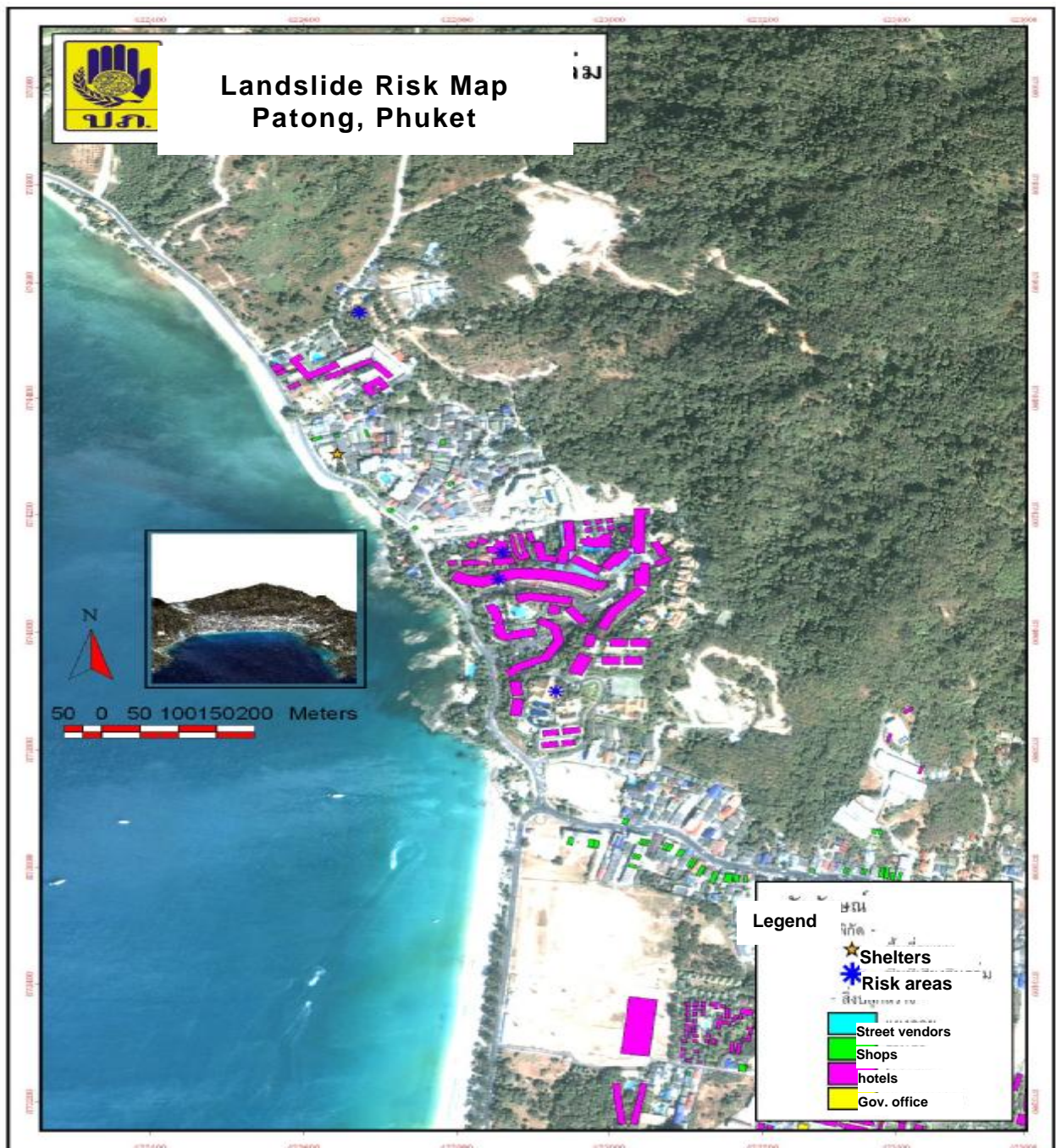
Responsibility	Responsible people	Office Telephone
<p>4.4 Director of PMP Civil Defence Commander assigns Civil Defence Volunteer and foundations to work closely as his designation such as traffic control, community security and first aid treatment with Patong Hospital</p>		
<p>4.5 Provide victim assistances with the collaboration with CG members, Thai Red Cross and private sectors.</p>	<p>Chief of Tourists Security Unit (LT.JG.Surapan Tawornkjornsiri)</p>	<p>085-833-3895</p>
<p>4.6 Support Helicopter for victim assistances after being requested by Security Unit, Royal Thai Navy</p>		

A-2 Landslide Risk Prone Areas and Safety Places in Patong Beach

i. Landslide risk areas and shelters

No.	District	Sub-District	Community	Number of Household	Population	Safety Place
1	Katu	Patong	Ban Kalim	158	889	Ban Kalim School
2	Katu	Patong	Ban Nanai	650	2,656	Mae Ubon Market

