

## Checklist Form C (Screening) - Disaster Impact Assessment

### (A). Basic Information of the Road:

- a. Name of the Road: Kegalle Bulathkohupitiya Karawanella Road
- b. Road No / Code: A21
- c. Category of Road: **National** / Provincial / Municipal, Town / Village / Other
- d. Road Administration: Province / CE / EE Division/s: Sabaragamuwa Prov. Kegalle District, Kegalle EED
- e. Classification: E / **A** / B / C / D / Unclassified / New/ Other
- f. Road Section: 5Km (42 Km)
- g. Type of Project: New Construction / Widening & Improvement / **Rehabilitation of the existing road**

### (A.1) - Draft Map of examined site with location numbers:



(A.2). Site No/s.: 13/8-13/9 LHS&RHS, 16/5-16/6LHS, 16/10-16Km Post LHS&RHS

(A.3). Attach Map showing potential hazardous locations based on “beyond normal condition”

- (Map No.01 in Form B)

① Attached

(A.4). Attach Table with the details of above-mentioned locations

② Attached

**(B). Evaluation:****(B.1)-Evaluation of screened sites**

No.	(1) Site No.	(2) Requesting Agency for Inspection	(3) Comments <i>(Proposing Actions by EE / Engineer)</i> <i>Site specific remarks)</i>
1.	13/8-13/9LHS&RHS	NBRO	High Priority
2.	16/5-16/6LHS	NBRO	Priority
3.	16/10-16Km Post	NBRO	Urgent
4.			
5.			
6.			
7.			
8.			
9.			
10.			

**(B.2) - Comments**

Total length of KBK road is 42 km & from 0+000 to 16+000 is maintained by EE Kegalle. Between 11+000 and 16+000 Three Sites were taken in to the Sample.

**(B.3)- Details of the responsible officer (CE)**

Name of the CE		A.A. Senadeera	
Designation		Chief Engineer	
Division & Organization Address		CE Division, RDA, Kegalle	
Contact Details	Telephone	Office	0352229877
		Mobile	0714432504
		Fax	0352229877
Email Address			

Signature of CE: \_\_\_\_\_

Date:  
.....

Received:

PD : \_\_\_\_\_ Date: \_\_\_\_\_

D, MMC : \_\_\_\_\_ Date: \_\_\_\_\_

ADG, RDA : \_\_\_\_\_ Date: \_\_\_\_\_

1.1. Site No: 16/5-16/6 **LHS/** RHS –Refer to the sites in draft map in section (A.1)  
 (LHS- Left Hand side; RHS- Right Hand side)

1.2. Inspection date/s: 15/10/2012

1.3. Road structure related to the site:

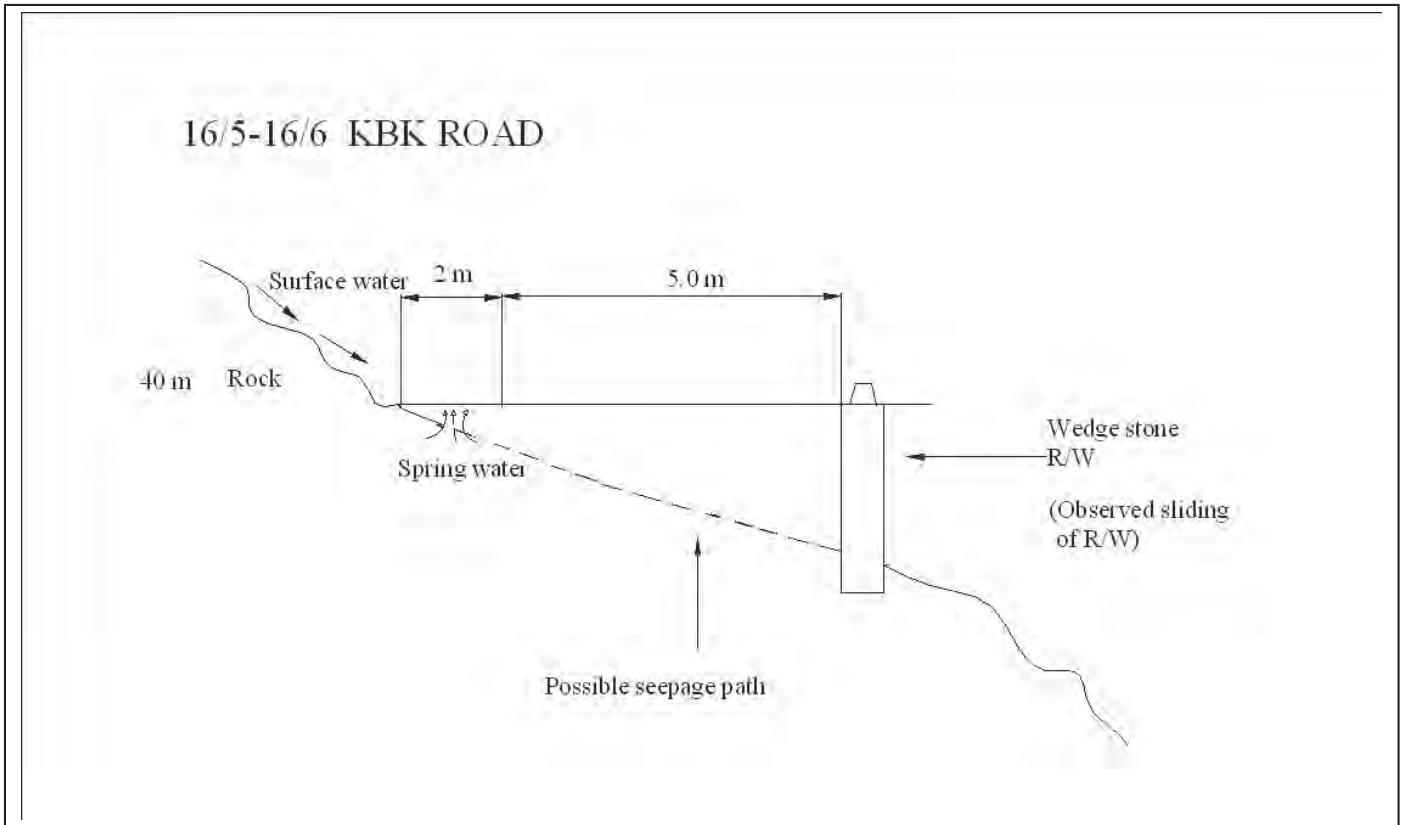
(1) Natural slope	<input type="checkbox"/>	(6) Drainage/ Canals	<input type="checkbox"/>
(2) Cut slope	<input type="checkbox"/>	(7) Road surface	<input type="checkbox"/>
(3) Embankment	<input type="checkbox"/>	(8) Others: Description : .....	<input type="checkbox"/>
(4) Retaining wall	<input checked="" type="checkbox"/>		
(5) Bridge	<input type="checkbox"/>		

1.4. Observable signs / features of the site, which may lead to hazardous / extreme conditions:

(1) No problem. Good condition	<input type="checkbox"/>	
(2) Soil and Concrete condition	<input checked="" type="checkbox"/>	Sliding of retaining wall
(3) Collapse (broken) and crack	<input checked="" type="checkbox"/>	Cracks on road observed, High RF may trigger the situation
(4) Road surface condition	<input type="checkbox"/>	Road surface is Macadam
(5) Drainage structure condition / Cleaning condition (like blockage)	<input type="checkbox"/>	No drains, Need to provide drain at RHS

1.5. Condition of the above potential failure: Please describe briefly.

Retaining wall is potential to failures with high rainfall conditions. Heavy Rainfall and Steep Slopes are the main factors of trigger the failures. Retaining wall height 5m, length 50m. As recommendations, strengthening of existing retaining wall by providing RCC jacket wall would help to control potential failure. But required to stop spring water coming to road surface and it deteriorate the surface conditions. At this location cut slope formed with a huge rock spread along the road about 60m in length and height 25m. This rock would help to stabilize RHS of the Road but at high RF all rain water falling on cut slope (Rock) flowing to road surface and it would be the potential impact to failure of the road pavement as well as retaining wall at LHS. Since there is no detour routes available, Inspections by NBRO for long term countermeasures is an urgent requirement.



1.7. Photos of the Site:

Photo	Photo
<p>Comment</p>	<p>Comment</p>

Signature of EE:

Name of the EE: H.K.D.A.P. Kumarasiri

Evaluation

01. Needs of Inspection: Need  No Need

02. If it is checked "Need" at 01, please check the type of potential failure

(1) Rock fall / collapse	<input type="checkbox"/>	(6) Retaining wall failure	<input checked="" type="checkbox"/>
(2) Slope failure / collapse	<input type="checkbox"/>	(7) Culvert /canal/ drainage failure	<input type="checkbox"/>
(3) Landslide	<input checked="" type="checkbox"/>	(8) Pavement	<input checked="" type="checkbox"/>
(4) Debris flow`	<input type="checkbox"/>	(9) Problem of bridge	<input type="checkbox"/>
(5) Embankment failure	<input checked="" type="checkbox"/>	(10) Others / Not sure	<input type="checkbox"/>

1. Type of Failure:	I. Type of Movement	
	<input type="checkbox"/> Fall <input type="checkbox"/> Topple <input type="checkbox"/> Complex (Combination of above)	<input type="checkbox"/> Slide <input type="checkbox"/> Rotational <input type="checkbox"/> Translational <input type="checkbox"/> Creep ( <input type="checkbox"/> Deep/ <input type="checkbox"/> Soil)
(i) Landslide <input type="checkbox"/>	ii. Type of Material	
	<input checked="" type="checkbox"/> Rock <input type="checkbox"/> Structural Failure	<input type="checkbox"/> Debris <input checked="" type="checkbox"/> Earth <input checked="" type="checkbox"/> Embankment Failure (LHS) <input checked="" type="checkbox"/> Erosion ( <input type="checkbox"/> Gully/ <input type="checkbox"/> Stream)
(ii) Other <input type="checkbox"/>	<input type="checkbox"/> Cutting Slope ( <input type="checkbox"/> Soil/ <input type="checkbox"/> Rock)	

### 2. Location Details

Executive Engineer Division:	Kegalle	Province:	Distric:
DS Division:		GN Division:	<input type="checkbox"/> Town <input checked="" type="checkbox"/> Village <input type="checkbox"/> Est
Coordinates:			
Cross Section:	<input type="checkbox"/> Fill <input checked="" type="checkbox"/> Cut	<input type="checkbox"/> Cut/fill	<input type="checkbox"/> Flat
Section Location:	<input type="checkbox"/> Tangent Section	<input type="checkbox"/> Curve Section	
Terrain:	<input type="checkbox"/> Flat Land <input type="checkbox"/> Rolling	<input checked="" type="checkbox"/> Hill area	Remarks
Access to Location:	Kegalle - Bolehempidiya road 13 km post		

### 3. Road Details

Name of the Road (Road No):	A 21		
No. of Lane:	<input checked="" type="checkbox"/> 1-Lane <input type="checkbox"/> Intermedium Lane <input type="checkbox"/> 2-Lane	Carriageway	<input type="checkbox"/> Paved <input checked="" type="checkbox"/> Un Paved
Surface:	<input checked="" type="checkbox"/> AC (Asphalt) <input type="checkbox"/> Mettled tarred <input type="checkbox"/> Brack topped	<input type="checkbox"/> Gravel	<input type="checkbox"/> Earth
Contracted by:	Contracted by		

### Geological and Topographical Conditions, Observations at the site about unstabilizations, Dip / Strike ... Etc

Soil type	<input checked="" type="checkbox"/> Sandy	<input checked="" type="checkbox"/> Clay	<input type="checkbox"/> Silty	Remarks: Orange B
Rock type	<input type="checkbox"/> Granite	<input type="checkbox"/> Charnokite	<input type="checkbox"/> Quartz	<input type="checkbox"/> Marble
Weathering Condition	<input type="checkbox"/> Loose	<input type="checkbox"/> Soft	<input type="checkbox"/> Hard	Remarks
Structural Geology	<input type="checkbox"/> Fresh	<input type="checkbox"/> Slightly Wcath	<input type="checkbox"/> Weathered	<input type="checkbox"/> Highly Wea
Topography	<input checked="" type="checkbox"/> Joints	<input type="checkbox"/> Foliations	<input checked="" type="checkbox"/> Cracks	<input checked="" type="checkbox"/> Fault plane:
Drainage	<input checked="" type="checkbox"/> Valley	<input type="checkbox"/> Flat Land	<input checked="" type="checkbox"/> Hill area	Remarks
Other Observations	<input type="checkbox"/> Ditches/Pipies	<input checked="" type="checkbox"/> Diversion Drain	<input type="checkbox"/> None	<input type="checkbox"/> Springs/St
LHS - Old rubber cultivated land & now it is replanting				
Minor cracks on RHS				

30 m length along the road

Scale of	Width	Height	Dip / Stream	
Slope <input type="checkbox"/>	Width 01: <input type="checkbox"/>		Slope	Stream
Stream <input type="checkbox"/>	Width 02: <input type="checkbox"/>		<input type="checkbox"/> 45° > <input checked="" type="checkbox"/> 45° - 60°	<input type="checkbox"/> 200 > <input type="checkbox"/> 200
wall <input type="checkbox"/>			<input type="checkbox"/> 60° < <input type="checkbox"/> Overhang	<input type="checkbox"/> 300 < <input type="checkbox"/>

### 8. Other Observations

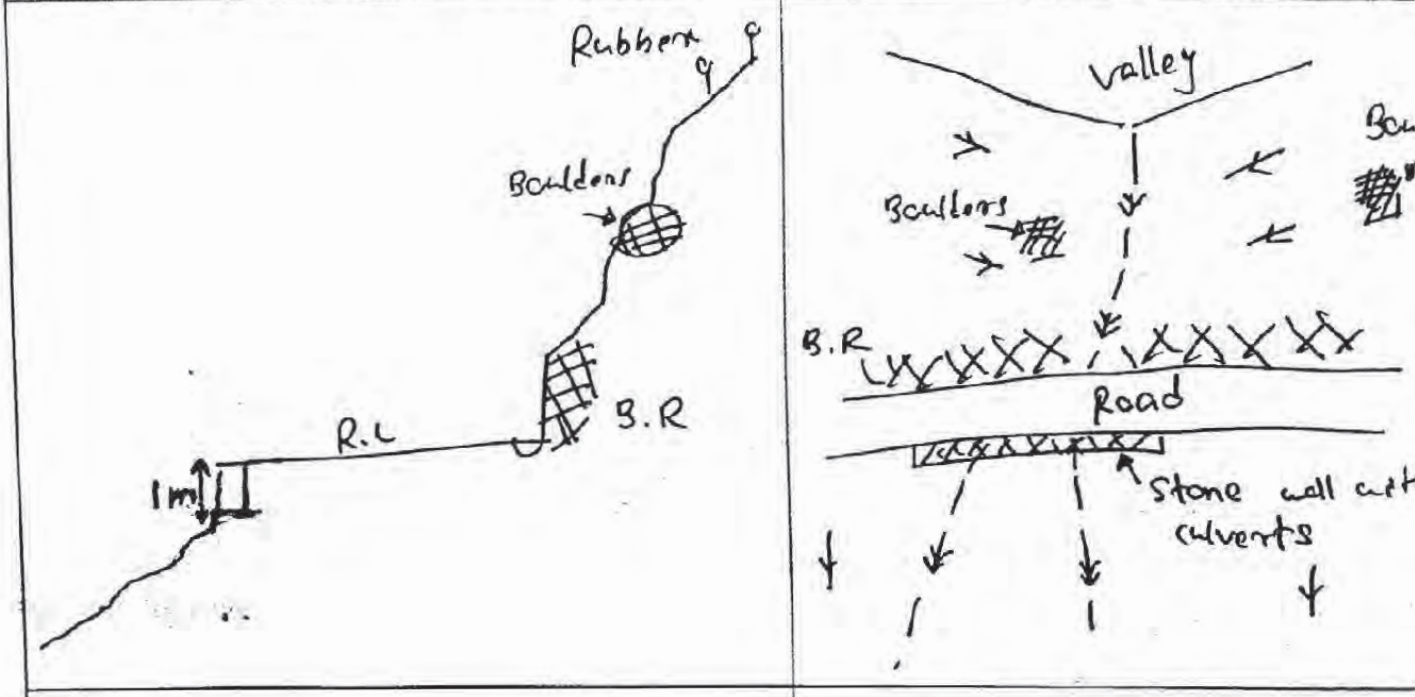
Existing Slope Condition (For all failures)	Degree of Saturation	<input checked="" type="checkbox"/> Dry	<input type="checkbox"/> Wet	<input type="checkbox"/> Seepage	<input type="checkbox"/> Spring
	Continuity of moving	<input type="checkbox"/> Unnoticed	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Remarkable	Remarks
Existing Stream Condition (especially at stream erosion)	Slope features	<input checked="" type="checkbox"/> Vegetation	<input type="checkbox"/> Structures	<input type="checkbox"/> Others	Remarks
	Type of flow	<input type="checkbox"/> Mountain	<input type="checkbox"/> Stream	<input type="checkbox"/> River	<input checked="" type="checkbox"/> Other
Existing Structural Condition (especially at Struct. failures)	Area of basin	<input type="checkbox"/> 50000 >	<input type="checkbox"/> 50000-200000	<input type="checkbox"/> 200000 <	
	Deposit on river bed	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Rare	<input type="checkbox"/> Abundant	
Existing Structural Condition (especially at Struct. failures)	Type of Structure	<input type="checkbox"/> Brick	<input type="checkbox"/> Rubble	<input type="checkbox"/> Concrete	<input type="checkbox"/> Other
	Cracks	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	Water drained (through wells)	<input type="checkbox"/> Clean	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Muddy	Remarks

Date of Incident	Nature of Incident and Extent of Damage/Impact
1st	Minor cutting failures @ LHS road cut
2nd	

10. Investigations Done

Date	Investigated by	Requested by	Major Findings, Conclusions & Recommendation
06/11/2012	D. Venigasetam (Geologist) Signature		

11. Description of Present Failure (Occurred on)



12. Present Condition  
 a. Minor cracks on RHS  
 b. fails on LHS Road cutting  
 c. Culverts & road side drains have b/c width

13. Elements of RIS, no Gravity or Threat  
 Medium

14. Possible Failures  
 Possible slope failure @ LHS

15. Potential Impact to the Road  
 Low       Medium       High

16. Availability of Detour Road  
 None       Available      Name of the road

17. Conclusions (Potential cause of fall):

a. Highly improve drainage @ LHS slope & do the full mitigation measures

18. Recommended Mitigation Measures Proposed

a. valley area should be kept as a reservation area  
 b. Improve the road side drain & divert it to RHS culverts

19. Urgency to remedial  
 Very Urgent       Urgent       Caution       No Problem

1. Type of Failure:	i. Landslide <input type="checkbox"/>		I. Type of Movement			
			<input type="checkbox"/> Fall	<input type="checkbox"/> Slide	<input checked="" type="checkbox"/> Rotational	<input type="checkbox"/> Lateral Sp
			<input type="checkbox"/> Topple		<input type="checkbox"/> Translational	<input type="checkbox"/> Flows
			<input type="checkbox"/> Complex (Combination of above)		<input type="checkbox"/> Creep ( <input type="checkbox"/> Deep/ <input type="checkbox"/> Soil	
		ii. Type of Material				
		<input type="checkbox"/> Rock	<input type="checkbox"/> Debris	<input checked="" type="checkbox"/> Earth		
		ii. Other <input type="checkbox"/>		<input checked="" type="checkbox"/> Embankment Failure	<input type="checkbox"/> Erosion ( <input type="checkbox"/> Gully/ <input type="checkbox"/> Str	
				<input type="checkbox"/> Structural Failure	<input checked="" type="checkbox"/> Cutting Slope ( <input checked="" type="checkbox"/> Soil/ <input type="checkbox"/> R	

### 2. Location Details

Executive Engineer Division:	Kegalle	Province:		District:	
DS Division:		GN Division:		<input type="checkbox"/> Town	<input checked="" type="checkbox"/> Village <input type="checkbox"/> Est
Coordinates:					
OS Section:	<input type="checkbox"/> Fill	<input type="checkbox"/> Cut	<input checked="" type="checkbox"/> Cut/fill	<input type="checkbox"/> Flat	
Section Location:	<input type="checkbox"/> Tangent Section		<input type="checkbox"/> Curve Section		
Access to Location:	<input type="checkbox"/> Flat Land	<input type="checkbox"/> Rolling	<input checked="" type="checkbox"/> Hill area	Remarks	
Kegalle - Galothkothupitiya road 16/5 - 16/10 Km Post					

### 3. Road Details

Name of the Road (Road No):	<input checked="" type="checkbox"/> 1-Lane		Carriageway	Road Plat Form	<input type="checkbox"/> Paved
No. of Lanes:	<input type="checkbox"/> Intermedium Lane	<input type="checkbox"/> 2-Lane			<input checked="" type="checkbox"/> Un Paved
Surface Type:	<input checked="" type="checkbox"/> AC (Asphalt)	<input type="checkbox"/> Mettled tarred Brack topped			<input type="checkbox"/> Gravel
Consulted by:				Contracted by:	RDA

### Geological and Topographical Conditions, Observations at the site about unstabilizations, Dip / Strike ... Etc

Soil Type:	<input checked="" type="checkbox"/> Sandy	<input checked="" type="checkbox"/> Clay	<input type="checkbox"/> Silty	Remarks	Dark B
Rock type:	<input type="checkbox"/> Granite	<input type="checkbox"/> Charnokite	<input type="checkbox"/> Quartz	<input type="checkbox"/> Marble	
Matrix:	<input type="checkbox"/> Loose	<input type="checkbox"/> Soft	<input checked="" type="checkbox"/> Hard	Remarks	
Weathering Condition:	<input checked="" type="checkbox"/> Fresh	<input type="checkbox"/> Slightly Weath	<input type="checkbox"/> Weathered	<input type="checkbox"/> Highly Wea	
Structural geology:	<input type="checkbox"/> Joints	<input type="checkbox"/> Foliations	<input checked="" type="checkbox"/> Cracks	<input type="checkbox"/> Fault plane	
Topography:	<input type="checkbox"/> Valley	<input type="checkbox"/> Flat Land	<input checked="" type="checkbox"/> Hill area	Remarks	
Drainage:	<input type="checkbox"/> Ditches/Pipies	<input type="checkbox"/> Diversion Drain	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Springs/St	
Other Observations:	seepage can see through the cracks				

Boundaries of landslide Affected Area:	x 50m along the main road				
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Scale of Slope: <input type="checkbox"/> Stream: <input type="checkbox"/> Wall: <input type="checkbox"/>	Width		Height	Gradient	
	Width 01:	Width 02:		Slope	
				<input type="checkbox"/> 45° >	<input type="checkbox"/> 45° - 60°
				<input checked="" type="checkbox"/> 60° <	<input type="checkbox"/> Overhang
				<input type="checkbox"/> 200 >	<input type="checkbox"/> 200
				<input type="checkbox"/> 300 <	<input type="checkbox"/>

### 8. Other Observations

Existing Slope Condition (For all failures)	Degree of Saturation	<input type="checkbox"/> Dry	<input type="checkbox"/> Wet	<input checked="" type="checkbox"/> Seepage	<input type="checkbox"/> Spring
	Continuity of moving	<input type="checkbox"/> Unnoticed	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Remarkable	Remarks
	Slope features	<input checked="" type="checkbox"/> Vegetation	<input checked="" type="checkbox"/> Structures	<input type="checkbox"/> Others	Remarks
Existing Stream Condition (especially at stream erosion)	Type of flow	<input type="checkbox"/> Mountain	<input type="checkbox"/> Stream	<input type="checkbox"/> River	<input type="checkbox"/> Other
	Area of basin	<input type="checkbox"/> 50000 >	<input type="checkbox"/> 50000-200000	<input type="checkbox"/> 200000 <	
	Deposit on river bed	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Rare	<input type="checkbox"/> Abundant	
Existing Structural Condition (especially at Struct. failures)	Type of Structure	<input type="checkbox"/> Brick	<input type="checkbox"/> Rubble	<input type="checkbox"/> Concrete	<input type="checkbox"/> Other
	Cracks	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	Water in cracks through walls	<input type="checkbox"/> Clean	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Muddy	Remarks



Date of Incident	Nature of Incident and Extent of Damage/Impact
1st	Road cracks occurred recently
2nd	

10. Investigations Done				
	Date	Investigated by	Requested by	Major Findings/Conclusions & Recommendation
11	06/11/2022	D. Kenigasekone Signature <i>D. Kenigasekone</i>		

11. Description of Present Failure (Occurred on)

1. Present Condition	LHS well has slid downwards Cracks on the road High seepage through the cracks		
2. Elements at Risk - no Gravity of Threat	LHS can slide with high rain		
3. Possible Failure	Embankment slope failure @ LH		
4. Potential Impact to the road	<input type="checkbox"/> Low	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> High
5. Availability of Detour Road	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Available	Name of the

17. Conclusions (Potential cause of fall)

① Improve drainage of the land & do the mitigation measures soon

18. Recommended Mitigation Measures Proposed
- ① Deep drainage @ RHS to reduce infiltration
  - ② RC wall @ LHS
  - ③ Remove large trees on rock slopes

19. Urgency to remedial	<input type="checkbox"/> Very Urgent	<input checked="" type="checkbox"/> Urgent	<input type="checkbox"/> Caution	<input type="checkbox"/> No Problem
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① RHS boulder can be unstable due to cracks with roots of trees

1. Type of Failure:	(i) Landslide <input type="checkbox"/>	i. Type of Movement <input type="checkbox"/> Fall <input checked="" type="checkbox"/> Slide <input type="checkbox"/> Rotational <input type="checkbox"/> Lateral Sp <input type="checkbox"/> Topple <input checked="" type="checkbox"/> Translational <input type="checkbox"/> Flows <input type="checkbox"/> Complex (Combination of above) <input type="checkbox"/> Creep ( <input type="checkbox"/> Deep/ <input type="checkbox"/> Soil			
	(ii) Other <input type="checkbox"/>	ii. Type of Material <input checked="" type="checkbox"/> Rock <input type="checkbox"/> Debris <input checked="" type="checkbox"/> Earth <input checked="" type="checkbox"/> Embankment Failure <input type="checkbox"/> Erosion ( <input type="checkbox"/> Gully/ <input type="checkbox"/> Str <input type="checkbox"/> Structural Failure <input type="checkbox"/> Cutting Slope ( <input type="checkbox"/> Soil/ <input type="checkbox"/> R			

2. Location Details

Executive Engineer Division:	Kegalle	Province:	District:
DS Division:		CN Division:	<input type="checkbox"/> Town <input checked="" type="checkbox"/> Village <input type="checkbox"/> Est
Coordinates:			
Cross section:	<input type="checkbox"/> Fill <input type="checkbox"/> Cut <input checked="" type="checkbox"/> Cut/fill <input type="checkbox"/> Flat		
Section Location:	<input type="checkbox"/> Tangent Section <input type="checkbox"/> Curve Section		
Terrain:	<input type="checkbox"/> Flat Land <input type="checkbox"/> Rolling <input type="checkbox"/> Hill area	Remarks:	
Access to Location:	Kegalle - Bulathkchupitiya road @ 16 km Post		

3. Road Details

Name of the Road (Rd No):	A-21		
No. of lanes:	<input checked="" type="checkbox"/> 1-Lane <sup>ate</sup> <input type="checkbox"/> Intermediate Lane <sup>4-10</sup> <input type="checkbox"/> 2-Lane <sup>4-10</sup>	Carriageway	<input type="checkbox"/> Paved <input checked="" type="checkbox"/> Un Paved
Surface Type:	<input checked="" type="checkbox"/> AC (Asphalt) <input type="checkbox"/> Mettled tarred Brack topped	<input type="checkbox"/> Gravel <input type="checkbox"/> Earth	Road Plat-Form one wheel plot
Consulted by:	Contracted by:		
4. Location Description:	Geological and Topographical Conditions, Observations at the site about unstabilizations, Dip / Strike Etc		
	Soil type:	<input checked="" type="checkbox"/> Sandy <input checked="" type="checkbox"/> Clay <input type="checkbox"/> Silty	Remarks: Light Br
	Rock type:	<input type="checkbox"/> Granite <input type="checkbox"/> Charnokite <input type="checkbox"/> Quartz	<input type="checkbox"/> Marble
	Moisture:	<input type="checkbox"/> Loose <input type="checkbox"/> Soft <input checked="" type="checkbox"/> Hard	Remarks
	Weathering condition:	<input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Slightly Weath <input type="checkbox"/> Weathered	<input type="checkbox"/> Highly Wea
	Structural features:	<input checked="" type="checkbox"/> Joints <input checked="" type="checkbox"/> Foliations <input checked="" type="checkbox"/> Cracks	<input checked="" type="checkbox"/> Fault plane
Topography:	<input type="checkbox"/> Valley <input type="checkbox"/> Flat Land <input checked="" type="checkbox"/> Hill area	Remarks	
Drainage:	<input type="checkbox"/> Ditches/Pipies <input type="checkbox"/> Diversion Drain <input type="checkbox"/> None	<input checked="" type="checkbox"/> Springs/St	
Other observations:	J/intensity 3/m. / Highly jointed, cracked rock @ R		

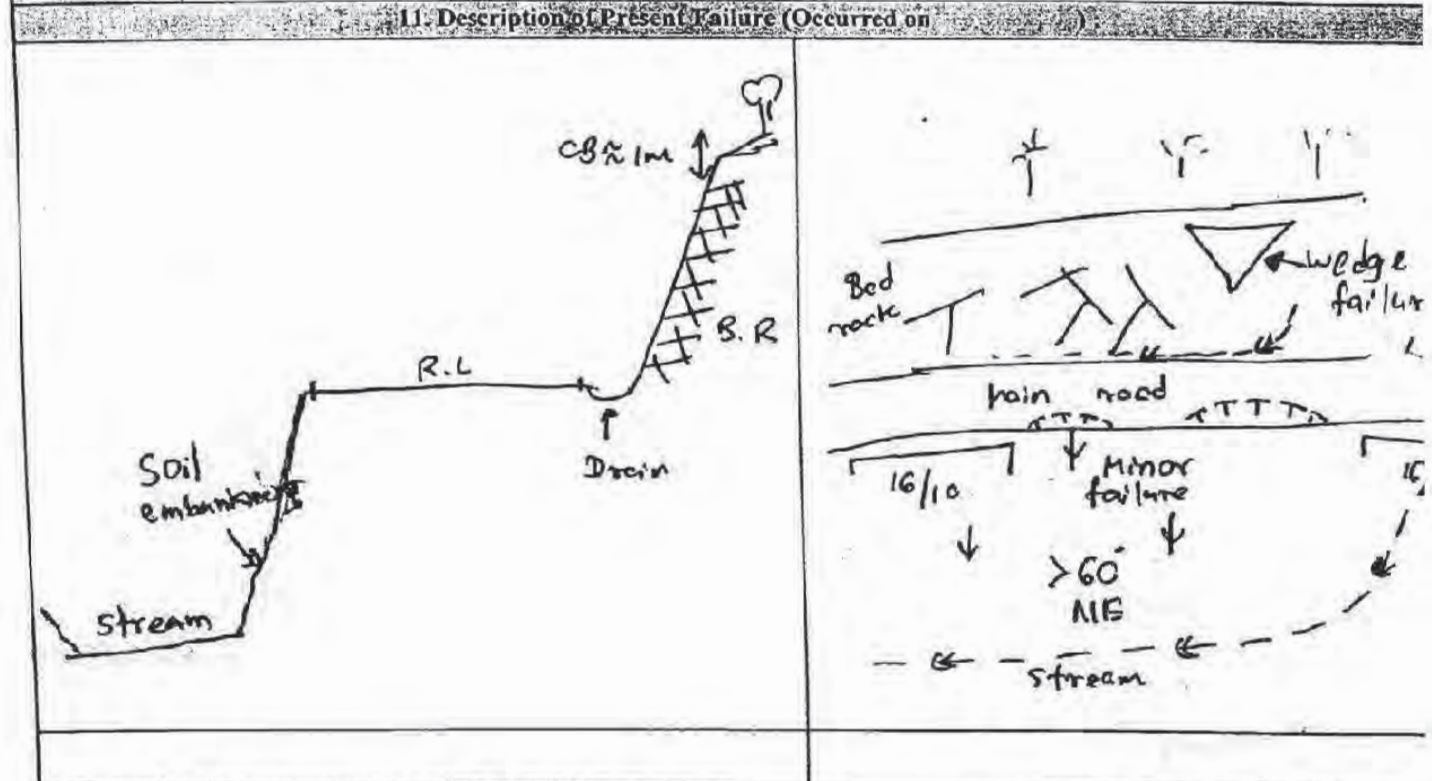
5. Slope details:			
6. Boundaries of landslide affected area:	Along the 16/10 saltent area		
7. Scale:	Width:	Height:	Slope:
Slope <input type="checkbox"/>	Width 01: Width 02:	4m	<input type="checkbox"/> 45° > <input type="checkbox"/> 45° - 60° <input checked="" type="checkbox"/> 60° < <input type="checkbox"/> Overhang
Stream <input type="checkbox"/>			<input type="checkbox"/> 200 > <input type="checkbox"/> 200 <input type="checkbox"/> 300 < <input type="checkbox"/>
Wall <input type="checkbox"/>			

8. Other Observations

Existing Slope Condition (For all failures)	Degree of Saturation:	<input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet	<input checked="" type="checkbox"/> Seepage <input type="checkbox"/> Spring
	Continuity of moving Slope failure:	<input checked="" type="checkbox"/> Unnoticed <input type="checkbox"/> Medium <input type="checkbox"/> Structures	<input type="checkbox"/> Remarkable <input type="checkbox"/> Others
Existing Stream Condition (especially at stream erosion)	Type of flow:	<input type="checkbox"/> Mountain <input checked="" type="checkbox"/> Stream <input type="checkbox"/> River	<input type="checkbox"/> Other
	Area of basin:	<input type="checkbox"/> 50000 > <input type="checkbox"/> 50000-200000 <input type="checkbox"/> 200000 <	
Existing Structural Condition (especially at Struct. failures)	Depositions river bed:	<input checked="" type="checkbox"/> None <input type="checkbox"/> Rare <input type="checkbox"/> Abundant	
	Type of Structure:	<input type="checkbox"/> Brick <input type="checkbox"/> Rubble <input type="checkbox"/> Concrete	<input type="checkbox"/> Other
	Cracks:	<input type="checkbox"/> None <input type="checkbox"/> Some <input type="checkbox"/> Many	Remarks: Subsided
	Water drained (through walls):	<input type="checkbox"/> Clean <input type="checkbox"/> Cloudy <input type="checkbox"/> Muddy	Remarks

Date of Incident:	Nature of Incident and Extent of Damage/Impact
1st	NOT recorded at the investigation
2nd	

10. Investigations Done			
Date	Investigated by	Requested by	Major Findings, Conclusions & Recommendation
06/11/2022	Dilum Wanigasekera (Geologist) -ra Signature		



12. Present Condition	<ul style="list-style-type: none"> <li>High Seepage can see through the joints RHS bed rock</li> <li>Small subsidence can see in the road</li> </ul>			
13. Elements at Risk and Gravity of Threat	<ul style="list-style-type: none"> <li>Rock sliding can occur to the main road</li> <li>LHS embankment can fail due to unbr.</li> </ul>			
14. Possible Failures	<ul style="list-style-type: none"> <li>Rock fall - RHS</li> <li>Slope failure - LHS</li> </ul>			
15. Potential Impact to the road	<input type="checkbox"/> Low	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> High	
16. Availability of Detour Road	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Available	Name of the road	
17. Conclusions (Potential cause of fall)				
<ul style="list-style-type: none"> <li>Road at a medium risk hazard</li> </ul>				
18. Recommended Mitigation Measures Proposed				
<ul style="list-style-type: none"> <li>Remove unstable rocks in RHS @ stabilize the joints</li> <li>Support the LHS embankment @ Improve drainage</li> </ul>				
19. Urgency to remedial	<input type="checkbox"/> Very Urgent	<input type="checkbox"/> Urgent	<input checked="" type="checkbox"/> Caution	<input type="checkbox"/> No Problem

Remove large trees on the rock surface

photo = 26-31

## Checklist Form C (Screening) - Disaster Impact Assessment

### (A). Basic Information of the Road:

- a. Name of the Road: Kegalle Bulathkohupitiya Karawanella Road
- b. Road No / Code: A21
- c. Category of Road: **National** / Provincial / Municipal, Town / Village / Other
- d. Road Administration: Province / CE / EE Division/s: Sabaragamuwa Prov. Kegalle District, Kegalle EED
- e. Classification: E / **A** / B / C / D / Unclassified / New/ Other
- f. Road Section: 5Km (42 Km)
- g. Type of Project: New Construction / Widening & Improvement / **Rehabilitation of the existing road**

### (A.1) - Draft Map of examined site with location numbers:



(A.2). Site No/s.: 13/8-13/9 LHS&RHS, 16/5-16/6LHS, 16/10-16Km Post LHS&RHS

(A.3). Attach Map showing potential hazardous locations based on “beyond normal condition”

- (Map No.01 in Form B)

① Attached

(A.4). Attach Table with the details of above-mentioned locations

② Attached

**(B). Evaluation:****(B.1)-Evaluation of screened sites**

No.	(1) Site No.	(2) Requesting Agency for Inspection	(3) Comments <i>(Proposing Actions by EE / Engineer)</i> <i>Site specific remarks)</i>
1.	13/8-13/9LHS&RHS	NBRO	High Priority
2.	16/5-16/6LHS	NBRO	Priority
3.	16/10-16Km Post	NBRO	Urgent
4.			
5.			
6.			
7.			
8.			
9.			
10.			