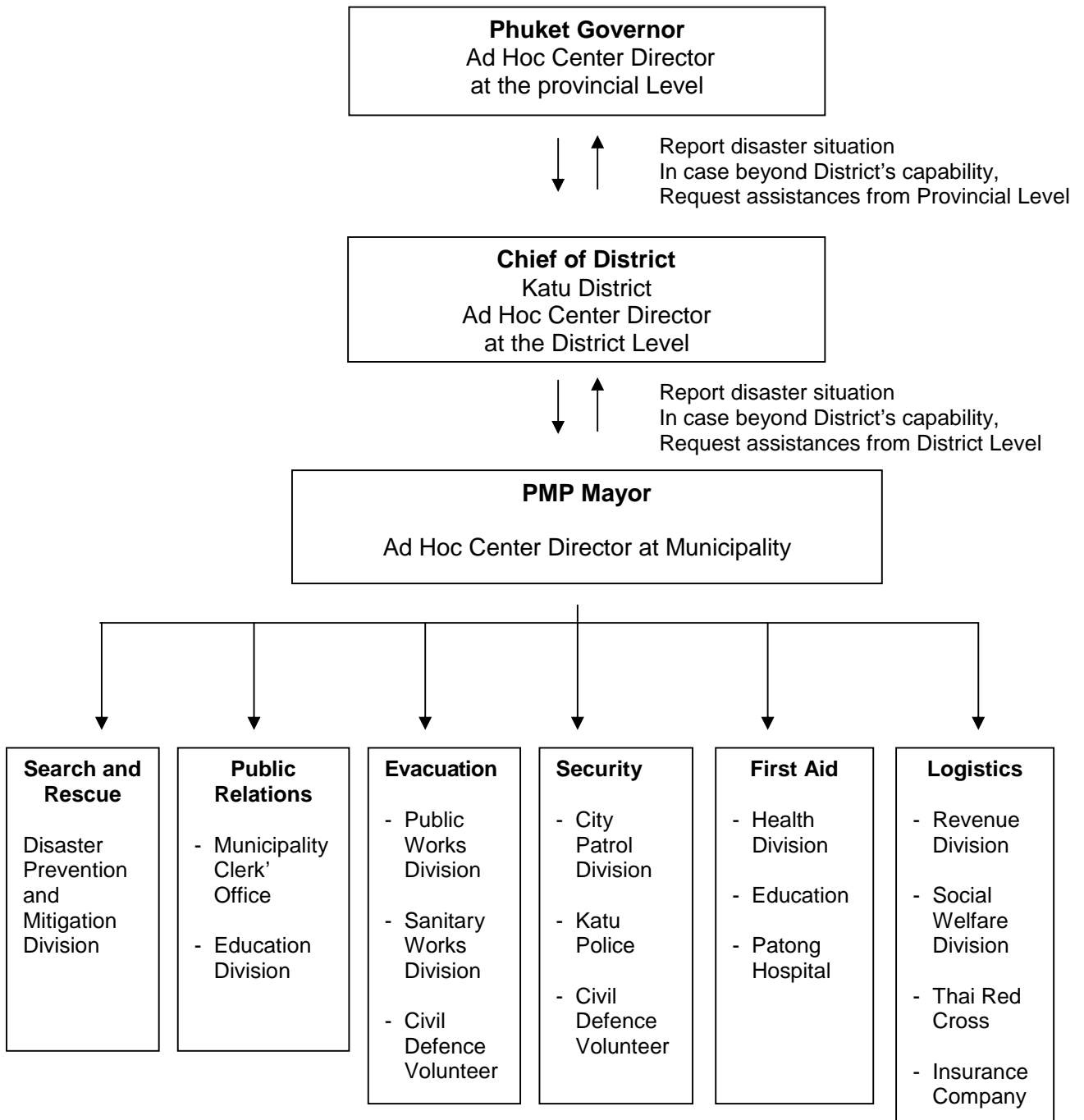
ii. Landslide Risk map



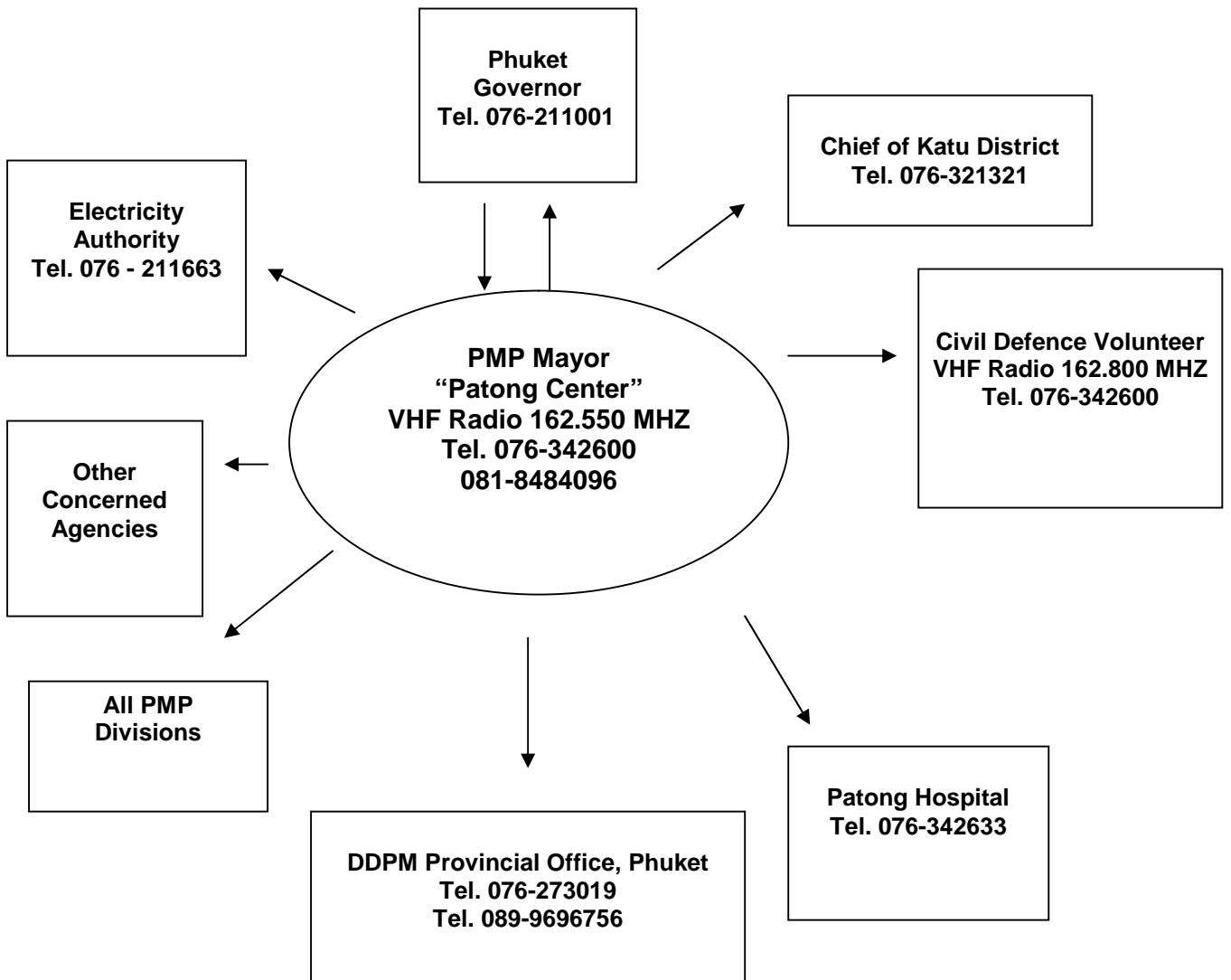
A-3 PMP Resource List: Personnel, vehicles, facilities and equipment for landslide, flash flood and inundation Preparation

Description	People/Quantity
1. Personnel - Fire Brigades	62
2. Vehicles	
<u>Disaster Prevention and Mitigation Division</u>	
- Fire Engines	4
- Fire Engines with water tank	6
- Van	2
- Mobile Response Unit (Fully Equipped Machines)	1
- Portable Fire Extinguishers	4
- Electrical Sewer	2
- Water Pumps	2
- Fire Engine with lights	1
<u>Public Works Division</u>	
- Water Trucks	2
- Trucks	5
- Electric Forklift	2
- Tractors	1
<u>Sanitary Works Division</u>	
- Hydraulic Back-hoe	1
- Trucks	1
- Mud drainage Truck	1
- Water Pumps	3
<u>Municipal's Clerk Office</u>	
- Van	2
<u>Royal Thai Navy Security Unit</u>	
- Helicopter	1

A-4 Incident Command System for landslide, flashflood and inundation



A-5 PMP Communication System



Annex B

B-1 PMP Civil Defence Commanding for Fire Incident

i. Personnel in charge for fire emergency management

Name	Position	Office Telephone Number	Mobile Phone
1. Mr.Pian Keesin	PMP Mayor	076- 342-694	084-4481336
2. Mr.Somchai Burarak	Deputy PMP Mayor	076-340-345	089-5947382
3. Mr.Chairat Sukaban	Deputy PMP Mayor	076-342-694	081-8916256
4. Mr.Woranat Tongyon	Deputy PMP Mayor	076-344-495	084-3070788
5. Mrs.Amporn Maneesri	PMP Mayor Consultant	076-345-203	089-8129601
6. Mr.Phunsak Naksena	Municipal Clerk	076-342-080	081-8946493
7. Mr. Supat Ratanasamahan	Deputy Municipal Clerk	076-345-608	089-1973335
8. Mrs.Somchit Limpatanawong	Deputy Municipal Clerk	076-34-2080	089-9689137
9. Mrs.Boonsong Nawarak	Acting Chief of Municipal Clerk Office	076-344-972	081-8949078
10. Mr.Sompol Kwanyeun	Acting Director of Civil Works Division	076-342-630	089-7330737
11. Mr.Supanat Mirin	Acting Director of Sanitary Works Division	076-345-371	089-1911998
12. Mrs.Uthaiwan Phensawat	Director of Revenue Division	076-345-775	
13. Police Corporal Wirat Chinda	Director of Public Health Division	076-345331	081-8968963
14. Mr.Samreung Potchatarn	Director of Education Division	076-342-078	081-979-9984
15. Ms.Mantita Chailert	Director of Policy and Plan Division	076-345-456	081-8945054
16. Mrs.Boonsong Nawarak	Acting Director of Social Welfare Division	076-345-204	081-8949078
17. Mr.Wisit Metasoontornpoj	Chief of Disaster Prevention Division	076-342-600	084-0613019
18. Mr.Sompong Jiamtua	Acting Chief of City Patrol	076-340-843	081-8946747

Name	Position	Office Telephone Number	Mobile Phone
19. Mrs.Taweepol Promkeao	Chief of Public Relations	076-344-275	081-6770121
20. Mr.Surasak Chantaluk	Chief of Electricity Division	076-342-278	087-2806487
21. Patong Hospital	Director	076-342633	
22. Katu Police Station	Commander	076-342719 076-342721	
23. Patong Electricity Authority	Manager	076-211663	
24. Water Works Authority	Manager	076-321515	
25. Royal Thai Navy Security		076-341197	
26. Mr.Chairat Sukaban	Chair of Civil Defence Volunteer	076-342600	081-8916256
27. Mr.Chotenarin Kerdson	Chief DDPM Provincial Office, Phuket	076-273019	089-9696756
28. Mr.Krisada Tansakul	Chief of Hotel Society		081-6933240

ii. Personnel according to fire emergency planning of PMP

Responsibility	Responsible people	Office Telephone
1. Directing Center		
1.1 Facilitate, direct, control and monitor operational officers to work according to Fire Management Planning	1. PMP Mayor (Mr.Pian Keesin) 2. Deputy PMP Mayor (2.1 Mr.Chairat Sukban) (2.2 Mr.Somchai Burarak) (2.3 Mr.Woranat Tongyon)	076-342-694 076-342-693
1.2 Correct and solve problems	3. Municipality Clerk (Mr.Phunsak Naksena)	076-342-080
1.3 Provide recommendation and collaborate with other related agencies	4. Deputy Municipal Clerk (Mrs.Somchit Limpatanawong) 5. Acting Director of Public Works Division (Mr.Phunsak Naksena) 6. Director of Public Health Division (Police Corporal Wirat Chinda) 7. Acting Director Sanitary Works Division (Mr.Supanat Mirin) 8. Director of Revenue Division (Mrs.Uthaiwan Phensawat) 9. Director of Education Division (Mr.Samreung Potchatarn)	076-342-080 076-342-630 076-344-106 076-345-371 076-345-775 076-342-078

Responsibility	Responsible people	Office Telephone
	10. Acting Chief of Municipal Clerk Office (Mrs.Boonsong Nawarak) 11. Acting Chief of Policy and Plan Sub-Division (Ms.Mantita Chailert) 12. Acting Chief of Social Welfare (Mrs.Boonsong Nawarak) 13. Chief of Administrative Office (Mr.Wisit Metasoontornpoj)	076-344-255 076-345-456 076-345-204 076-342-600
2. Emergency Receiving Calls and Operation Center Unit 2.1 Receive Emergency Calls and report to commander 2.2 Prepare Evacuation by Search and Rescue Team 2.3 Coordinate with concerned agencies such as Patong Electricity Authority to terminate electricity 2.4 Inform and Coordinate Provincial Water Works Authority to provide water supply for fire suppression in the incident.	1. Chief of Administrative Office (Mr.Wisit Metasoontornpoj) 2. Acting Chief of Disaster Prevention Sub-Division (Mr.Paitoon Polrop) 3. Radio Communication Officers 4. Fire Brigades	076-342-600
3. Supporting Units 3.1 Dispatch Fire Brigades and officers to terminate electricity, and evacuate their properties by Public Works Division and Disaster Prevention Division. 3.2 Designate officials from Disaster Prevention Division, City Patrol Works, Social Welfare Division, and Public Works Division to survey, prepare victim lists including injured and dead people, evaluate damage values to household and buildings and report to supervisors and provincial as soon as possible	1. Acting Chief of Public Works (Mr.Phunsak Naksena) 2. Chief of Administrative Office (Mr.Wisit Metasoontornpoj) 1. Chief of Administrative Office (Mr.Wisit Metasoontornpoj) 2. Acting Director of Social Welfare Division (Mrs.Boonsong Nawarak) 3. Acting Director of Public Works Division (Mr.Phunsak Naksena)	076-342-630 076-342-600 076-345-205 076-342-080

Responsibility	Responsible people	Office Telephone
<p>3.3 Public Relations Division will take responsibilities as the follows;</p> <p><i>Before Disaster</i></p> <p>Disseminate public warning regarding fire incident regularly</p> <p><i>During Disaster</i></p> <p>Announce and broadcast in progress situation to the public including facilitate victims for assistances form government sectors and other concerned agencies</p>	<p>Acting Director of Plan and Policy Division (Ms.Mantita Chailert)</p>	<p>076-345-456</p>
<p>3.4 Arrange temporary shelters, foods, consumption water and necessities for victims at Ban Sainamyen School by Social Welfare Division, Revenue Division and Education Division</p>	<p>1. Director of Social Welfare Division (Mrs.Boonsong Nawarak)</p> <p>2. Director of Revenue Division (Mrs.Uthaiwan Phensawat)</p> <p>3. Director of Education Division (Mr.Samreung Potchatarn)</p>	<p>076-245-204</p> <p>076-345-775</p> <p>076-342-078</p>
<p>3.5 Facilitate and co-ordinate with Provincial Thai Red Cross, Private sectors and foundations to afford victim assistances by Social Welfare Division and Clerk Municipal Office</p>	<p>1. Acting Director of Social Welfare Division (Mrs.Boonsong Nawarak)</p> <p>2. Chief of Clerk Municipal Office</p>	<p>076-345-205</p>
<p>3.6 Provincial Water Works Authority, Phuket Office will support water supply for fire suppression</p>	<p>Manager of Provincial Water Works Authority, Phuket Office</p>	<p>076-321-515</p>
<p>4. Co-operation Agencies</p>		
<p>4.1 Order Patong Electricity Authority to break electric circuit according to PMP Civil Defence Director commanding</p>	<p>Manager of Provincial Electricity Authority, Phuket office (Patong Branch)</p>	<p>076-321-515</p>

Responsibility	Responsible people	Office Telephone
4.2 Facilitate traffic flow, provide safety and security to the public in the emergency areas and work according to policemen's responsibilities	Superintendent Katu District Police Station	
4.3 Civil Defence Volunteers and foundation staffs will facilitate and support traffic control as well as jobs been assigned by fire commander	1. Chair of Civil Defence Volunteer, PMP (Mr.Chairat Sukhaban) 2. Chair of Foundatins	
4.4 Provide medical treatment by Patong Hospital and Public Health Division at emergency area and transfer the patients to hospital for consecutive treatment	1. Director of Patong Hospital 2. Director of Public Health Division (Police Corporal Wirat Chinda)	076-344-106
4.5 Provide victim assistances with the collaboration with CG members, Thai Red Cross and private sectors.		
4.6 Support Helicopter for victim assistances after being requested by Security Unit, Royal Thai Navy	Chief of Tourists Security Unit (LT.JG.Surapan Tawornkjomsiri)	085-833-3895

B-2 Fire Risk Zones and Shelters in Patong Municipality

i. Identified eight fire risk areas

There are 8 risk prone areas to fire in Patong Municipality as the follows;

Zone 1: Bangla Road both sides

This zone is very crowded with entrepreneurs and foreign tourists besides its surrounding with commercial buildings along the roads and Sois (small roads). Moreover, many retail stores, souvenir shops, pubs, bars and restaurants in this area, however, road characteristics are very narrow and the vehicles could not easily to enter. Consequently, it is very popular tourist attraction areas, in case of fire occur it will cause more danger and obstacle to fire brigade teams. Likewise, the chances to lose of live, property and economy will increase.

Zone 2: Ban Kalim

This location is considered as very crowded areas with wood house. According to the vicinity surrounds by narrows roads and slope hills, people prefer to use motorcycles than cars. Moreover, this area is very dangerous for landslide.

Zone 3: Kok Makham Village, Prabarami Road

Road condition is very narrow, slop and it is very difficult for cars to enter into this areas.

Zone 4: Soi Rajuthit 200 years, Taweewong Road

It is very crowded areas with many sois and it is very for cars to enter into this areas.

Zone 5: Royal Paradise Hotel areas

The commercial buildings, residential areas, and business areas such as hotels, shops, retail shops, laundry shops and entertainment businesses which surround the area. It is considered the moderate crowded areas and limited routes to enter. Therefore, in case of fire, the fire brigade will have the difficulties for assistance.

Zone 6: Soi Prisanee (Post Office Sub-Road), Taweewong Road

This spot is located in business areas including variety of shops, shopping malls and many restaurants. According to the congested roads and crowded with Thai and foreign tourists as well as jam-packed commercial billboards at the low position together with untidy telephone lines, electricity wires will cause fire incident easily. Besides, there are many clothes shops and souvenirs shops which will be combustibile to fire and difficult to fire brigade Team.

Zone 7: Pisitkoranee Road, Sainamyen Village

It is composed of old row buildings made of wood, the entrance and exit roads are narrow and difficult for residential transportation. If fire happen, it will be easy and rapid to spread out to the other buildings. In addition, the fire brigade teams could not work effectively during fire.

Zone 8: Ratuthit Road (200th Anniversary), Soi Eden

Because of the entrance road is very limited and narrow, vehicles could not pass in the diverse direction. Then it will be the problem to fire suppression for fire brigade teams.

***** In case of the entrance to most areas in PMP are very narrow, Fire Brigade Team will use the fire hose to suppress fire incident.*