**(B.2) - Comments**

Total length of KBK road is 42 km & from 0+000 to 16+000 is maintained by EE Kegalle. Between 11+000 and 16+000 Three Sites were taken in to the Sample.

**(B.3)- Details of the responsible officer (CE)**

Name of the CE		A.A. Senadeera	
Designation		Chief Engineer	
Division & Organization Address		CE Division, RDA, Kegalle	
Contact Details	Telephone	Office	0352229877
		Mobile	0714432504
		Fax	0352229877
Email Address			

Signature of CE: \_\_\_\_\_

Date:  
.....

Received:

PD : \_\_\_\_\_ Date: \_\_\_\_\_

D, MMC : \_\_\_\_\_ Date: \_\_\_\_\_

ADG, RDA : \_\_\_\_\_ Date: \_\_\_\_\_

1.1. Site No: 16/10-16Km Post **LHS/ RHS** –Refer to the sites in draft map in section (A.1)  
(LHS- Left Hand side; RHS- Right Hand side)

1.2. Inspection date/s: 15/10/2012

1.3. Road structure related to the site:

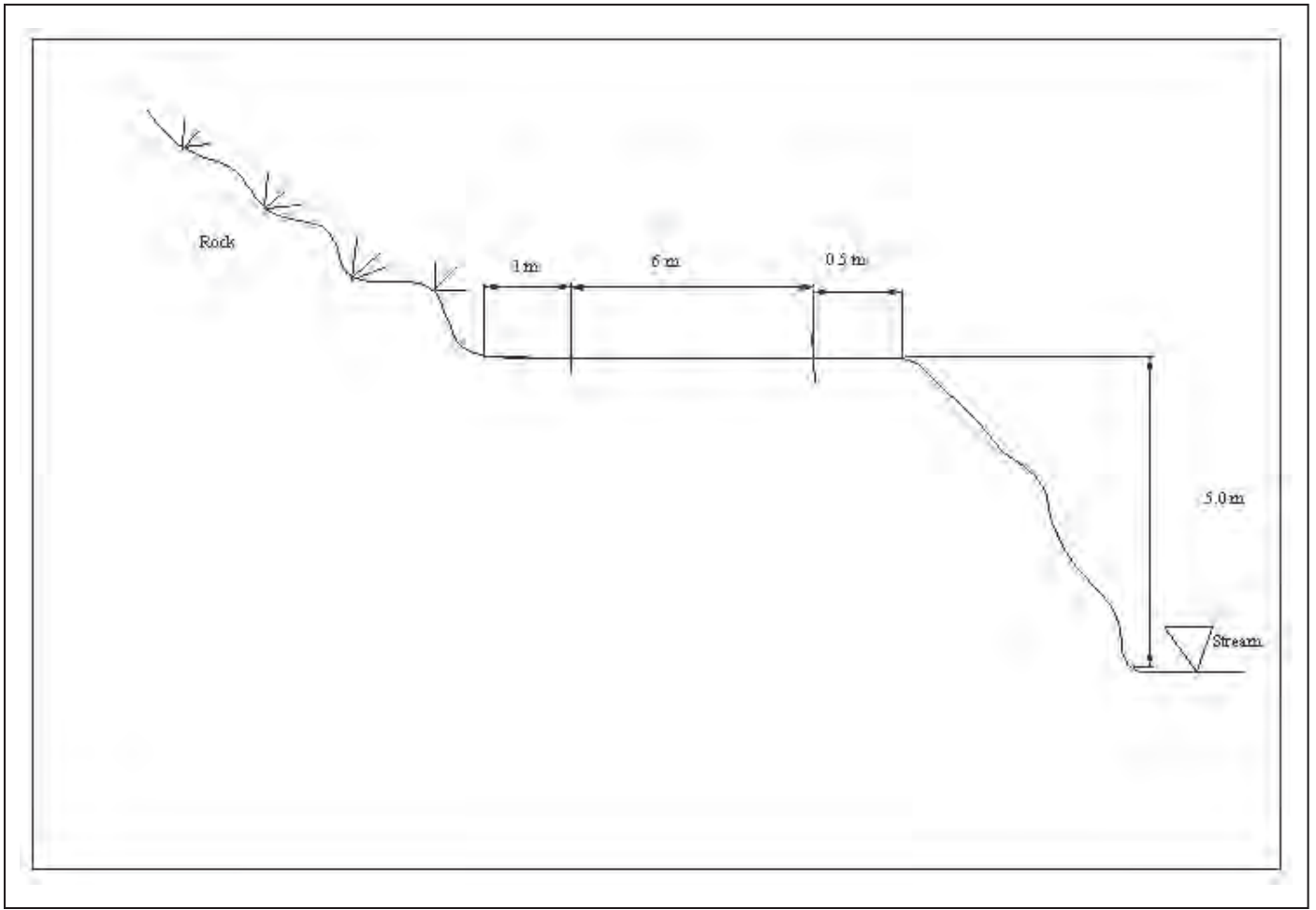
(1) Natural slope	<input type="checkbox"/>	(6) Drainage/ Canals	✓
(2) Cut slope	✓	(7) Road surface	✓
(3) Embankment	✓	(8) Others: Description Spring water coming to the road surface	✓
(4) Retaining wall	<input type="checkbox"/>		
(5) Bridge	<input type="checkbox"/>		

1.4. Observable signs / features of the site, which may lead to hazardous / extreme conditions:



(1) No problem. Good condition	<input type="checkbox"/>	
(2) Soil and Concrete condition	✓	Moisture content of soil is high
(3) Collapse (broken) and crack	✓	Cracks on road observed, High RF may trigger the situation
(4) Road surface condition	<input type="checkbox"/>	Road surface is Macadam
(5) Drainage structure condition / Cleaning condition (like blockage)	<input type="checkbox"/>	No drains, Need to provide drain at RHS

1.5. Condition of the above potential failure: Please describe briefly.

Embankment is potential to failure with high rainfall conditions. Heavy Rainfall and Steep Slopes are the main factors of trigger the failures. Embankment height 25m, length 70m and gradient 45-60°. As recommendations, Slope protection method could be adopted to the existing embankment to control potential failure. But moisture content of existing soil is high and one stream is flowing along the toe line of embankment therefore difficult to reduce gradient of the embankment. It is required to stop spring water coming to road surface and it deteriorates the surface conditions. At this location cut slope formed with a huge rock (bed rock) spread along the road about 60m in length and height 40m. This rock would help to stabilize RHS of the Road but at high RF all rain water falling on cut slope (Rock) flowing to road surface and it would be the potential impact to failure of the road pavement as well as embankment at LHS. Since there is no detour routes available, Inspections by NBRO for long term countermeasures is an urgent requirement.



1.7. Photos of the Site:

Photo	Photo
	
<p>Comment</p>	<p>Comment</p>

Signature of EE:

Name of the EE: H.K.D.A.P. Kumarasiri

Evaluation

01. Needs of Inspection:                                      Need                                       No Need

02. If it is checked "Need" at 01, please check the type of potential failure

(1) Rock fall / collapse	✓	(6) Retaining wall failure	✓
(2) Slop failure / collapse	✓	(7) Culvert /canal/ drainage failure	✓
(3) Landslide	✓	(8) Pavement	✓
(4) Debris flow`	✓	(9) Problem of bridge	<input type="checkbox"/>
(5) Embankment failure	✓	(10) Others / Not sure	<input type="checkbox"/>



## Checklist Form C (Disaster Records) - Disaster Impact Assessment

### (A). Basic Information of the Road:

- a. Name of the Road: ...Gavilipitiya Hettimulla Road
- b. . Route No / Code: B136
- c. Category of Road: **National** / Provincial / Municipal, Town / Village / Other
- d. Road Administration: Province / CE / EE Division/s: Sabaragamuwa, Kegalle District, Kegalle EED
- e. Classification: E / A / **B** / C / D / Unclassified / New/ Other
- f. The length of the road: 16.08 Km
- g. Recorded date/s of the disaster: Date Not clear (Year 2012 October)

### (A.1) - Draft Map of disaster happened site with location numbers:



### (A.2) - Site No/s.: Between Culvert No 16/5 and 16/6 RHS

**(B). Evaluation:****(B.1)-Evaluation of damaged sites**

No.	(1) Site No.	(2) Type of Failure	(3) Requesting Agency for Inspection or Repairing	(3) Comments <i>(Proposing Actions by EE / Engineer, Site specific remarks)</i>
1.	16/5-16/6 RHS	Longitudinal crack on road surface	<b>NBRO</b>	Providing R/wall or Toe wall for the embankment or reconstruction of embankment with suitable gradient and seal surface longitudinal cracks using slurry seal for surface crack
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

**(B.2) - Comments**

Only one site was reported as Disaster occurred site. It was taken as the sample

**(B.3)- Details of the Chief Engineer:**

Name of the Chief Engineer		Eng. A.A. Senadeera	
Admin. CE Division & Address		Kegalle Division, RDA	
Contact Details	Telephone	Office	0352229877
		Mobile	0714432504
		Fax	0352229877
Email Address			

Signature of CE: \_\_\_\_\_ Date: \_\_\_\_\_

Received:

PD : \_\_\_\_\_ Date: \_\_\_\_\_

D, MMC : \_\_\_\_\_ Date: \_\_\_\_\_

ADG, RDA : \_\_\_\_\_ Date: \_\_\_\_\_

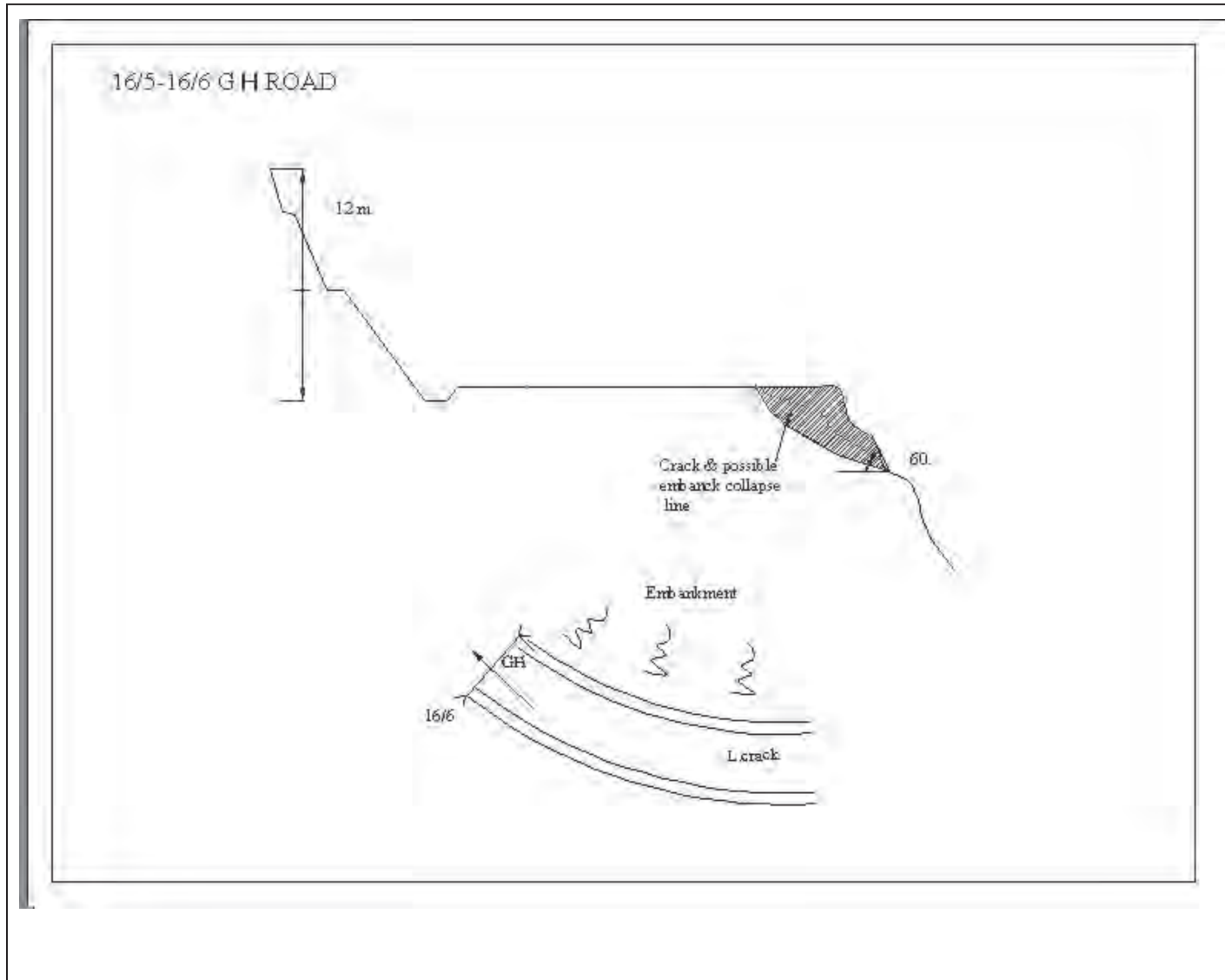
1.1. Site No: 16/5 -16/6 RHS – *Refer to the sites in draft map in section (A.1.)*

*(LHS- Left Hand side; RHS- Right Hand side)*

1.2. Inspection date/s: 15/10/2012

**2.0. Details of the disaster condition:**

(2.1) What was the event occurred.	1). Sediment disaster <input type="checkbox"/> 2). Inundation of the road <input type="checkbox"/> 3). Road structural failures <input checked="" type="checkbox"/> 4). Damages to surrounding area <input checked="" type="checkbox"/> 5). Others
(2.2) Weather condition that led to the disaster situation	1). Continuous rainfall ✓ (.....days) 2). Heavy rains ✓ (..... mm/h) 3). Strong winds <input type="checkbox"/> (.....km/h) 4). Cyclone <input type="checkbox"/> 5.Others ( ) <input type="checkbox"/>
(2.3) Duration of traffic interruption	(No interruption) days
(2.4) Description of the damage: (please include “Condition of the failure” in your description) Surface cracks & embankment failure need to be defined by Inspection Experts. The Site details of possible embankment collapse are as follows length 15m width & height 5m.Present gradient of embankment is more than 50%. Two longitudinal cracks appeared on road surface (length 3m width 3mm) There was a previous failure (earth slips) happened at cut slope of same location LHS at 2010 and traffic was interrupted for 3 hours. Slope protection measures and Retaining wall are proposed. Road Details : Carpet (AC), Single lane 4.5m width 6m total (with shoulder).	
(2.5). Sketch of the damage site:	



**3.0. Damages with the disaster events:**

**3.1. Damaged physical structures:**

(1) Natural slope	<input type="checkbox"/>	(6) Crossing culvert/ canal	<input type="checkbox"/>
(2) Cut slope	<input type="checkbox"/>	(7) Road surface	<input checked="" type="checkbox"/>
(3) Embankment	<input checked="" type="checkbox"/>	(8) Others	<input type="checkbox"/>
(4) Retaining wall	<input type="checkbox"/>	Description :	
(5) Bridge	<input type="checkbox"/>		



**3.2 Size of the damage: Please specify the damage size choosing necessary items.**

(1) Width	<input checked="" type="checkbox"/>	5m
(2) Height	<input checked="" type="checkbox"/>	5m
(3) Length	<input checked="" type="checkbox"/>	15m
(4) Size of Culvert / Canal	<input type="checkbox"/>	_m × _m or R= _m
(5) Others (Longitudinal crack	<input checked="" type="checkbox"/>	Description : 3m length 3mm width crack at 2 places

3.3 Condition of failure:

(1) No damage of road structure	<input type="checkbox"/>
(2) Though the road structure functions, repair is needed.	<input checked="" type="checkbox"/>
(3) Though the structure has not destroyed, the function has lost.	<input type="checkbox"/>
(3) Destroyed Completely	<input type="checkbox"/>

3.4. Photos of the Site:

Photo	Photo
	
<p>Comment: Longitudinal cracks appeared on carriageway and gradient of embankment more than 60 degree</p>	<p>Comment: Cut slope collapsed on 2010 and gradient of cut slope also more than 60 degree</p>

Signature of the EE: \_\_\_\_\_

Name of the EE: H.K.D.A.P. Kumarasiri

Date: 15.10.2012

### Checklist Form D (Disaster Record) : Disaster Impact Assessment

Form D should be completed by DDMCU)

1. Project / Road Details:

1.1	Name of Road: <u>B136 (Bulathkothupitiya - Kegalle Road)</u>
1.2	Class of the Road: A <input checked="" type="radio"/> B <input type="radio"/> C / Other <u>Express way.</u>
1.3	Road Ref. No: <u>B136 = 16/5 - 16/6 LHS</u>
1.4	Responsible Agency of the Road Administration: <u>RDA</u>
1.5	Area / Location of the problem exists: <u>16/5 - 16/6 LHS</u>
1.6	Exact Landmarks (if any): Please attach a sketch map: <u>B136 ; Within 01 Km from Hettiniulla - Bulathkothupitiya (ADU) Junction.</u>

<DDMCU>

1.7	Name of responsible officer from DDMCU: <u>(Mr) Mahendra Jagath</u>
1.8	Position: <u>Asst. Director / DDMCU</u>
1.9	Organization: <u>DDMCU / Kegalle</u>
1.10	Postal Address: <u>District Secretariat, Kegalle</u>
1.11	E-mail Address: <u>Kegalle@dneg.gov.lk</u>
1.12	Telephone : Office: <u>0352222603</u> Mobile: <u>0773957816</u> Fax: <u>0352222603</u>

2. Disaster Information

2.1	Interview date	<u>06/11/2012</u>
2.2	Organize person of this interview	<u>DDMCU / Kegalle ; RDA</u>
2.2.1	Interviewer	<u>(Mr) Saman Kumara</u>
2.3.1	Name of Province / District / DS	<u>Subaragamulla / Kegalle / Bulathkothupitiya</u>
2.3.2	Name of the LA / MC / UC / PS	<u>Bulathkothupitiya</u>
2.4	Name of GND	<u>Meedeniya - North</u>
2.5	Name of Village / Community / Lane	<u>Meedeniya</u>
2.6	Date/s occurred (disaster)	<u>2010 / Not exact date identified</u>
2.7	Type of disaster	<u>Slope / cut failure (LHS)</u>
2.8	Duration of the event	<u>01</u> days
2.9	Affected area	<u>1 1/2</u> (Ac) Ha / Sq.M. / sq. Km
2.10	Affected number	Family: <u>0</u> People: <u>0</u>
2.11	Disaster management plan for the GND	<input checked="" type="radio"/> (1) Exist      2. Not exist <input checked="" type="radio"/> (1) Functioned <input checked="" type="radio"/> (2) Not functioned: Reason <u>Some Not High / More Si</u>
2.12	Evacuation	1. Needed <input checked="" type="radio"/> (2) Not needed
2.13	Evacuation period (No. of days/ hours stayed outside due to the event)	<u>Road block - 01 day</u> <u>0</u> days

3. Interview contents:

1. Situation:	The site has previous earthslips. Several times further failures
2. Evacuation:	No evacuations needed. Has to consider a detour arrangements.
3. Which kind of support was needed?	RDA actions to establish suitable Countermeasures. Technical assistance - NBRD, RDA; Funding support and
4. Cause of the disaster:	High rainfall and condition of soils & <sup>Support</sup> slope condition.
5. Others:	The site has to be improved with counter measure on landslides and improvement of drainage network around the site.

4. DDMCU comment

4.1	Situation	1. Very serious (2) Serious 3. Not serious
	Reason	The road side is with high potential to fail. So, need immediate actions to have cars
4.2	Response	1. Very urgent (2) Urgent 3. Not Urgent
	Reason	The road is frequently used by people
4.3	Necessary action	Ret. Walls, LS Countermeasures
4.4	Request Action 1	1. Contents: Retain walls 2. Organization to request: RDA, NBRD, DMC 3. Purpose to request: Protect the road side from failure
	Request Action 2	1. Contents: Drainage BTS, & Road crossing d 2. Organization to request: RDA, DMC 3. Purpose to request: Poor drainage accelerates LS
	Request Action 3	1. Contents: — 2. Organization to request: — 3. Purpose to request: —
4.5	Comment:	Steep slope cuts can be done with recommended from NBRD.

Signature of the Inspector: Saman Kumara  
Name: \_\_\_\_\_

Signature of Asst. Director, DDMCU: [Signature]  
Name: \_\_\_\_\_

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## Checklist Forms A & B : Disaster Impact Assessment

### Basic Information of the Road:

- a. Name of the Road / Bridge: .....
- b. Route No / Code: .....
- c. Category of Road: National / Provincial / Municipal, Town / Village / Other
- d. Road Classification: E / A / B / C / D / Unclassified / New/ Other .....
- e. Location of the project: Province / CE / EE Division/s.....
- f. The length of the road: .....Km                      Bridge: Width .....Bridge Span / size .....
- g. Type of Project: New Construction / Widening & Improvement / Rehabilitation of the existing road

Form A Map 01 Route Map (Location Map)	① Attached <input type="checkbox"/>	Not prepared <input type="checkbox"/>
Form A Checklist	Completed <input type="checkbox"/>	Not Completed <input type="checkbox"/>
Form A Map 02 <u>Road Plan</u> with structures, hazardous, conservation areas (Map1.1, 1.2,1.3 etc)	② Attached <input type="checkbox"/>	Not prepared <input type="checkbox"/>
Form A Table01 List of <u>Road Structures</u>	③ Attached <input type="checkbox"/>	Not prepared <input type="checkbox"/>
Form A Map 03 <u>Road Plan</u> with drainage network of the road	④ Attached <input type="checkbox"/>	Not prepared <input type="checkbox"/>
Form B Checklist	Completed <input type="checkbox"/>	Not Completed <input type="checkbox"/>
Form B Map 04 <u>Potential hazardous areas</u>	⑤ Attached <input type="checkbox"/>	Not prepared <input type="checkbox"/>

### Details of the Resonsible Official (for RDA, Director (ESD):

Name of Officer			
Designation			
Division & Organization			
Contact Details	Telephone	Office	
		Mobile	
		Fax	
	Email Address		

Submitted by: Director (ESD), RDA

Signature: \_\_\_\_\_

Name : \_\_\_\_\_

Date: \_\_\_\_\_

Received by: Additional Director General (Projects), RDA

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_



<b>FORM A</b>
---------------

**1. Information of Design Standard:**

1.1	Name of Overall Design Standard :		
1.2	Standards / Guidelines applied on following works :		
	<b>Type of work</b>	<b>Name of Standards / Guidelines</b>	
	Cuttings of slopes		
	Fillings of lowlands		
	Embankment works		
	Retaining walls / Side walls		
	Prevention of Slope failures		
	Drainage System		
	Structures crossing the road		
	Bridges / Tunnel / Viaduct		
	Culverts		
	Geometry		

**2. Information of Design Parameters:**

2.1	Please attach <u>Route map (Location map)</u> <span style="float: right;">①Attached <input type="checkbox"/></span>		
Natural condition and other social conditions	Climatic Division/s; <span style="margin-left: 100px;">Wet Zone <input type="checkbox"/></span> <span style="margin-left: 50px;">Intermediate Zone <input type="checkbox"/></span> <span style="margin-left: 50px;">Dry Zone <input type="checkbox"/></span>		
	Rainfall value considered for the design: ..... mm ..... mm/h		
	Annual Average <input type="checkbox"/> Recorded Max <input type="checkbox"/> Recently Max <input type="checkbox"/> Others <input type="checkbox"/> _____		
	Just follow the standard <input type="checkbox"/> Not discussed <input type="checkbox"/>		
	Features of the location (total road /section of assessment) ; Mark all that apply		
	Flat land <input type="checkbox"/> Hilly area <input type="checkbox"/> Mountain area <input type="checkbox"/> Coastal area <input type="checkbox"/>		
	Urban area <input type="checkbox"/> Rural area <input type="checkbox"/> Suburban area <input type="checkbox"/> Others <input type="checkbox"/> _____		
	Remarked public facility along the road;		
	Events or festivals considered for the design: No <input type="checkbox"/> Yes <input type="checkbox"/>		

Fill in the decided values in the design. If they comply with the standards listed above in 1.1 and 1.2, please mark "Yes". If not, please mark "No" and specify the reason.

2.2 Design conditions	Design Speed	Km/h		
	Design Traffic Volume	ADT/day		
	Probable Rainfall Return Period and Rainfall Intensity			
	- Rivers	years	mm/h	
	- Streams	years	mm/h	
	- Canals	years	mm/h	
2.3 Vehicle restrictions	Design Vehicle	Passenger Car <input type="checkbox"/>	Typical Heavy Truck <input type="checkbox"/>	
		Others <input type="checkbox"/>	Semi- Trailer <input type="checkbox"/>	
	Load Restriction	t	Yes	No
	Vehicle Class			

**3. Design Policy for Route Selection:**

3.1	Please specify the reason of emphasis of route selection:
3.2	Recognized hazard along the selected route: Not recognized or considered <input type="checkbox"/> Landslide <input type="checkbox"/> Slope Failiures <input type="checkbox"/> Flood <input type="checkbox"/> Heavy Rain <input type="checkbox"/> Strong Wind <input type="checkbox"/> Tsunami <input type="checkbox"/> Others:
3.3	Please specify the main countermeasures to response the above hazard;

**4. Hazards /Conservations along the road:**

Please prepare the road design plan with hazard area and conservation area.

4.1	Consider the following data / conditions relevant to the road.	Hazards exist along (near) the road? Y/N	In case of exists hazards, data available? Y/N
	- Landslide hazard areas / Hilly terrains		
	- Areas more than 30 degree slope		
	- Flood hazard areas / Recorded flood prone areas		
	- Crown land reservations		
	- Natural forest reserves / Strict nature resereves		
	- Coastal conservation areas / Tsunami affected areas		
	- Wetlands / Marshy land areas / Sanctuaries		
	- Other designated conservation areas (Archeological/ Cultural)		
4.2	Did you prepare drawing plan of drainage system?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
4.3	Please prepare a map with above data and <u>road plan</u> with location of the structures.	②Attached <input type="checkbox"/>	
4.4	Please prepare a table* of <u>road structures</u> and structure measures considerations. * Please use table format for Form A	③Attached <input type="checkbox"/>	
4.5	Please attach a map of <u>Road plan</u> with drainage network of the road	④Attached <input type="checkbox"/>	

**Details of the Responsible Design Engineer of Form A:**

Name of Design Engineer			
Designation			
Division & Organization			
Contact Details	Telephone	Office	
		Mobile	
		Fax	
	Email Address		

Signature of Design Engineer: \_\_\_\_\_

Name of Design Engineer : \_\_\_\_\_

Date: \_\_\_\_\_

**FORM B**

**5. Disaster Experience in the Project Area:**

5.1. Disaster records	Which kind of disaster experience had in the project area shown on map <input type="checkbox"/> Inundation    Once or more in a year <input type="checkbox"/> Once in 5 years <input type="checkbox"/> Once in 10 years <input type="checkbox"/> Max record: date ___/___/___ ..... height (m) .....days <input type="checkbox"/> Landslide <input type="checkbox"/> Land Subsidence <input type="checkbox"/> Others:..... <input type="checkbox"/> No information
5.2. Disaster situation	Please specify what had happen when the above disaster occurred?

**6. Identification of Hazard:**

6.1	Which kind of disaster potential exists in this project area? Please mark all that apply.				
	Condition	Landslide (slope failure)	Flood	Structure failure/ over capacity	By others reason (_____)
	Road can be blocked by;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Road can be broken by;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Surrounding area can be damaged by;	/	/	<input type="checkbox"/>	<input type="checkbox"/>
	*Please specify any other possible situation.				
	Which kind of disaster potential exists in this project related to bridges? Please mark all that apply.				
	Condition	Landslide (slope failure)	Flood	Structure failure/ over capacity	By others reason (_____)
	Bridge can be blocked by;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bridge can be broken by;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Surrounding area can be damaged by;	/	/	<input type="checkbox"/>	<input type="checkbox"/>
	*Please specify any other possible situation;				
6.2	Please mark above <u>potential hazardous areas</u> on the Map 02 “Road plan map” prepared for Form A. <span style="float: right;">⑤ Attached <input type="checkbox"/></span>				

**7. Countermeasures:**

7.1 Inspection as Road Mgt.	Periodical checkup will be planned;    Annually <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Daily <input type="checkbox"/> Special inspection will be done in case of ; More than _____mm rainfall <input type="checkbox"/> Warning from DOM and NBRO <input type="checkbox"/> Required by inspection screening <input type="checkbox"/> Information by users or neighborhood residents <input type="checkbox"/>
7.2 Traffic Control	Prepared criterion value for traffic control; Continuous rainfall <input type="checkbox"/> Rainfall intensity <input type="checkbox"/> Wind Velocity <input type="checkbox"/> Visibility <input type="checkbox"/> Other criteria <input type="checkbox"/> _____ Early warning mechanism; Sign Board <input type="checkbox"/> Public Notice <input type="checkbox"/> Media Announcement <input type="checkbox"/> Guide by Traffic Police <input type="checkbox"/> Others <input type="checkbox"/> _____ Action plans for relevant organizations on emergencies prepared with / by; RDA <input type="checkbox"/> PRDA <input type="checkbox"/> Traffic Police <input type="checkbox"/> Exec. Engineers <input type="checkbox"/> Local A. <input type="checkbox"/> DMC <input type="checkbox"/> DDMCU <input type="checkbox"/> Alternative route; Exist <input type="checkbox"/> Prepared temporary road construction procedure <input type="checkbox"/> Not prepared <input type="checkbox"/> Restoration plans of road: Prepared the procedure <input type="checkbox"/> Not prepared <input type="checkbox"/>

<b>7.3</b> Evacuation	Evacuation systems for users; Warning <input type="checkbox"/> Evacuation route <input type="checkbox"/> Guide <input type="checkbox"/> Evacuation Center <input type="checkbox"/> Parking lot <input type="checkbox"/> Food <input type="checkbox"/> Water <input type="checkbox"/> Announcement system <input type="checkbox"/> Evacuation system for neighborhood; Warning <input type="checkbox"/> Evacuation route <input type="checkbox"/> Guide <input type="checkbox"/> Evacuation center <input type="checkbox"/> Coordination with local disaster management plan <input type="checkbox"/>																																																															
<b>7.4</b> Cooperation	Relevant organizations agreed with; <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width:30%;"></th> <th style="width:10%;">Traffic police</th> <th style="width:10%;">Local authority</th> <th style="width:10%;">NBRO</th> <th style="width:10%;">UDA</th> <th style="width:10%;">DMC</th> <th style="width:10%;"></th> <th style="width:10%;"></th> </tr> </thead> <tbody> <tr> <td>Possible disasters</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Traffic control plan</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Inspection plan</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Restoration system</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Cooperation of disaster situation</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width:70%;">Communities has been explained;</th> <th style="width:10%;">Yes</th> <th style="width:10%;">No</th> </tr> </thead> <tbody> <tr> <td>Possible Disasters</td> <td></td><td></td> </tr> <tr> <td>Warning System</td> <td></td><td></td> </tr> <tr> <td>Evacuation system</td> <td></td><td></td> </tr> <tr> <td>Disaster management plan with LA</td> <td></td><td></td> </tr> </tbody> </table>		Traffic police	Local authority	NBRO	UDA	DMC			Possible disasters								Traffic control plan								Inspection plan								Restoration system								Cooperation of disaster situation								Communities has been explained;	Yes	No	Possible Disasters			Warning System			Evacuation system			Disaster management plan with LA		
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**8. Confirmation of Monitoring Arrangements during the Construction Stage:**

8.1	Had Construction method statement been prepared?	Yes	No
8.2	Is the construction method statement including the disaster management plan?	Yes	No
8.3	Is it prepared any response system against any problem?	Yes	No
8.4	Had the project plan been explained to the neighborhood residents/ communities?	Yes	No
8.2	Have the contact person been announced to the residents / community?	Yes	No

**Details of the Responsible Officer for Form B: (for RDA, Nominated Officer from ESD)**

Name of Officer			
Designation			
Division & Organization			
Contact Details	Telephone	Office	
		Mobile	
		Fax	
	Email Address		

Signature of Responsible Officer: \_\_\_\_\_

Name of Responsible Officer: \_\_\_\_\_

Date: \_\_\_\_\_

Attachment ② Table 01 of Location of Road Structure (Right side)

Right Side

Site No.	SECTIONS/STATIONS		Distance (m)	Type of Structure	Countermeasure	Comments about the possibility of disasters	Potential No. of Affecting		
	Start	End					Families	Houses	Public Properties
1	+	+							
2	+	+							
3	+	+							
4	+	+							
5	+	+							
6	+	+							
7	+	+							
8	+	+							
9	+	+							
10	+	+							
11	+	+							
12	+	+							
**	+	+							
**	+	+							
19	+	+							
20	+	+							



Attachment ② Table 01 of Location of Road Structure (Left side)

Left Side

Site No.	SECTIONS/STATIONS		Distance (m)	Type of Structure	Counter measure	Comments about the possibility of disaste	Potential No. of Affecting	
	Start	End					Building	Families
1	+	+						
2	+	+						
3	+	+						
4	+	+						
5	+	+						
6	+	+						
7	+	+						
8	+	+						
9	+	+						
10	+	+						
11	+	+						
12	+	+						
13	+	+						
14	+	+						
15	+	+						
16	+	+						
17	+	+						
18	+	+						
19	+	+						
20	+	+						
21	+	+						
22	+	+						
23	+	+						
24	+	+						

**Attachment ② Table 01 of Location of Road Structure (Crossing Structure)**

**Crossing structure**

Site No.	SECTIONS/STATIONS		Distance (m)	Type of Structure	Countermeasures	Comments about the possibility of disaster	Potential No. of Affecting	
	Left side	Right side					Building	Families
1	+	+						
2	+	+						
3	+	+						
4	+	+						
5	+	+						
6	+	+						
7	+	+						
8	+	+						
9	+	+						
10	+	+						
11	+	+						
12	+	+						
13	+	+						
14	+	+						
15	+	+						
16	+	+						
17	+	+						
18	+	+						
19	+	+						
20	+	+						
21	+	+						
28	+	+						
29	+	+						
30	+	+						

### Checklist Form C (Screening) - Disaster Impact Assessment

**(A). Basic Information of the Road:**

a. Name of the Road: .....
b. Road No / Code:.....
c. Category of Road: National / Provincial / Municipal, Town / Village / Other
d. Road Administration: Province / CE / EE Division/s: .....
e. Classification: E / A / B / C / D / Unclassified / New/ Other .....
f. Road Section: ..... Km
g. Type of Project: New Construction / Widening & Improvement /Rehabilitation of the existing road

**(A.1) - Draft Map of examined site with location numbers:**

(A.2). Site No/s.: \_\_\_\_\_

(A.3). Attach Map showing potential hazardous locations based on “beyond normal condition”

- (Map No.01 in Form B)

① Attached

(A.4). Attach Table with the details of above-mentioned locations

② Attached

**(B). Evaluation:**

(B.1)-Evaluation of screened sites

No.	(1) Site No.	(2) Requesting Agency for Inspection	(3) Comments <i>(Proposing Actions by EE / Engineer)</i> <i>Site specific remarks)</i>
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

(B.2) - Comments

(B.3)- Details of the responsible officer (CE)

Name of the CE			
Division & Organization Address			
Contact Details	Telephone	Office	
		Mobile	
		Fax	
	Email Address		

Signature of CE: \_\_\_\_\_

Date: \_\_\_\_\_

-----

Received by:

PD, ....., RDA: \_\_\_\_\_

Date: \_\_\_\_\_

Director, MMC: \_\_\_\_\_

Date: \_\_\_\_\_

ADG, RDA: \_\_\_\_\_

Date: \_\_\_\_\_

1.1. Site No:  LHS/ RHS –Refer to the sites in draft map in section (A.1)  
 (LHS- Left Hand side; RHS- Right Hand side)

1.2. Inspection date/s: (DD/MM/YYYY)...../ ...../ .....

1.3. Road structure related to the site:

(1) Natural slope	<input type="checkbox"/>	(6) Drainage/ Canals	<input type="checkbox"/>
(2) Cut slope	<input type="checkbox"/>	(7) Road surface	<input type="checkbox"/>
(3) Embankment	<input type="checkbox"/>	(8) Others: Description : .....	<input type="checkbox"/>
(4) Retaining wall	<input type="checkbox"/>		
(5) Bridge/ Culverts	<input type="checkbox"/>		
		Utility Services (Power, Water, Telecom, Level Crossings, Tunnels, Subways, Electricity/ Telecom Posts etc.)	

1.4.1. Observable signs / features of the site, which may lead to hazardous / extreme conditions:

(1) No problem. Good condition	<input type="checkbox"/>	
(2) Soil and Concrete condition	<input type="checkbox"/>	
(3) Collapse (broken) and crack	<input type="checkbox"/>	
(4) Road surface condition	<input type="checkbox"/>	
(5) Drainage structure condition / Cleaning condition (like blockage)	<input type="checkbox"/>	

1.4.2. Land Use type of the project site?

- Developed area  Not developed area   
 Residential  Commercial  Plantation  Other  Specify:

1.5. Condition of the above potential failure: Please describe briefly.

1.6. Sketch of the Site:

1.7. Photos of the Site:

Photo	Photo
Comment	Comment

Signature of EE: \_\_\_\_\_

Name of the EE: \_\_\_\_\_

Evaluation

01. Needs of Inspection:                      Need                       No Need

02. If it is checked "Need" at 01, please check the type of potential failure

(1) Rock fall / collapse	<input type="checkbox"/>	(6) Retaining wall failure	<input type="checkbox"/>
(2) Cut Slop failure / collapse	<input type="checkbox"/>	(7) Culvert /canal/ drainage failure	<input type="checkbox"/>
(3) Landslide	<input type="checkbox"/>	(8) Pavement	<input type="checkbox"/>
(4) Debris flow	<input type="checkbox"/>	(9) Problem of bridge	<input type="checkbox"/>
(5) Embankment failure	<input type="checkbox"/>	(10) Others / Not sure	<input type="checkbox"/>

LANDSLIDE EFFECT TO THE ROADS				Ref. No. of the Road:	
1. Type of Failure:	(i) Landslide <input type="checkbox"/>	i. Type of Movement			
		<input type="checkbox"/> Fall	<input type="checkbox"/> Slide	<input type="checkbox"/> Rotational	<input type="checkbox"/> Lateral Spread
		<input type="checkbox"/> Topple		<input type="checkbox"/> Translational	<input type="checkbox"/> Flows
	<input type="checkbox"/> Complex (Combination of above)		<input type="checkbox"/> Creep ( <input type="checkbox"/> Deep/ <input type="checkbox"/> Soil)		
(ii) Other <input type="checkbox"/>	ii. Type of Material				
	<input type="checkbox"/> Rock	<input type="checkbox"/> Debris	<input type="checkbox"/> Earth		
	<input type="checkbox"/> Embankment Failure		<input type="checkbox"/> Erosion ( <input type="checkbox"/> Gully/ <input type="checkbox"/> Stream)		
<input type="checkbox"/> Structural Failure		<input type="checkbox"/> Cutting Slope( <input type="checkbox"/> Soil/ <input type="checkbox"/> Rock)			
2. Location Details					
Executive Engineer Division:		Province:		District:	
DS Division:		GN Division		<input type="checkbox"/> Town <input type="checkbox"/> Village <input type="checkbox"/> Estate	
Coordinates:					
Cross section:	<input type="checkbox"/> Fill	<input type="checkbox"/> Cut	<input type="checkbox"/> Cut/fill	<input type="checkbox"/> Flat	
Section Location:	<input type="checkbox"/> Tangent Section		<input type="checkbox"/> Curve Section		
Terrain	<input type="checkbox"/> Flat Land	<input type="checkbox"/> Rolling	<input type="checkbox"/> Hill area	Remarks	
Access to Location:					
3. Road Details					
Name of the Road (Road No)					
No.of lanes	<input type="checkbox"/> 1- Lane <input type="checkbox"/> Intermedium Lane <input type="checkbox"/> 2- Lane	Carriageway		Road Plat Form	<input type="checkbox"/> Paved <input type="checkbox"/> Un Paved
Surface Type	<input type="checkbox"/> AC (Asphalt)	<input type="checkbox"/> Mettled tarred Brack topped	<input type="checkbox"/> Gravel	<input type="checkbox"/> Earth	
Consulted by				Contracted by	
4. Location Description:	Geological and Topographical Conditions, Observations at the site about unstabilizations, Dip / Strike ... Etc				
	Soil Type	<input type="checkbox"/> Sandy	<input type="checkbox"/> Clay	<input type="checkbox"/> Silty	Remarks
	Rock ype	<input type="checkbox"/> Granite	<input type="checkbox"/> Charnokite	<input type="checkbox"/> Quartz	<input type="checkbox"/> Marble
	Matrix	<input type="checkbox"/> Loose	<input type="checkbox"/> Soft	<input type="checkbox"/> Hard	Remarks
	Weathering Condition	<input type="checkbox"/> Fresh	<input type="checkbox"/> Slightly Weath	<input type="checkbox"/> Weathered	<input type="checkbox"/> Highly Weath
	Structural geology	<input type="checkbox"/> Joints	<input type="checkbox"/> Foliations	<input type="checkbox"/> Cracks	<input type="checkbox"/> Fault planes
	Topography	<input type="checkbox"/> Valley	<input type="checkbox"/> Flat Land	<input type="checkbox"/> Hill area	Remarks
	Drainage	<input type="checkbox"/> Ditches/Pipies	<input type="checkbox"/> Diversion Drain	<input type="checkbox"/> None	<input type="checkbox"/> Springs/Streams
Other Observations					
5. Last Occurrence on:					
6. Boundaries of Landslide/Affected Area:					
7. Scale of Slope <input type="checkbox"/> Stream <input type="checkbox"/> Wall <input type="checkbox"/>	Width		Height	Gradient	
	Width 01:	Width 02:		Slope	Stream
				<input type="checkbox"/> 45° > <input type="checkbox"/> 45° - 60°	<input type="checkbox"/> 200 > <input type="checkbox"/> 200 - 300
			<input type="checkbox"/> 60° < <input type="checkbox"/> Overhang	<input type="checkbox"/> 300 < <input type="checkbox"/> Other	
8. Other Observations					
Existing Slope Condition (For all failures)	Degree of Saturation	<input type="checkbox"/> Dry	<input type="checkbox"/> Wet	<input type="checkbox"/> Seepage	<input type="checkbox"/> Spring
	Continuity of moving	<input type="checkbox"/> Unnoticed	<input type="checkbox"/> Medium	<input type="checkbox"/> Remarkable	Remarks
	Slope features	<input type="checkbox"/> Vegetation	<input type="checkbox"/> Structures	<input type="checkbox"/> Others	Remarks
Existing Stream Condition (especially at stream erosion)	Type of Flow	<input type="checkbox"/> Mountain	<input type="checkbox"/> Stream	<input type="checkbox"/> River	<input type="checkbox"/> Other
	Area of basin	<input type="checkbox"/> 50000 >	<input type="checkbox"/> 50000-200000	<input type="checkbox"/> 200000 <	
	Deposit on river bed	<input type="checkbox"/> None	<input type="checkbox"/> Rare	<input type="checkbox"/> Abundant	
Existing Structural Condition (especially at Struct. failures)	Type of Structure	<input type="checkbox"/> Brick	<input type="checkbox"/> Rubble	<input type="checkbox"/> Concrete	<input type="checkbox"/> Other
	Cracks	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	Water drained (through walls)	<input type="checkbox"/> Clean	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Muddy	Remarks

9. Failure History				
Date of Incident		Nature of Incident and Extent of Damage/Impact		
1st				
2nd				
10. Investigations Done				
Date	Investigated by	Requested by	Major Findings, Conclusions & Recommendations:	
11	Signature			
11. Description of Present Failure (Occurred on ) :				
12. Present Condition :				
13. Elements at Risk and Gravity of Threat:				
14. Possible Failures				
15. Potential Impact to the road		<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
16. Availability of Detour Road		<input type="checkbox"/> None	<input type="checkbox"/> Available	Name of the road
17. Conclusions (Potential cause of fall) :				
18. Recommended Mitigation Measures Proposed :				
19. Urgency to remedial		<input type="checkbox"/> Very Urgent	<input type="checkbox"/> Urgent	<input type="checkbox"/> Caution <input type="checkbox"/> No Problem



# DAMAGE TO THE STRUCTURE OF THE ROADS

Ref. No. of the Road:

Name of the Road (Road No)					
Section		From <input type="checkbox"/> / To <input type="checkbox"/>			km
<b>1. Type of Structure</b>					
<input type="checkbox"/> Retaining wall	<input type="checkbox"/> Drainage/Canal	<input type="checkbox"/> Road Surface			
<input type="checkbox"/> Others	Remarks				
Damage with sediment failure	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
<b>2. Location Details</b>					
Executive Engineer Division:		Province:		District:	
DS Division:		GN Division		<input type="checkbox"/> Town	<input type="checkbox"/> Village <input type="checkbox"/> Estate
Coordinates:					
Cross section:	<input type="checkbox"/> Fill	<input type="checkbox"/> Cut	<input type="checkbox"/> Cut/fill	<input type="checkbox"/> Flat	
Section Location:	<input type="checkbox"/> Tangent Section		<input type="checkbox"/> Curve Section		
Terrain	<input type="checkbox"/> Flat Land	<input type="checkbox"/> Rolling	<input type="checkbox"/> Hill area	Remarks	
Access to Location:					
<b>3. Road Details</b>					
Name of the Road (Road No)					
No. of lanes	<input type="checkbox"/> 1- Lane <input type="checkbox"/> Intermediate Lane <input type="checkbox"/> 2- Lane	Carriageway	m	Road Platform	<input type="checkbox"/> Paved <input type="checkbox"/> Unpaved m
Surface Type	<input type="checkbox"/> AC (Asphalt)	<input type="checkbox"/> Mettled Tarred Black topped	<input type="checkbox"/> Gravel	<input type="checkbox"/> Earth	
Consulted by			Contracted by		
<b>4. Structure Details</b>					
Type of Structural Material	<input type="checkbox"/> Concrete	<input type="checkbox"/> Reinforced Concrete	<input type="checkbox"/> Steel Frame	<input type="checkbox"/> Masonry	
	<input type="checkbox"/> Precast Concrete	<input type="checkbox"/> Others	Remarks		
Dimension of Structure	Width: m	Length: m	Height / Depth : m	Diameter of Culvert: m	
Any Other Details					
<b>5. Severity of Damage (Extent of Damage)</b>					
Retaining wall	Collapse	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Cracks	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Tilt	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Remarks	<input type="checkbox"/> Leaks appear in cracks <input type="checkbox"/> The above leaks is muddy <input type="checkbox"/> Grass (vegetation) is growing at the cracks			
	Any Other Details				
Drainage / Canal	Collapse	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Cracks	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Siltation	<input type="checkbox"/> None	<input type="checkbox"/> Partialy	<input type="checkbox"/> Severely	<input type="checkbox"/> Blocked
	Vesitation	<input type="checkbox"/> None	<input type="checkbox"/> Partialy	<input type="checkbox"/> Severely	<input type="checkbox"/> Blocked
	Any Other Details				
Road Surface	Debris deposition / Road siltation	<input type="checkbox"/> None	<input type="checkbox"/> Partialy	<input type="checkbox"/> Severely	<input type="checkbox"/> Blocked
	Pot Halls	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Cracks	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Subsidence	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
	Any Other Details				

**6. Failure History**

Date of Incident	Discription	
Last Failure		

**7. Investigations Done**

Date	Investigated by	Requested by	Major Findings,Conclusions & Recommendations:
	Signiture		

**11. Description of Present Failure (Occurred on ) :**

--	--

**12. Present Condition :**

**13. Elements of Risk and Threat:**

**14. Provable Failures**       Likely to continue       Not likely to continue

**15. Potential Impact to the road**       Low       Medium       High

**16. Availability of Detour Road**       None       Available      Name of the road

**17. Conclusions (Potential cause of fall) :**

--

**18. Recommended Mitigation Measures Proposed :**

--

**19. Urgency to remedial**       Very Urgent       Urgent       Caution       No Problem

# FLOOD SITUATION OF THE ROADS

Ref. No. of the Road:

## 1. Situation

<input type="checkbox"/> Inundation of the road	<input type="checkbox"/> Inundation of surrounding area	<input type="checkbox"/> Others Remarks
<input type="checkbox"/> Damage with sediment failure	<input type="checkbox"/> Damage with road structure	

## 2. Location Details

<b>Executive Engineer Division:</b>		<b>Province:</b>		<b>District:</b>	
<b>DS Division:</b>		<b>GN Division</b>		<input type="checkbox"/> Town	<input type="checkbox"/> Village <input type="checkbox"/> Estate
<b>Coordinates:</b>					
<b>Cross section:</b>	<input type="checkbox"/> Fill	<input type="checkbox"/> Cut	<input type="checkbox"/> Cut/fill	<input type="checkbox"/> Flat	
<b>Section Location:</b>	<input type="checkbox"/> Tangent Section		<input type="checkbox"/> Curve Section		
<b>Terrain</b>	<input type="checkbox"/> Flat Land	<input type="checkbox"/> Rolling	<input type="checkbox"/> Hill area	Remarks	
<b>Access to Location:</b>					

## 3. Road Details

<b>Name of the Road (Road No)</b>					
<b>No. of lanes</b>	<input type="checkbox"/> 1- Lane	<b>Carriageway</b>	m	<b>Road Plat Form</b>	<input type="checkbox"/> Paved
	<input type="checkbox"/> Intermedium Lane				<input type="checkbox"/> Un Paved
<input type="checkbox"/> 2- Lane					
<b>Surface Type</b>	<input type="checkbox"/> AC (Asphalt)	<input type="checkbox"/> Mettled tarred Brack topped	<input type="checkbox"/> Gravel	<input type="checkbox"/> Earth	
<b>Consulted by</b>				<b>Contracted by</b>	

## 4. Data of the Inundation Situation

<b>Inundated area</b>	<input type="checkbox"/> Road	Location:		
	<input type="checkbox"/> Surrounding area	Location:		
<b>Durration of the inundation</b>	<input type="checkbox"/> Road	_____ days	<input type="checkbox"/> Surrounding area	_____ days

## 5. Condition of the drainage system

<b>Type of Drainage</b>		<input type="checkbox"/> Side Ditch	<input type="checkbox"/> Culvet	<input type="checkbox"/> Connected canal	<input type="checkbox"/> Others ( )
<b>Weather condition</b>	Continuation of rainfall		<input type="checkbox"/>	_____ days	Remarks
	Heavy rains		<input type="checkbox"/>	..... mm/h	Remarks
	Others( )		<input type="checkbox"/>		Remarks
<b>Design condition</b>	Rainfall return Period			_____ years	Remarks
	Rainfall intensity			..... mm/h	Remarks
	Others( )				Remarks
<b>Existing Condition</b>	<b>Failures</b>	<input type="checkbox"/> None	<input type="checkbox"/> Small damage (No influence to traffic)	<input type="checkbox"/> Heavy damage (Influencing traffic)	Remarks
	<b>Cracks</b>	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	<b>Grass at Cracks</b>	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	<b>Mud at Bottom</b>	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks
	<b>Grass Inside</b>	<input type="checkbox"/> None	<input type="checkbox"/> Some	<input type="checkbox"/> Many	Remarks

**Other Observations**

**Comment for above conditions**

### 6. Inundation History

Date of Incident	Discription	
1st		
2nd		

### 7. Investigations Done

Date	Investigated by	Requested by	Major Findings, Conclusions & Recommendations:
	Signature		

### 11. Description of Present Condition (Occurred on ) :

--	--

<b>12. Present Condition :</b>	
<b>13. Elements at Risk:</b>	
<b>14. Possible Damages</b>	
<b>15. Potential Impact to the road</b>	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
<b>16. Availability of Detour Road</b>	<input type="checkbox"/> None <input type="checkbox"/> Available      Name of the road
<b>17. Potential of Inundation at surrounding area</b>	

### 18. Conclusions (Potential cause of inundation) :

--

### 19. Recommended Mitigation Measures Proposed :

--

<b>19. Urgency to remedial</b>	<input type="checkbox"/> Very Urgent <input type="checkbox"/> Urgent <input type="checkbox"/> Caution <input type="checkbox"/> No Problem
--------------------------------	---

**Checklist Form C (Disaster Records) - Disaster Impact Assessment**

**(A). Basic Information of the Road:**

a. Name of the Road: .....

b. . Route No / Code: .....

c. Category of Road: National / Provincial / Municipal, Town / Village / Other

d. Road Administration: Province / CE / EE Division/s: .....

e. Classification: E / A / B / C / D / Unclassified / New/ Other .....

f. The length of the road: ..... Km

g. Recorded date/s of the disaster: DD/MM/YYYY\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

**(A.1) - Draft Map of disaster happened site with location numbers:**

**(A.2) - Site No/s.:** \_\_\_\_\_

**(B). Evaluation:**

**(B.1)-Evaluation of damaged sites**

No.	(1) Site No.	(2) Type of Failiure	(3) Requesting Agancy for Inspection or Repairing	(3) Comments <i>(Proposing Actions by EE / Engineer, Site specific remarks)</i>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

**(B.2) - Comments**

**(B.3)- Details of the Chief Engineer:**

Name of the Chief Engineer			
Admin. CE Division & Address			
Contact Details	Telephone	Office	
		Mobile	
		Fax	
	Email Address		

Signature of CE: \_\_\_\_\_ Date: \_\_\_\_\_

Received:

PD : \_\_\_\_\_ Date: \_\_\_\_\_

D, MMC : \_\_\_\_\_ Date: \_\_\_\_\_

ADG, RDA : \_\_\_\_\_ Date: \_\_\_\_\_

1.1. Site No:  LHS/ RHS – Refer to the sites in draft map in section (A.1.)  
 (LHS- Left Hand side; RHS- Right Hand side)

1.2. Inspection date/s: (DD/MM/YYYY)...../ ...../ .....

**2.0. Details of the disaster condition:**

(2.1) What was the event occurred.	1). Landslides <input type="checkbox"/> 2). Inundation of the road <input type="checkbox"/> 3). Road structural failures <input type="checkbox"/> 4). Damages to surrounding area <input type="checkbox"/> 5). Others <input type="checkbox"/>
(2.2) Weather condition that led to the disaster situation	1). Continuous rainfall <input type="checkbox"/> (.....days) 2). Heavy rains <input type="checkbox"/> (..... mm/h) 3). Strong winds (.....) <input type="checkbox"/> (..... km/h) 4). Cyclone (.....) <input type="checkbox"/> 5).Others (.....) <input type="checkbox"/>
(2.3) Duration of traffic interruption	..... days
(2.4) Description of the damage: (please include “Condition of the failure” in your description)	
(2.5). Sketch of the damage site:	

**3.0. Damages with the disaster events:**

## 3.1. Damaged physical structures:

(1) Natural slope	<input type="checkbox"/>	(6) Crossing culvert/ canal	<input type="checkbox"/>
(2) Cut slope	<input type="checkbox"/>	(7) Road surface	<input type="checkbox"/>
(3) Embankment	<input type="checkbox"/>	(8) Others <input type="checkbox"/>	Description :
(4) Retaining wall	<input type="checkbox"/>		
(5) Bridge	<input type="checkbox"/>		

## 3.2 Size of the damage: Please specify the damage size choosing necessary items.

(1) Width	<input type="checkbox"/>	_m
(2) Height	<input type="checkbox"/>	_m
(3) Length	<input type="checkbox"/>	_m
(4) Size of Culvert / Canal	<input type="checkbox"/>	_m × _m or R= _m
(5) Others	<input type="checkbox"/>	Description :

## 3.3 Condition of failure:

(1) No damage of road structure	<input type="checkbox"/>
(2) Though the road structure functions, repair is needed.	<input type="checkbox"/>
(3) Though the structure has not destroyed, the function has lost.	<input type="checkbox"/>
(3) Destroyed Completely	<input type="checkbox"/>

## 3.4. Photos of the Site:

Photo	Photo
Comment:	Comment:

Signatue of the EE: \_\_\_\_\_

Name of the EE: \_\_\_\_\_

Date: \_\_\_\_\_



## Checklist Form D (Disaster Record) : Disaster Impact Assessment

### Form D completed by DDMCU)

#### 1. Project / Road Details:

1.1	Name of Road:
1.2	Road Ref. No:
1.3	Class of the Road: E/ A / B / C / D / Unclassified / New/ Other .....
1.4	Responsible Agency of the Road Administration:
1.5	Area / Location of the problem exists: Province / CE / EE Division/s.....
1.6	Exact Landmarks (if any): Please attach a sketch map:

#### < DDMCU >

1.7	Name of Assistant Director, DDMCU :		
1.8	Postal Address:		
1.9	E-mail Address:		
1.10	Telephone : Office;	Mobile;	Fax;

#### 2. Disaster Information:

2.1	Interview date	
2.2	Organize person of this interview	
2.2.1	Interviewer	
2.3.1	Name of Province /District/ DS	
2.3.2	Name of the LA / MC/ UC/ PS	
2.4	Name of GND	
2.5	Name of Village / Community/ Lane	
2.6	Date/s occurred (disaster)	
2.7	Type of disaster	
2.8	Duration of the event	days
2.9	Affected area	Ac/ Ha/ Sq.M. / sq. Km
2.10	Affected number	Families:          People:
2.11	Disaster management plan for the GND	1. Exist          2. Not exist
		1. Functioned   2. Not functioned: Reason
2.12	Evacuation	1. Needed          2. Not needed
2.13	Evacuation period (No. of days/ hours stayed outside due to the event)	days

**3. Interview Contents:**

1. Situation:
2. Evacuation:
3. Which kind of support was needed?
4. Cause of the disaster:
5. Others:

**4. DDMCU Comment:**

4.1	Situation	1. Very Serious 2. Serious 3. Not Serious
	Reason	
4.2	Response	1. Very Urgent 2. Urgent 3. Not Urgent
	Reason	
4.3	Necessary Actions	
4.4	Request Action 1	1. Contents: 2. Organization to request: 3. Purpose to request:
	Request Action 2	1. Contents: 2. Organization to request: 3. Purpose to request:
	Request Action 3	1. Contents: 2. Organization to request: 3. Purpose to request:
4.5	Comment:	

Signature of Asst. Director, DDMCU: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Director, (M, R&D): \_\_\_\_\_ Date: \_\_\_\_\_

.....

Received from DMC:

Signature of ADG/ RDA: \_\_\_\_\_ Date: \_\_\_\_\_







*Appendix 1-2 Questionnaire for Participants Feed Back  
on DIA System*

## Questionnaire for Participants Feed Back on DIA System

1. Name: \_\_\_\_\_

2. Position: \_\_\_\_\_

3. Agency Name: \_\_\_\_\_

4. Contact No.: \_\_\_\_\_

5. Is your sector affected / being with potentials to the effect of any type of disasters?

Yes	No
-----	----

6. If "Yes", what kinds of disasters your sector has to consider in development projects?  
Please list down on the priority, if more.

7. According to your idea/ experience, do you think that EIA / IEE or other approval related assessment system applicable to your sector are sufficiently covered the disaster considerations in development projects?

Yes	No
-----	----

8. If "No", Which kind of mechanism are you proposing to fulfil the requirement ?

9. Do you think, this DIA System can be incorporated in development project assessments relevant to your sector?

Yes	No
-----	----

10. If "Yes", please describe briefly the most suitable, practical way of introduction of the DIA into your sector. If "No", please describe the reasons for such context.

11. Please specify any more idea or opinion of the DIA system (or DIA checklist system).

Thank you!





*Appendix 1-3 Analytical Report on Participant Agency Responses*

**Analytical Report on  
Participant Agency Responses**  
**Final Workshop on Disaster Impact Assessment for Development Sectors**