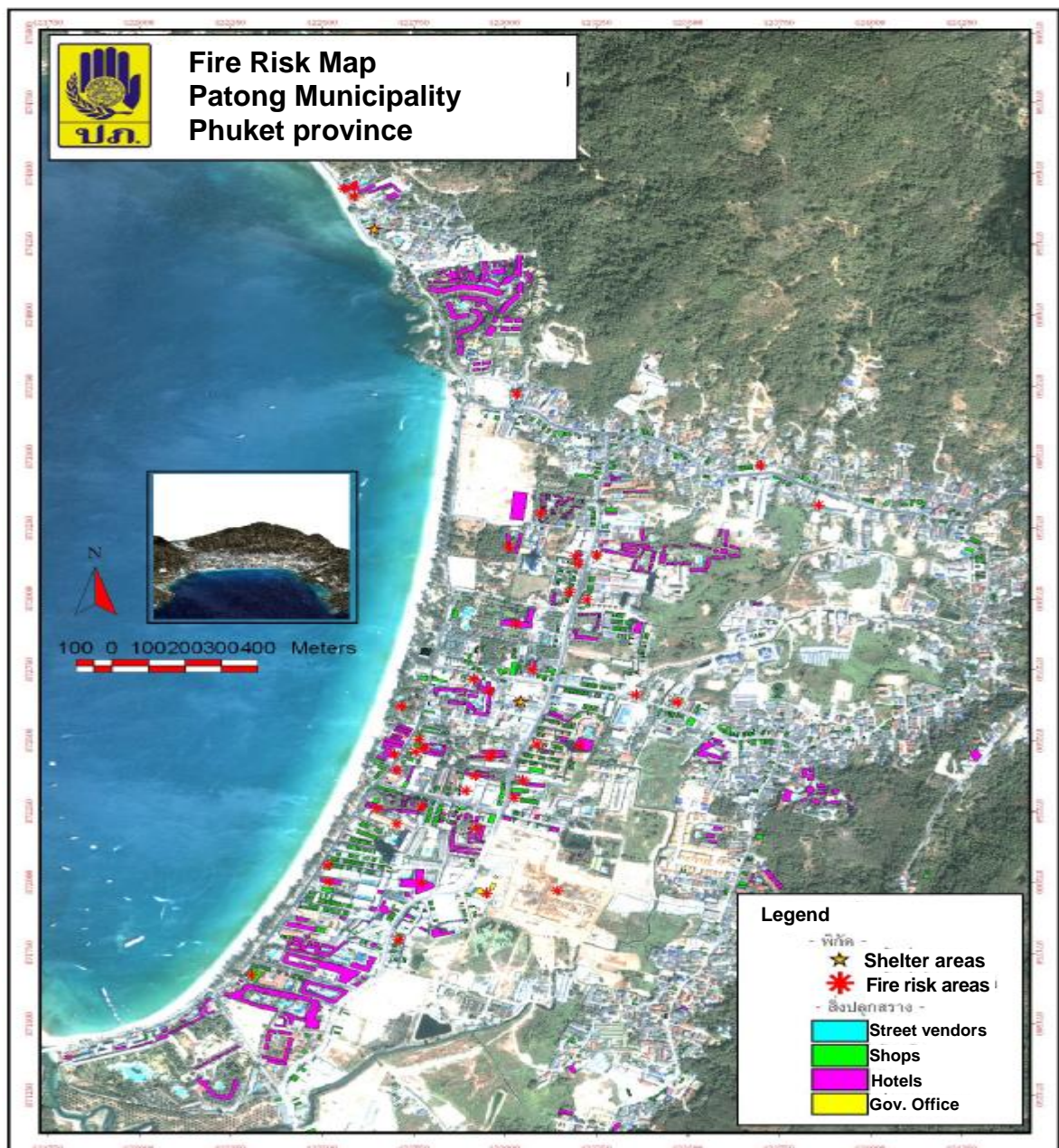
ii. Shelter Areas

Since PMP has approximate areas about 16.4 square kilometers, gathering transportation system and communication system together. It is designated 3 shelters for victims as the follows;

1. Ban Kalim School
2. Ban Sainamyen
3. Wat Suwankereewong (Temple)
4. Lam Petch Temple

Some of victims prefer to stay with their relatives and closed friends nearby the fire incident areas.

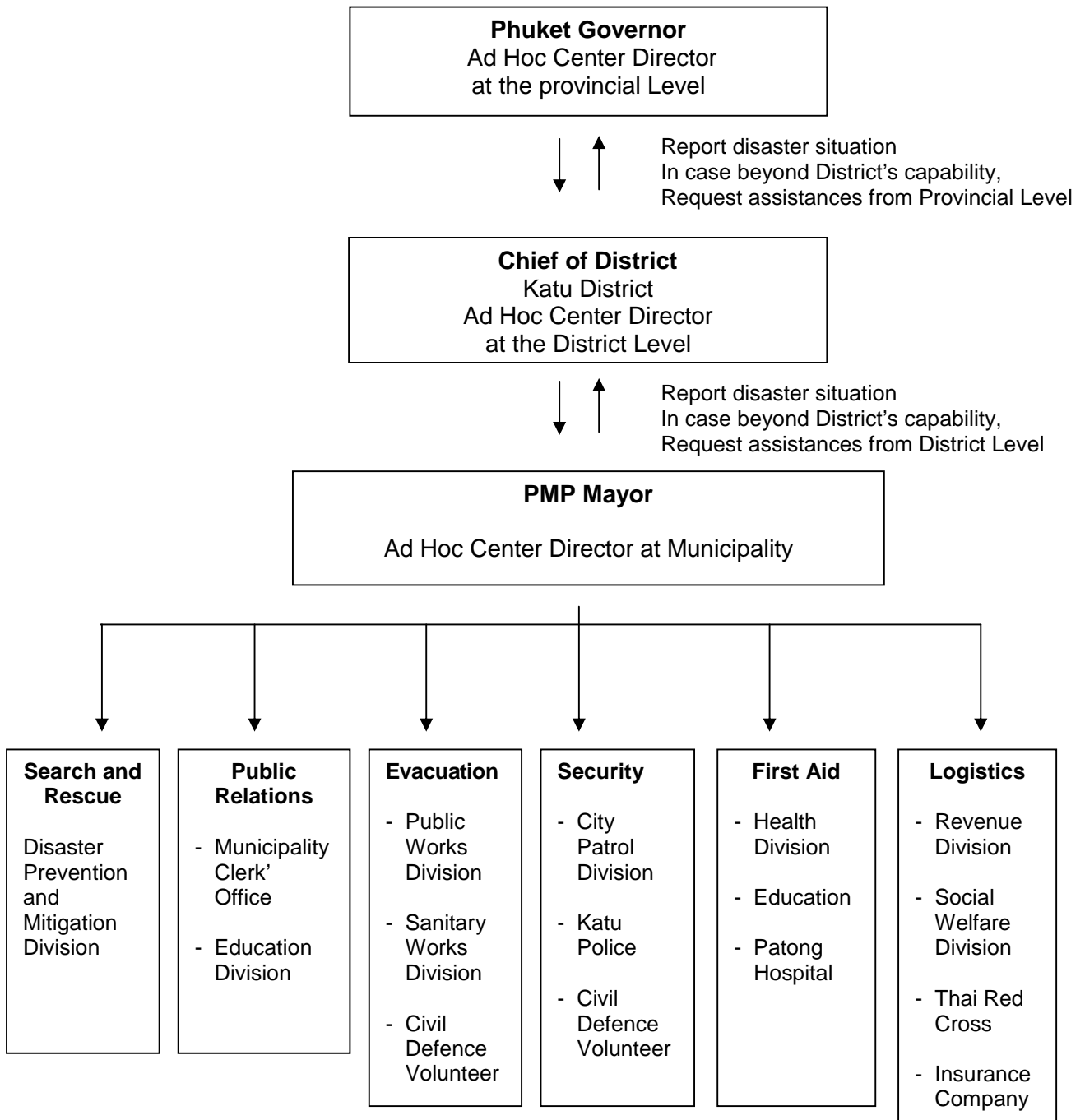
iii. Fire Hazard and Shelters Map



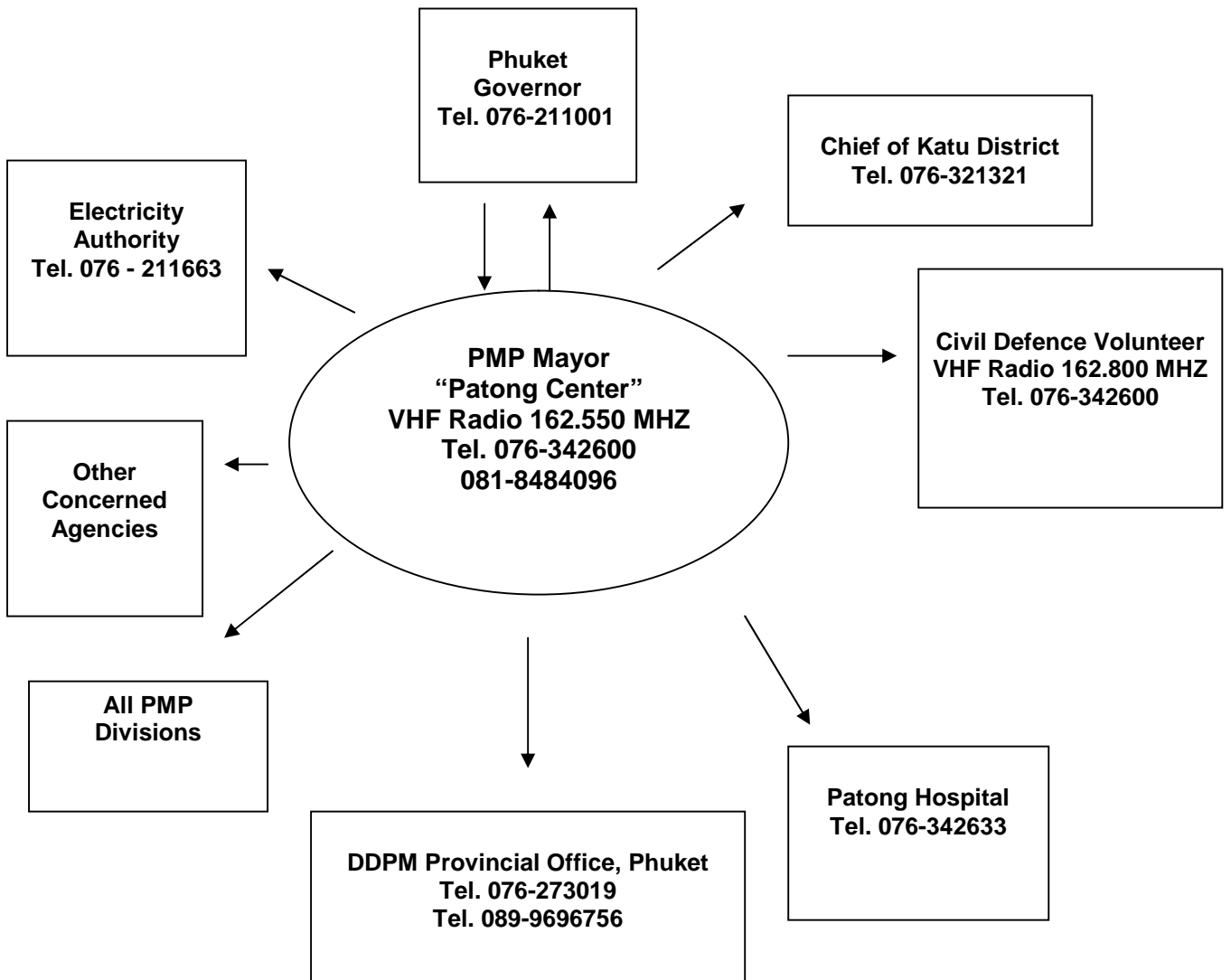
B-3 PMP Resource List: Personnel, vehicles, facilities and equipment for fire