2012-12-07, Centre For Banking Studies , Rajagiriya  
Conducted by: DMC / JiCA- DiMCEP

~~~~~

Participating agencies:

1. Disaster Management Centre
2. Road Development Authority (RDA)
3. Central Environment Authority (CEA)
4. Dept. of Irrigation (ID)
5. Mahaweli Authority of Sri Lanka (MASL)
6. Sri Lanka Land Reclamation & Development Corporation (SLRDCC)
7. National Housing Development Authority (NHDA)
8. National Water Supply & Water Board (NWS&DB)
9. Coastal Conservation Dept. (CCD)
10. Board of Investment (BOI)
11. National Physical Planning Dept. (NPPD)
12. Min. of Land & Land Development (MLLD)
13. Sri Lanka Port Authority (SLPA)
14. Min .Local Govt. & Provincial Council (MLGPC)
15. Marine Environment Protection Authority (MEPA)
16. Wild Life Conservation Dept. (DWLC)
17. National Aquatic Resources Research & Development Agency (NARA)
18. Central Engineering Consultancy Bureau & IESL (CECB)
19. National Science and Technology Commission (NASTEC)
20. Sri Lanka Sustainable Energy Authority (SLSEA)
21. Department of Attorney General's (DAG)

Absentee agencies:

1. National Building Research Organization (NBRO)
2. Geological Survey & Mines Beauru (GSMB)
3. Urban Development Authority (UDA)
4. Ceylon Electricity Board (CEB)
5. Atomic Energy Authority (AEA)
6. Sri Lanka Tourism Development Authority (SLTDA)
7. Railways Dept. (CGR)
8. Ceylon Fisheries Harbour Corporation (CFHC)
9. National Planning Dept. (NPD)
10. Forest Conservation Dept.
11. Agrarian Services Dept.
12. National Engineering R &D Centre (NERD)
13. Univ. of Moratuwa (UOM)

## Background:

The final workshop on Disaster Impact Assessment (DIA) for development sectors was held on 07<sup>th</sup> December 2012 at the Centre for Banking Studies, Rajagiriya. The purpose of the workshop was to disseminate / introduce the DIA concept to key development sectors in Sri Lanka to share the knowledge and experience of DIA system trialed to road development sector. The total number of participants was 32. The total percentage of participation was 80% (Invited 40). (*Participant list - See Attachment 01*).

Based on the presentations of the DIA concept by Ms. Anoja Senevirathne, Asst. Director (Mitigation, Research & Development), Disaster Management Centre and aspects relevant to incorporation of DIA system in road development sector by Eng. S.H.U. De Silva, Director (Environment & Social Development division), Road Development Authority, participants were requested to provide their views and comments by a questionnaire provided (*See Attachment 02*).

Analyses of the responses are described as follows;

Question: Is your sector affected / being with potentials to the effect of any type of disasters?

Response: YES - 78%

Categories of disaster / Hazard types:

|                                                                                       |          |
|---------------------------------------------------------------------------------------|----------|
| • Floods / Inundations / Flash floods due to drainage canal blockings                 | 24%      |
| • Landslides / Earthslips / Cut slope failures                                        | 14%      |
| • Tsunami                                                                             | 10%      |
| • Erosion / Land degradation                                                          | 08%      |
| • Drought                                                                             | 08%      |
| • Sea tides                                                                           | 07%      |
| • Dam failures - 6% responses                                                         | 06%      |
| • Storm surges / High winds / Oils or Chemical spills                                 | Each 04% |
| • Forest fire/ Human elephant conflict/ Pollution / Power generational related issues | Each 03% |

Question: According to your idea/ experience, do you think that EIA / IEE or any other Approval related assessment system applicable to your sector are sufficiently covered the disaster considerations in development projects?

Response: YES - 35% ; NO - 65%

If "No", Which kind of mechanism are you proposing to fulfil the requirement ?

- EIA / IEE does not have sufficient data on flood frequency, rainfall intensity, rainfall analyses, river basin details, land use maps for crop diversification and resettlement related data. Therefore, it needs to ensure the availability of such data for assessments (*ID*).
- In case of tsunami, potential impacts of sea level rise and other coastal hazards, developers need to consider evacuation plans, preparation of zonal plans for aquaculture marine fisheries including tsunami residence buildings, tsunami resilience communities. Also, It is important to consider those in national development plans (*NARA*).
- Disaster relevant data need to be collected from the organizations and the public who have the experience of periodic disasters (*RDA*). Proper coordination among relevant agencies for data sharing and developing contingency plans need to be strengthened (*NARA*).
- A monitoring mechanism for the development projects in maintenance / operational period is necessary to do regularly (*MEPA*).
- With such kind of arrangements, EIA / IEE or other assessments can be more developed into a satisfactory level to fulfil the disaster risk reduction arrangements at the initial stages (*RDA*).
- EIA covers only before the activities of construction and it will not monitor the post construction activities. DIA may be a more reliable tool to fulfil that gap (*RDA*). Therefore, DIA with parallel to EIA/ IEE will be the ideal arrangement (*MASL*). A DIA Checklist system with step by step from pre feasibility, feasibility, design, construction and maintenance stages can be applied to any development sector (*ID*).

Question: Do you think, this DIA System can be incorporated into development projects Assessments relevant to your sector?

Response: YES - 87% ; NO - 13%

- DIA can be started before the initiation of a project at the planning stage and after EIA (RDA). Incorporation of EIA and DIA may not be possible as the difference of concepts and purpose (CECB). Therefore, DIA has to be implemented separately. However, the possibility of the DIA through EIA procedure, through a development activity approval procedure need to be sought. The idea is good, but repetitions in EIA/ DIA should be avoided. DIA to be continued during post construction as well. It should be developed using in various other multiple sectors (CCD).
- In developmental projects, analyses of the cut slope to prevent failures, necessary opening to prevent floods, construction of walls and retaining structures to prevent landslides in the design stage can be fulfilled by DIA (RDA).
- With respect to the assessments in irrigation projects, DIA is helpful to keep canal reservation according to the gazette notification, check the water levels of the area and to protect wetlands as retention areas for proper maintenance of canals. It can be improved more to cover flash floods (SLRDCC).
- Some agencies use kind of checklists relevant to project approvals. Irrigation Department presently uses a similar kind of checkups in projects. These checklists can be improved with disaster assessment points by identifying shortcomings (ID).
- In case of certain development sectors related to wildlife conservation areas, evacuation practices in conflict situations, establishment of proper land use plans can be confirmed through the DIA system (DWLC).
- Awareness programs for all stakeholders is an essential aspect to establish a DIA system in any development sector (SLSEA). CECB is a semi government organization with the capacity to give awareness and trainings to engineers. Therefore, such programs to engineers and project designers can be facilitated by agencies like CECB.
- The DIA guidelines should be incorporated and included in the Pradeshiya Sabha Act., Urban Council Ordinance, Municipal Council Ordinance (MLGPC). Also, DIA can be applied

for the preparation of local level town plans (NPPD). It needs to consider of incorporation and capacity building up to grassroots levels of the sectors and society (BOI).

- Selecting steps in the rehabilitation of reservoirs, DIA will be a helpful tool to prioritize the selection (MASL). Construction of large dams is not similar to road development sector. Therefore, specific and new guideline should be introduced (ID).
- With the incorporation of DIA into any sector, identification of disasters which can be occurred, easy access to data and further assistance of specialists has to be considered (NHDA). All related state sector institutions need to contribute to such efforts to the development of Sri Lanka (SLSEA).
- Data sharing is a very important fact but it needs to be carefully considered because some data such as hydrographic data (bathymetry) takes high importance on security aspects of the countries (NARA).
- Making DIA system a mandatory requirement by law will be helpful to get the sustainability of the system application (RDA).
- According to comments, when it takes into practice, it should be continuously improved and finally, it will be lead to a comprehensive DIA system (CECB).
- This should apply for all Local Authorities to adopt same rules and regulations (SLRDCC).

Question: EIA / IEE or other approval related assessment system applicable to the sector are sufficiently covered the disaster considerations in development projects. But, DIA System can also be incorporated in development project assessments.

Response: 30% Agreed

Question: EIA / IEE or other approval related assessment system applicable to the sector are insufficient to cover the disaster considerations in development projects. Therefore, DIA System needs to incorporate in development project assessments.

Response: 57% Agreed

- DIA has been appreciated by participants as a required tool for sustainability of projects, and therefore, considered as a timely requirement.
- DIA has been appreciated by participants as a required tool for sustainability of projects, and therefore, considered as a timely requirement *(ID)*.
- Some participants proposed that DIA needs to incorporate in EIA. Anyhow, the way of incorporation is still not clearly identified. Therefore, further discussions and reviews are needed with long term view.

#### Recommendations:

- Development projects which can be affected by inundations, landslides / slope failures and coastal zone related conditions are priority identifications by the workshop participants. Same way, the development sectors which create disaster situations in above contexts are also considered. On this basis, Road Development, Urban Development, Irrigation and water management projects, constructions along coastal areas are some key sectors. The majority has pointed out that the EIA / IEE is not sufficient to address Disaster related aspects in development projects. Availability of Data relevant to assess disaster conditions was highlighted.
- As the next steps of incorporation of DIA into other development sectors in Sri Lanka, DMC can do the coordination and technical assistance to the interested sectors.
- RDA will initiate the DIA system as a checklist system relevant to road development projects and it will be as a Self Evaluation System.
- All interested sectors are important to give a priority consideration on the sustainability of the system within the sector assessment mechanism.

*Appendix 1-4 Letter on DIA in Road Development Sector  
by RDA*





මාර්ග සංවර්ධන අධිකාරිය  
வீதி அபிவிருத்தி அதிகாரசபை  
Road Development Authority

"සෙත්සිරිපාය", බත්තරමුල්ල, ශ්‍රී ලංකාව.  
"செத்திரிபாய", பத்தரமுல்லை, இலங்கை.  
"Sethsiripaya", Battaramulla, Sri Lanka.

මගේ අංකය }  
எனது இல } RDA/ESD/DIM  
My No. }  
ඔබේ අංකය }  
உமது இல }  
Your No. }  
දිනය }  
திகதி }  
Date } 18.12.2012

Director General,  
Disaster Management Center,  
Vidya Mawatha,  
Colombo 07.

**DISASTER IMPACT ASSESMENT (DIA) IN ROAD DEVELOPMENT SECTOR.**

This refers to the Technical Evaluation Committee Meeting (TEC) No. 02 held at 1.00pm at the office of the Director General, RDA on 10.12.2012 on the above subject.

It was decided to continue the DIA checklist system as a "Self Assessment System" for the following road and bridge construction projects since DIA system has still not been included in the TOR issued by the Central Environmental Authority (CEA).

- Any new road /bridge project
- New bypass
- Reconstruction of bridges
- Widening of existing roads
- Any tunnel work
- Rock/gravel/sand excavation
- Rock blasting including chemical blasting
- Rehabilitation of roads in disaster prone areas

It was decided to conduct an awareness programme province wise on the DIA checklist system for Provincial Directors, Chief Engineers, Executive engineers and other engineers in RDA with your assistance including JICA if assistance available.

We also kindly request you

01. To make available to RDA the "checklist form D" for the projects handled by the RDA under the Ports and Highways which would be maintained by you under this scheme.

02. To make available sufficient number of copies (200) the document "Disaster Impact Assessment" to be circulated among engineers responsible for this task.

Eng. W.A.S. Weerasinghe  
Director General  
Road Development Authority

CC : 1. Team Leader, JICA/DIMCEP,DMC, Vidya Mw, Col 07  
2. Addl. Director General (CD) , f.y.i pl.

**Telephones:**

Chairman 2862767, Director General 2862795, Working Director 2865779, General Numbers ++94-11-2871821-30  
Additional Director Generals {Projects 2862485, AO&M 2864804, AD 2882194, NP 2887463}  
Directorates {Administration 2865245, Engineering Services 2864803, ESD 2868470, Finance 2864799, Highway Designs 2874024,  
Internal Audit 2865764, Lands 2889350, Legal 2885491, Mechanical 2872273, MM&C 2882196, Planning 2882995  
Procurement 2884790, R&D 2632649, Rural Bridges 2623896, Training 2869342, Works 2864388}



*Appendix 1-5 Evaluation Point of the DIA Checklist  
Forms*

## Evaluation Point of the Forms

## &lt;Form A&gt;

Main point is confirmation of design condition. By filling this form, in which condition the road is designed will be make clear. Therefore if the conditions and the setting reasons are not clear, it is needed to confirm with the designer.

## 1. Confirmation of Design Standard

In this part, which design standard or guideline is followed to design is confirmed.

If it is not specified, the officer in charge of Form A&B needs to confirm to the designer.

## 2. Confirmation of Design Condition

In this part, which values of the design conditions are used for each part of design are confirmed.

Since Design Condition is treated as margin line of Natural disaster and Technological disaster, which value was decided as design condition is important.

If the design standard indicates each applicable value for all detail design for Sri Lanka, design may just follow the value. However these records, which values are utilized for the design, will be useful for the consideration of applicability or revise of the values.

Therefore to clarify the reason why the value is used as design condition is important.

## 3. Design Policy for Route Selection

The result of the route selection is one of the conditions for the design. Because the road designer can not change the main route at the design stage.

The route is selected by some reason such like economic, resettlement, hazards, etc. So the hazardous condition is not always higher priorities of the selection. Therefore the designer understands the reason of the selection and the hazards which were recognized at the selection stage, and consider the countermeasures for the hazards are important.

Though the applicability of the selection of countermeasures also should be evaluated in the future, it is needed to confirm the design policy against the hazards as a checklist (without any special study) at this moment.

## 4. Hazards along the Road

When the designer designs the road, the area conditions are confirmed. Showing the condition around the site to related people is very important. By this reason, the map is required to prepare. Based on this map, Form B contents can be considered.

<Form B>

Main point of Form B is finalizing the Potential Hazardous areas map with discussion of the committee members. By the discussion, to image foreseeable disaster potential as much as possible is very important.

And against the disasters, preparation of the non-structural measures is confirmed.

If it is not prepared enough, it will be required to prepare until in-service.

5. Disaster Experience in the Project Area

Disaster experience is confirmed in this part. If the site area has experience of any disaster, the experience should be reflected to countermeasure.

Therefore the disaster experience information is confirmed at this part.

6. Identification of Hazard

The officer in charge of the Form B checks the potential disasters. This is considered with the information of Form A and above Form B-5.

Since this consideration is done by using information and design plan without any special study, this is treated as base idea for disaster assessment.

By using this map, discussion with committee members will be held and the hazardous area idea will be finalized.

7. Countermeasures

Countermeasures are confirmed by 4 points. 7.1 Inspection (maintenance), 7.2 Traffic control, 7.3 Evacuation and 7.4 Cooperation.

By the 7.1, 7.2 and 7.3, whether the systems are prepared or not are confirmed.

By 7.4, whether the discussion or meeting had been held regarding disaster mater or not are confirmed.

8. Confirmation of the Monitoring Arrangements during the Construction Stage

If possible, it is better to confirm the construction plan step by step. However, it is difficult to confirm the all step's plan, so far the system reply for problems are confirmed.

*Appendix 1-6 Attendance Sheet of DIA Workshop Held in  
7th December 2012*

**List of Invited Agencies and Attended Agencies**

| NO | Invited Agency                           | Confirmed Name                                                                               | Confirmed No. | Attended  |
|----|------------------------------------------|----------------------------------------------------------------------------------------------|---------------|-----------|
| 1  | RDA                                      | Mr. BDK Bandara<br>Mr. DKR Swarna<br>Mr. HMKGG Bandara<br>Mr. D Ganeshan<br>Dr. HLDMA JUdith | 5             | 5         |
| 2  | NBRO                                     |                                                                                              | 2             |           |
| 3  | MASL                                     |                                                                                              | 2             | 1         |
| 4  | UDA                                      |                                                                                              | 1             |           |
| 5  | CEA                                      | Kanthe de Silva                                                                              | 1             | 2         |
| 6  | DOI                                      |                                                                                              | 1             | 2         |
| 7  | CEB                                      | Mr. KKS Dasanayaka                                                                           | 1             |           |
| 8  | Atomic Energy Authority                  |                                                                                              |               |           |
| 9  | SLSEA                                    |                                                                                              |               | 1         |
| 10 | GSMB                                     | Ms Nilmin                                                                                    | 1             |           |
| 11 | SLLRDC                                   | Ms Padmi Wijerathna                                                                          | 1             | 1         |
| 12 | NHDA                                     | call latter                                                                                  |               | 1         |
| 13 | NWS&WB                                   | Mr. Ferdinando<br>Mr Sumanaweera                                                             | 2             | 2         |
| 14 | CECB                                     | Mr .Viraj<br>SCK Karunarathna                                                                | 2             | 2         |
| 15 | Railway Dept                             | Nalaka Bandara                                                                               | 1             |           |
| 16 | NARA                                     |                                                                                              | 3             | 3         |
| 17 | CCD                                      | Mr. Ranawaka                                                                                 | 1             | 1         |
| 18 | Ceylon Fishery Harbors Corp              |                                                                                              |               |           |
| 19 | Tourism Development Authority            |                                                                                              | 1             |           |
| 20 | Marine Environment Protection Authority  | HTNI Piyadasa                                                                                | 1             | 1         |
| 21 | Min .Local Govt & Provincial Council     | Call Leter                                                                                   |               | 1         |
| 22 | Department of Attorney General's         | Mr .Ravindra Pathiranage                                                                     | 1             | 1         |
| 23 | NPPD                                     | Mr. Veranhjan<br>Kulakulasooriya<br>PNS Samarathunga                                         | 2             | 1         |
| 24 | Min .of Land & Land Develioment          | Mrs. PM Shanthi                                                                              | 1             | 1         |
| 25 | IES                                      | Clarance Perera                                                                              | 1             |           |
| 26 | Agrarian Services Department             | Mr .Nawarathna                                                                               | 1             |           |
| 27 | national Engineering R &D center         |                                                                                              | 1             |           |
| 28 | National Science & Technology Commission | Dr. Muditha                                                                                  | 1             | 1         |
| 29 | NPD                                      | call later                                                                                   |               |           |
| 30 | BOI                                      | MKD Lorance<br>AK Jayasinghe<br>AKA Mahinda                                                  | 3             | 2         |
| 31 | Port Authority                           | Athula Hewawithara                                                                           | 1             | 1         |
| 32 | Wild Life Conservation Dept              |                                                                                              |               | 1         |
| 34 | Forest Conservation Dept                 |                                                                                              | 1             |           |
| 35 | Airport & Aviation Services              | Not come                                                                                     |               |           |
| 36 | PGIS                                     | not come                                                                                     |               |           |
| 37 | UOM                                      |                                                                                              | 1             |           |
|    | <b>Total</b>                             |                                                                                              | <b>40</b>     | <b>31</b> |





*Appendix 1-7 Disaster Management Plan (DMP) Batticaloa District*

# Disaster Management Plan (DMP)

## Batticaloa District

Prepared by  
**District Secretariat - Batticaloa**

In collaboration with

**Disaster Management Centre  
&  
Ministry of Disaster Management**

February 2012



# Content of the Plan

Page No.

## **PART I-INTRODUCTION**

### **1.1. BACKGROUND**

- 1.1.1 Legal Framework for Disaster Management (DM) in Sri Lanka 01
- 1.1.2 The National Disaster Management Policy 02
- 1.1.3 Purpose of Planning 02
- 1.1.4 Broad Contents of the Plan 02

### **1.2. DISTRICT PROFILE**

- 1.2.1. Geographical Background 03
- 1.2.2. Historical Background 03
- 1.2.3. Administrative Background 03

### **1.3. HAZARD VULNERABILITY AND RISK ANALYSIS**

- 1.3.1 Main Disasters affecting the District 04
- 1.3.2 Hazards and Vulnerability Assessment 05

## **PART II - DISASTER PREVENTION & MITIGATION PLAN (Being Prepared)**

## **PART III- DISASTER PREPAREDNESS & EMERGENCY RESPONSE PLAN**

### **3.1. INTRODUCTION 06**

### **3.2. INSTITUTIONAL ARRANGEMENTS**

- 3.2.1. Emergency Operation Centre (EOC) 07
- 3.2.2. Roles & Responsibilities of Emergency Operation Centre (EOC) 08
- 3.2.3. District Disaster Management Committee (DDMC) 08
- 3.2.4. Responsibilities of District Disaster Management Centre (DDMC) 10
- 3.2.5. Sub-Committees 11
- 3.2.6. Early Warning Mechanism 12

### **3.3. EMERGENCY RESPONSE**

- 3.3.1. Initial Response and Notification Activation Steps 13
- 3.3.2. Functions of the Emergency Operations Centre (EOC) 14
- 3.3.3. Functions of the District Disaster Management Committee (DDMC) 14
- 3.3.4. Functions of Sub- Committees 15

|                                                                             |    |
|-----------------------------------------------------------------------------|----|
| <b>3.4. <u>RESOURCES AND CAPACITY ANALYSIS</u></b>                          |    |
| 3.4.1. Introduction                                                         | 15 |
| 3.4.2. Locations of Identified Temporary Shelter and Transit Camps          | 15 |
| 3.4.3. Community Participation in Preparedness                              | 15 |
| 3.4.4. NGOs and CBOs identified for Response Activities at Divisional Level | 15 |
| 3.4.5. Equipments                                                           | 16 |
| <b>3.5. <u>REPORTING PROCEDURE AT DIFFERENT STAGES</u></b>                  | 16 |

**PART IV- DISASTER REHABILITATION & RECONSTRUCTION PLAN (Being Prepared)**

**ANNEXURES:**

Annexure I -1 : Map of Batticaloa District

Annexure I -2 : District Profile

Annexure I -3 : District Hazards and Vulnerability

Annexure III-1 : Constitution of the District Disaster Management Committee

Annexure III-2 : Functions of Sub Committees, Role and Responsibility of Sub Committees

Annexure III-3 : Role and Responsibility of Relavant Agencies

Annexure III-4 : Member Lists of EOC, DDMCU and Sub Committees, and other Member Agencies

## **PLAN CONCURRENCE**

Members of the District Disaster Management Committee (DDMC) of Batticaloa District gave their concurrence for this District Disaster Preparedness and Response Plan at the committee meeting chaired by me held on 28th (Tuesday) February 2012, at the District Secretariat, Batticaloa.

Mr S.Arumainayaham  
District Secretary, Batticaloa

Members of the District Disaster Management Committee (DDMC) present at the meeting held on 28- February -2012 at the District Secretariat - Annexure III-4

### **Schedule for updating plans**

| <b>Plans</b>                        | <b>Review</b>          | <b>Updating Schedule</b> | <b>Revision</b>                            |
|-------------------------------------|------------------------|--------------------------|--------------------------------------------|
| District Disaster Management Plan   | After a major disaster | ½ Yearly (May & Nov.)    | Once in 05 years or as needed after review |
| Divisional Disaster Management Plan | -do-                   | -do-                     | -do-                                       |



**PART - I**  
**INTRODUCTION**



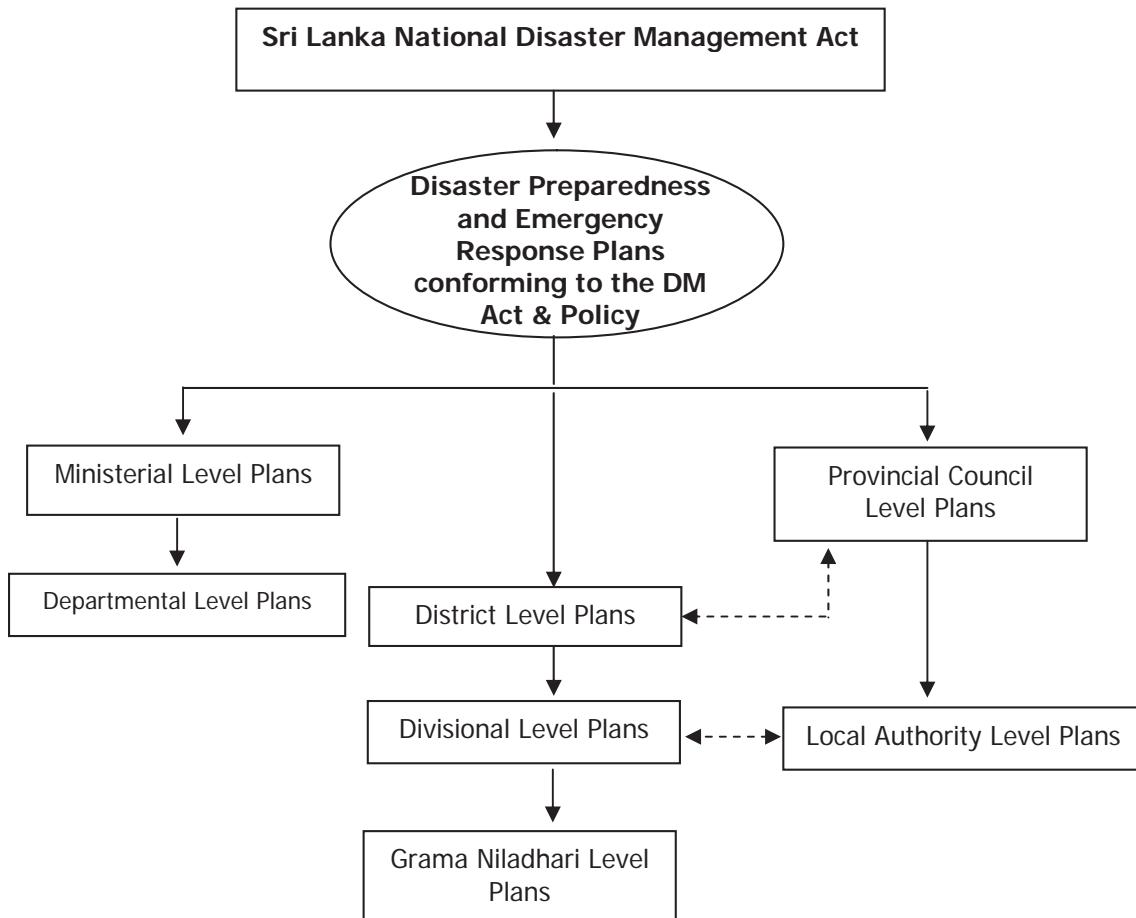


# 1.0. INTRODUCTION

## 1.1. Background

Disaster Management Plans are developed at sub-national levels for responding to disasters if and when they occur. This is required by the Sri Lanka Disaster Management Act, and the National Disaster Management Policy was developed by the Ministry of Disaster Management.

Fig.1 – Conformity of Disaster Preparedness and Emergency Response Plans to the Sri Lanka National Disaster Management Act, National Disaster Management Policy and with each other.



### 1.1.1. Legal Framework for Disaster Management (DM) in Sri Lanka

In May 2005, the Sri Lanka Disaster Management Act No.13 of 2005 was enacted with legal provisions for instituting a disaster risk management system in the country. The Act provides for the establishment of the National Council for Disaster Management (NCDM), which is the high-level inter-ministerial body chaired by H.E. President and which provides direction for disaster risk management in Sri Lanka. It also provides for the establishment of Disaster Management Centre (DMC) that will be the lead agency for disaster risk management. In January 2006 a separate Ministry of Disaster Management (MDM) was established with NCDM and DMC listed as organizations coming under this Ministry.

### **1.1.2. The National Disaster Management Policy**

As required by the Act, the National Disaster Management Policy was developed by the Ministry of Disaster Management and approved by the NCDM and the Cabinet of Ministers of Sri Lanka.

#### **Priorities accorded in the policy for main elements of Disaster Mgt.**

- During normal time, the highest priority in DM will be accorded to Preparedness to ensure safety of the people; Mitigation/Prevention and Integration in development at the best possible extent to reduce risk and ensure sustainable development in the country.
- Highest priority during and after a disaster will be accorded to Response and Immediate Recovery of essential services, and to Medium and Long term Reconstruction and Rehabilitation, to a higher standard than before the occurrence of the disaster.

### **1.1.3. Purpose of Planning**

- Ensures a dependable, timely and coordinated response
- Facilitates emergency simulation exercises during pre - disaster state
- Better to plan when it is not needed than to plan when a disaster has happened
- Identifies action when there is uncertainty and prediction errors
- Identifies action when there are major data errors or data gaps
- Identifies actions to be taken in areas prone to high probability and/or high impact disasters
- Identifies action in situations where there is no / limited access
- Identifies capacities and responsibilities of different stakeholders

### **1.1.4. Broad Contents of the Plan**

- District Profile
- Hazards, Vulnerability and Risk Assessment
- Institutional Arrangements
  - Committees
  - Sub committees
- Mechanism of Emergency Response
- Capacity:
  - Contact details of focal points of stakeholders
  - Inventory of physical resources
- Standard Reporting Procedures

## 1.2. District Disaster Profile

### 1.2.1. Geography & Climate

Batticaloa District is located in the Eastern Province of Sri Lanka. District occupies the central part of the eastern coastal land mass and covers a flat coastal plain boarded by the Indian Ocean with an average elevation of around 05 meters. It has an area of 2,854 square kilometres (1,102 sq mi). Scenic beauty of the Batticaloa is the lagoons. District has three lagoons namely Batticaloa lagoon, Valaichchenai lagoon, and Vakari (Panichchankerni) lagoon. Among these, Batticaloa lagoon is the largest and has 56 km long 162 square km area. The biggest bridge of all is Lady Manning Bridge located at Kallady, which is the main access to Batticaloa capital city from the southern parts of the district. This bridge is also famous for singing fishes. Batticaloa has heavenly beaches with high tourist attractions such as Kallady beach, Pasikudah and Kalkudah.

Batticaloa District features with a tropical wet and dry climate. It is generically referred to as 'dry-monsoonal climate'. The average temperature of the district is around 32 degrees Celsius (88 degrees Fahrenheit) with maximum records from March to May, the warmest throughout the year. The North Eastern monsoon brings heavy rains to the district from November to February with an average of 1,400 millimeters (55.1 inches).

### 1.2.2. History

Batticaloa is a Portuguese derivation. In Tamil interpretations, Batticaloa is termed as "Matakkalappu" (translation: Muddy Swamp). According to Mattakallappu Manmiyam (மடல்கள மாமிய), the word Mattakallappu consists of Tamil words "Mattu" (மட) means honey or Matta-derived from "Mattam" (மடல) means 'flat' and geographical name Kalappu. Mukkuwa (or Mutkuhar), known as the first people migrated to this land named this place as Kalappu-Mattam or boundary of lagoon later it became Matta-Kallappu or Flat Lagoon. Similarly the Mattu-Kallappu or "Confluence of Honey River" became Mattakallappu.

Ancient map drawn by Egyptian cartographer Ptolemy shows the Eastern Province and Batticaloa as Nagadiba. Thus the people of the Eastern Province were called Nagas. There were several Naga kings and princes who ruled Sri Lanka.

Mattakallappu Manmiyam refers (மடல்கள மாமிய) Mukkuva people constructed seven villages in various areas. They immigrated their people from India and established the kingdom of Mukkuva. The name of the villages and towns in Batticaloa still holds the historical evidence of the ancient batticaloan people.

Batticaloa was also one of the worst hit districts by the tsunami of December 26, 2004. The water level rose up to 4.7 metres (15 feet).

### **1.2.3. Administration**

Batticaloa is one of the 25 administrative districts of Sri Lanka. The district is administered by District Secretariat headed by District Secretary appointed by the central government of Sri Lanka. There are 14 Divisional Secretariat (DS) Divisions, each headed by a Divisional Secretary. The DS Divisions are further sub-divided into 348 Grama Niladhari (GN) Divisions (villages). Batticaloa District comprise of 12 local authorities of which one is a Municipal Council, one is an Urban Council and the remaining 10 are Pradeshya Sabhas.

### **1.3. Hazard Vulnerability ,Capacity and Risk Analysis**

Hazard analysis plays a vital role in the Disaster Preparedness and Response mechanism of the district. It shows potential hazards prevailing in the district and probable time of occurrence, which would be extremely important in terms of Preparedness and Response.

- Hazardous months of the district indicating Potential Hazards, Probable time of occurrence
- Potential impacts and the last reported year
- History of disasters in the district and their impacts
- Frequency of disaster occurrence indicating the time and areas vulnerable to such disasters
- Prediction of probable disasters in relation to time for precautinary measures, early warning and safe rescue operations
- Estimation of population at risk etc.

#### **1.3.1 Main disasters affecting the district**

Out of the 14 ds divisions in Batticaloa, 08 ds divisions along the coastal belt are most vulnerable to coastal hazards and floods. Due to the 2004 tsunami, 2,975 persons died and 24,013 houses were destroyed or damaged. The entire district is vulnerable to cyclones as it is located within in the wind-loading zone. A total of 698 people died and 314,960 houses were damaged or destroyed due to the cyclone that took place in 1978.

The other hazards prevailing in the districts are;

- a. Drought
- b. Lighting
- c. Epidemics
- d. Elephant attacks
- e. Industrial related hazard (rice mills & prawn farming)

### 1.3.2 Hazards and Vulnerability Assessment

| <b>Hazard</b> | <b>Probable Time of Occurrence</b> | <b>Potential Impact</b>                                        | <b>Last Reported Year</b> |
|---------------|------------------------------------|----------------------------------------------------------------|---------------------------|
| Floods        | December - January                 | Damages to life, livelihood, crops, Infrastructures, livestock | <b>2011</b>               |
| Epidemics     | December - March                   | Damages to life, livestock, crops                              | <b>2010</b>               |
| Cyclone       | November-December                  | Damages to life, livelihood, crops, Infrastructures, livestock | <b>2000</b>               |
| Tsunami       | Any time                           | Damages to life, livelihood, crops, Infrastructures, livestock | <b>2004</b>               |
| Drought       | July - August                      | Damages to life, crops, livestock                              | <b>2009</b>               |
| Lighting      | Any time with rainy seasons        | Damages to life, crops, livestock                              | <b>2012</b>               |

Source: DesInventar, 2012

Further details are described in the tables in Annexure I-3.



**PART - II**  
**DISASTER PREVENTION**  
**&**  
**MITIGATION PLAN**  
**(Being Prepared)**





**PART -III**  
**DISASTER PREPAREDNESS**  
**&**  
**RESPONSE PLAN**  
**(DPRP)**



## **3.0. Disaster Preparedness & Response Plan**

### **3.1. Introduction**

This plan was developed in consultation with the members of the DDMC and others who are responsible for updating and reviewing periodically. It is designed to,

- Reflect the organizational structure for emergency management
- Reflect the needs of the community
- Incorporate various agencies' roles and responsibilities
- Maximize the efficient use of resources

The main users of this document will be the members and officials of the District Secretariat and relevant service departments (national and provincial) operating within the respective areas of the district, the community based organizations (CBOs) and NGOs.

#### **The Specific Operational Priorities of this plan:**

- Protecting human life
- Meeting the immediate emergency needs of people (rescue, medical care, food, shelter and clothing)
- Restoring facilities that are essential to the health, safety and welfare of people
- Meeting the rehabilitation needs of people (temporary housing , employment)
- Mitigating hazards that pose a threat to life, property and the environment

#### **Preparedness Activities on Emergency Preparedness:**

- Ensure Institutional Arrangements are in place
- Convene DM Committee, Sub Committees
- Activation of District EOC
- Execute Early Warning Plan
- Search & Rescue Operations
- Monitoring and Coordination events-EOC

#### **Preparedness Activities on Emergency Response:**

- Early Warning
- Evacuation
- Identification of detention camps and providing necessary facilities
- Search and rescue
- Post Disaster Assessment
- Emergency Relief

- Logistics & Supply
- Communication & Information Management
- Survivor Responses & Coping
- Safety
- Security (in the disaster affected area in general and more particularly for the houses and property of those evacuated to safe areas)
- Emergency Response
- Medical Support
- Providing Food, Water & Shelters

### 3.2. Institutional Arrangements

The district level disaster management structure is summarized as shown in Fig. 02. Discussion for better disaster management will be done by DDMC and sub-committees during normal situation.

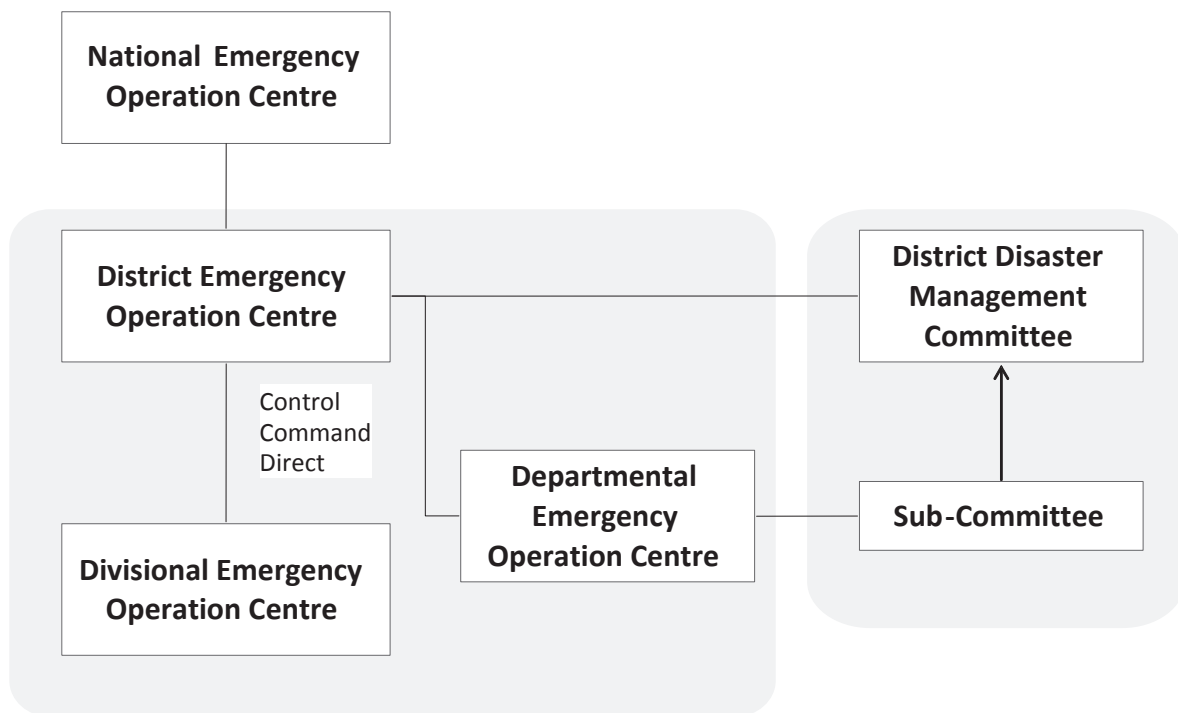


Fig.02 : The district level disaster management structure

#### 3.2.1. Emergency Operations Centre (EOC)

The emergency operations in the district would be controlled, commanded and directed from the Emergency Operations Centre (EOC), which will be the focal point in the district for emergency response. The EOC would host all the communication equipment and data and information required to plan, make decisions and execute operations.

The EOC is formed under the chairmanship of the District Secretary and functions with the assistance from the District Disaster Management Committee (DDMC), in which members include, Divisional Secretaries, Provincial / District Heads (and Deputies) of Departments, government agencies and other major stakeholders. The members of the EOC appointed by name as of dates are given in the Annexure III-4.

### **3.2.2. Roles & Responsibilities of EOC**

- Evacuation of vulnerable communities
- Functioning of sub committees
- Establishing IDP centers
- Providing of emergency medical teams/ambulances
- Link up with departments/agencies/local authorities
- Documentation / Situation reports
- Coordination with national agencies
- Restoration of infrastructure

### **3.2.3. District Disaster Management Committee (DDMC)**

The District Disaster Management Committee assists the Emergency Operation Centre (EOC). During a disaster, this committee will initiate activities for responding to the disaster. However, in such situation only the divisional secretaries of affected divisions will be the active committee.

The DDMC comprises of district level heads of various departments providing services to the people in the area, Police, Security Forces, public, private agencies, individuals as well as representatives of the district and provincial political heads and representatives from major Non-Governmental Organizations (NGOs) active in the area. Generally, above members will ex-officio constitute the DDMC, but additional members could be included as the necessity. The District Secretary has appointed Assistant Director of District DDMCU, as the Convener and Coordinator of the DDMC and delegated to him the relevant responsibilities. The Coordinator will also be responsible for all documentation, correspondence, coordination with sub-committees and updating of the plan. Meetings of the DDMC will be held regularly.

## Constitution of the District Disaster Management Committee

- District Secretary - Chairman
- Additional District Secretary
- Assistant District Secretary
- District Assistant Director DMC – (Convener and Coordinator of District DM Committee)
- Divisional Secretaries
- Officers attached to District Secretariat
  - District Social Services Officer
  - Disaster Relief Service Officer (Development Assistant – NDRSC)
  - Environment Officer
  - Assistant Samurdhi Commissioner
  - Director (Planning)
  - Other relevant key officers
  
- District level officers, district level representatives, deputy and an additional official from each of the following organizations:
  - 1) Irrigation Department
  - 2) Meteorology Department
  - 3) Police Department
  - 4) Sri Lanka Army
  - 5) Sri Lanka Navy
  - 6) Sri Lanka Air Force
  - 7) Road Development Authority
  - 8) Provincial Road Development Authority
  - 9) National Water Supply & Drainage Board
  - 10) Ceylon Electricity Board
  - 11) Sri Lanka Telecom
  - 12) RPDHS (Provincial Health Services)
  - 13) Director- Teaching Hospital
  - 14) Assistant Commissioner of Local Government
  - 15) Local Authorities (Mayor, Chairman)
  - 16) Zonal Education Directors
  - 17) District NGOs / INGOs
  - 18) Urban Development Authority
  - 19) National Physical Planning Department
  - 20) Central Environment Authority
  - 21) National Housing Development Authority
  - 22) Land Use Policy Planning Department
  - 23) Agriculture Department
  - 24) Chamber of Commerce
  - 25) Assistant Commissioner of Cooperative Development
  - 26) Sri Lankan Transport Board
  - 27) Coast Conservation Department
  - 28) Fisheries & Aquatic Resources Department
  - 29) Department of Animal Production and Health
  - 30) Forest Conservation Department
  - 31) Wildlife Conservation Department
  - 32) Sri Lanka Petroleum Cooperation
  - 33) Agrarian Services Department
  - 34) Timber Corporation
  - 35) GSMB
  - 36) NBRO

### 3.2.4. Responsibility of DDMC

#### Preparedness and Response: District Secretariat / DDMC

##### Normal Situation:

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Early Warning    | <ul style="list-style-type: none"> <li>▪ Ensure proper maintenance and functioning of warning and communication equipment</li> <li>▪ Ensure that evacuation routes and safe areas have been clearly marked and signposted</li> <li>▪ Coordination with DMC &amp; other national agencies for early warning for specific hazards</li> <li>▪ Assess training &amp; awareness needs and target groups on aspects related to EW dissemination; coordinate &amp; organize to conduct training, awareness &amp; drills – warning receiving officers, dissemination groups</li> <li>▪ Assignment of duties to the district and divisional level officials</li> <li>▪ Keep records of NGOs and local CBOs and coordination and duty assignment</li> </ul> |
| Evacuation & SAR | <ul style="list-style-type: none"> <li>▪ Ensure that search and rescue equipment is fully functional and in working order</li> <li>▪ Confirm locations &amp; inventory of evacuation camps/temporary shelter, keep location maps ready</li> <li>▪ Ensure availability of earmarks basic equipment and materials for SAR</li> <li>▪ Assess training needs and target groups on related aspects such as SAR parties</li> <li>▪ Coordinate NGO activities through necessary support to ensure community participation</li> <li>▪ Identifying additional NGOs, assigning specific response function to different specialized NGOs</li> </ul>                                                                                                          |
| Relief           | <ul style="list-style-type: none"> <li>▪ Maintain a physical inventory of stocks to capture external assistance when it arrives</li> <li>▪ Identification and maintaining inventory of shelter Centers and keep location maps ready</li> <li>▪ Assess Relief requirements and arrange to acquire same</li> <li>▪ Assess Transport requirements</li> <li>▪ Communicate with individuals and institutions along the supply chain in order to highlight anticipated shortfalls or problems with the supply of food and other commodities</li> <li>▪ Coordinate the relief distribution plans of NGOs and CBOs</li> </ul>                                                                                                                             |
| Restoration      | <ul style="list-style-type: none"> <li>▪ Keep records and contact information about related service providing agencies relevant for the subgroup activities and make all relevant officials aware of such information</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Health & Welfare | <ul style="list-style-type: none"> <li>▪ Relevant Zonal Committee to meet and be prepared</li> <li>▪ Identification of tasks in case of early warning / disaster and assigning responsibilities to relevant sub committee members / officials</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

##### Before Disaster Situation

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | <ul style="list-style-type: none"> <li>▪ Provide regular situation updates to the DMC, to Divisional Secretaries &amp; Grama Niladharis and the media</li> <li>▪ Activate public announcement system for early warning dissemination</li> <li>▪ Proper record keeping and transmission of information to all the levels</li> <li>▪ Warn people about the impending danger, provide information on evacuation paths &amp; safe areas.</li> <li>▪ Coordination with DMC &amp; other national agencies responsible for EW for specific hazards</li> <li>▪ Share early warning information to the Divisional Secretary and the Grama Niladhari</li> <li>▪ Maintain law and order to prevent looting and theft</li> </ul> |
| Evacuation & SAR | <ul style="list-style-type: none"> <li>▪ Coordinate the activities of community volunteers assisting with the rescue operation</li> <li>▪ Coordinate with Civil Defense – Police / Army / Navy /Air force</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Relief           | <ul style="list-style-type: none"> <li>▪ Coordinate with emergency health teams to evacuate the injured, provide first aid, transport to hospital</li> <li>▪ Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> <li>▪ Ensure that food &amp; other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>▪ Coordinate with the police to maintain law and order</li> </ul>                                                                                                                                                                                                                                                                |
| Restoration      | <ul style="list-style-type: none"> <li>▪ Keep records and contact information about related service providing agencies relevant for the subgroup activities and make all relevant officials aware of such information</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Health & Welfare | <ul style="list-style-type: none"> <li>▪ Resource availability for emergency ambulance, medicine, doctors, sanitary and hygiene</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

##### During Disaster Situation

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Early Warning    | <ul style="list-style-type: none"> <li>▪ Warn people the impending danger, provide information on evacuation paths &amp; safe areas.</li> <li>▪ Provide regular situation updates to DMC, to Divisional Secretaries &amp; Grama Niladharis and media</li> <li>▪ Coordinate with NGOs and CBOs to assist with early warning dissemination and evacuation</li> <li>▪ Maintain law and order to prevent looting and theft</li> </ul> |
| Evacuation & SAR | <ul style="list-style-type: none"> <li>▪ Undertake a rapid damage assessment</li> <li>▪ Coordinate with Civil Defense – Police / Army / Navy /Air force</li> <li>▪ Coordinate the activities of community volunteers assisting with the rescue operation</li> <li>▪ Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> </ul>                                                     |
| Relief           | <ul style="list-style-type: none"> <li>▪ Undertake a rapid damage assessment</li> <li>▪ Coordinate with emergency health teams to evacuate injured, provide first aid, &amp; transport them</li> </ul>                                                                                                                                                                                                                            |



|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | <ul style="list-style-type: none"> <li>to hospital</li> <li>▪ Monitoring for proper implementation of all above activities</li> <li>▪ Ensure food &amp; other materials distributed in an equitable manner addressing needs of the most affected</li> <li>▪ Coordinate with the police to maintain law and order</li> <li>▪ Construct a sufficient number of latrines for males and females at relief camps and ensure that they are disinfected regularly</li> </ul>                                                                                                                                                                   |