Description	People/Quantity
1. Personnel - Fire Brigades	62
2. Vehicles	
<u>Disaster Prevention and Mitigation Division</u>	
- Fire Engines	4
- Fire Engines with water tank	6
- Van	2
- Mobile Response Unit (Fully Equipped Machines)	1
- Portable Fire Extinguishers	4
- Electrical Sewer	2
- Water Pumps	2
- Fire Engine with lights	1
<u>Public Works Division</u>	
- Water Trucks	2
- Trucks	5
- Electric Forklift	2
- Tractors	1
<u>Sanitary Works Division</u>	
- Hydraulic Back-hoe	1
- Trucks	1
- Mud drainage Truck	1
- Water Pumps	3
<u>Municipal's Clerk Office</u>	
- Van	2
<u>Royal Thai Navy Security Unit</u>	
- Helicopter	1

B-4 Incident Command System for Fire Incident

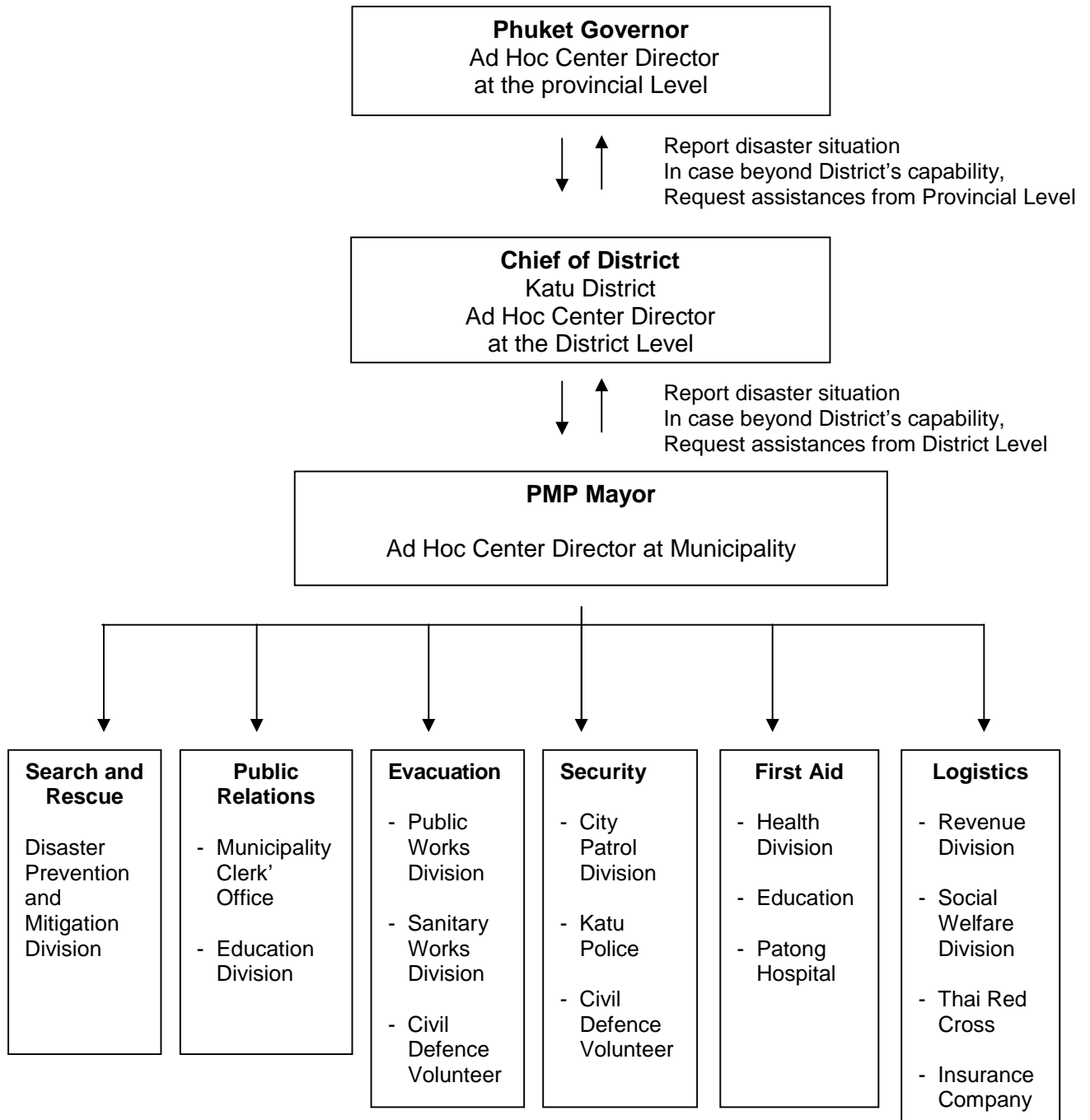


B-5 PMP Communication System

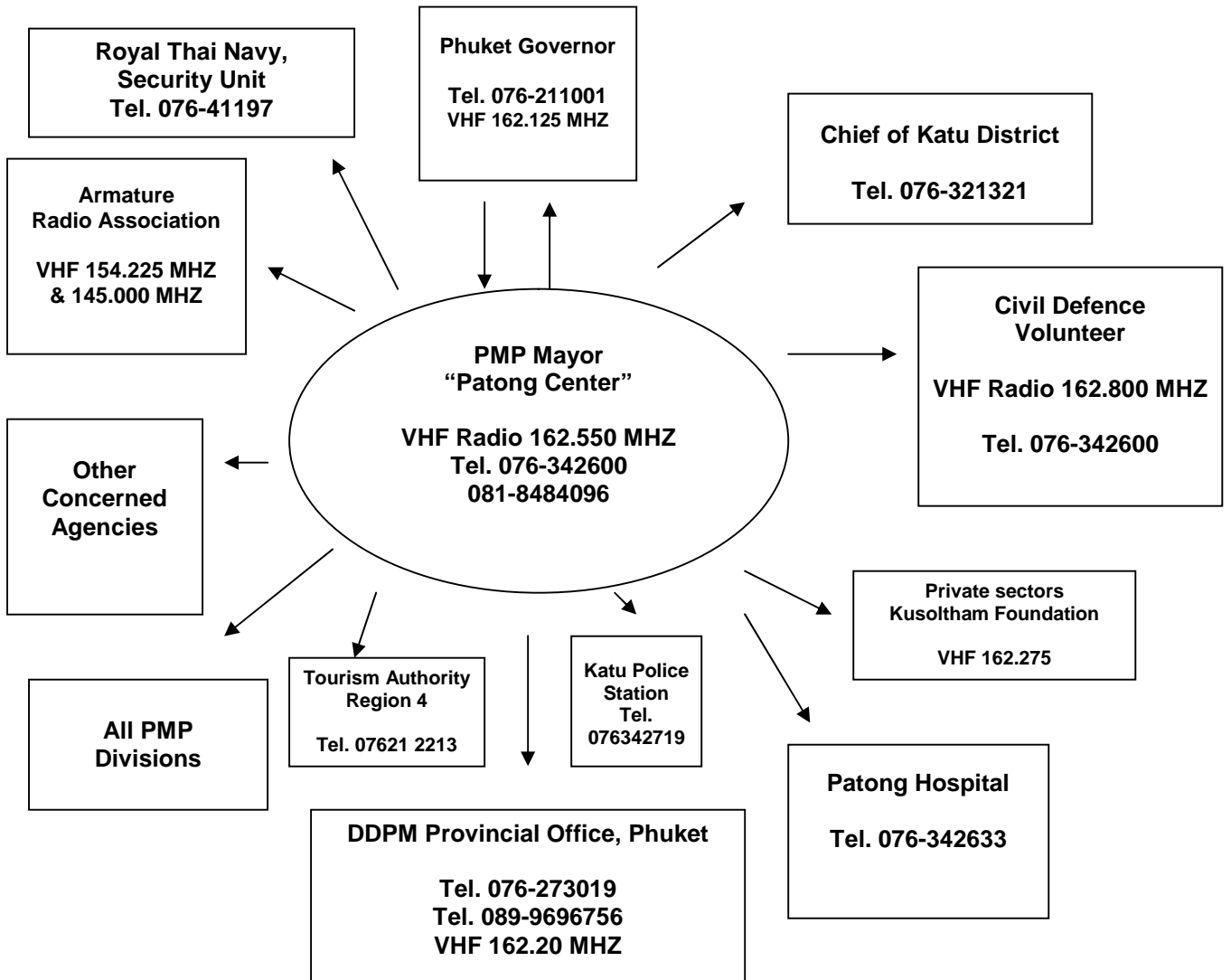


Annex C

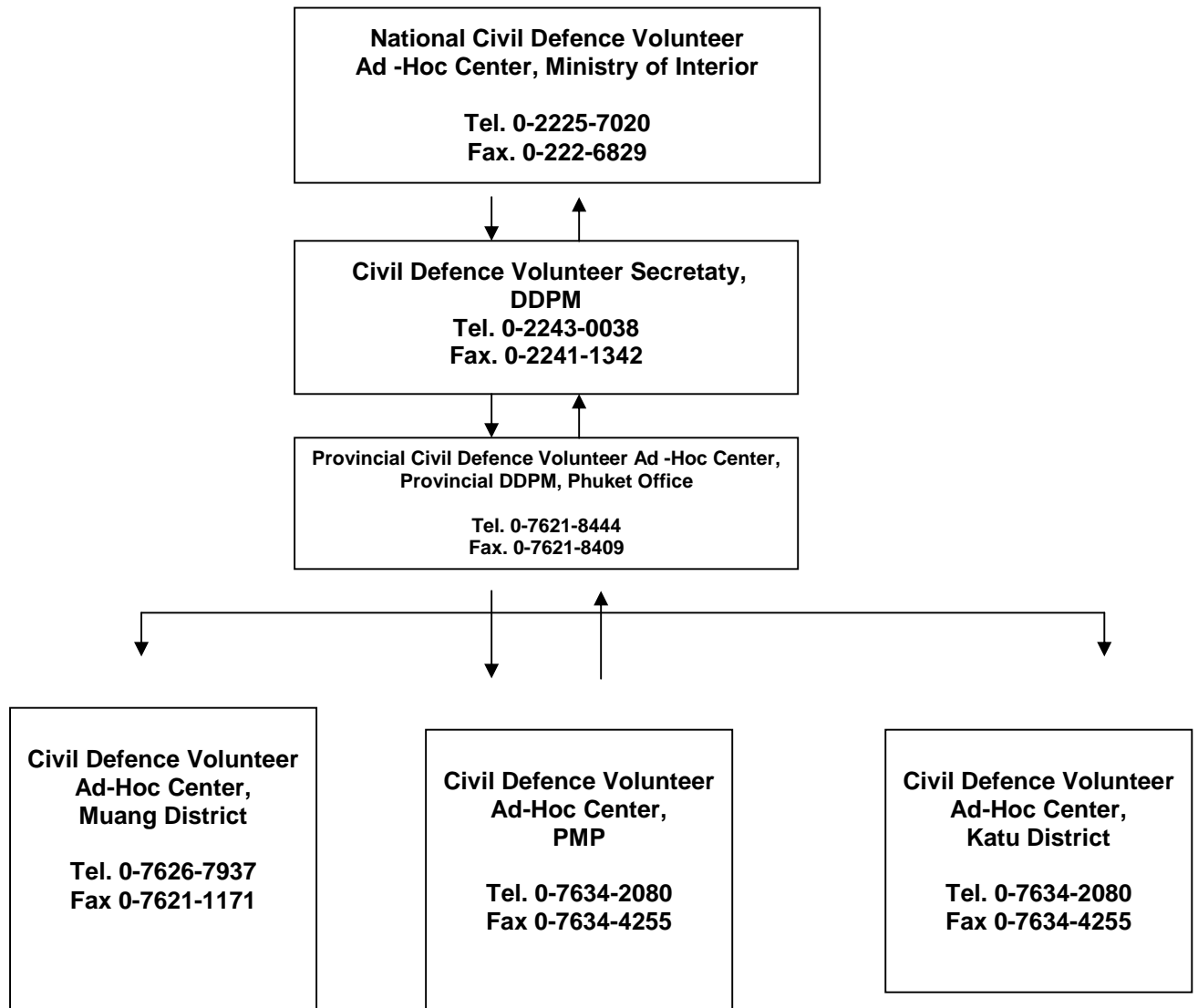
C-1 PMP Incident Command System for Tsunami



C-2 PMP Communication System for Tsunami



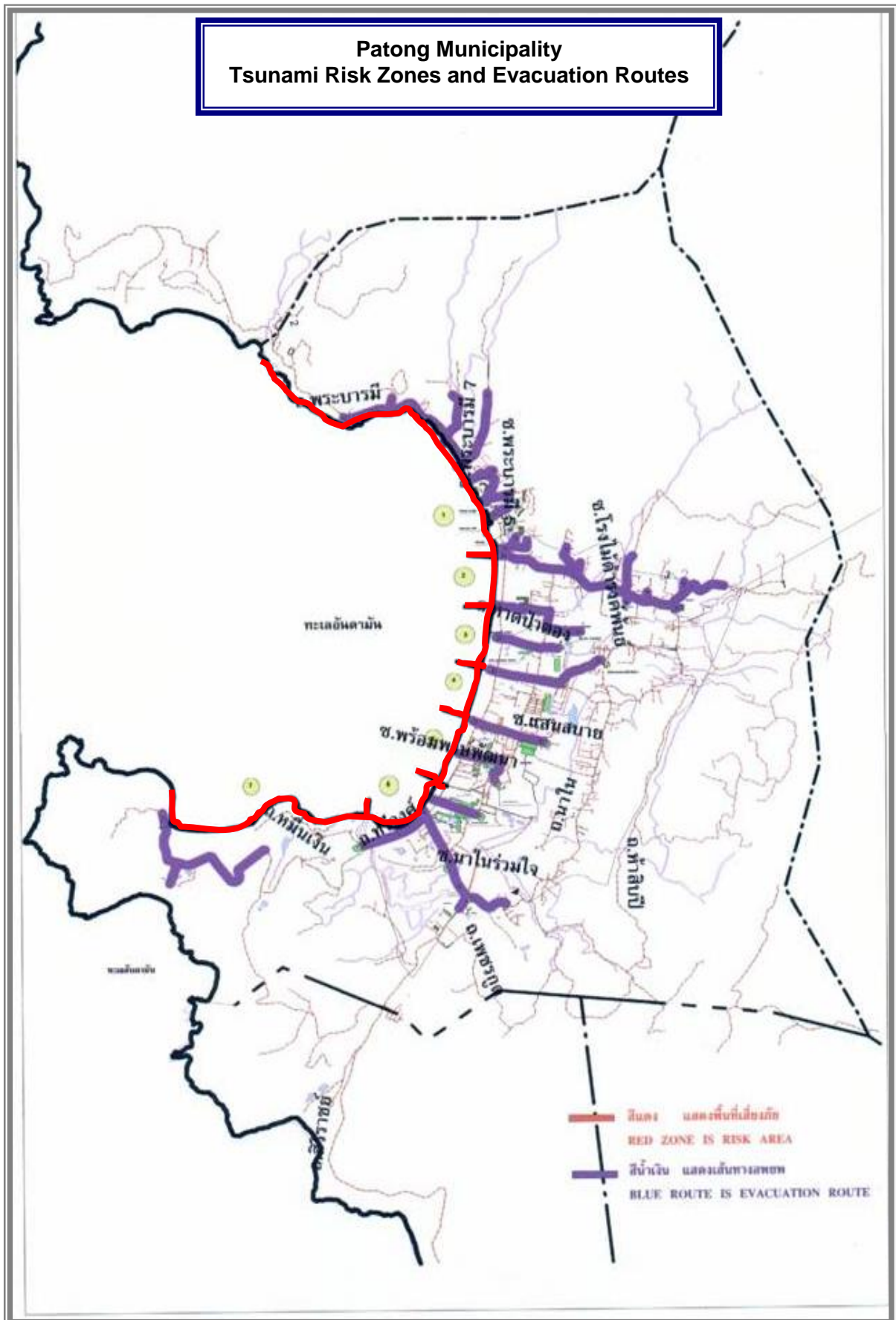
C-3 Civil Defence Volunteer Ad-Hoc Center under Civil Defence Volunteer Act 1979