| Restoration                     | <ul style="list-style-type: none"> <li>▪ Organization and coordination of clearance of debris Monitoring</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Health and Welfare              | <ul style="list-style-type: none"> <li>▪ Treatment for injuries, health camps</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>After Disaster Situation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Early Warning                   | <ul style="list-style-type: none"> <li>▪ Provide regular situation updates to the DMC at National level, to Divisional Secretaries and Grama Niladhari's as well as the media</li> <li>▪ To inform people in safe shelters when it is safe to return home</li> <li>▪ Provide regular situation updates to EOC</li> <li>▪ Maintain law and order to prevent looting and theft</li> </ul>                                                                                                                                                                                                                                                 |
| Evacuation and SAR              | <ul style="list-style-type: none"> <li>▪ Undertake a rapid damage assessment</li> <li>▪ Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Relief                          | <ul style="list-style-type: none"> <li>▪ Undertake a rapid damage assessment</li> <li>▪ Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospital</li> <li>▪ Monitoring for proper implementation of all above activities</li> <li>▪ Ensure that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>▪ Coordinate with the police to maintain law and order</li> <li>▪ Construct a sufficient number of latrines for males and females at relief camps and ensure that they are disinfected regularly</li> </ul> |
| Restoration                     | <ul style="list-style-type: none"> <li>▪ Organization and coordination of clearance of debris Monitoring</li> <li>▪ Award compensation to beneficiaries and provides information to beneficiaries on their entitlements</li> <li>▪ Design District recovery plans</li> <li>▪ Coordinate the rehabilitation and reconstruction activities of NGOs and CBOs</li> </ul>                                                                                                                                                                                                                                                                    |
| Health and Welfare              | <ul style="list-style-type: none"> <li>▪ Eradicate and control epidemics, maintain the health and hygiene of the affected community</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.2.5. Sub-Committees

Proposed constitution of Sub-Committees is given in the following table.

- Disaster Early Warning Sub-Committees
- Evacuation, SAR and Security Sub-Committees
- IDP Centers, Relief and food Sub-Committees
- Immediate restoration of services, rehabilitation and reconstruction Sub-Committee
- Health and Welfare Sub-Committee

Members appointed to these committees are either members already appointed to the DDMC or their representatives. The present members appointed by name to these sub-committees are indicated in Annexure III-4.

**Each of the sub-committees is responsible for the following.**

- Developing and updating sections of the District Preparedness and Response Plan and resource inventory that are of relevance to them
- Undertaking rapid damage and loss assessments and needs assessments related to their sectors in the aftermath of a disaster

- Providing regular situation updates to the DDMC on long term mitigation activities, and preparedness measures taken on receipt of early warnings
- Providing regular situation updates to the DDMC on emergency response activities
- Coordinating with NGOs and CBOs to ensure the effective delivery of emergency assistance

### 3.2.6 Early Warning Mechanism

From the DDMCU locations (divisional / local authority / Grama Niladhari levels or other identified specific locations) onwards, the dissemination to the communities will be through following various methods:

- Alarms (e.g. for fires)
- Sirens (e.g. for industrial accidents)
- Local announcements through loudspeakers organized at LA or village levels
- Other traditional modes of communication (e.g. Beating of drums, ringing of bells at religious places, hoisting of flags) and
- Public announcements through radio, television etc. (e.g., for cyclones, floods and landslides).

Personnel and agencies such as LA officials, GNs, Local Police, CBOs, SLRC, NGOs and Volunteers will be involved in the dissemination activities. The effectiveness of the methods will be different in different locations depending on the location specific characteristics. The Grama Niladhari level Early Warning Committee and CBOs must develop the method that will be adopted and obtain the concurrence of the Divisional / District Secretary. Fig. 3 illustrates the Planned System of Dissemination of EW messages to the Communities.

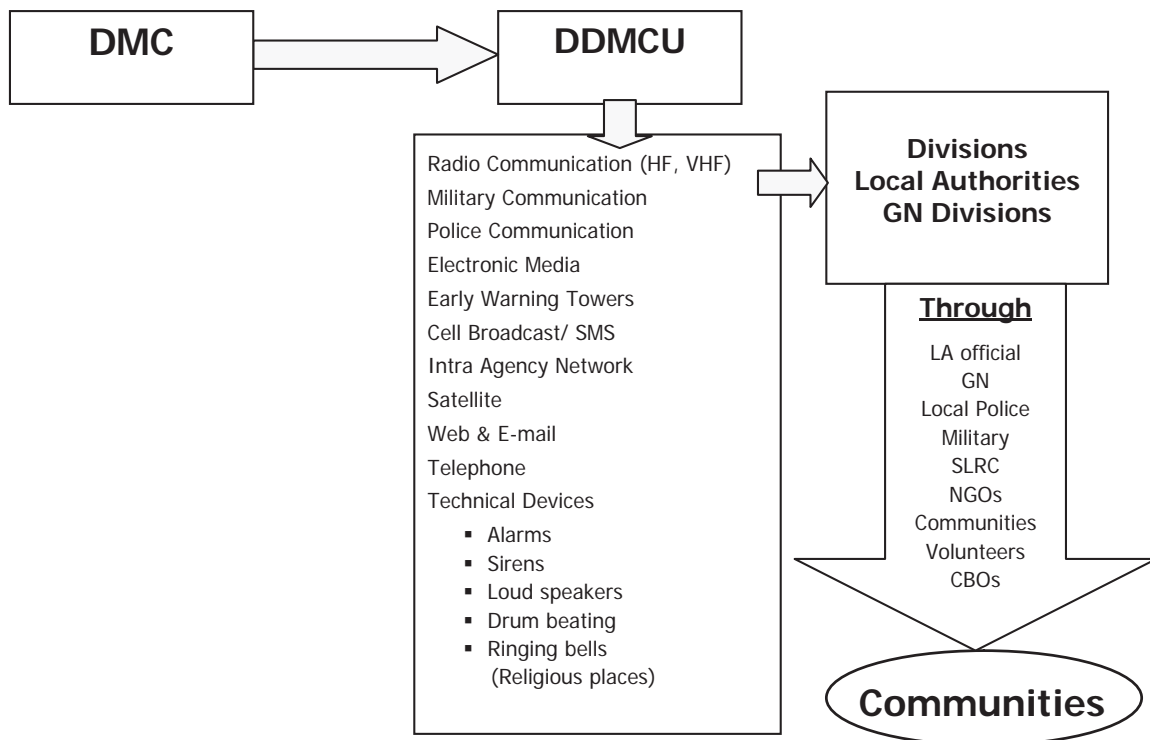


Fig. 3: Planned System of Dissemination of EW Messages to the Communities

### 3.3. Emergency Response

The District Secretary is responsible for notification within the district in case of emergencies occurring within its boundaries. The District Disaster Management Committee (DDMC) will be responsible for the following;

- The flow of emergency information within the District Secretariat, Divisional Secretariat and among other relevant organizations
- Coordination between divisional secretariats and other responding agencies
- The rapid mobilization, deployment and tracking of resources

#### Political Leadership

Political leadership is essential in major disasters to bring back to normal situations. The senior cabinet minister or the chief minister should preside district disaster management committee to monitor and activate the required activities. The political authorities have to liaise with other ministries, organizations etc. to accelerate the process. When the situation developed the political leadership is essential to get funds and resources from the treasury and expedite required Political leadership. Sub Committees could also chaired by senior ministers in the district.

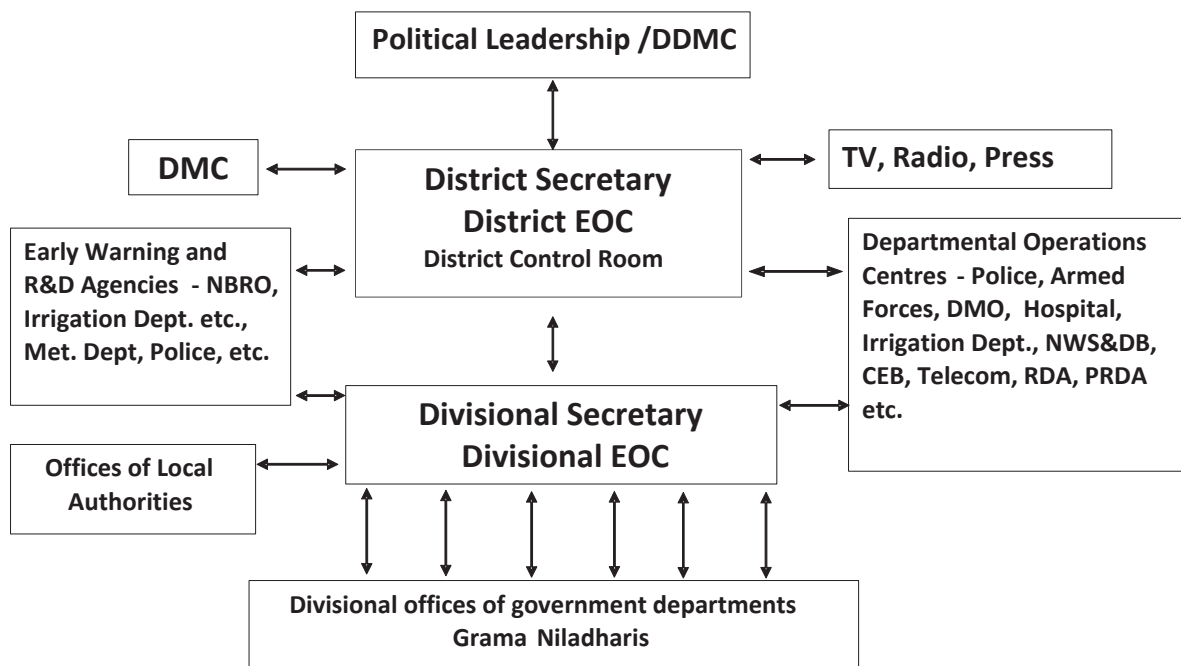


Fig.03 : Mechanism for Emergency Operation at District Level

### **3.3.1. Initial Response and Notification Activation Steps**

- **Step 1:** Can activate any Early Warning or Emergency situation in the district, the EOCs are opened. National level department officers manage field operations with their resources from Departmental EOCs, and coordinate with the Divisional Secretaries, Mayors/Chairmans and Commissioners/Secretaries of the local authorities.
- **Step 2:** Departmental EOCs send damage assessments and coordinate their respective interdepartmental and interagency resource requests through the EOC and their line ministries. District EOC must coordinate these.
- **Step 3:** If the District Secretariat cannot meet the required resources, the EOC must work to secure the needed resources initially from the Provincial Council EOC and if still cannot cope with the situation, then from the DMC. If the government cannot meet with the requirements international assistance will be requested.

### **3.3.2. Functions of the Emergency Operations Centre (EOC)**

The District EOCs are opened with the declaration of an emergency situation in the district. The District EOC will set overall emergency policy, and control, command and direct the emergency operations, and coordinate of the following activities with sub-committees, Divisional Secretariats and various departments.

- Disaster early warning coordination with the Early Warning Division of the DMC and also local agencies and groups with respect to local disasters such as floods and landslides
- Operations Units:
  - Service Units
  - Infrastructure Unit
  - Health Unit
- Finance/Admin. – Resource Unit
- Information Management Unit

### **3.3.3. Functions of the District Disaster Management Committee (DDMC)**

The District Disaster Management Committee (DDMC) will coordinate all related activities given in the Annexure III-1 with other sub-committees and agencies.

### **3.3.4. Functions of the Sub Committees**

The functions of the sub-committees are outlined given in the Annexure III-2.

At the appropriate times of the preparedness and response phases of the disaster cycle these committees will assist the District Secretary to implement this plan. Each sub-committee will have specific responsibilities as spelt out in the Annexure III-2.

## **3.4 . Resources Available in the District (Physical Resources)**

### **3.4.1. Introduction**

Divisional level details as listed below are included in the respective Divisional Disaster Preparedness and Response Plans.

- 1) Storage Facilities with Capacity
- 2) Primary Health Clinics
- 3) Traders
- 4) Transportation (Road and water)
- 5) Profile of NGOs, Volunteer Groups
- 6) List of CBOs
- 7) Profile of Community Based Organizations

### **3.4.2. Locations of Identified Temporary Shelter and Transit Camps**

Details of schools, temples and churches and other public buildings selected as safe and temporary shelter and transit camps for use in case of a disaster situation are given in the respective Divisional Disaster Preparedness and Response Plans.

### **3.4.3. Community Participation in preparedness**

In most disasters, community members are the first to respond before any outside assistance can reach the disaster site. Therefore, in certain disaster prone areas a group of young volunteers can be formed and trained to undertake essential tasks, which would reduce the loss of life and property and at the same time, build confidence in self-management. These can be coordinated by the EOC and Divisional Disaster Management Committees.

### **3.4.4. NGOs and CBOs identified for Response Activities at Divisional Level**

Details of NGOs, Volunteer Organizations, businessmen and well wishers in the divisions identified for support during preparedness and the occurrence of a disaster are given in the

respective Divisional Disaster Preparedness and Response Plans indicating areas they have agreed to contribute.

### 3.4.5. Equipments

Earth moving equipments, Ambulances, Lorries, Chainsaw, Boats, Tractors, Bowser

### 3.5 . Reporting Procedure at different stages

In a disaster situation at different stages the district Control Room will be required to send different kinds of reports to the government and in turn it will have to collect information by calling for reports from Divisional Secretaries and other agencies.

| Reporting |                                           |                                           |
|-----------|-------------------------------------------|-------------------------------------------|
| No.       | From                                      | To                                        |
| 1         | District Secretary                        | As relevant to required agencies          |
| 2         | Divisional Secretary                      | DMC/EOC through' District Secretary       |
| 3         | Grama Niladhari                           | Divisional Secretary                      |
| 4         | Infrastructure service providing agencies | District Secretary / Divisional Secretary |



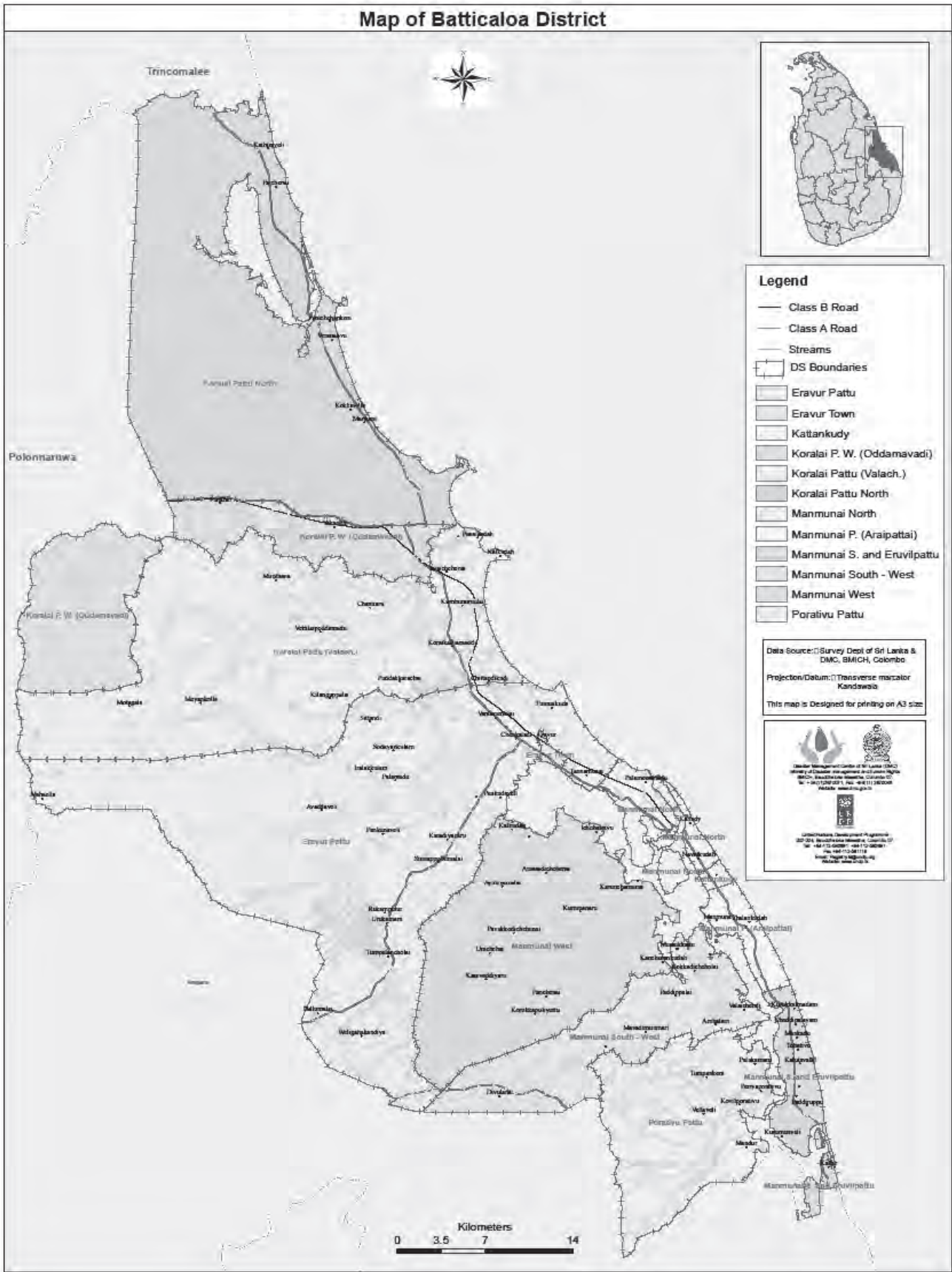
**PART - IV**  
**DISASTER REHABILITATION**  
**&**  
**RECONSTRUCTION PLAN**  
**(Being Prepared)**





# **ANNEXES**







## BACKGROUND OF THE DISTRICT

### District Boundaries:

|                    |                                      |
|--------------------|--------------------------------------|
| North              | : Verugal Aru & Trincomalee District |
| East               | : Bay of Bengal (Sea)                |
| South & South West | : Amparai District                   |
| West & North West  | : Polonnaruwa District               |

Length of coastal belt - 120 Km. It covers a land area of approximately 2633.1 Square Km (3.8% of the Countries total land area.

### **The District at a Glance:**

|                                |                                               |                                                         |
|--------------------------------|-----------------------------------------------|---------------------------------------------------------|
| 1                              | Total geographical area                       | 2633.1 sq km                                            |
| 2                              | Total population (2011 Census)                | 588,993                                                 |
|                                | Males                                         | 285,828                                                 |
|                                | Females                                       | 303,165                                                 |
| 3                              | Annual Rainfall                               | Total Annual 3581.3 (mm)<br>Monthly Average 298.44 (mm) |
| 4                              | Mean Average Temperature                      | Max. 31.23 °C Min 25.42 °C                              |
| 5                              | Number of Divisions                           | 14                                                      |
| 6                              | Number of GN Divisions                        | 348                                                     |
| 7                              | Number of Villages                            | 965                                                     |
| 8                              | Number of Local Authorities                   | 12                                                      |
|                                | Municipal Councils                            | 01                                                      |
|                                | Urban Councils                                | 01                                                      |
|                                | Pradeshiya Sabhas                             | 10                                                      |
| 9                              | Number of Police Stations                     | 17                                                      |
| 10                             | Number of General Hospitals (TH)              | 01                                                      |
|                                | Number of Base Hospitals                      | 02                                                      |
|                                | Number of District Hospitals                  | 04                                                      |
|                                | Number of Division Hospitals                  | 02                                                      |
|                                | Number of Private Hospitals                   | 03                                                      |
|                                | Number of Peripheral units                    | 01                                                      |
|                                | Number of Rural Hospitals                     | 04                                                      |
| Number of Central Dispensaries | 14                                            |                                                         |
| 11                             | Forest Coverage in hectares                   | 60,643. Ha                                              |
| 12                             | Water Bodies in hectares                      | 22,900. Ha                                              |
| 13                             | No. of families in the district               | 164, 063                                                |
| 14                             | No. of Post Offices                           | 93                                                      |
| 15                             | Number of Fire Stations                       | 01                                                      |
| 16                             | Number of Schools (Functioning 142, Closed-7) | 149                                                     |
| 17                             | No of rivers                                  | 14                                                      |
| 18                             | Road networks                                 | 945196 km                                               |
| 19                             | Banks                                         | 42                                                      |
| 20                             | Number of harbors                             | 01 (Fisheries)                                          |
| 21                             | Number of airports                            | 01                                                      |
| 22                             | Helipads                                      | 15                                                      |

Source: Department of Census and Statistics & DDMCU, Batticaloa, 2011

**Land Extent:**

| No  | DS Division                     | Total Area                |       | Divisional Boundaries |                                                          |                                 |                      |
|-----|---------------------------------|---------------------------|-------|-----------------------|----------------------------------------------------------|---------------------------------|----------------------|
|     |                                 | Sq.Km                     | %     | North                 | East                                                     | South                           | West                 |
| 1.  | Manmunai North                  | 75.09                     | 2.85  | Eravur Pattu          | Sea                                                      | Kattankudy                      | Manmunai West        |
| 2.  | Kattankudy                      | 3.89                      | 0.16  | Manmunai North        | Sea                                                      | Manmunai Pattu                  | Manmunai South West  |
| 3.  | Manmunai South and Eruvil Pattu | 31.72                     | 1.2   | Manmunai Pattu        | Sea                                                      | Ampara District                 | Porativu Pattu       |
| 4.  | Manmunai Pattu                  | 52.5                      | 1.99  | Kattankudy            | Sea                                                      | Manmunai South and Eruvil Pattu | Manmunai South West  |
| 5.  | Porativu Pattu                  | 167.2                     | 6.35  | Manmunai South West   | Manmunai South and Eruvil Pattu                          | Ampara District                 | Ampara District      |
| 6.  | Manmunai South West             | 161.6                     | 6.14  | Manmunai West         | Kattankudy, Manmunai South, Eruvil Pattu, Manmunai Pattu | Porativu Pattu Ampara District  | Manmunai West        |
| 7.  | Manmunai West                   | 292.7                     | 11.12 | Lagoon                | Manmunai South West                                      | Manmunai South West             | Eravur Pattu         |
| 8.  | Eravur Town                     | 3.14                      | 0.14  | Eravur Pattu          | Eravur Pattu                                             | Eravur Pattu                    | Lagoon               |
| 9.  | Eravur Pattu                    | 634.16                    | 24.08 | Koralai Pattu South   | Sea                                                      | Manmunai North                  | Ampara District      |
| 10. | Koralai Pattu                   | 484.5                     | 18.4  | Koralai Pattu Central | Sea                                                      | Koralai Pattu South             | Koralai Pattu West   |
| 11. | Koralai Pattu West              | 176.0                     | 6.68  | Koralai Pattu South   | Koralai Pattu Central                                    | Koralai Pattu South             | Polonnaruwa District |
| 12. | Koralai Pattu North             | 550.0                     | 20.89 | Trincomalee District  | Sea                                                      | Koralai Pattu South             | Polonnaruwa District |
| 13. | Koralai Pattu South             | Newly formed not Surveyed |       | Koralai Pattu West    | Koralai Pattu                                            | Eravur Pattu                    | Polonnaruwa District |
| 14. | Koralai Pattu Central           | Newly formed not Surveyed |       | Polonnaruwa District  | Koralai Pattu North                                      | Lagoon                          | Lagoon               |

Source: Department of Census and Statistics, 2011

**District Population Details:**

| Year            | Males   | Females | Total   | % of District Population to Country Population - 2011 |
|-----------------|---------|---------|---------|-------------------------------------------------------|
| 2011 Population | 285,828 | 303,165 | 588,993 | 3%                                                    |

Source: Department of Census and Statistics, 2011

**Division wise Population according to age (2011 Census):**

| D.S Division                  | Sex            |                | Age            |                | Total Population |
|-------------------------------|----------------|----------------|----------------|----------------|------------------|
|                               | Male           | Female         | Under 18       | 18 & Over      |                  |
| Manmunai North                | 44,151         | 47,969         | 34,948         | 57,172         | 92,120           |
| Kattankudy                    | 24,205         | 25,198         | 19,009         | 30,394         | 49,403           |
| Manmunai Pattu                | 16,566         | 17,276         | 11,233         | 22,609         | 33,842           |
| Manmunai South & Eruvil Pattu | 30,388         | 32,004         | 24,728         | 37,664         | 62,392           |
| Porativu Pattu                | 21,808         | 23,526         | 18,038         | 27,296         | 45,334           |
| Manmunai South West           | 12,966         | 13,294         | 10,360         | 15,900         | 26,260           |
| Manmunai West                 | 15,038         | 15,597         | 13,687         | 16,948         | 30,635           |
| Eravur Town                   | 19,032         | 19,944         | 16,421         | 22,555         | 38,976           |
| Eravur Pattu                  | 35,519         | 38,501         | 34,765         | 39,255         | 74,020           |
| Korali Pattu South            | 14,870         | 15,977         | 12,405         | 18,442         | 30,847           |
| Koralai Pattu                 | 11,495         | 12,416         | 9,147          | 14,764         | 23,911           |
| Korali Pattu West             | 11,852         | 12,216         | 11,049         | 13,019         | 24,068           |
| Koralai Pattu Central         | 16,251         | 16,870         | 12,856         | 20,265         | 33,121           |
| Koralai Pattu North           | 11,687         | 12,377         | 10,815         | 13,249         | 24,064           |
| <b>Total</b>                  | <b>285,828</b> | <b>303,165</b> | <b>239,461</b> | <b>349,532</b> | <b>588,993</b>   |

Source: Department of Census and Statistics, 2011

**Division Wise Demographic Details (2011 Census):**

| D.S Division                  | No. of GN Divisions | No. of Families | Total Population |
|-------------------------------|---------------------|-----------------|------------------|
| Manmunai North                | 48                  | 24,928          | 92,120           |
| Kattankudy                    | 18                  | 13,447          | 49,403           |
| Manmunai Pattu                | 27                  | 9,707           | 33,842           |
| Manmunai South & Eruvil Pattu | 45                  | 17,563          | 62,392           |
| Porativu Pattu                | 43                  | 12,846          | 45,334           |
| Manmunai South West           | 24                  | 7,349           | 26,260           |
| Manmunai West                 | 24                  | 8,640           | 30,635           |
| Eravur Town                   | 15                  | 10,268          | 38,976           |
| Eravur Pattu                  | 39                  | 19,990          | 74,020           |
| Korali Pattu South            | 18                  | 10,698          | 30,847           |
| Koralai Pattu                 | 12                  | 7,244           | 23,911           |
| Korali Pattu West             | 8                   | 6,005           | 24,068           |
| Koralai Pattu Central         | 8                   | 8,213           | 33,121           |
| Koralai Pattu North           | 16                  | 7,165           | 24,064           |
| <b>Total</b>                  | <b>345</b>          | <b>164,063</b>  | <b>588,993</b>   |

Source: Department of Census and Statistics, 2011



**Number of Schools:**

| Division                | Grade 1 A&B | Grade 1 C | Grade 2    | Grade 3    | Total      |
|-------------------------|-------------|-----------|------------|------------|------------|
| Bt/Batticaloa Zone      | 8           | 13        | 23         | 21         | 65         |
| Bt/Pattirupu Zone       | 4           | 14        | 22         | 27         | 67         |
| Bt/Central Zone         | 6           | 9         | 18         | 32         | 65         |
| Bt/Kalkudha Zone        | 3           | 10        | 24         | 44         | 81         |
| Bt/Batticaloa West Zone | 1           | 7         | 26         | 30         | 64         |
| <b>Total</b>            | <b>22</b>   | <b>53</b> | <b>113</b> | <b>154</b> | <b>342</b> |

Source: Department of Census and Statistics, 2011

**Extent, Number of GN divisions and villages in each division:**

| Division                      | Sq. km.         | GN Divisions | Villages   |
|-------------------------------|-----------------|--------------|------------|
| Manmunai North                | 75.09           | 48           | 88         |
| Kattankudy                    | 3.89            | 18           | 18         |
| Manmunai Pattu                | 31.72           | 27           | 89         |
| Manmunai South & Eruvil Pattu | 52.5            | 45           | 60         |
| Paddipali                     | 167.2           | 43           | 120        |
| Manmunai South West.          | 161.6           | 24           | 39         |
| Manmunai West                 | 292.7           | 24           | 116        |
| Eravur Town                   | 3.74            | 17           | 35         |
| Eravur Pattu                  | 634.16          | 39           | 162        |
| Koralai Pattu                 | 484.5           | 12           | 23         |
| Koralai Pattu West            | 176             | 8            | 12         |
| Koralai Pattu North           | 550             | 16           | 50         |
| Koralai Pattu Central         | —               | 9            | 15         |
| Koralai Pattu South           | —               | 18           | 138        |
| <b>Total</b>                  | <b>2,633.10</b> | <b>348</b>   | <b>965</b> |

Source: Department of Census and Statistics, 2011

**Details of households and Samurdhi beneficiaries (2011):**

| DS Division           | Total Population | No. of Families | No. of Beneficiary Families |
|-----------------------|------------------|-----------------|-----------------------------|
| Manmunai North        | 92,120           | 24,928          | 9233                        |
| Kattankudy            | 49,403           | 13,447          | 5691                        |
| Manmunai Pattu        | 33,842           | 9,707           | 5267                        |
| MS&EP                 | 62,392           | 17,563          | 9232                        |
| Porathivu Pattu       | 45,334           | 12,846          | 8277                        |
| Manmunai South West   | 26,260           | 7,349           | 4706                        |
| Manmunai West         | 30,635           | 8,640           | 5433                        |
| Eravur Town           | 38,976           | 10,268          | 5628                        |
| Koralai Pattu         | 23,911           | 7,244           | 3726                        |
| Koralai Pattu West    | 24,068           | 6,005           | 4351                        |
| Koralai Pattu Central | 33,121           | 8,213           | 4500                        |
| Koralai Pattu North   | 24,064           | 7,165           | 3935                        |
| <b>Total</b>          | <b>588,993</b>   | <b>133,375</b>  | <b>69,979</b>               |

Source: Department of Census and Statistics, 2011

## Hazards &amp; Vulnerability of Batticaloa District

## History of Disasters and Probability of Disaster Episodes in the District

| Hazard Type         | Year & month of Occurrence | Affected Divisions           | Frequency | Impact on Population |                      |                     |
|---------------------|----------------------------|------------------------------|-----------|----------------------|----------------------|---------------------|
|                     |                            |                              |           | Deaths               | Displaced (Families) | Affected (Families) |
| Flood               | 2003                       | Eravurpattu                  |           |                      |                      | 1708                |
|                     |                            | Kattankudy                   |           |                      |                      | 2240                |
|                     |                            | Manmunai South West          |           |                      |                      | 5940                |
|                     |                            | Porathivupattu               |           |                      |                      | 10400               |
|                     |                            | Koralaipattu West            |           |                      |                      | 6048                |
| Flood               | 2004, Dec                  | Manmunai South West          |           |                      |                      | 5861                |
|                     |                            | Manmunai West                |           |                      |                      | 6305                |
|                     |                            | Kattankudy                   |           |                      |                      | 5971                |
|                     |                            | Koralaipattu Central         |           |                      |                      | 1120                |
|                     |                            | Koralaipattu North           |           |                      |                      | 1290                |
|                     |                            | Manmunaipattu                |           |                      |                      | 6497                |
|                     |                            | Eravur Town                  |           |                      |                      | 4360                |
|                     |                            | Koraliapattu West            |           |                      |                      | 5023                |
|                     |                            | Eravurpattu                  |           |                      |                      | 7568                |
|                     |                            | Porathivupattu               |           |                      |                      | 2166                |
|                     |                            | Koralaipattu                 |           |                      |                      | 3845                |
| Flood               | 2005, Jan                  | Manmunai South & Eruvipattu  |           |                      |                      | 1552                |
|                     |                            | Eravur Town                  |           |                      |                      | 7884                |
| Flood               | 2006, Jan                  | Manmunai South & Eruvipattu  |           |                      |                      | 3086                |
|                     |                            | Porathivupattu               |           |                      |                      | 4242                |
|                     |                            | Eravurpattu                  |           |                      |                      | 1551                |
| Floods              | 2007, Dec                  | Manmunai South & Eruvilpattu | 10 months |                      |                      | 1705                |
|                     |                            | Kattankudy                   |           |                      | 254                  | 927                 |
|                     |                            | Manmunaipattu                |           |                      |                      | 5720                |
|                     |                            | Manmunai North               |           |                      | 95                   | 134                 |
|                     |                            | Eravur Town                  |           |                      |                      | 8286                |
|                     |                            | Eravurpattu                  |           |                      | 2114                 | 2114                |
|                     |                            | Koraliapattu South           |           |                      | 895                  | 895                 |
|                     |                            | Koralaipattu West            |           |                      | 2631                 | 6664                |
|                     |                            | Koralaipattu Central         |           |                      | 2100                 | 8309                |
|                     |                            | Koralaipattu                 |           |                      | 680                  | 5916                |
| Flood               | 2008, March                | Koralaipattu North           |           |                      |                      | 558                 |
|                     |                            | Manmunai North               |           |                      |                      | 256                 |
|                     |                            | Manmunaipattu                |           |                      |                      | 1428                |
|                     |                            | Porathivupattu               |           |                      |                      | 29                  |
|                     |                            | Manmunai South & Eruvilpattu |           |                      |                      | 31                  |
|                     |                            | Eravurpattu                  |           |                      |                      | 19                  |
|                     |                            | Kattankudy                   |           |                      |                      |                     |
|                     |                            | Koralaipattu Central         |           |                      |                      |                     |
| EravurTown          |                            |                              |           | 3                    |                      |                     |
| Manmunai South West |                            |                              |           | 332                  |                      |                     |
|                     |                            |                              |           |                      |                      | 2053                |

| Hazard Type       | Year & month of Occurrence | Affected Divisions  | Frequency           | Impact on Population |                      |                     |
|-------------------|----------------------------|---------------------|---------------------|----------------------|----------------------|---------------------|
|                   |                            |                     |                     | Deaths               | Displaced (Families) | Affected (Families) |
|                   | 2005                       | Koralaipattu        |                     |                      |                      | 74                  |
|                   | 2005                       | Eravurpattu         |                     |                      |                      | 2564                |
|                   | 2006                       | Eravurpattu         |                     |                      |                      | 3347                |
|                   | 2003                       | Batticaloa District |                     |                      |                      | 1464                |
| Epidemics-Malaria | 2004                       | Batticaloa District |                     |                      |                      | 429                 |
|                   | 2005                       | Batticaloa District |                     |                      |                      | 81                  |
|                   | 2006                       | Batticaloa District |                     |                      |                      | 07                  |
|                   | 2007                       | Batticaloa District |                     |                      |                      | 04                  |
|                   | 2001                       | Batticaloa District |                     |                      |                      | 55                  |
| Dysentery         | 2002                       | Batticaloa District |                     |                      |                      | 145                 |
|                   | 2003                       | Batticaloa District |                     |                      |                      | 66                  |
|                   | 2004                       | Batticaloa District |                     |                      |                      | 71                  |
|                   | 2005                       | Batticaloa District |                     |                      |                      | 54                  |
|                   | 2006                       | Batticaloa District |                     |                      |                      | 194                 |
|                   | 2007                       | Batticaloa District |                     |                      |                      | 501                 |
|                   | 2008                       | Batticaloa District |                     |                      |                      | 22                  |
|                   | Viral Hepatitis            | 1998                | Batticaloa District |                      |                      |                     |
| 1999              |                            | Batticaloa District |                     |                      |                      | 78                  |
| 2000              |                            | Batticaloa District |                     |                      |                      | 57                  |
| 2001              |                            | Batticaloa District |                     |                      |                      | 38                  |
| 2002              |                            | Batticaloa District |                     |                      |                      | 45                  |
| 2003              |                            | Batticaloa District |                     |                      |                      | 89                  |
| 2004              |                            | Batticaloa District |                     |                      |                      | 156                 |
| 2005              |                            | Batticaloa District |                     |                      |                      | 369                 |
| 2006              |                            | Batticaloa District |                     |                      |                      | 208                 |
| 2007              |                            | Batticaloa District |                     |                      |                      | 1187                |
| Tetanus           | 2008                       | Batticaloa District |                     |                      |                      | 45                  |
|                   | 1999                       | Batticaloa District |                     |                      |                      | 02                  |
|                   | 2000                       | Batticaloa District |                     |                      |                      | 02                  |
|                   | 2001                       | Batticaloa District |                     |                      |                      | 05                  |
|                   | 2002                       | Batticaloa District |                     |                      |                      | 07                  |
|                   | 2003                       | Batticaloa District |                     |                      |                      | 03                  |
|                   | 2004                       | Batticaloa District |                     |                      |                      | 03                  |
|                   | 2005                       | Batticaloa District |                     |                      |                      | 01                  |
|                   | 2006                       | Batticaloa District |                     |                      |                      | 04                  |
|                   | 2007                       | Batticaloa District |                     |                      |                      | 01                  |
| Rabies            | 2008                       | Batticaloa District |                     |                      |                      | 01                  |
|                   | 1998                       | Batticaloa District |                     | 20                   |                      |                     |
|                   | 1999                       | Batticaloa District |                     | 12                   |                      |                     |
|                   | 2000                       | Batticaloa District |                     | 20                   |                      |                     |
|                   | 2001                       | Batticaloa District |                     | 08                   |                      |                     |
|                   | 2002                       | Batticaloa District |                     | 04                   |                      |                     |
|                   | 2003                       | Batticaloa District |                     | 02                   |                      |                     |
|                   | 2004                       | Batticaloa District |                     | 04                   |                      |                     |
|                   | 2005                       | Batticaloa District |                     | 01                   |                      |                     |
|                   | 2006                       | Batticaloa District |                     | 01                   |                      |                     |
| 2007              | Batticaloa District        |                     | 05                  |                      |                      |                     |
| 2008              | Batticaloa District        |                     | 05                  |                      |                      |                     |

| Hazard Type  | Year & month of Occurrence | Affected Divisions           | Frequency | Impact on Population |                      |                     |
|--------------|----------------------------|------------------------------|-----------|----------------------|----------------------|---------------------|
|              |                            |                              |           | Deaths               | Displaced (Families) | Affected (Families) |
|              | 2001                       | Batticaloa District          |           |                      |                      | 36                  |
|              | 2002                       | Batticaloa District          |           |                      |                      | 76                  |
|              | 2003                       | Batticaloa District          |           |                      |                      | 119                 |
|              | 2004                       | Batticaloa District          |           |                      |                      | 101                 |
|              | 2005                       | Batticaloa District          |           |                      |                      | 06                  |
|              | 2006                       | Batticaloa District          |           |                      |                      | 63                  |
|              | 2006                       | Manmunai North               |           | 01                   |                      | 33                  |
|              |                            | Manmunai South & Eruvilpattu |           |                      |                      | 01                  |
|              |                            | Koralaipattu                 |           |                      |                      | 20                  |
|              | 2007                       | Batticaloa District          |           | 01                   |                      | 76                  |
|              | 2008                       | Batticaloa District          |           | 01                   |                      | 54                  |
| Virus fever  | 2006                       | Manmunai North               |           |                      |                      | 28                  |
|              |                            | Manmunai south & Eruvilpattu |           |                      |                      | 38                  |
|              |                            | Koralaipattu                 |           |                      |                      | 2                   |
|              |                            | Eravurpattu                  |           |                      |                      | 44                  |
|              |                            | Kattankudy                   |           |                      |                      | 37                  |
|              |                            | Manmunai South West          |           |                      |                      | 04                  |
|              |                            | Eravur Town                  |           |                      |                      | 09                  |
|              |                            | Manmunai West                |           |                      |                      | 22                  |
|              |                            | Porathivupattu               |           |                      |                      | 23                  |
|              |                            | Koralaipattu West            |           |                      |                      | 01                  |
| Chicken pox  | 2007                       | Batticaloa District          |           |                      |                      | 16                  |
| TB           | 2007                       | Batticaloa District          |           |                      |                      | 07                  |
| Meningitis   | 2007                       | Batticaloa District          |           |                      |                      | 01                  |
| Encephalitis | 2007                       | Batticaloa District          |           |                      |                      | 01                  |
| Food poison  | 2007                       | Batticaloa District          |           |                      |                      | 05                  |
| Measles      | 2007                       | Batticaloa District          |           |                      |                      | 01                  |
| Lighting     | 1997                       | Koralaipattu                 |           | 2                    |                      |                     |
| Cyclone      | 1978, Nov                  | Batticaloa District          |           | 1146                 |                      | 107,740             |
| Tsunami      | 2004, Dec                  | Eravurpattu                  |           | 54                   | 1331                 | 8258                |
|              |                            | Kattankudy                   |           | 105                  | 2291                 | 6683                |
|              |                            | Koralaipattu                 |           | 512                  | 1311                 | 5850                |
|              |                            | Koralaipattu North           |           | 311                  | 3553                 | 5027                |
|              |                            | Koralaipattu South           |           | 75                   | 67                   | 1135                |
|              |                            | Manmunai North               |           | 1472                 | 4762                 | 13350               |
|              |                            | Manmunaipattu                |           | 40                   | 904                  | 5820                |
|              |                            | Manmunai South & Eruvilpattu |           | 162                  | 2513                 | 13780               |
|              |                            | Manmunai South West          |           | Nil                  |                      | 1000                |
|              |                            | Porathivupattu               |           | Nil                  |                      | 1270                |
|              |                            | Koralaipattu Central         |           | Nil                  |                      | 327                 |
|              |                            | Koralaipattu West            |           | Nil                  |                      | 215                 |
|              |                            | Eravur Town                  |           | Nil                  |                      | 175                 |
|              |                            | Manmunai West                |           |                      | 14                   | 827                 |

Source: DDMCU, 2012

## Hazards and Vulnerability Assessment

### Hazardous Calendar

| Hazard             | Probable Time of Occurrence | Potential Impact                                            | Last Reported Year                    |
|--------------------|-----------------------------|-------------------------------------------------------------|---------------------------------------|
| Floods             | December - January          | Damages to Life, Livelihood, Crops, Infrastructures, Animal | 1957,1978, 2007, 2008, 2010,2011,2012 |
| Epidemics          | December - March            | Damages to Life, Animal, Crops                              | 2007                                  |
| Cyclone<br>Tornado | November-December           | Damages to Life, Livelihood, Crops, Infrastructures, Animal | 1978, 2000<br>2012                    |
| Tsunami            | Any                         | Damages to Life, Livelihood, Crops, Infrastructures, Animal | 2004                                  |
| Drought            | July - August               | Damages to Life, Crops, Animal                              | 2005, 2006                            |
| Lighting           | Inter Monsoons              | Damages to Life, Crops, Animal                              | 1997,2012                             |

Source: DDMCU, 2012

**CONSTITUTION OF THE DISTRICT DISASTER MANAGEMENT COMMITTEE**

- District Secretary - **Chairman**
- Additional District Secretary
- District Assistant Director DMC – (**Convener and Coordinator of DDMC**)
- Divisional Secretaries
- Officers attached to District Secretariat
  - District Social Service Officer
  - Development Assistant - NDRSC
  - Environment officer
  - Assistant Samurudi Commissioner
  - Planning Director
  - Other Officials
  
- District level officers from each of the following organizations district level representatives, his deputy and an additional official:
  1. Irrigation Department
  2. Meteorology Department
  3. Police Department
  4. Sri Lanka Army
  5. Sri Lanka Navy
  6. Sri Lanka Air Force
  7. Road Development Authority
  8. Provincial Road Development Authority
  9. National Water Supply & Drainage Board
  10. Ceylon Electricity Board
  11. Sri Lanka Telecom
  12. Regional Director of Health Services (Provincial Health)
  13. Director - Teaching Hospital
  14. Assistant Commissioner of Local Government
  15. Local Authorities (Mayor, Chairmen)
  16. Urban Development Authority
  17. National Physical Planning Department
  18. Zonal Education Directors
  19. District NGOs / INGOs

20. Central Environment Authority
21. National Housing Development Authority
22. Land Use Policy Planning Department
23. Department of Agriculture
24. Agrarian Services Department
25. Coast Conservation Department
26. Fisheries Development Department
27. Department of Animal Production and Health
28. Chamber of Commerce
29. Assistant Commissioner of Cooperative Development
30. Sri Lankan Transport Board
31. Ceylon Petroleum Cooperation
32. Sri Lanka Railways Department
33. Forest Conservation Department
34. Wildlife Conservation Department
35. Timber Corporation
36. NBRO
37. GSMB

## THE DISTRICT DISASTER MANAGEMENT COMMITTEE (DDMC)

The District Disaster Management Committee (DDMC) will coordinate all related activities with other subcommittees and agencies including the following:

### Services:

- Assess
  - Search and rescue requirements
  - Relief requirements
  - Cash Compensation requirements
- Organize and Coordinate
  - Establishment of Relief camps in accordance with standards laid down
  - Essential services such as drinking water,
  - Arrangements for dry rations and family kits for cooking
  - Relief supplies to transit camps and relief camps, and to Site Operations Centers
  - Welfare Services
  - Maintain law and order to prevent looting and theft
  - Livestock camps
  - Supplies of fodder and cattle-feed to livestock
- Coordinate NGO activities through necessary support to ensure community participation
- Establishing coordination mechanisms with local level NGOs and other national level NGOs
- Identification of NGOs to serve on committees etc.
- Assigning well-defined areas of operations of the EOC
- Assigning specific response function to specialized NGOs
- Reporting upon procurement and disbursement of relief materials received through government and non-government channels
- Mobilize and coordinate work of volunteers ensuring community participation

### Infrastructure:

- Organization and coordination of clearance of debris
- Temporary Repairs to damaged infrastructure
- Water
- Telecommunication
- Power
- Bridges
- Roads
- Transport
- Railway
- Canals and Drains



- Public buildings
- Construction of facilities
- Shelters with sanitation and recreation facilities as per the standards
- Medical facilities
- Provision of hand-pumps and bowsers where necessary
- Temporary structures for storage
- Postal facilities
- Help aids when required
- Educational facilities

#### **Health:**

- Organize and maintain records on;
  - Treatment of the injured and sick
  - Psychological trauma
  - Disposal of dead bodies and carcasses
  - Preventive medicine and anti-epidemic actions
  - Reports on food, water supplies, sanitation and disposal of waste
- Assess, supply and supervise;
  - Medical relief for the injured
  - The number of ambulances required and the hospitals where they could be sent (public and private)
  - Medical equipment and medicines required
  - Special information required regarding treatment as for epidemics etc.
- Supervision of maintenance of standards
  - Identification of source for supply of drinking water through tankers, bowsers and other means of transport
  - Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water stagnation and health services
  - Assistance to communities for storage of rations, sanitation, water supply, disposal of waste water stagnation and health services

#### **Planning and Intelligence:**

- Establishing communication links with;
  - Members of other EOCs – Disaster Management Centre, Provincial Council, District, Local Authorities, Divisional Secretary
  - Technical Agencies responsible for forecasting and warning related to different hazards;
    - Adverse climate conditions, intense rains, cyclones and meteorological disasters (Department of Meteorology)
    - River Floods (Irrigation Department)
    - Landslides (NBRO)

- Reservoir and dam related floods (Irrigation Dept., Mahaweli Authority of Sri Lanka, Ceylon Electricity Board, National Water Supply and Drainage Board)
- Other hazards (Police, Fire Brigade, Defense Services, Civil Defense)
- Earthquakes (Geological Survey and Mines Bureau (GSMB))
- Tsunamis (GSMB and National Aquatic Resources and Research Agency (NARA))
- The service providing agencies (NWS&DB, RDA, CEB, Telecom, Railway)
- Food (CWE, MPCS, etc.)
- NGOs and CBOs
- Private donors

### **Reporting:**

- Dispatch of Preliminary Information Report and Action Taken Report to EOC of DMC and District as relevant as per the formats provided in this report. Follow-up with additional information and periodic information reports on deployment of resources and any other activities.
- Market Intervention:
  - Prevent and initiate legal action on those engaged in hoarding, price hiking, corruption and unauthorized sale of relief materials with the assistance of Police and relevant officers.
- General:
  - Disseminate details about legal and official procedures, eligibility criteria with respect to relief and compensation for loss of life, injuries, livestock, crop, houses, etc. to be sent to Divisional Secretary/LA as relevant
  - Maintenance of records (date of the reporting period of service, leave record, overtime, etc.) for all the persons deployed for relief work
  - Ensure implementation of orders and instructions from EOC of DMC
  - Requisition of accommodation, vehicles & equipment for relief duties
  - Issue of passes and identification stickers for vehicles on relief duty including the persons from NGOs (within the EOC)
  - Sanctioning expenses for reimbursement with the approval of the PC or District Secretary as relevant

### **Logistics:**

- General
  - Assessment of needs including manpower and deployment of resources as per the available information
  - Assignments for coronary inquests
  - Identification of the location where carcasses can be disposed of
  - Assessment of transport requirement
  - Requesting for additional resources from other districts/divisions.

- Arrangements for supply of fuel to authorized relief vehicles (credit coupons, fuel orders etc.)
- Coordinating and supervising issuing of relief tickets to affected families
- Ensuring safe storage and transport of relief supplies
- Coordination of supplies distributed directly by NGOs and other organizations including private donors
- Ensuring proper maintenance of vehicles and equipment
- Coordination of transport with (Pre-identified);
  - SLTB and Private Bus companies
  - Railway
  - Security forces
  - Private transporters, bus owners
  - Boat Operators
  - Government Helicopters
- Organizing transport for;
  - Rescue parties
  - Relief personnel
  - Marooned persons
  - Water, medicines, first aid and cooked food for marooned persons and volunteers
  - Relief materials
  - Seriously injured and sick

**Communication and Information Management:**

- Set-up an information centre in EOC to organize sharing of information with mass media and community
- Monitor disaster warnings and weather conditions in coordination with, and on the advice of Meteorological Dept., Irrigation Dept., NBRO etc.
- General:
  - Send out-messages on behalf of EOC
  - Maintaining in-message and out-message Register
  - Collect information from Site Operations Centre
  - Organize information for EOC
  - Serve as data bank required for managing operational aspects of disaster situations
- Keep readily available all the information including;
  - Office and residence telephone numbers, fax numbers, mobile numbers etc. of Chief Secretary and other District Secretaries including Divisional Secretaries
  - Phone numbers, names, addresses, page numbers etc. of the officers and staff of the Emergency Operations Centre

- List of local people who can organize and co-ordinate the relief activities
- Phone numbers, fax numbers, wireless, etc. of the other control desk officers
- Phone numbers, names and addresses of the field officers
- Phone numbers, names, and addresses of Non-officials (like MPs, Local Authority Members, Provincial Council Members etc.) in the district
- Planning information required including maps incorporated in an Emergency Management Plan
- Disaster Site Maps indicating the extent to which other areas may be affected
- Information regarding alternate routes, water sources, layout of essential services which may be affected

▪ **Maintain other particulars:**



### CONSTITUTION OF SUB-COMMITTEES

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>I. Disaster Early Warning Sub-Committee</b></p> <ul style="list-style-type: none"> <li>➤ 1 or 2 officials relevant to the subject from District Secretariat (one of them will act as coordinator / convener)</li> <li>➤ Select Chairperson from among representatives</li> <li>➤ Representatives from; <ul style="list-style-type: none"> <li>▪ Meteorology Dept.</li> <li>▪ Irrigation Dept. / Mahaweli Authority of Sri Lanka / Ceylon Electricity Board / NWS &amp; DB (for river flooding &amp; Down stream of dam flooding – as applicable)</li> <li>▪ Geological Survey &amp; Mines Bureau (to be in contact)</li> <li>▪ Police Dept.</li> <li>▪ Major Municipal Council in the district</li> <li>▪ Divisional Secretariat</li> <li>▪ Sri Lanka Navy</li> <li>▪ Major District NGOs / CBOs</li> <li>▪ NBRO (to be in contact)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Roles and Responsibilities of sub-committee:</b></p> <ul style="list-style-type: none"> <li>➤ Preparedness for and implementation of following; <ul style="list-style-type: none"> <li>▪ Coordination with DMC and other national agencies responsible for early warning for specific hazards</li> <li>▪ Keep records of NGOs and local CBOs and coordination and duty assignment</li> <li>▪ Ensure proper maintenance and functioning of warning and communication systems</li> <li>▪ Arrangement of vehicles and public announcement system for early warning dissemination</li> <li>▪ Assignment of duties to the district and divisional level officials</li> </ul> </li> <li>➤ Assess training &amp; awareness needs and target groups on aspects related to early warning dissemination; coordinate and organize to conduct training, awareness and drills – Warning receiving officers, dissemination groups etc.</li> <li>➤ In case of an actual early warning; <ul style="list-style-type: none"> <li>▪ On hearing of the warning immediately inform District Secretary and EOC</li> <li>▪ In case of locally identified disasters such as landslides, flooding, other local disasters, immediately report to Early Warning Division and EOC of DMC</li> <li>▪ Warning people about the impending danger and advise to leave for pre-identified safer places</li> <li>▪ Proper record keeping and transmission of information to all the levels</li> <li>▪ Early warning to fishermen as relevant</li> </ul> </li> <li>➤ Maintain law and order to prevent looting and theft;</li> </ul> |

## **II. Evacuation and SAR Sub-Committee**

- 1 or 2 officials relevant to the subject from District Secretariat (one of them will act as coordinator / convener)
- Select Chairperson from among representatives
- Representatives from;
  - Police Department
  - Armed Forces
  - Road Development Authority
  - Provincial Road Development Authority
  - District NGOs
  - Health Department
  - Divisional Secretariats
  - Major Municipal Council in the district

### **Roles and Responsibilities of sub-committee:**

- Assess and acquire needed resources and facilities;
  - Rescue kits at risk areas depending on the hazards
  - SAR teams trained for SAR and survival techniques (of the Police / Fire Brigade and NGOs) for search and rescue – to be made available round the clock, depending on the type of impending disaster assess the type of SAR that would be required – Land, Water, Air
  - Ensure availability of earmarks basic equipment and materials for SAR
  - Other
- Assess training needs and target groups on related aspects such as;
  - First aid groups
  - SAR parties
  - Community groups selected as response teams
  - Other
- Organize and coordinate
  - Identification and marking of evacuation routes shown with sign boards for different disasters (likely landslides, floods, tsunami etc.)
  - Confirm locations and inventory of evacuation camps/ temporary shelter and keep location maps ready
  - Evacuation drills
  - Arrangement of boats and vehicles etc. and keep contacts to mobilize for evacuation when required
  - Respective parties to rehearse individually and jointly with other parties to minimize response time
  - NGOs and other groups for the provision of to be trained and be prepared
  - Maintain law and order to prevent looting and theft of evacuated houses
- Coordinate NGO activities through necessary support to ensure community participation
  - Establishing coordination mechanisms with local NGOs & other national level NGOs

- Identifying additional NGOs & assigning specific response function to different specialized NGOs
- Mobilize and coordinate work of volunteers ensuring community participation assigning specific responsibilities
- Coordinate with CBO groups and organize training in evacuation
- In an actual event carry out the following;
  - Ensure readiness of identifying shelter Centers with essential services
  - Mobilize people of unsafe areas to go to identify / safer shelters as pre-identified
  - Coordinate with Civil Defense – Police / Army / Navy /Air force
  - Mobilize CBO groups trained in evacuation
  - Mobilize boats/vehicles etc. for speedy evacuation
  - Evacuate people of marooned areas and administer emergent relief, and direct them to identify safe shelters as pre-identified
  - Deploy police for maintaining law & order during evacuation
- Mobilize First Aid groups and other parties for treating and transporting the injured;



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p><b>III. Relief, Temporary Camps, Food &amp; Security Sub-Committee</b><br/>(Relief supply &amp; distribution, Transit &amp; relief camps, food distribution centers, security, thefts &amp; looting)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>➤ 1 or 2 officials relevant to the subject from District Secretariat (one of them will act as coordinator / convener)</li> <li>➤ Select Chairperson from among representatives</li> <li>➤ Representatives from; <ul style="list-style-type: none"> <li>▪ Police Department</li> <li>▪ Armed Forces</li> <li>▪ Ceylon Electricity Board</li> <li>▪ National Water Supply &amp; Drainage Board</li> <li>▪ Education Department</li> <li>▪ District NGOs</li> <li>▪ Health Department</li> <li>▪ Cooperative Department</li> <li>▪ Provincial Local Govt. Dept.</li> <li>▪ Divisional Secretariats</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Roles and Responsibilities of sub-committee:</b></p> <ul style="list-style-type: none"> <li>➤ Be prepared with following; <ul style="list-style-type: none"> <li>▪ Identifying and maintaining inventory of shelter Centres and keep location maps ready</li> <li>▪ Pre organization of shelter Centres with essential facilities – adequate water, toilets, bathing, cooking facilities etc.</li> </ul> </li> <li>➤ Assess; <ul style="list-style-type: none"> <li>▪ Relief requirements and arrange to acquire same</li> <li>▪ Cash Compensation requirements and coordination with relevant govt. agencies</li> <li>▪ Transport requirements</li> </ul> </li> <li>➤ Assess awareness needs and target groups on aspects related to location identification, camp management, basic sanitation, security and service providing agencies who are responsible for such activities etc.</li> <li>➤ Coordinate NGO activities through necessary support to ensure community participation; <ul style="list-style-type: none"> <li>▪ Establishing coordination mechanisms with local level NGOs and other national level NGOs</li> <li>▪ Identification of NGOs to serve on committees etc.</li> <li>▪ Assigning well-defined areas of operations of the EOC</li> <li>▪ Assigning specific response functions to specialized NGOs</li> <li>▪ Mobilize and coordinate work of volunteers ensuring community participation</li> </ul> </li> <li>➤ In an actual event; <ul style="list-style-type: none"> <li>▪ Ensure that the identified shelter Centres are ready with essential services</li> <li>▪ Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> <li>▪ Procurement and transportation of Relief materials to affected pockets/areas/ people</li> <li>▪ Reporting upon procurement and disbursement of relief materials received through government and non-government channels</li> <li>▪ Arrangement of cooking facilities in the shelter camps &amp; affected areas</li> <li>▪ Assigning responsibilities to officials for distribution of emergency relief</li> <li>▪ Coordinating with the civil society organizations and UN agencies for continued relief operation</li> </ul> </li> <li>➤ Monitoring for proper implementation of all above activities;</li> </ul> |

#### **IV. Immediate Restoration of Services, Rehabilitation & Reconstruction Sub- Committee**

- 1 or 2 officials relevant to the subject from District Secretariat (one of them will act as coordinator / convener)
- Select Chairperson from among representatives
- Representatives from;
  - Police Department
  - Armed Forces
  - Road Development Authority
  - Provincial Road Development Authority
  - Ceylon Electricity Board
  - National Water Supply & Drainage Board
  - Sri Lanka Telecom
  - Railway Department
  - District NGOs
  - National Housing Development Authority
  - Local Authorities

#### **Roles and Responsibilities of sub-committee:**

Be prepared and carry out the following;

- Keep records and contact information about related service providing agencies relevant for the subgroup activities and make all relevant officials aware of such information
- Organization and coordination of clearance of debris;
  - Formation of task force with requisite equipments
  - Assigning responsibilities for specific areas
  - Emergency clearance of debris to enabled reconnaissance
  - Coordinate road-clearing activities to expedite relief work - assembling laborers and providing them with necessary equipments
  - Arrangement of towing vehicles, Earth moving equipments, cranes, construct temporary roads
  - Keep National & other Highways clear from disaster effects.
  - Blocked rivers and canals to be cleared
  - Damage assessment
  - Monitoring
- Temporary Repairs to damaged infrastructure;
  - Water, Power, Transport, Telecommunication, Roads, Bridges, Canals and Drains, Public buildings
  - Provision of hand-pumps and bowsers where necessary
- Construction of facilities;
  - Temporary shelters with sanitation and recreation facilities as per the standards
  - Temporary structures for storage
  - Damaged hospitals, Educational facilities / schools and other urgent facilities to commence urgent services

#### **v. Health and Welfare Sub-Committee**

- 1 or 2 officials relevant to the subject from District Secretariat (one of them will act as coordinator / convener)
- Select Chairperson from among representatives
- Representatives from;
  - Police Department
  - Armed Forces
  - Area Hospital
  - Health Department
  - District NGOs
  - Provincial Local Govt. Dept.
  - Major CBOs

#### **Roles and Responsibilities of sub-committee:**

- Preparedness by assessing requirements and maintaining contact with;
  - Relevant Zonal Committee to meet and be prepared
  - Relevant Emergency Health Care Teams to be prepared
  - Mobile teams to be prepared and assigning them with specific areas in case of a disaster
  - Contacts with public and private hospitals to send injured and availability ambulances for use in case of a disaster
  - Special information required regarding treatment as for epidemics etc.
  - Keep records of contact personnel for various services - safe drinking water
  - Identification of tasks in case of early warning / disaster and assigning responsibilities to relevant sub committee members / officials
  - Volunteers/village level workers in inaccessible pockets and generating public health awareness and to obtain their assistance in case of a disaster
  - Stock piling of medicine, water disinfectants etc.
- Identify and organize training in coordination with the EOC and Disaster Management Committee after identifying agencies for conducting trainings;
  - Conduct training of various personnel to assist the medical and sanitation teams at various levels on relevant areas - First aid groups, Volunteers/village level groups, Community groups selected as response teams
- In an actual event;
  - Assess the situation, prepare estimates and inform District Secretary / EOC
  - Areas where DPDHS cannot take decisions inform District Secretary / EOC
  - Stock piling of medicine
  - Stock piling of water disinfectants
- Organize and maintain records on;
  - Treatment of the injured and sick
  - Disposal of dead bodies and carcasses
  - Preventive medicine and anti-epidemic actions
  - Psychological trauma counseling
  - Special information required regarding treatment as for epidemics etc.
  - Reports on food, water supplies, sanitation and disposal of waste

- Assess, supply and supervise;
  - Medical relief for the injured
  - Number of ambulances required & the hospitals where they could be sent (public & private)
  - Medical equipment and medicines required
- Supervision of maintenance of standards;
  - Identification of source for supply of drinking water through tankers, bowsers and other means of transport
  - Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water / stagnation and health services
- Assistance to communities for storage of rations, sanitation, water supply, disposal of waste water / stagnation and health services;

**Emergency Operations Management is handled by the Main Disaster Mgt. Committee**

- District Secretary – Chairperson
- DMC District Disaster Management Coordinator
- Addl. District Secretary – Coordinator / Convenor
- Director - Planning
- Divisional Secretaries from affected divisions as appropriate
- Representatives of relevant agencies



**Role & Responsibilities of relevant Agencies:**

1. District Secretariat / DDMCU
2. Divisional Secretariat
3. Department of Meteorology (DOM)
4. Irrigation Department (ID) / Mahaweli Authority of Sri Lanka (MASL)
5. Police Department
6. Sri Lanka Army
7. Provincial Local Government Department
8. Municipal Councils (MCs)
9. Local Authorities (LAs)
10. Provincial Health Services / DPDHS
11. Area Hospital
12. District Major Non Government Organizations (NGOs)
13. Major Community Based Organizations (CBOs)
14. Cooperative Services Department
15. Education Department
16. National Water Supply & Drainage Board (NWS&DB)
17. Road Development Authority (RDA)
18. Provincial Road Development Authority (PRDA)
19. Ceylon Electricity Board (CEB)
20. Sri Lanka Telecom (SLT)
21. Railway Department (CGR)
22. National Housing Development Authority (NHDA)

## Role and Responsibility of Relavant Agencies

| <b>Preparedness and Response: District Secretariat / DDMCU</b> |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LEVEL1 / Before Disaster</b>                                | Early Warning      | <ul style="list-style-type: none"> <li>• Ensure that evacuation routes and safe areas in hazard maps have been clearly marked and signs posted</li> <li>• Assess training &amp; awareness needs and target groups on aspects related to early warning dissemination; coordinate and organize to conduct training, awareness and drills – warning receiving officers, dissemination groups</li> <li>• Ensure proper maintenance and functioning of warning and communication equipment</li> <li>• Assignment of duties to the district and divisional level officials</li> <li>• Keep records of NGOs and local CBOs and Coordination and duty assignment</li> <li>• Coordination with DMC and other national agencies responsible for early warning for specific hazards</li> <li>• Provide regular situation updates to the DMC at National level, to Divisional Secretaries and Grama Niladharis as well as the media</li> <li>• Activate public announcement system for early warning dissemination</li> <li>• Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> <li>• Share early warning information with the Divisional Secretary and the Grama Niladhari</li> <li>• Proper record keeping and transmission of information to all the levels</li> </ul> |
|                                                                | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Ensure availability of earmarked basic equipment and materials for SAR</li> <li>• Ensure that search and rescue equipment are fully functional and in working order</li> <li>• Confirm locations and inventory of evacuation camps/ temporary shelter and keep location maps ready</li> <li>• Assess training needs and target groups on related aspects such as SAR parties</li> <li>• Coordinate NGO activities through necessary support to ensure community participation Identifying additional NGOs and assigning specific response function to different specialized NGOs</li> <li>• Coordinate the activities of community volunteers assisting with the rescue operations</li> <li>• Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospitals</li> <li>• Coordinate with Civil Defense – Police / Army / Navy /Air Force</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                | Relief             | <ul style="list-style-type: none"> <li>• Assess relief requirements and arrange to acquire same</li> <li>• Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> <li>• Maintain a physical inventory of stocks to capture external assistance when it arrives Coordinate the relief distribution plans of NGOs and CBOs</li> <li>• Assess transport requirements</li> <li>• Identification and maintaining inventory of shelter centers and keep location maps ready</li> <li>• Ensure arrangements that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>• Communicate with individuals and institutions along the supply chain in order to highlight anticipated shortfalls or problems with the supply of food and other commodities</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                | Restoration        | <ul style="list-style-type: none"> <li>• Keep records and contact information about related service providing agencies and make all relevant officials aware of such information</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                | Health and Welfare | <ul style="list-style-type: none"> <li>• Relevant Committee members to be met and be prepared</li> <li>• Identification of tasks in case of disasters and assigning responsibilities to relevant Sub Committee members / officials</li> <li>• Coordinate with Relief Sub Committee</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Preparedness and Response: District Secretariat / DDMCU</b> |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>LEVEL2 / During</b>                                         | Early Warning      | <ul style="list-style-type: none"> <li>• Warn people about the impending danger, provide information on evacuation paths and safe areas.</li> <li>• Provide regular situation updates to the DMC at National level, to Divisional Secretaries and Grama Niladharis as well as the media</li> <li>• Coordinate with NGOs and CBOs to assist with early warning dissemination and evacuation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Coordinate with Civil Defense –Police / Army / Navy / Air Force</li> <li>Coordinate the activities of community volunteers assisting with the rescue operations</li> <li>Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> </ul>                                                                                                                                                                                                                                                                                                                                                 |
|                          | Relief             | <ul style="list-style-type: none"> <li>Undertake a rapid damage assessment</li> <li>Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospitals</li> <li>Ensure that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>Construct a sufficient number of latrines for males and females at relief camps and ensure that they are disinfected regularly</li> <li>Coordinate with the Police to maintain law and order</li> <li>Monitoring for proper implementation of all above activities</li> </ul>                                              |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Organization and coordination of clearance of debris &amp; restoration of essential services</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate with Relief Sub Committee</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Provide regular situation updates to the DMC at National level, to Divisional Secretaries and Grama Niladharis as well as the media</li> <li>To inform people in safe shelters when it is safe to return home</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Undertake a rapid damage assessment</li> <li>Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                          | Relief             | <ul style="list-style-type: none"> <li>Undertake a rapid damage assessment</li> <li>Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospitals</li> <li>Ensure epidemic prevention/ control</li> <li>Ensure that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>Construct a sufficient number of latrines for males and females at relief camps and ensure that they are disinfected regularly</li> <li>Coordinate with the Police to maintain law and order</li> <li>Monitoring for proper implementation of all above activities</li> </ul> |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Undertake a rapid damage assessment</li> <li>Organization and coordination of clearance of debris</li> <li>Award compensation to beneficiaries and provides information to beneficiaries on their entitlements</li> <li>Design district recovery plans</li> <li>Coordinate the rehabilitation and reconstruction activities of NGOs and CBOs</li> <li>Report the assessments to DMC</li> </ul>                                                                                                                                                                                                                                     |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate with Relief Sub Committee</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |



## Preparedness and Response: Meteorology Department

|                             |                    |                                                                                                                                                                                           |
|-----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before<br>Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Collect, analyze and interpret data and share forecasts and early warnings with DMC at National level, District Secretary and (DDMC).</li> </ul> |
|                             | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
| LEVEL2 / During<br>Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Provide regular weather updates to DMC at National level, District Secretary and (DDMC).</li> </ul>                                              |
|                             | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
| LEVEL3 / Ending<br>Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Provide regular weather updates to DMC at National level, District Secretary and (DDMC).</li> </ul>                                              |
|                             | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |
|                             | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                       |

## Preparedness and Response: Irrigation Dept. / Mahaweli Authority of Sri Lanka

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Monitor rainfall levels, river levels and reservoir conditions carefully</li> <li>▪ Collect, analyze, interpret data and share forecasts, early warnings with EOC / DMC at National level, District Secretary and DDMCU</li> <li>▪ Share early warnings with Divisional Secretary and Grama Niladharis</li> <li>▪ Warn people about the impending danger and provide information on evacuation paths and safe areas</li> <li>▪ Provide regular situation updates to DMC at National level, to Divisional Secretaries and Grama Niladharis as well as the media</li> </ul> |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Prepare flood hazard maps and provides DMC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Monitor rainfall levels, river levels and reservoir conditions carefully</li> <li>▪ Collect, analyze, interpret data and share forecasts, early warnings with EOC / DMC at National level, District Secretary and DDMCU</li> <li>▪ In case of locally identified disasters, immediately report to Early Warning Division and EOC of DMC</li> <li>▪ Provide regular situation updates to DMC at National level, District Secretary and DDMCU</li> <li>▪ Act on flood water management in safe and proper manner</li> </ul>                                                 |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Coordinate and facilitate SAR teams</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Maintain a record of the situation updates</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Provide regular situation updates to EOC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Act to minimize the flood damages</li> <li>▪ Rapid damage assessment</li> <li>▪ Arrange mitigation projects &amp; Support to the relevant offices</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                              |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Preparedness and Response: Ceylon Electricity Board

|                          |                    |                                                                                                                                                                                                                         |
|--------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Activate public announcement system for early warning dissemination / or with media</li> </ul>                                                                                 |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Coordinate with trained teams &amp; equipments to response / power disconnections</li> </ul>                                                                                   |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪ Measures to provide uninterrupted power supply</li> </ul>                                                                                                                      |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Ready to deploy restoration teams</li> </ul>                                                                                                                                   |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Provide regular updates of the situation to EOC</li> </ul>                                                                                                                     |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Temporary repairs to damaged infrastructure (Power)</li> </ul>                                                                                                                 |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Provide regular situation updates to EOC</li> </ul>                                                                                                                            |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Undertake a rapid damage assessment</li> <li>▪ Temporary repairs to damaged infrastructure (Power)</li> <li>▪ Carry out repairs to damaged infrastructure: (Power)s</li> </ul> |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                     |

## Preparedness and Response: Police Department

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | <ul style="list-style-type: none"> <li>▪ Ensure proper maintenance and functioning of warning and communication systems</li> <li>▪ Arrangement of vehicles and public announcement system for early warning dissemination</li> </ul>                                                                                                                                                                                                                                                                                  |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Ensure availability of earmarked basic equipment and materials for SAR</li> <li>▪ Assess training needs and target groups on related aspects such as SAR parties</li> <li>▪ Confirm locations and inventory of evacuation camps/ temporary shelter and keep location maps ready</li> <li>▪ Ensure that search and rescue equipment are fully functional and in working order</li> </ul>                                                                                      |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪ Identification and maintaining inventory of shelter centers and keep location maps ready</li> <li>▪ Assess transport requirements</li> <li>▪ Maintain a physical inventory of stocks to capture external assistance when it arrives</li> </ul>                                                                                                                                                                                                                               |
|                          | Restoration        | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ On hearing of the warning immediately inform the District Secretary and EOC</li> <li>▪ Warning people about the impending danger and advise to leave for pre-identified safer places</li> <li>▪ Maintain law and order to prevent looting and theft</li> <li>▪ Activate public announcement system for early warning dissemination</li> </ul>                                                                                                                                |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Coordinate with civil defense – Police / Army / Navy /Air force</li> <li>▪ Ensure readiness of identifying shelter centers with essential services</li> <li>▪ Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>▪ Maintain law and order to prevent looting and theft of evacuated houses</li> <li>▪ Ensure that search and rescue equipment is fully functional and in working order</li> </ul>                               |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪ Maintain law and order</li> <li>▪ Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> </ul>                                                                                                                                                                                                                                                                                                                                                      |
|                          | Restoration        | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> <li>▪ In case of locally identified disasters such as landslides, flooding, other local disasters, immediately report to Early Warning Division and EOC of DMC</li> </ul>                                                                                                                                                                                            |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Maintain law and order to prevent looting and theft of evacuated houses</li> <li>▪ Mobilize boats/vehicles etc. for speedy evacuation</li> <li>▪ Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> <li>▪ Mobilize and dispatch search and rescue teams to affected areas to rescue</li> <li>▪ Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospital</li> </ul> |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪ Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> <li>▪ Maintain law and order</li> </ul>                                                                                                                                                                                                                                                                                                                                                      |
|                          | Restoration        | ▪ Organize and coordinate of clearance of debris                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| LEVEL3 / Ending Disaster | Early Warning      | ▪ Maintain law and order to prevent looting and theft                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Evacuation and SAR | ▪ Maintain law and order to prevent looting and theft of evacuated houses                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                          | Relief             | ▪ Maintain law and order                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                          | Restoration        | ▪ Damage assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Preparedness and Response: Major Municipal Council in the district

|                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation          | Early Warning      | <ul style="list-style-type: none"> <li>▪ Ensure proper maintenance and functioning of warning and communication equipment</li> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                               |
|                           | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Establishing coordination mechanisms with DDMCU, / GA, local level NGOs and other national level NGOs</li> </ul>                                                                                                                                                                                                                                                                                                     |
|                           | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| LEVEL 1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Ensure readiness of identified shelter centers with essential services</li> <li>▪ Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>▪ Coordinate with civil defense – Police / Army / Navy / Air force</li> </ul>                                                                                                                                                      |
|                           | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Restoration        | <ul style="list-style-type: none"> <li>▪ Coordinate &amp; plan for the restoration arrangements</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> </ul>                                                                                                                                                                                                                                                                                               |
| LEVEL 2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Coordination with DMC and other national agencies responsible for early warning for specific hazards</li> </ul>                                                                                                                                                                                                                                                                                                      |
|                           | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>▪ Coordinate with Civil defense – Police / Army / Navy / Air force</li> <li>▪ Mobilize and dispatch search and rescue teams to affected areas to rescue</li> </ul>                                                                                                                                                   |
|                           | Relief             | <ul style="list-style-type: none"> <li>▪ Coordinate with relief workers &amp; sub committees</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
|                           | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Coordinate public health / epidemic control arrangements</li> </ul>                                                                                                                                                                                                                                                                                                                                                  |
| LEVEL 3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ To inform people in safe shelters when it is safe to return home</li> </ul>                                                                                                                                                                                                                                                                                                                                          |
|                           | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                           | Restoration        | <ul style="list-style-type: none"> <li>▪ Coordinate with emergency health personnel to ensure that dead bodies are appropriately disposed</li> </ul>                                                                                                                                                                                                                                                                                                          |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Coordinate with relief teams</li> <li>▪ Arrangement of health clinics, cleaning wells, water supplies for drinking</li> <li>▪ Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> <li>▪ Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water / stagnation and health services</li> </ul> |

## Preparedness and Response: Divisional Secretariat(1/2)

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | <ul style="list-style-type: none"> <li>• Assignment of duties to divisional level officials</li> <li>• Keep records of NGOs and local CBOs and coordination and duty assignment</li> <li>• Ensure that evacuation routes and safe areas have been clearly marked and sign posted</li> <li>• Arrangement of vehicles and public announcement system for early warning dissemination</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Arrange rescue kits at risk areas depending on hazards</li> <li>• Assess training needs and target groups on related aspects such as community groups selected as response teams</li> <li>• Confirm locations and inventory of evacuation camps/ temporary shelter and keep location maps ready</li> <li>• Arrangements of evacuation drills</li> <li>• Arrangement of boats and vehicles etc. and keep contacts to mobilize for evacuation when required</li> <li>• Respective parties to rehearse individually and jointly with other parties to minimize response time</li> <li>• Coordinate NGO activities through necessary support to ensure community participation</li> <li>• Identifying additional NGOs and assigning specific response function to different specialized NGOs</li> <li>• Mobilize and coordinate work of volunteers ensuring community participation assigning specific responsibilities</li> <li>• Coordinate with CBO groups and organize training in evacuation</li> <li>• Ensure that search and rescue equipment is fully functional and in working order</li> </ul> |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Identification and maintaining inventory of shelter centers and keep location maps ready</li> <li>• Pre organization of shelter centers with essential facilities – adequate water, toilets, bathing, cooking facilities etc.</li> <li>• Assess relief requirements and arrange to acquire same</li> <li>• Assess cash compensation requirements and coordination with relevant govt. agencies</li> <li>• Assess awareness needs and target groups on aspects related to location identification, camp management, basic sanitation, security and service providing agencies who are responsible for such activities etc.</li> <li>• Coordinate NGO activities through necessary support to ensure community participation</li> <li>• Establish coordination mechanisms with local level NGOs and other national level NGOs</li> <li>• Assign specific response functions to specialized NGOs</li> <li>• Mobilize and coordinate work of volunteers ensuring community participation</li> <li>• Maintain a physical inventory of stocks to capture external assistance when it arrives</li> </ul>    |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                          | Health and Welfare | • Coordinate with health authorities to stock file essential medical supplies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Proper record keeping and transmission of information to all the levels</li> <li>• Warn people about the impending danger and advise to leave at pre-identified safer places</li> <li>• Share early warning information to Grama Niladharis</li> <li>• Activate public announcement system for early warning dissemination</li> <li>• Provide regular Situation to District and Grama Niladaris</li> <li>• Arrangement of vehicles and public announcement system for early warning dissemination</li> <li>• In case of locally identified disasters such as landslides, flooding, other local disasters, immediately report to Early Warning Division and EOC of DMC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Coordinate with civil defense – Police / Army / Navy /Air force</li> <li>• Ensure readiness of identified shelter centers with essential services</li> <li>• Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>• Mobilize CBO groups trained in evacuation</li> <li>• Coordinate the activities of community volunteers assisting with the rescue operation</li> <li>• Ensure that search and rescue equipment is fully functional and in working order</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Ensure that the identified shelter centers are ready with essential services</li> <li>• Coordinate with Evacuation &amp; SAR sub committee and assess requirements</li> <li>• Coordinate with the Police to maintain law and order</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                          | Health and Welfare | • Coordinate with health authorities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Preparedness and Response: Divisional Secretariat(2/2)