C-4 Contact Organizations

Organization	Telephone Number
National Disaster Warning Center	0-2589-2497 Hotline 1860
Regional Communication Center, Permanent Secretary Office, Ministry of Interior	0-2225-7020
- Department of Disaster Prevention and Mitigation - Radio Communication System "Nirapai" DDPM regional Center	0-22243-8038 Hot Line 1784
Katu Police Station	076-342719
Royal Thai Army Military	076-341197
Radio Amateur Association	VHF 154.225 MHZ 145.000MHZ
Radio Communication Network	
Private Radio Network such as Ruamkatanyu Foundation, Potektung Foundation Kusolatham Foundation	VHF 168.275 MHZ

C-5 Tsunami Hazard Map and Evacuation Routes



SCENARIO

Scenario for fire Drills at Holiday Inn Hotel, Patong Sub-District, Katu District, Phuket

No.	Time	Situation	Responsibility/ Procedure/ Equipment	Operational Areas	Responsible Organization	Human Resources
1	09.30 A.M.	Registration for drill participants and observers	Drill participants registration	Directing Center	Municipality Clerk Offices Hotels	Local residents/ tourists hotel entrepreneurs and all concerned agencies
2	10.10 A.M.	- Participants are assigned in designated areas at Holidays according to hotel emgency plan - Hotel guests stay at their rooms - Release Artificial Smoke	- Assigne hotel officers, Civil Defence Volunteers and PMP officials as hotel guests and injured in each floor - Patong Hospital officials decorate injured bodies - PMP officials release artificial smoke from 4th floor	Holiday Inn Hotel	- Disaster Prevention and Mitigation Division, PMP - Holiday Inn Hotel - Patong Hospital	- 50 Hotel Officials - 10 injured actors - Concerned participants - Honor Guests - Artificial smoke release
3	10.11 A.M.	- Hotel guest notices fire incident at 4th floor and informs hotel officer - After the hotel officer assesses the situation and unable to control it so he inform the PR hotel at once	- Hotel officer uses fire extinguisher to suppress fire at the first stage and inform executive official -Hotel officer requests assistance from PMP by phone at 199 or 076 -342 600 - The hotel executive decides to press fire alarm and operates under emergy plan - Hotel officers evacuate hotel guests	Holiday Inn Hotel	Holiday Inn Hotel Officers	
4	10.13 A.M.	- Chief of Disaster Prevention and Mitigation, PMP has been informed and commanded fire brigades with equipped fire engines for high rised buiding. Fire brigrade team moves to hotel and also reports to PMP Mayor - PMP communication officer reports to Katu District Police Station - Chief of Electricity Authority, Patong will go to the fire incident - Chief of Water Work Authority , Phuket will go to the fire incident	- Vigilant Mobile Van - Fire Engines -Water Trucks - Equipped Rescue Trucks - Katu Police will control traffic system and also use barricade lines in order to facillitate the Fire Brigades Team, PMP to suppress fire and relocate fire engines - Electricity Authority will cut off electircity as requested - Water Work Authority will supply water as requested	- Disaster Prevention and Mitigation Division (DPM) (Fire Brigades) - Communication Room - Emergency routes for fire engines and evacuation routes } At the fire incident	- Chief of DPM, PMP - Katu District Police Station	- DPM Division (Fire Brigade) - Katu District Police Station - Electricity Authority (Patong) - Water Works Authority, Phuket
5	10.15 A.M.	PMP Mayor as a Director of Ad-Hoc Directing Center will report the situation to Phuket Governor that the situation is unble to handle by PMP - PMP will coordinate with neighboring agencies for their assistances	- Katu Municipality - Phuket Municipality - Karon Municipality - Kamala Sub-District Administration Organization - Phuket Province Administration Organization All above mentioned organizations have been contacted by radio communication network and ready to operation as requested for assistances	At each organizations fire brigade stations	PMP Mayor	- DPM Division (Fire Brigade Team) - Municipality Clerk Office - Civil Defence Volunteer - Public Relations Division
6	10.20 A.M.	- Chief of Fire Brigade Team arrives at the Hotel and coordinates with hotel and in charges as a commander to work with his team - Chief of Building and Ground office will hand down hotel evacuation route to the commander - The Commander and Fire Brigade Team plan to operation	- Vigilant Mobile Unit - Hotel Office guides the firefighters to the nearest fire incident area	Holiday Inn Hotel	Ad Hoc Directing Center, PMP	- DPM Division (Fire Brigade Team) - Holiday Inn Officers
7	10.25 A.M.	- PMP Mayor as a Director of Ad-Hoc Directing Center arrives the hotel and will command the situation - Chief of Fire Brigade will report the situation to PMP Mayor		Holiday Inn Hotel	Ad Hoc Directing Center, PMP	- PMP Officials - DPM Division (Fire Brigade Team)
8	10.30 A.M.	- Phuket Governor as a Director of Ad- Hoc Directing Center at a Provincial Level arrives at the hotel - PMP Mayor reports and hands down his task as a commander to Phuket Governor		Holiday Inn Hotel	Ad Hoc Directing Center, PMP	
9	10.35 A.M.	- All concerned organizations which have been requested to assist PMP via radio communication network report to the commander at the Ad - Hoc Directing Center	- All concerned organizations report to the commander at the Ad-Hoc Center with their resources and equipments	Ad - Hoc Directing Center	Ad Hoc Directing Center, PMP	- Kusornthamphuket Foundation - Emergency Response Unit Team - Royal Thai Navy with Helicopter - Civil Defence Volunteers and ETC

10	10.50 A.M.	<ul style="list-style-type: none"> - Chief of Evacuation Team of Holidays Inn reports to the commander that 200 guests are evacuated to safety shelters, and 10 guests are staying at the 4th floor and expecting some guests are injured - The incident commander orders the Search and Rescue Team to search for missing persons and the SAR Team will work closely with the Chief of Brigade team 	Emergency Medical Service Team, Patong Hospital prepares for Medical Treatment of the patients	Holiday Inn Hotel	Holiday Inn Hotel PMP Patong Hospital	All concerned agencies
11	10.55 A.M.	<ul style="list-style-type: none"> - Chief of Fire Brigade order to evacuate the missing persons and a little injured from 4th floor and requests for additional 3 SAR Team (1SAR team is composed of 3 people) with transferable equipment - The Hotel Evacuation Team reports that there is no missing persons in the building - The Emergency Medical Service Team triages injured; 10 a little injured, 2 moderated injured, and transfers the victims to the hospital 	<ul style="list-style-type: none"> - The SAR Team evacuates missing persons to safety areas - The SAR Team evacuates the injured to the First Aid Team 	Holiday Inn Hotel	<ul style="list-style-type: none"> - Fire Brigade Team, PMP - SAR Team - Kusornthamphuket Foundation - Thepkasatri Municipality - SAR Team (OTOS) from DDPM , 1team comprised of 3 people - EMS from Patong Hospital 	<ul style="list-style-type: none"> - All concerned agencies conduct fire drills Doctors/ Nurses
12	11.10 A.M.	<ul style="list-style-type: none"> - Chief of Fire Brigade reports to the commander that the fire is suppressed 	- order to stop searching victims	Holiday Inn Hotel	Ad - Hoc Center, PMP	- All concerned agencies conduct fire drills
13	11.25 A.M.	<p>Drills Ending</p> <ul style="list-style-type: none"> - All organizations get together at the Ad-Hoc Center - PMP Mayor reports the drills outcome to Phuket Governor - Phuket Governor releases the closing remarks and thanks to all organizations and participants - Phuket Governor visits logistics units 		Ad - Hoc Center, PMP	Ad - Hoc Center, PMP	- All concerned agencies conduct fire drills