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• In case of locally identified disasters such as landslides, flooding, other local disasters, immediately report to District EOC</li> <li>• Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> <li>• Provide regular situation updates to District EOC</li> <li>• Proper record keeping and transmission of information to all the levels</li> </ul>                                                                                                                                                                                                                                                                                                        |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Ensure that maintain law and order to prevent looting and theft of evacuated houses</li> <li>• Ensure that people are safely evacuated and housed in safe shelters</li> <li>• Mobilize trained in evacuation CBO groups</li> <li>• Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> <li>• Coordinate the activities of community volunteers assisting with the rescue operations</li> <li>• Mobilize and dispatch search and rescue teams to affected areas to rescue</li> <li>• Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospital</li> <li>• Undertake a rapid damage assessment</li> </ul> |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Ensure that the identified shelter centers are ready with essential services</li> <li>• Procurement and transportation of relief materials to affected pockets/areas/ people</li> <li>• Ensure that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>• Arrangement of cooking facilities in the shelter camps &amp; affected areas.</li> <li>• Arrange for the provision of camps for livestock and arrange for supplies of fodder and cattle-feed for livestock</li> <li>• Coordinating with the civil society organizations and Int'l agencies for the continued relief operation</li> </ul>                                                |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Organize and coordinate of clearance of debris</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with the relief sub committee</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Provide regular situation updates to EOC</li> <li>• To inform people in safe shelters when it is safe to return home</li> <li>• Proper record keeping and transmission of information to all the levels</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Ensure maintain law and order to prevent looting and theft of evacuated houses</li> <li>• Coordinate with emergency health personnel to ensure that dead bodies are appropriately disposed</li> <li>• Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> <li>• Undertake a rapid damage assessment</li> </ul>                                                                                                                                                                                                                                                                                                                                                  |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Ensure that food and other materials are distributed in an equitable manner addressing the needs of the most affected</li> <li>• Coordinating with the civil society organizations and Int'l agencies for the continued relief operation</li> <li>• Arrange for the provision of camps for livestock and arrange for supplies of fodder and cattle-feed for livestock</li> </ul>                                                                                                                                                                                                                                                                                                                                |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Organize and coordinate of clearance of debris</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with the relief sub committee</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Preparedness and Response: Armed Forces

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | <ul style="list-style-type: none"> <li>• Ensure proper maintenance and functioning of warning and communication systems</li> <li>• Arrangement of vehicles and public announcement system for early warning dissemination</li> </ul>                                                                                                                                                                                                                                                          |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• SAR teams trained on SAR and survival techniques (of Police/Fire Brigade and NGOs) for search and rescue – to be made available round the clock, depending on the type of impending disaster assess the type of SAR that would be required – Land, Water, Air</li> <li>• Ensure availability of earmarked basic equipment and materials for SAR</li> <li>• Assess training needs and target groups on related aspects such as SAR parties</li> </ul> |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Assess Transport requirements</li> <li>• Identification and maintaining inventory of shelter centers and keep location maps ready</li> </ul>                                                                                                                                                                                                                                                                                                         |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Arrangement of towing vehicles, earth moving equipments, cranes, construct temporary roads</li> </ul>                                                                                                                                                                                                                                                                                                                                                |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with health service teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Early warning to fishermen and other relevant groups</li> <li>• Activate public announcement system for early warning dissemination</li> <li>• Warning people about the impending danger and advise to leave for pre-identified safer places</li> </ul>                                                                                                                                                                                              |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Ensure that search and rescue equipment is fully functional and in working order</li> </ul>                                                                                                                                                                                                                                                                                                                                                          |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Coordinate with relief teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Coordinate with restoration related teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with health service teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> <li>• Coordinate with Police to ensure that maintain law and order to prevent looting and theft</li> </ul>                                                                                                                                                                                                                                   |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Mobilize boats/vehicles etc. for speedy evacuation</li> <li>• Evacuate people of marooned areas and administer emergent relief, and direct them to identified safe shelters as pre-identified</li> <li>• Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> <li>• Mobilize and dispatch search and rescue teams to affected areas to rescue</li> </ul>                                              |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Formation of task force with requisite equipments</li> <li>• Assigning responsibilities for specific areas.</li> </ul>                                                                                                                                                                                                                                                                                                                               |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Coordinate with restoration related teams for emergency support</li> <li>• Emergency clearance of debris to enabled reconnaissance</li> </ul>                                                                                                                                                                                                                                                                           |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospitals</li> </ul>                                                                                                                                                                                                                                                                                                                        |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Provide regular situation updates to EOC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>• Maintain law and order to prevent looting and theft of evacuated houses/ Coordinate with Police</li> </ul>                                                                                                                                                                                                                                                                                                                                           |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Coordinate with relief service related teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | <ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Formation of task force with requisite equipments</li> <li>• Emergency clearance of debris to enabled reconnaissance</li> <li>• Assigning responsibilities for specific areas.</li> </ul>                                                                                                                                                                                                                               |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate with health service teams for emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |



## Preparedness and Response: Major District NGOs (District NGOs)

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | <ul style="list-style-type: none"> <li>Assess training &amp; awareness needs and target groups on aspects related to early warning dissemination; coordinate and organize to conduct training, awareness and drills – Warning receiving officers, dissemination groups etc.</li> <li>Arrangement of vehicles and public announcement system for early warning dissemination</li> </ul>                                      |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Rescue kits at risk areas depending on the hazards</li> <li>Assess training needs and target groups on related aspects such as Community groups selected as response teams</li> <li>Confirm locations and inventory of evacuation camps/ temporary shelter and keep location maps ready</li> <li>NGOs and other groups for the provision of to be trained and be prepared</li> </ul> |
|                          | Relief             | <ul style="list-style-type: none"> <li>Pre organization of shelter Centers with essential facilities – adequate water, toilets, bathing, cooking facilities etc.</li> <li>Establishing coordination mechanisms with local level NGOs and other national level NGOs</li> </ul>                                                                                                                                               |
|                          | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate with health supply teams</li> </ul>                                                                                                                                                                                                                                                                                                                                       |
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Support to disseminate warning people about the impending danger and advise to leave for pre-identified safer places (with instructions/ supervision of DMgt. Officials / Government)</li> <li>Activate public announcement system for early warning dissemination (with instruction/ supervision of D Mgt. Officials / Government officers)</li> </ul>                              |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Support to maintain law and order to prevent looting and theft of evacuated houses</li> <li>Mobilize CBO groups trained in evacuation</li> <li>Mobilize people of unsafe areas to go to identify / safer shelters as pre-identified</li> <li>Ensure that search and rescue equipment is fully functional and in working order</li> </ul>                                             |
|                          | Relief             | <ul style="list-style-type: none"> <li>Coordinate with relief teams to provide emergency support</li> </ul>                                                                                                                                                                                                                                                                                                                 |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Coordinate with restoration related teams to provide emergency support</li> </ul>                                                                                                                                                                                                                                                                                                    |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate with health service teams to provide emergency support</li> </ul>                                                                                                                                                                                                                                                                                                         |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> <li>Maintain law and order to prevent looting and theft</li> </ul>                                                                                                                                                                                                           |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Support to maintain law and order to prevent looting and theft of evacuated houses</li> <li>Coordinate with relief providers to ensure that survivors rescued are directed to relief camps</li> <li>Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospital</li> </ul>                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>Procurement and transportation of Relief materials to affected pockets/areas/ people</li> </ul>                                                                                                                                                                                                                                                                                      |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Formation of task force with requisite equipments</li> </ul>                                                                                                                                                                                                                                                                                                                         |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate the activities of volunteers for the provision of first aid</li> </ul>                                                                                                                                                                                                                                                                                                    |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Provide regular situation updates to EOC / DS/ GA</li> </ul>                                                                                                                                                                                                                                                                                                                         |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Support to maintain law and order to prevent looting and theft of evacuated houses</li> </ul>                                                                                                                                                                                                                                                                                        |
|                          | Relief             | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Damage assessment</li> <li>Formation of task force with requisite equipments</li> <li>Emergency clearance of debris to enabled reconnaissance</li> </ul>                                                                                                                                                                                                                             |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate the activities of volunteers for the provision of first aid, medical help &amp; sanitation</li> </ul>                                                                                                                                                                                                                                                                     |

| Preparedness and Response: Major CBOs |                    |                                                                                                                                                                                                                                                                                        |
|---------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation                      | Early Warning      | <ul style="list-style-type: none"> <li>Assess training &amp; awareness needs and target groups on aspects related to early warning dissemination; coordinate and organize to conduct training, awareness and drills – Warning receiving officers, dissemination groups etc.</li> </ul> |
|                                       | Evacuation and SAR | <ul style="list-style-type: none"> <li>Coordinate and organize to conduct training, and drills</li> <li>Mobilize CBO groups trained in evacuation</li> </ul>                                                                                                                           |
|                                       | Relief             | <ul style="list-style-type: none"> <li>Support government / VDMC to organize relief services</li> </ul>                                                                                                                                                                                |
|                                       | Restoration        | <ul style="list-style-type: none"> <li>Plan restoration arrangements with communities</li> </ul>                                                                                                                                                                                       |
|                                       | Health and Welfare | <ul style="list-style-type: none"> <li>Train FA groups, Plan with health officers</li> </ul>                                                                                                                                                                                           |
| LEVEL1 / Before Disaster              | Early Warning      | <ul style="list-style-type: none"> <li>Disseminate warning people about the impending danger and advise to leave for pre-identified safer places</li> <li>Activate public announcement system for early warning dissemination</li> </ul>                                               |
|                                       | Evacuation and SAR | <ul style="list-style-type: none"> <li>Mobilize people of unsafe areas to go to identify / safer shelters as pre-identified</li> <li>Ensure that search and rescue equipment is fully functional and in working order</li> </ul>                                                       |
|                                       | Relief             | <ul style="list-style-type: none"> <li>Assess relief assistance to villages/ GN/ DS</li> </ul>                                                                                                                                                                                         |
|                                       | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                     |
|                                       | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate with health teams</li> </ul>                                                                                                                                                                                                         |
| LEVEL2 / During Disaster              | Early Warning      | <ul style="list-style-type: none"> <li>Warn people about the impending danger and provide information on evacuation paths and safe areas.</li> </ul>                                                                                                                                   |
|                                       | Evacuation and SAR | <ul style="list-style-type: none"> <li>Coordinate with emergency teams to evacuate &amp; direct to the evacuation centers</li> </ul>                                                                                                                                                   |
|                                       | Relief             | <ul style="list-style-type: none"> <li>Monitor &amp; Update , Coordinate relief services</li> </ul>                                                                                                                                                                                    |
|                                       | Restoration        | <ul style="list-style-type: none"> <li>Updates of damages to DS/ GA/ DDMCU</li> </ul>                                                                                                                                                                                                  |
|                                       | Health and Welfare | <ul style="list-style-type: none"> <li>Coordinate efficient health support</li> </ul>                                                                                                                                                                                                  |
| LEVEL3 / Ending Disaster              | Early Warning      | <ul style="list-style-type: none"> <li>Provide regular situation updates to EOC</li> </ul>                                                                                                                                                                                             |
|                                       | Evacuation and SAR | <ul style="list-style-type: none"> <li>Support maintain law and order to prevent looting and theft of evacuated houses</li> </ul>                                                                                                                                                      |
|                                       | Relief             | <ul style="list-style-type: none"> <li>Coordinate support for efficient relief services</li> </ul>                                                                                                                                                                                     |
|                                       | Restoration        | <ul style="list-style-type: none"> <li>Support clearing the damaged areas</li> </ul>                                                                                                                                                                                                   |
|                                       | Health and Welfare | <ul style="list-style-type: none"> <li>Support ensure the sanitation</li> </ul>                                                                                                                                                                                                        |

## Preparedness and Response: Road Development Authority

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Evacuation and SAR | • Identification and marking of evacuation routes shown with sign boards for different disasters (likely landslides, floods, tsunami etc.)                                                                                                                                                                                                                                                                                                               |
|                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| LEVEL1 / Before Disaster | Early Warning      | • Identification and marking of evacuation routes shown with sign boards for different disasters (likely landslides, floods, tsunami etc.)<br>• Receive EW information from EOC                                                                                                                                                                                                                                                                          |
|                          | Evacuation and SAR | • Control of roads with risk location                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | • Identification of towing vehicles, Earth moving equipments, cranes, construct temporary roads                                                                                                                                                                                                                                                                                                                                                          |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| LEVEL2 / During Disaster | Early Warning      | • Receive updates from EOC/ DDMCU, update to EOC                                                                                                                                                                                                                                                                                                                                                                                                         |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | • Undertake a rapid damage assessment<br>• Keep National & other Highways clear from disaster effects.<br>• Emergency clearance of debris to enabled reconnaissance<br>• Coordinate road-clearing activities to expedite relief work - assembling laborers and providing them with necessary equipments                                                                                                                                                  |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| LEVEL3 / Ending Disaster | Early Warning      | • Updates from EOC/ DMC                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                          | Restoration        | • Damage assessment<br>• Formation of task force with requisite equipments<br>• Emergency clearance of debris to enabled reconnaissance<br>• Coordinate road-clearing activities to expedite relief work - assembling laborers and providing them with necessary equipments<br>• Arrangement of towing vehicles, Earth moving equipments, cranes, construct temporary roads<br>• Carry out repairs to damaged infrastructure: transport (roads, bridges) |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Preparedness and Response: Provincial Road Development Authority |                    |                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster                                         | Early Warning      | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Evacuation and SAR | ▪ Identification and marking of evacuation routes shown with sign boards for different disasters (likely landslides, floods, tsunami etc.)                                                                                                                                                              |
|                                                                  | Relief             | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Restoration        | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                       |
| LEVEL2 / During Disaster                                         | Early Warning      | ▪ Identification and marking of evacuation routes shown with sign boards for different disasters (likely landslides, floods, tsunami etc.)<br>▪ Receive EW information from EOC                                                                                                                         |
|                                                                  | Evacuation and SAR | ▪ Control of roads with risk location                                                                                                                                                                                                                                                                   |
|                                                                  | Relief             | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Restoration        | ▪ Identification of towing vehicles, Earth moving equipments, cranes, construct temporary roads                                                                                                                                                                                                         |
|                                                                  | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                       |
| LEVEL3 / Ending Disaster                                         | Early Warning      | ▪ Receive updates from EOC/ DDMCU, update to EOC                                                                                                                                                                                                                                                        |
|                                                                  | Evacuation and SAR | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Relief             | ▪                                                                                                                                                                                                                                                                                                       |
|                                                                  | Restoration        | ▪ Undertake a rapid damage assessment<br>▪ Keep National & other Highways clear from disaster effects.<br>▪ Emergency clearance of debris to enabled reconnaissance<br>▪ Coordinate road-clearing activities to expedite relief work - assembling laborers and providing them with necessary equipments |
|                                                                  | Health and Welfare | ▪                                                                                                                                                                                                                                                                                                       |

## Preparedness and Response: Department of Health Service / DPDHS (1/2)

|                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation          | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                           | Evacuation and SAR | • Assess training needs and target groups on related aspects such as First aid groups                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                           | Relief             | <ul style="list-style-type: none"> <li>• Pre organization of shelter Centers with essential facilities – adequate water, toilets, bathing, cooking facilities etc.</li> <li>• Maintain a physical inventory of stocks to capture external assistance when it arrives</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                           | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>• Relevant Emergency Health Care Teams to be prepared</li> <li>• Special information required regarding treatment as for epidemics etc.</li> <li>• Keep records of contact personnel for various services - safe drinking water</li> <li>• Volunteers/village level workers in inaccessible pockets and generating public health awareness and to obtain their assistance in case of a disaster</li> <li>• Stockpiling of medicine, water disinfectants etc.</li> <li>• Identify and organize training in coordination with the Disaster Management Committee after identifying agencies for conducting training.</li> <li>• Conduct trainings for various personnel to assist the medical and sanitation teams at various levels in relevant areas - First aid groups, Volunteer/village level groups, Community groups selected as response teams</li> </ul> |
| LEVEL 1 / Before Disaster | Early Warning      | • Coordinate / Update with DMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                           | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                           | Relief             | <ul style="list-style-type: none"> <li>• Ensure that the identified shelter centers are ready with essential services</li> <li>• Ensure standards of camps in line with internationally recognized standards</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>• Supervision of maintenance of standards</li> <li>• Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water / stagnation and health services</li> <li>• Assistance to communities for storage of rations, sanitation, water supply, disposal of waste water / stagnation and health services</li> <li>• Areas where DPDHS cannot take decisions inform District Secretary / EOC</li> <li>• Stock piling of medicine</li> <li>• Stock piling of water disinfectants</li> <li>• Ensure that emergency units in hospitals are on standby</li> </ul>                                                                                                                                                                                                                                                  |

## Preparedness and Response: Department of Health Service / DPDHS (2/2)

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Coordinate with DMC / DDMCU</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Mobilize First Aid groups and other parties for treating and transporting the injured</li> <li>Coordinate with emergency health teams to evacuate the injured, provide first aid, and transport them to hospital</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Relief             | <ul style="list-style-type: none"> <li>Provide clean water with water Bowsers to affected households and at relief camps</li> <li>Ensure that the identified shelter Centers are ready with essential services</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                          | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Treatment to the injured and sick</li> <li>Disposal of dead bodies and carcasses</li> <li>Supervision of maintenance of standards</li> <li>Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> <li>Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water / stagnation and health services</li> <li>Assistance to communities for storage of rations, sanitation, water supply, disposal of waste water / stagnation and health services</li> <li>Areas where DPDHS cannot take decisions inform District Secretary / EOC</li> <li>Ensure that emergency units in hospitals are on standby</li> <li>Coordinate the activities of volunteers for the provision of first aid</li> <li>Dispatch mobile health teams to affected areas and to relief camps</li> </ul> |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Relief             | <ul style="list-style-type: none"> <li>Control sprays of insecticides in temporary shelters</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                          | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>Areas where DPDHS cannot take decisions inform District Secretary / EOC</li> <li>Treatment of the injured and sick</li> <li>Disposal of dead bodies and carcasses</li> <li>Preventive medicine and anti-epidemic actions</li> <li>Psychological trauma counseling</li> <li>Special information required regarding treatment as for epidemics etc.</li> <li>Reports on food, water supplies, sanitation and disposal of waste</li> <li>Supervision of maintenance of standards</li> <li>Assistance to communities for storage of rations, sanitation, water supply, disposal of waste water / stagnation and health services</li> <li>Dispatch mobile health teams to affected areas and to relief camps</li> <li>Coordinate the activities of volunteers for the provision of first aid</li> </ul>                                                                                          |

| Preparedness and Response: National Water Supply & Drainage Board |                    |                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster                                          | Early Warning      | <ul style="list-style-type: none"> <li>Coordinate for updates from EOC</li> <li>Public announcements of interruptions of water supply</li> </ul>                                                                                                                                                                                  |
|                                                                   | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                   | Relief             | <ul style="list-style-type: none"> <li>Pre Arrange for supplying clean water with water Bowsers to affected households and at relief camps</li> </ul>                                                                                                                                                                             |
|                                                                   | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                   | Health and Welfare | <ul style="list-style-type: none"> <li>Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> </ul>                                                                                                                                                                     |
| LEVEL2 / During Disaster                                          | Early Warning      | <ul style="list-style-type: none"> <li>Coordinate for updates from EOC</li> </ul>                                                                                                                                                                                                                                                 |
|                                                                   | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                   | Relief             | <ul style="list-style-type: none"> <li>Provide clean water with water Bowsers to affected households and at relief camps</li> </ul>                                                                                                                                                                                               |
|                                                                   | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                   | Health and Welfare | <ul style="list-style-type: none"> <li>Ensure sanitation of drinking water supplies</li> </ul>                                                                                                                                                                                                                                    |
| LEVEL3 / Ending Disaster                                          | Early Warning      | <ul style="list-style-type: none"> <li>Coordinate for updates from EOC</li> </ul>                                                                                                                                                                                                                                                 |
|                                                                   | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                   | Relief             | <ul style="list-style-type: none"> <li>Provide clean water with water Bowsers to affected households and at relief camps</li> </ul>                                                                                                                                                                                               |
|                                                                   | Restoration        | <ul style="list-style-type: none"> <li>Damage assessment</li> <li>Temporary Repairs to damaged infrastructure (water supply)</li> <li>Carry out repairs to damaged infrastructure: (water supply)</li> <li>Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> </ul> |
|                                                                   | Health and Welfare | <ul style="list-style-type: none"> <li>Ensure sanitation of drinking water supplies</li> </ul>                                                                                                                                                                                                                                    |

## Preparedness and Response: Education Department

|                          |                    |                                                                                                                                                                                                                                          |
|--------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>Updates with DS / DDMCU</li> </ul>                                                                                                                                                                |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>Based on the situation, take action for safety of school children and staff</li> </ul>                                                                                                            |
|                          | Relief             | <ul style="list-style-type: none"> <li>Ensure that the shelter centers are ready with essential facilities</li> <li>Pre- organize shelter centres with essential facilities available – water, toilets, bathing, cooking etc.</li> </ul> |
|                          | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Relief             | <ul style="list-style-type: none"> <li>Ensure that the shelter centers are ready with essential facilities</li> <li>Coordinate with DS/ EOC / DDMCU</li> </ul>                                                                           |
|                          | Restoration        | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |
|                          | Relief             | <ul style="list-style-type: none"> <li>Ensure that the shelter centers are ready with essential facilities</li> </ul>                                                                                                                    |
|                          | Restoration        | <ul style="list-style-type: none"> <li>Coordinate with DS/ EOC / DDMCU</li> <li>Rapid damage assessment &amp; repair arrangements</li> </ul>                                                                                             |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li></li> </ul>                                                                                                                                                                                       |



## Preparedness and Response: Cooperative Department

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Maintain a list of the households receiving assistance both food and non-food</li> <li>• Communicate with individuals and institutions along the supply chain in order to highlight anticipated shortfalls or problems with the supply of food and other commodities</li> <li>• Coordinate the relief distribution plans of NGOs and CBOs through EOC/DDMCU/ DS</li> <li>• Pre organization of shelter Centers with essential facilities</li> </ul> |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LEVEL2 / During Disaster | Early Warning      | • Receive updates from DMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Coordinate the relief distribution plans of NGOs and CBOs through EOC/DDMCU/ DS</li> <li>• Coordinate with the police to maintain law and order in relief services</li> </ul>                                                                                                                                                                                                                                                                       |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| LEVEL3 / Ending Disaster | Early Warning      | • Receive updates from DMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Coordinate the relief distribution plans of NGOs and CBOs through EOC/DDMCU/ DS</li> <li>• Coordinate with the police to maintain law and order in relief services</li> </ul>                                                                                                                                                                                                                                                                       |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Preparedness and Response: Provincial Local Govt. Dept.

|                          |                    |                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | •                                                                                                                                                                                                                                                                                                    |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                    |
|                          | Relief             | <ul style="list-style-type: none"> <li>• Communicate with individuals and institutions along the supply chain in order to highlight anticipated shortfalls or problems with the supply of food and other commodities</li> <li>• Coordinate the relief distribution plans of NGOs and CBOs</li> </ul> |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                    |
|                          | Health and Welfare | •                                                                                                                                                                                                                                                                                                    |
| LEVEL1 / Before Disaster | Early Warning      | • Updates from DMC / EOC                                                                                                                                                                                                                                                                             |
|                          | Evacuation and SAR | • Coordinate with Local Authorities / Municipal Councils / Urban Council to provide the required assistance.                                                                                                                                                                                         |
|                          | Relief             | • Coordinate establishment of camps in line with internationally recognized standards                                                                                                                                                                                                                |
|                          | Restoration        | •                                                                                                                                                                                                                                                                                                    |
|                          | Health and Welfare | • Coordinate with Public Health authorities to support health & welfare teams                                                                                                                                                                                                                        |
| LEVEL2 / During Disaster | Early Warning      | • Updates from DMC / EOC                                                                                                                                                                                                                                                                             |
|                          | Evacuation and SAR | • Coordinate with Local Authorities / Municipal Councils / Urban Council to provide the required assistance.                                                                                                                                                                                         |
|                          | Relief             | •                                                                                                                                                                                                                                                                                                    |