Scenario for tsunami Drills

No.	Time	Situation	Responsibility/ Procedure/ Equipment	Operational Areas	Responsible Organization	Operation Procedure
1	09.15 A.M.	Normal situation, clear sky, calm waves at Patong Beach	Local residents, tourists and entrepreneurs do their own businesses as normal lives	PMP Risk Zones (Zone 5, 6)	PMP Directing Center	Local residents/ tourists entrepreneurs get together and inform their arrival at PMP Directing Center
2	9.30 A.M.	Suppose : There is earthquake around Nicoba Island			National Disaster Warning Center PTWC	All of staffs ready to operation
3	09.35 A.M.	TMD report that the Earthquake happened at 09.30 a.m. 8.2 Richter at 6.7 north 92.6 east around Nicoba Island and supposed that tsunami happened.			Thai Meteorological Dept.	All of staffs ready to operation
4	09.40 A.M. - 09.45 A.M.	NDWC received confirmed data of tsunami happened and analyzed data and signal 79 warning towers in 6 Andaman Coastal Provinces			NDWC	NDWC staffs operation
2	09.45 A.M.	Early Warning Tower releases warning siren to inform local residents/tourists and entrepreneurs to evacuate to safety places	- National Early Warning Center disseminate warning sirens to warning towers in the Andaman Coastal - PMP will use mobile vans to warn the public in Zone 5,6 (tsunami risk prone areas)	PMP Risk Zones (Zone 5, 6)	PMP	Local residents/ tourists entrepreneurs in risk areas
3	09.47 A.M.	- Community Radio Towers, Radio Stations, T.V.Pool, and mobile phone providers will release warning and short messages to the public - The Community Leaders in each zones, security and coast guard trigger sirens in their responsible areas	- Each leader in evacuation team leads people to appointment place in order to check and prioritize evacuation order (Children, elder people, disabilities, and women are most priority group) to the shelter	PMP Risk Zones (Zone 5, 6)	1. PMP 2. Community Leader and Evacuation Team	
4	09.50 A.M.	- PMP local residents, tourists and entrepreneurs evacuate to evacuation	- Police and Civil Defence Volunteer will facilitate and control traffic system and protect public and private properties. - Civil Defence Volunteer will assist police to block and control traffic system - PMP will provide rescue trucks and other volunteers reach disaster area in order to evacuate victims - School Children will conduct drills according their plans	Risk Area in Patong Beach	1. Katu Police Station 2. PMP Disaster Prevention and Mitigation Division 3. Civil Defence Volunteer 4. Academic Institutions	Local Residents, tourists, teachers, students, police from kuta district police station, PMP officials and volunteers.
5	09.52 A.M.	PMP Mayor as a Director of Ad-Hoc Directing Center will facilitate to evacuate the public	Ad Hoc Directing Center is established to report and update information to Provincial Ad Hoc Center Director to check the amount of missing victims	Ad Hoc Directing Center	1. PMP Mayor 2. DDPM Provincial Office 3. Ad Hoc Center, Provincial Level 4. Katu Administration Office 5. Civil Defence Volunteer Center 6. Rescue Team 7. Sea Rescue Team 8. Amateur Radio Association	PMP Officials/ Katu Officials, volunteers and foundations
6	10.00 A.M.	Director of Ad-Hoc Directing Center at provincial level (Phuket Governor) arrives the Ad Hoc Center	- PMP Mayor reports disaster situation to Phuket Governor and also report to Minister of Interior - DDPM Provincial Office, Phuket under the Provincial Ad Hoc Center pronounces disaster area in PMP	Ad Hoc Directing Center	1. Phuket Governor 2. Concerned agencies 3. DDPM Provincial Office, Phuket	Provincial Director of Ad Hoc Center / PMP Ad Hoc Center / Operation Officers/ Plan and Policy officials/ logistics sections/ Administration/ PR officials/ Security Officers
7	10.05 A.M.	Director of Ad- Hoc Directing Center at Provincial level (Phuket Governor) convenes the meeting for disaster assessment	- The Incident Commander asks operation sections/ plan and policy section / logistics/ Administration sections to report their operation to the Director of Ad-Hoc Center at National Level (Minister of Interior) - The Incident Commander orders PR Division to prepare information for public releases	Ad Hoc Directing Center	1. Incident Commander 2. Operational Sections 3. Plan and Policy Sections 4. Logistics 5. Administration Sections	Incident Commander

8	10.15 A.M.	Operational Officers and Security Units (Coast Guard) evacuate local residents and tourists to safety shelter	<ul style="list-style-type: none"> - The Incident Commander order the operational Section to set up Missing Persons from tsunami Center - Set up the first Aid Unit to assist victims and triage some injured to the hospitals 	Evacuation routes/shelters	<ol style="list-style-type: none"> 1. Operational Units 2. PMP 	<ol style="list-style-type: none"> 1. Operational Units 2. PMP
9	10.22 A.M.	The 1st and 2nd tsunami waves strike toward Patong Beach and cause damages to the designated in the mapping	<ul style="list-style-type: none"> - Warning towers are released the siren to warn the public of the stricken tsunami 	PMP Risk Zones (Zone 5, 6)	<ol style="list-style-type: none"> 1. Operational Sector 2. PMP officials 	<ol style="list-style-type: none"> 1. Operational Sector 2. PMP officials
10	10.25 A.M.	The Incident Commander calls out for disaster situation assesment	<ul style="list-style-type: none"> - Plan and Policy section reports disaster situation and suggests the Incident Commander to request sea SAR Team from Third Naval Area Commands (3rd NAC) for victim assistances and search for missing - The Incident Commander will assign Emergency Medical Service and foundations to investigate disaster areas 	Incident Command Center	<ol style="list-style-type: none"> 1. Operational Sector 2. PMP 3. Third Naval Area Commands, Royal Thai Navy 4. Emergency Medical Service 	<ol style="list-style-type: none"> 1. Operational Sector 2. Disaster Prevention and Mitigation Division, PMP 3. Third Naval Area Commands, Royal Thai Navy 4. OTOS (One Tambon One Search and Rescue Team)
11	10.28 A.M.	Operational Units investigate the areas, search and find out 2 serious injured victims in Soi Bangla and could not transfer them to hospital by vehicles	<ul style="list-style-type: none"> - The Incident Commander order Plan and Policy section to coordinate with 3rd NAC for sea rescue and transfer injured to the hospital urgently - The Incident Commander order EMS team and SAR Team search victims for 1 hr by designated zones and report its operation to the commander 	Soi Bangla and PMP Risk Zones (Zone 5,6)	<ol style="list-style-type: none"> 1. Plan and Policy Section 2. Operational Section 3. Coordinating Section 4. Third Naval Area Commands 5. PMP 6. EMS and SAR team 	<ol style="list-style-type: none"> 1. Third Naval Area Commands, Royal Thai Navy 2. Disaster Prevention and Mitigation Division, PMP 3. OTOS (One Tambon One Search and Rescue Team)
12	10.30 A.M.	Operational Unit reports and summarize regarding death and injured. (40 injured, 8 death)	<ul style="list-style-type: none"> - Incident Commander asks all teams to verify concurrence lists of injured, missing and death - PR Division will collect and report disaster situation to dessiminate to the press - PMP mobile van will broadcast regarding update situation 	Incident Commnad Center in Zone 5, 6 - Shelters	<ol style="list-style-type: none"> 1. Incident Commander 2. Operational Section 3. PR Division 4. PMP 	<ol style="list-style-type: none"> 1. Incident Command Unit 2. PMP
13	10.40 A.M.	Operational Unit has been reported that the rumors of the giant waves destroy many houses and buildings. In addition, burglars steal res idents's properties which cause some worry from victims in shelters	<ul style="list-style-type: none"> - Incident Commander order the coordinating unit to request volunteers from provincial level and private sector to work in the shelters - Incident Commander orders PR Division to inform victims in shelters regarding tsunami is gone and causes a little damage. Besides, the commander order the security team to confine incident areas until it will get back to normal stage 	<ul style="list-style-type: none"> - Incident Command Unit - Shelters - Security Unit - PMP 	<ol style="list-style-type: none"> 1. Incident Commander 2. PMP 	<ol style="list-style-type: none"> 1. Incident Commander 2. PR Division 3. Shelter Supervisors 4. Security Unit 5. Municipality Clerk, PMP
14	10.45 A.M.	SAR Operational Units report that they have not additional victims both by sea and air search rescue teams	<ul style="list-style-type: none"> - Incident Commander orders to finalized verification of victim list - Incident Commander orders to report missing persons 	Incident Command Unit	<ol style="list-style-type: none"> 1. Incident Commander 2. Operational Unit 3. Search and Rescue Unit 	One Tambon and One Search and Rescue Team
15	10.48 A.M.	Operational Units will be reported the number of local residents, and will be confirmed the tourist list from hotel entreprenurs and tour guide association	<ul style="list-style-type: none"> - Incident Commander will assign the PR Division to gather all information to the public release - Incident Commander orders Coordinating Team to collaborate with Ministry of Foreign Affairs, NGOs and International Organizations to contact victims' relatives both domestic and foreign countries 	Incident Command Unit	Incident Commander	All concerned Officers
16	10.50 A.M.	All teams check and confirm the number of injured, death, missing persons and check list in shelters for verify the total amount	<ul style="list-style-type: none"> - Incident commander orders finish searching victims and ending disaster - DDPM under Civil Defence Volunteer Ad Hoc Center will announce to disaster situation ending 	Victim Shelters	Operational Units	All concerned Officers
17	11.00 A.M.	Phuket Governor visits victims at their shelters and all operatinal teams report to the Governor	All operational Teams get together and prepare for Governor visit	Victim Shelters	Operational Units	All concerned Officers
18	11.20 A.M.	Phuket Governor delivers closed remarks and finish the tsunami drills	Phuket Governor delivers closed remarks	Victim Shelters	Operational Units	All participants including tourists, local residents and all teams