|                          | Restoration        | • Coordinate with relevant agencies to complete restoration activities                                                                                                                                                                                                                               |
|                          | Health and Welfare | • Coordinate with health & welfare groups to provide necessary services to complete restoration activities                                                                                                                                                                                           |
| LEVEL3 / Ending Disaster | Early Warning      | •                                                                                                                                                                                                                                                                                                    |
|                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                    |
|                          | Relief             | • Coordinate with the Police to maintain law and order                                                                                                                                                                                                                                               |
|                          | Restoration        | • Coordinate with Local Authorities to assess the damage to properties & compensation                                                                                                                                                                                                                |
|                          | Health and Welfare | • Coordinate with health sector agencies / officials relevant to Local Authorities / MC/ UC                                                                                                                                                                                                          |

**Preparedness and Response: Sri Lanka Telecom**

|                          |                    |                                                                                                                              |
|--------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | •                                                                                                                            |
|                          | Evacuation and SAR | •                                                                                                                            |
|                          | Relief             | •                                                                                                                            |
|                          | Restoration        | •                                                                                                                            |
|                          | Health and Welfare | •                                                                                                                            |
| LEVEL1 / Before Disaster | Early Warning      | • Updates of the impending disasters from DMC                                                                                |
|                          | Evacuation and SAR | •                                                                                                                            |
|                          | Relief             | •                                                                                                                            |
|                          | Restoration        | • Ensure uninterrupted telephone communication services                                                                      |
|                          | Health and Welfare | •                                                                                                                            |
| LEVEL2 / During Disaster | Early Warning      | • Updates of the impending disasters from DMC                                                                                |
|                          | Evacuation and SAR | •                                                                                                                            |
|                          | Relief             | •                                                                                                                            |
|                          | Restoration        | • Ensure uninterrupted telephone communication services<br>• Temporary Repairs to damaged infrastructure (Telecommunication) |
|                          | Health and Welfare | •                                                                                                                            |
| LEVEL3 / Ending Disaster | Early Warning      | • Updates of the impending disasters from DMC                                                                                |
|                          | Evacuation and SAR | •                                                                                                                            |
|                          | Relief             | •                                                                                                                            |
|                          | Restoration        | • Damage assessment<br>• Repairs to damaged infrastructure (Telecommunication)                                               |
|                          | Health and Welfare | •                                                                                                                            |

## Preparedness and Response: Railway Department

|                          |                    |                                                                                                                                                                                                                                                                       |
|--------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Coordinate / Updates from EOC</li> <li>▪ Control train movements by dissemination of warning messages</li> </ul>                                                                                                             |
|                          | Evacuation and SAR | ▪                                                                                                                                                                                                                                                                     |
|                          | Relief             | ▪                                                                                                                                                                                                                                                                     |
|                          | Restoration        | ▪                                                                                                                                                                                                                                                                     |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                     |
| LEVEL2 / During Disaster | Early Warning      | ▪ Coordinate / Updates from EOC                                                                                                                                                                                                                                       |
|                          | Evacuation and SAR | ▪                                                                                                                                                                                                                                                                     |
|                          | Relief             | ▪                                                                                                                                                                                                                                                                     |
|                          | Restoration        | ▪                                                                                                                                                                                                                                                                     |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                     |
| LEVEL3 / Ending Disaster | Early Warning      | ▪ Coordinate / Updates from EOC                                                                                                                                                                                                                                       |
|                          | Evacuation and SAR | ▪                                                                                                                                                                                                                                                                     |
|                          | Relief             | ▪                                                                                                                                                                                                                                                                     |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Damage assessment</li> <li>▪ Temporary Repairs to damaged infrastructure: railway tracks, bridges, signal systems</li> <li>▪ Carry out repairs to damaged infrastructure: railway tracks, bridges, signal systems</li> </ul> |
|                          | Health and Welfare | ▪                                                                                                                                                                                                                                                                     |

| Preparedness and Response: National Housing Development Authority |                    |                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL1 / Before Disaster                                          | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Relief             | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Restoration        | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                    |
| LEVEL2 / During Disaster                                          | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Relief             | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Restoration        | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                    |
| LEVEL3 / Ending Disaster                                          | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Relief             | •                                                                                                                                                                                                                                                                                                                                                    |
|                                                                   | Restoration        | <ul style="list-style-type: none"> <li>• Damage assessment</li> <li>• Assist to construct temporary shelters with sanitation and recreation facilities as per the standards</li> <li>• Assist construction of damaged houses and public facilities such as hospitals, schools and other urgent facilities to commence services</li> <li>•</li> </ul> |
|                                                                   | Health and Welfare | •                                                                                                                                                                                                                                                                                                                                                    |

## Preparedness and Response: Local Authorities

|                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation         | Early Warning      | <ul style="list-style-type: none"> <li>▪ Ensure proper maintenance and functioning of warning and communication equipment</li> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                               |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Establishing coordination mechanisms with DDMCU, / GA, local level NGOs and other national level NGOs</li> </ul>                                                                                                                                                                                                                                                                                                     |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| LEVEL1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Ensure readiness of identified shelter centers with essential services</li> <li>▪ Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>▪ Coordinate with civil defense – Police / Army / Navy /Air force</li> </ul>                                                                                                                                                       |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Coordinate &amp; plan for the restoration arrangements</li> </ul>                                                                                                                                                                                                                                                                                                                                                    |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> </ul>                                                                                                                                                                                                                                                                                               |
| LEVEL2 / During Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ Coordination with DMC and other national agencies responsible for early warning for specific hazards</li> </ul>                                                                                                                                                                                                                                                                                                      |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪ Mobilize people of unsafe areas to go to identified / safer shelters as pre-identified</li> <li>▪ Coordinate with Civil Defense – Police / Army / Navy /Air force</li> <li>▪ Mobilize and dispatch search and rescue teams to affected areas to rescue</li> </ul>                                                                                                                                                    |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪ Coordinate with relief workers &amp; sub committees</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Coordinate public health / epidemic control arrangements</li> </ul>                                                                                                                                                                                                                                                                                                                                                  |
| LEVEL3 / Ending Disaster | Early Warning      | <ul style="list-style-type: none"> <li>▪ To inform people in safe shelters when it is safe to return home</li> </ul>                                                                                                                                                                                                                                                                                                                                          |
|                          | Evacuation and SAR | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Relief             | <ul style="list-style-type: none"> <li>▪</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          | Restoration        | <ul style="list-style-type: none"> <li>▪ Coordinate with emergency health personnel to ensure that dead bodies are appropriately disposed</li> <li>▪ Provision of hand pumps and bowsers where necessary</li> <li>▪ Organize and coordinate of debris clearance</li> </ul>                                                                                                                                                                                    |
|                          | Health and Welfare | <ul style="list-style-type: none"> <li>▪ Coordinate with relief teams</li> <li>▪ Arrangement of health clinics, cleaning wells, water supplies for drinking</li> <li>▪ Identification of source for supply of drinking water through tankers, bowsers and other means of transport</li> <li>▪ Supervision of transit and relief camps for cooking arrangements, sanitation, water supply, disposal of waste water / stagnation and health services</li> </ul> |

**Preparedness and Response: Area Hospital**

|                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Situation          | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Health and Welfare | <ul style="list-style-type: none"> <li>• Relevant Emergency Health Care Teams to be prepared</li> <li>• Special information required regarding treatment as for epidemics etc.</li> <li>• Stock pilling of medicine, water disinfectants etc.</li> <li>• Identify and organize training in coordination with the Disaster Management Committee after identifying agencies for conducting trainings.</li> <li>• Conduct training of various personnel to assist the medical and sanitation teams at various levels in relevant areas - First Aid groups, Volunteers/village level groups, Community groups selected as response teams</li> </ul> |
| LEVEL 1 / Before Disaster | Early Warning      | <ul style="list-style-type: none"> <li>• Coordinate with district EOC</li> <li>• Dissemination of epidemic information</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Health and Welfare | • Coordinate / Contact with public and private hospitals to send injured and availability ambulances for use in case of a disaster                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Preparedness and Response: Area Hospital |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEVEL2 / During Disaster                 | Early Warning      | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Coordinate/Contact with public and private hospitals to send injured and availability ambulances for use in case of a disaster</li> <li>• Treatment of the injured and sick</li> <li>• Disposal of dead bodies and carcasses</li> <li>• Assess, supply and supervise               <ul style="list-style-type: none"> <li>• Medical relief for the injured</li> <li>• Number of ambulances required and the hospitals where they could be sent (public and private)</li> <li>• Medical equipment and medicines required</li> <li>• Special information required regarding treatment as for epidemics</li> </ul> </li> </ul> |
| LEVEL3 / Ending Disaster                 | Early Warning      | • Dissemination of epidemic information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                          | Evacuation and SAR | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Relief             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Restoration        | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                          | Health and Welfare | <ul style="list-style-type: none"> <li>• Disposal of dead bodies and carcasses</li> <li>• Preventive medicine and anti-epidemic actions</li> <li>• Psychological trauma counseling</li> <li>• Special information required regarding treatment as for epidemics etc.</li> <li>• Assess, supply and supervise               <ul style="list-style-type: none"> <li>• Medical relief for the injured</li> <li>• Number of ambulances required and the hospitals where they could be sent (public and private)</li> <li>• Medical equipment and medicines required</li> </ul> </li> </ul>                                                                               |





*Appendix 2-1 Daily, Weekly and Monthly Weather Report*

01/06/2011 0302 NO DATA due to  
 \* A.W.S. & VSAT Batteries Voltages Very low

毎日 (M高)

Station:- Kakinayale Year:- 2011

Month:- June

| AWS Data |            |           |         |                |      |         |       |             |             | Observed Data       |                |      |      |       |             |             |      |
|----------|------------|-----------|---------|----------------|------|---------|-------|-------------|-------------|---------------------|----------------|------|------|-------|-------------|-------------|------|
| Date     | Time (UTC) | Wind(m/s) |         | Temperature °C |      |         | R.H % | Pressure mb | Rainfall mm | Wind(m/s) Dir/Speed | Temperature °C |      |      | R.H % | Pressure mb | Rainfall mm |      |
|          |            | Dir/Speed | Current | Max            | Min  | Current |       |             |             |                     | Max            | Min  |      |       |             |             |      |
| 01       | 0000       | 170       | 2-2     | 25.0           |      |         | 100   | 1008.8      | 6-0         | 230                 | 2-5            | 25.0 |      |       | 98          | 1007.7      | 6.0  |
|          | 0300       | 170       | 2-2     | 25.0           |      |         | 100   | 1008.8      | 0           | 180                 | 1-5            | 25.6 | 29.4 | 24.9  | 95          | 1009.4      | 2.2  |
|          | 0600       | 255       | 4.2     | 30.1           |      |         | 83    | 1009.6      | 0           | 230                 | 5-1            | 29.8 |      |       | 79          | 1009.2      | 0.5  |
|          | 0900       | 258       | 9.0     | 26.9           |      |         | 92    | 1008.4      | 1.0         | 210                 | 8-5            | 30.2 |      |       | 73          | 1008.2      | 0.8  |
|          | 1200       | 258       | 7.2     | 25.0           | 31.0 | 25.0    | 100   | 1008.4      | 2.0         | 270                 | 4-2            | 28.0 | 30.7 | 25.6  | 82          | 1008.1      | 0.4  |
|          | 1500       | 279       | 3.9     | 29.2           |      |         | 100   | 1010.8      | 14.0        | 270                 | 4-3            | 25.2 |      |       | 95          | 1010.2      | 16.2 |
|          | 1800       | 172       | 1-1     | 25.1           |      |         | 100   | 1010.5      | 2.0         | 270                 | 1-8            | 27.1 |      |       | 88          | 1010.9      | 0.5  |
|          | 2100       | 172       | 2.2     | 24.9           |      |         | 100   | 1009.9      | 0           | cal/m               |                | 25.0 |      |       | 98          | 1008.8      | 0.4  |
| 02       | 0000       | 172       | 2-2     | 25.0           |      |         | 100   | 1009.9      | 0           | cal/m               |                | 25.0 |      |       | 98          | 1008.7      | 0    |
|          | 0300       | 234       | 4.1     | 29.6           |      |         | 83    | 1010.9      | 0           | 270                 | 2-3            | 28.6 | 29.1 | 25.3  | 80          | 1010.2      | 0    |
|          | 0600       | 253       | 4.5     | 31.3           |      |         | 77    | 1010.1      | 0           | 230                 | 4-4            | 29.8 |      |       | 77          | 1009.5      | 0    |
|          | 0900       | 249       | 4.9     | 29.9           |      |         | 77    | 1008.3      | 0           | 230                 | 5-1            | 29.5 |      |       | 76          | 1008.0      | 0    |
|          | 1200       | 250       | 3-7     | 28.5           | 31.5 | 28.5    | 84    | 1009.2      | 0           | 230                 | 3-5            | 28.5 | 30.7 | 28.3  | 81          | 1008.5      | 0    |
|          | 1500       | 246       | 4-1     | 28.1           |      |         | 86    | 1010.8      | 0           | 250                 | 3-7            | 28.2 |      |       | 83          | 1010.3      | 0    |
|          | 1800       | 260       | 3-9     | 27.9           |      |         | 90    | 1011.5      | 0           | 240                 | 4-0            | 28.0 |      |       | 85          | 1011.1      | 0    |
|          | 2100       | 251       | 4-6     | 27.7           |      |         | 89    | 1009.9      | 0           | 230                 | 4-4            | 27.9 |      |       | 83          | 1009.4      | 0.4  |
| 03       | 0000       | x         | x       | x              |      |         | x     | x           | x           | 230                 | 4-5            | 27.9 |      |       | 83          | 1009.2      | 0    |
|          | 0300       | 244       | 4-0     | 30.3           | 30.4 | 27.6    | 79    | 1011.0      | 0           | 240                 | 3-4            | 29.2 | 29.7 | 27.8  | 79          | 1010.7      | 0    |
|          | 0600       | 240       | 4-9     | 31.0           |      |         | 72    | 1010.6      | 0           | 230                 | 6-0            | 30.2 |      |       | 74          | 1010.6      | 0    |
|          | 0900       | 240       | 4-7     | 30.8           |      |         | 71    | 1008.6      | 0           | 230                 | 5-0            | 31.0 |      |       | 72          | 1008.5      | 0    |
|          | 1200       | 230       | 4-6     | 28.7           | 31.9 | 28.7    | 78    | 1008.4      | 0           | 230                 | 4-0            | 28.8 | 31.2 | 28.7  | 76          | 1008.3      | 0    |
|          | 1500       | 240       | 2-9     | 28.1           |      |         | 86    | 1010.6      | 0           | 230                 | 1-8            | 28.3 |      |       | 83          | 1009.9      | 0    |
|          | 1800       | 240       | 3-4     | 27.9           |      |         | 91    | 1011.1      | 0           | 230                 | 1-7            | 27.9 |      |       | 85          | 1010.5      | 0    |
|          | 2100       | 240       | 3-0     | 28.5           |      |         | 88    | 1009.6      | 0           | 230                 | 3-5            | 28.1 |      |       | 85          | 1009.2      | 0    |
| 04       | 0000       | 230       | 3-6     | 28.7           |      |         | 100   | 1009.3      | 4.0         | 330                 | 2-5            | 25.0 |      |       | 96          | 1009.6      | 4.0  |
|          | 0300       | 210       | 3-2     | 27.7           | 28.7 | x       | 97    | 1010.8      | 0           | 130                 | 0-7            | 27.8 | 29.1 | 24.9  | 90          | 1010.1      | 0.3  |
|          | 0600       | 264       | 4-9     | 29.5           |      |         | 85    | 1009.7      | 0           | 250                 | 4-7            | 29.3 |      |       | 79          | 1009.2      | 0    |
|          | 0900       | 270       | 5-6     | 30.7           |      |         | 77    | 1007.9      | 0           | 230                 | 2-5            | 30.0 |      |       | 71          | 1007.4      | 0    |
|          | 1200       | 250       | 3-3     | 29.5           | 31.7 | 24.4    | 80    | 1007.8      | 0           | 230                 | 2-5            | 29.0 | 31.1 | 27.5  | 78          | 1007.5      | 0    |
|          | 1500       | 250       | 3-6     | 27.2           |      |         | 91    | 1009.3      | 2.0         | 230                 | 4-0            | 27.4 |      |       | 84          | 1008.9      | 1.9  |
|          | 1800       | 250       | 3-2     | 27.5           |      |         | 95    | 1010.0      | 0           | 270                 | 2-5            | 27.8 |      |       | 89          | 1009.7      | 0    |
|          | 2100       | 260       | 4-2     | 27.6           |      |         | 91    | 1008.7      | 0           | 230                 | 4-0            | 27.8 |      |       | 87          | 1008.8      | 0    |
| 05       | 0000       | No DATA   |         |                |      |         |       |             |             | 230                 | 3-5            | 27.6 |      |       | 86          | 1008.6      | 0.2  |
|          | 0300       | 270       | 5-1     | 30.1           |      |         | 83    | 1010.0      | 0           | 270                 | 3-5            | 28.1 | 29.4 | 26.5  | 87          | 1010.0      | 0.5  |
|          | 0600       | 273       | 4-1     | 31.2           |      |         | 80    | 1009.7      | 0           | 270                 | 3-3            | 30.2 |      |       | 77          | 1009.2      | 0    |
|          | 0900       | 268       | 3-5     | 31.6           |      |         | 79    | 1007.7      | 0           | 230                 | 3-5            | 30.0 |      |       | 77          | 1007.5      | 0    |
|          | 1200       | 254       | 4-8     | 28.8           | 31.7 | 28.8    | 84    | 1007.6      | 0           | 250                 | 3-3            | 29.0 | 31.2 | 28.7  | 80          | 1007.2      | 0    |
|          | 1500       | 250       | 5-2     | 28.4           |      |         | 88    | 1009.4      | 0           | 230                 | 4-0            | 28.2 |      |       | 85          | 1008.6      | 0    |
|          | 1800       | 250       | 4-8     | 28.1           |      |         | 89    | 1009.9      | 0           | 230                 | 4-7            | 28.2 |      |       | 85          | 1009.2      | 0    |
|          | 2100       | 260       | 4-1     | 27.7           |      |         | 93    | 1008.4      | 0.5         | 250                 | 3-7            | 27.7 |      |       | 88          | 1007.9      | 0.8  |

Km/h m/s



pngtstrst

Date :- 11/16/2011

Time :- 8:16:39 AM Checked By :- Sandaruwan

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|               |                                     |
|---------------|-------------------------------------|
| Anuradhapura  | (M1) - No response from Monitor PC  |
| Badulla       | (M2) - No response from Monitor PC  |
| Galle         | (M6) - No response from Monitor PC  |
| Katugastota   | (M9) - No response from Monitor PC  |
| Kurunegala    | (M11) - No response from Monitor PC |
| M'Iluppallama | (M12) - No response from Monitor PC |
| Mannar        | (M13) - No response from Monitor PC |
| Pottuvil      | (M15) - No response from Monitor PC |
| Puttalam      | (M16) - No response from Monitor PC |
| Ratnapura     | (M18) - No response from Monitor PC |
| Vauniya       | (M20) - No response from Monitor PC |
| A'kolapelessa | (C6) - VSAT not Responding          |
| Kudawa        | (C17) - VSAT not Responding         |

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VSAT not Responding:- 2

No response from Data Logger :- 0

No response from Monitor PC :- 11



(点検簿) 週

AWS Cleaning Report (13)

| Station | MAHAILLUPPALLAMA           |                                                                                                        | Date                 | 2010/05/03 |
|---------|----------------------------|--------------------------------------------------------------------------------------------------------|----------------------|------------|
|         | Item                       | Cleaning                                                                                               | Status (Please Tick) | Remarks    |
| 1       | Solar panel with battery   | Wipe off dirt on the solar panel and stand                                                             | ✓                    |            |
| 2       | Enclosure                  | Wipe off dirt on enclosure                                                                             | ✓                    |            |
| 3       | Mounting pole              | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 4       | Windspeed direction sensor | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 5       | Thermometer                | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 6       | Hygrometer                 | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 7       | Rain gauge                 | Remove dust from the dust proof mesh and filter and wash with water. Wipe the container with wet cloth | ✓                    |            |
| 8       | Barometer                  | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 9       | Pyranometer                | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 10      | Monitor PC                 | Wipe off dirt with dry cloth                                                                           | ✓                    |            |
| 11      | VSAT solar panel           | Wipe off dirt on the solar panel                                                                       | ✓                    |            |
| 12      | VSAT antenna & enclosure   | Wipe off dirt on enclosure                                                                             | ✓                    |            |

Attended by SRINEETHA SAMADY

Certified by (O.I.C) [Signature]

AWS Cleaning Report

| Station | MAHAILLUPPALLAMA           |                                                                                                        | Date                 | 2010/05/18 |
|---------|----------------------------|--------------------------------------------------------------------------------------------------------|----------------------|------------|
|         | Item                       | Cleaning                                                                                               | Status (Please Tick) | Remarks    |
| 1       | Solar panel with battery   | Wipe off dirt on the solar panel and stand                                                             | ✓                    |            |
| 2       | Enclosure                  | Wipe off dirt on enclosure                                                                             | ✓                    |            |
| 3       | Mounting pole              | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 4       | Windspeed direction sensor | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 5       | Thermometer                | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 6       | Hygrometer                 | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 7       | Rain gauge                 | Remove dust from the dust proof mesh and filter and wash with water. Wipe the container with wet cloth | ✓                    |            |
| 8       | Barometer                  | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |            |
| 9       | Pyranometer                | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |            |
| 10      | Monitor PC                 | Wipe off dirt with dry cloth                                                                           | ✓                    |            |
| 11      | VSAT solar panel           | Wipe off dirt on the solar panel                                                                       | ✓                    |            |
| 12      | VSAT antenna & enclosure   | Wipe off dirt on enclosure                                                                             | ✓                    |            |

Attended by R. S. Kameswari / R. U. Jayarathna

Certified by (O.I.C) [Signature]

AWS Cleaning Report

| Station                      |                                                                                                        | Date                 |         |
|------------------------------|--------------------------------------------------------------------------------------------------------|----------------------|---------|
| MAHALLUPPALAMA               |                                                                                                        | 20/05/31             |         |
| Item                         | Cleaning                                                                                               | Status (Please Tick) | Remarks |
| 1 Solar panel with battery   | Wipe off dirt on the solar panel and stand                                                             | ✓                    |         |
| 2 Enclosure                  | Wipe off dirt on enclosure                                                                             | ✓                    |         |
| 3 Mounting pole              | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |         |
| 4 Windspeed direction sensor | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |         |
| 5 Thermometer                | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |         |
| 6 Hygrometer                 | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |         |
| 7 Rain gauge                 | Remove dust from the dust proof mesh and filter and wash with water. Wipe the container with wet cloth | ✓                    |         |
| 8 Barometer                  | Wipe the enclosure of the transducer with wet soft cloth                                               | ✓                    |         |
| 9 Pyranometer                | Wipe off dirt or dust with soft cloth                                                                  | ✓                    |         |
| 10 Monitor PC                | Wipe off dirt with dry cloth                                                                           | ✓                    |         |
| 11 VSAT solar panel          | Wipe off dirt on the solar panel                                                                       | ✓                    |         |
| 12 VSAT antenna & enclosure  | Wipe off dirt on enclosure                                                                             | ✓                    |         |

Attended by R. S. Kumaran / R. U. Jayalalitha

Certified by (O.I.C) R. S. Kumaran

AWS Cleaning Report

| Station                      |                                                                                                        | Date                 |         |
|------------------------------|--------------------------------------------------------------------------------------------------------|----------------------|---------|
| MAHALLUPPALAMA               |                                                                                                        |                      |         |
| Item                         | Cleaning                                                                                               | Status (Please Tick) | Remarks |
| 1 Solar panel with battery   | Wipe off dirt on the solar panel and stand                                                             |                      |         |
| 2 Enclosure                  | Wipe off dirt on enclosure                                                                             |                      |         |
| 3 Mounting pole              | Wipe off dirt or dust with soft cloth                                                                  |                      |         |
| 4 Windspeed direction sensor | Wipe off dirt or dust with soft cloth                                                                  |                      |         |
| 5 Thermometer                | Wipe the enclosure of the transducer with wet soft cloth                                               |                      |         |
| 6 Hygrometer                 | Wipe the enclosure of the transducer with wet soft cloth                                               |                      |         |
| 7 Rain gauge                 | Remove dust from the dust proof mesh and filter and wash with water. Wipe the container with wet cloth |                      |         |
| 8 Barometer                  | Wipe the enclosure of the transducer with wet soft cloth                                               |                      |         |
| 9 Pyranometer                | Wipe off dirt or dust with soft cloth                                                                  |                      |         |
| 10 Monitor PC                | Wipe off dirt with dry cloth                                                                           |                      |         |
| 11 VSAT solar panel          | Wipe off dirt on the solar panel                                                                       |                      |         |
| 12 VSAT antenna & enclosure  | Wipe off dirt on enclosure                                                                             |                      |         |

Attended by

Certified by (O.I.C)



AWS පද්ධති නඩත්තු කිරීම.

ඔලිංගොඩ, හෝර්ටන් තැන්න, පිදුරුතලාතල කඳු මුදුන, නුවරඑළිය  
2010-05-04 සිට 2010-05-06

- 1) I.S.M. අභයසිංහ - කාර්මික නිලධාරී
- 2) M.V.P.J. කුරේරා - කාර්මික නිලධාරී
- 3) J.A. ජෝන්සන් කුමාර - කම්කරු
- 4) R.D. ශාන්ත නුවන් රත්නෝත් - කම්කරු
- 5) ප්‍රමුද නිශාන්ත - රියදුරු

(සකස්) 11

| ස්ථානය                                                                                            | කාල පරිච්ඡේදය                   | නිරීක්ෂණ                                                                                                                                                                                                                                      | කාර්යයන්                                                                                                                                                                                                                                                                                                   | යෝජනා                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ඔලිංගොඩ කෘෂිකර්ම පර්යේෂණ නොවිසල පරිශ්‍රය<br>C13, Palangoda                                        | 2010-05-04<br>ප.ව.14.00-20.00   | සියළුම උපකරණ ක්‍රියාකාරී තත්වයෙන් පැවතුන අතර කණුව පාසි බැඳී ඇති පැහැය ගැන්වී තිබුණි.<br>වර්ෂාමාන සෙක්සරය තුල කණු රොඩු, දුහුවිලි රැඳී තිබිණ.<br>උපකරණ කොටුව තුල තණකොළ වැවී තිබිණ.                                                              | AWS කණුව පහත්කර කණුව සහ සංවේදක පිරිසිදු කරන ලදී. කණුව නැවත ඔසවා සියලුම උපකරණ ආවරණ පිරිසිදු කරන ලදී. වර්ෂාමාන සෙක්සරය ගලවා පිරිසිදු කරන ලද අතර තණකොළ කැපීම සහ ගලවා උදුලු ගෑමද සිදු කරන ලදී.<br>භූගත ප්‍රතිරෝධයන් මැන බැලූ අතර කණුවෙහි භූගත ප්‍රතිරෝධය වැඩිවී ඇති අතර ඕම් 100 අඩු අගයක් දක්වා රැගෙන ආ යුතුය. | උපකරණ කොටුව තුල සූර්යකෝෂ සහ ඇන්ටනා කැබිනට් අතර වැවී ඇති තණකොළ කපා ඉවත් කිරීම දුෂ්කර කාර්යයකි. මේ සඳහා යාන්ත්‍රික තණකොළ කපනයක් භාවිතා කිරීම සුදුසුය. භූගත ප්‍රතිරෝධය අඩු කල යුතුය.                                                            |
| හෝර්ටන් තැන්න වනජීවී සංරක්ෂණ දෙපාර්තමේන්තු කාර්යාල පරිශ්‍රය<br>C10 Hitenyaplu<br>H14 Nuwara Eliya | 2010-05-05<br>පෙ.ව.10.00-18.00  | AWS උපකරණ ක්‍රියාකාරී තත්වයෙන් පැවතුන අතර කණුව පාසි බැඳී තිබුණි. VSAT පද්ධතියේ ක්‍රියා නොකරන උපකරණ INOVA Engineering ආයතනය නඩත්තු කටයුතු සඳහා රැගෙන ගොස් ඇත. පරිශ්‍රය තුල තණකොළ පදුරු වැවී තිබිණ.                                             | AWS කණුව පහත්කර සංවේදක පිරිසිදු කරන ලද අතර කණුවද පිරිසිදු කරන ලදී. සියලුම ආවරණ කෝදා පිරිසිදු කරන ලදී. වර්ෂාමාන සෙක්සරය ගලවා පිරිසිදු කරන ලදී.<br>AWS, VSAT පද්ධති භූගත කිරීම්වල භූගත ප්‍රතිරෝධය මැන බලන ලදී.<br>බැටරි චෝල්ටියතාවයන් හා ආරෝපන චෝල්ටියතාවයන් පරීක්ෂා කර බලන ලදී.                             | අඩු තාල අන්තරයකදී තණකොළ කපා පිරිසිදු කල යුතුය. භූගත කිරීම්වල ප්‍රතිරෝධය අඩු කල යුතුය.<br>උපකරණ කොටුව තුල සූර්යකෝෂ සහ ඇන්ටනා කැබිනට් අතර වැවී ඇති තණකොළ කපා ඉවත් කිරීම දුෂ්කර කාර්යයකි. මේ සඳහා යාන්ත්‍රික තණකොළ කපනයක් භාවිතා කිරීම සුදුසුය. |
| පිදුරුතලාතල කඳු මුදුන සිවිල් ආවේණික සමාගම පරිශ්‍රයේ AWS පද්ධතිය                                   | 2010-05-06<br>පෙ.ව. 08.00-05.45 | සියළුම උපකරණ හොඳ තත්වයේ පැවතුන අතර පද්ධතිය හොඳින් ක්‍රියාකරයි.<br>උපකරණ ආවරණය කර කොටුවක් තනා නොමැති අතර තණකොළ වැවී තිබුණි.<br>Rain gauge ආවරණය පහරක් වැදී තරමක් ඇතුලට එබී තිබිණ.<br>Data Logger ආවරණය තුල ජලවාශ්ප බැඳී තිබිණ.                 | AWS කණුව පහත්කර සංවේදක පිරිසිදු කරන ලදී. කණුව, කේටා ලොගර් ආවරණය කෝදා පිරිසිදු කරන ලදී.<br>බැටරි චෝල්ටියතා මැන බලා ආරෝපනයන් පරීක්ෂා කරන ලදී.<br>උපකරණ අවට තණකොළ කපා ඉවත්කර පිරිසිදු කරන ලදී.<br>AWS, VSAT පද්ධති භූගත කිරීම්වල භූගත ප්‍රතිරෝධය මැන බලන ලදී.                                                 | සහි දෙනකට වරක්වත් තණකොළ කපා ඉවත් කල යුතුය. මේ සඳහා බාහිර පුද්ගලයන් යොදවීමේදී උපකරණවලට හානි සිදුවීමට ඉඩ තිබේ.<br>උදා:- සූර්ය කෝෂ, බාහිර වයර්, වර්ෂාමානය.<br>භූගත කිරීම්වල භූගත ප්‍රතිරෝධය අඩු කල යුතුය.                                       |
| නුවරඑළිය කාලගුණ විද්‍යා කාර්යාලය                                                                  | 2010-05-06<br>16.00-22.00       | අවට තරමක් තණකොළ වැවී ඇති අතර කණුව මත පාසි බැඳී තිබිණ. උපකරණ ආවරණ, සූර්ය කෝෂ පිරිසිදුව තිබිණ. පරිගණකය තදින් දුහුවිලි බැඳී අපවිත්‍රව පැවති අතර කාර්යාල ගොඩනැගිල්ලේ අළුත්වැඩියා කටයුතු නිසා පරිගණකය ක්‍රියාවිරහිත වන තරමටම දුහුවිලි බැඳී තිබුණි. | AWS කණුව පහත්කර කණුව හා සියලුම සංවේදක පිරිසිදු කරන ලදී.<br>බැටරි චෝල්ටියතා මැන බලා ආරෝපන මට්ටම පරීක්ෂා කරන ලදී. භූගත කිරීම්වල ප්‍රතිරෝධය මැන බලන ලදී.<br>පරිගණකය ගලවා දුහුවිලි ඉවත්කර පිරිසිදු කරන ලදී.<br>AWS, VSAT පද්ධති භූගත කිරීම්වල භූගත ප්‍රතිරෝධය මැන බලන ලදී.                                     | කණුව නොසැලකිල්ලෙන් පහත් කලහොත්, සුළු මිනුම් සංවේදකය බිම වැදී අනතුරකට ලක්වීමේ අවදානමක් ඇත. කණුව අසලින් විදුලි රැහැනක් ඇති නිසා පහත් කිරීමට පෙර ආධාරක කම්බි ගැලවීමේදී සැලකිලිමත් විය යුතුය. නිරීක්ෂක මහතුන්හට මේ පිලිබඳව අවධාරණය කල යුතුය.     |

මෙයට



*Appendix 2-2 Periodical Weather Report*

## Regular Inspection Book

|                |                 |
|----------------|-----------------|
| Station Name   | Nuwara Eliya    |
| Inspected Date | 2011-06-24      |
| Inspector      | Kurera / Namali |



## 1. Cleaning and Inspection

### 1.1. Cleaning and Inspection of Facilities

Check the current condition of the facility.

#### (1) Cleaning

- ① Check if there is any foreign particles or grasses on the meteorological enclosure that disturb the observation

#### (2) Check of the appearance

- ① Confirm that there is no distortion on the ground.

### 1.2. Solar panel with Battery

Inspection items for Solar panel and Battery Enclosure are shown below.

#### (1) Cleaning

- ① Remove sand or dust from the Solar panel.
- ② Wipe off dirt on the Solar stand and Battery Enclosure.

#### (2) Appearance Inspection

##### ① Solar panel

- Flaw, breakage, deformation, dent
- Rust, peeled coating

##### ② Solar stand

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Loose screws and bolts, deformation of screws and bolts

##### ③ Battery Enclosure

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Loose screws and bolts, deformation of screws and bolts

##### ④ Battery

- Flaw, breakage, deformation, dent
- Liquid leakage

##### ⑤ Charge and discharge controller

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Loose screws and bolts, deformation of screws and bolts

#### (3) Cable connection

##### ① Solar panel

- Connected condition of the cables

##### ② Battery Enclosure

- Connected condition of the cables

### 1.3. Enclosure

#### (1) Cleaning

- Wipe off dirt on the Enclosure
- Loose screws, deformation of screws

#### (2) Appearance Inspection

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Loose screws, deformation of screws

#### (3) Cable connection

- Connected condition of the cables

#### (4) Replacement of filters

- Chapter 4.5 of the Maintenance Procedure shall be referred.

### 1.4. Mounting Pole

#### (1) Cleaning

- Wipe off dirt from the Mounting Pole.

#### (2) Appearance Inspection

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Loose screws, deformation of screws
- Rust and being loose of metal fittings
- Breakage of the wire
- Rust and degradation of the wire

1

### 1.1. Inspection and cleaning of the facility

#### (1) Cleaning

- ① Finished

#### (2) Appearance Inspection

- ① Exist / None

### 1.2. Solar panel with Battery

#### (1) Cleaning

- ① Finished

- ② Finished

#### (2) Appearance Inspection

##### ① Solar panel

Exist / None

Exist / None

##### ② Solar stand

Exist / None

Exist / None

Exist / None

##### ③ Battery Enclosure

Exist / None

Exist / None

Exist / None

##### ④ Battery

Exist / None

Exist / None

##### ⑤ Charge and discharge controller

Exist / None

Exist / None

Exist / None

#### (3) Cable connection

##### ① Solar panel

Good / Defective

##### ② Battery Enclosure

Good / Defective

### 1.3. Enclosure

#### (1) Cleaning

Finished

Finished

#### (2) Appearance Inspection

Exist / None

Exist / None

Exist / None

#### (3) Cable connection

Good / Defective

#### (4) Replacement of filters

Finished

### 1.4. Mounting Pole

#### (1) Cleaning

Finished

#### (2) Appearance Inspection

Exist / None

Exist / None

Exist / None

Exist / None

Exist / None

Exist / None

1.5. Wind speed and direction sensor

- (1) Cleaning
  - Wipe off dirt with soft cloth.
- (2) Appearance Inspection
  - Breakage or deformation of the sensing devices.
  - Rust, peeled coating
- (3) Cable connection
  - Connection of the connector

1.6. Thermometer

- (1) Cleaning
  - In case dust secrets inside the Natural funnel or the cap, it shall be cleaned off.
- (2) Appearance Inspection
  - Breakage of the sensing devices
  - Rust, peeled coating
  - Rust and being loose of the metal fittings
- (3) Cable connection
  - Connected condition of the cables (in the Connected box)

1.7. Hygrometer

- (1) Cleaning
  - Wipe the enclosure of the transducer with wet soft cloth.
  - In case dust secrets inside the Natural funnel or the cap, it shall be cleaned off.
- (2) Appearance Inspection
  - Breakage of the sensing devices
  - Rust, peeled coating
  - Rust and being loose of metal fittings
- (3) Cable connection
  - Connected condition of the cables (in the Connected box)

1.8. Rain gauge

- (1) Cleaning
  - Remove dust from the dustproof mesh and the filter, and wash with water.
  - Wipe the water inlet and the turn-over container with wet cloth.
  - Spider net in the sensor
- (2) Appearance Inspection
  - Flaw, breakage, deformation, dent
  - Rust, peeled coating
  - Break or corrosion of the reed switch
  - Confirmation of the level with the level vial.
- (3) Cable connection
  - Connected condition of the cables

1.9. Barometer

- (1) Cleaning
  - Wipe the enclosure of the transducer with wet soft cloth.
- (2) Appearance Inspection
  - Flaw, breakage, deformation, dent
  - Rust, peeled coating
- (3) Cable connection
  - Connected condition of the cables

1.5. Wind speed and direction sensor

- (1) Cleaning Finished
- (2) Appearance Inspection Exist / None
- (3) Cable connection Exist / None  
Good / Defective

1.6. Thermometer

- (1) Cleaning Finished
- (2) Appearance Inspection Exist / None
- (3) Cable connection Exist / None  
Good / Defective

1.7. Hygrometer

- (1) Cleaning Finished  
Finished
- (2) Appearance Inspection Exist / None
- (3) Cable connection Exist / None  
Good / Defective

1.8. Rain gauge

- (1) Cleaning Finished  
Finished
- (2) Appearance Inspection Exist / None
- (3) Cable connection Exist / None  
Level / Uneveled  
Good / Defective

1.9. Barometer

- (1) Cleaning Finished
- (2) Appearance Inspection Exist / None
- (3) Cable connection Exist / None  
Good / Defective

1.10. Pyranometer

(1) Cleaning

- Wipe off dirt or dust with soft cloth.
- If the desiccant in the sensor (Blue silica gel ) turns to red, replace it.

(2) Appearance Inspection

- Flaw, breakage, deformation, dent
- Rust, peeled coating
- Breakage of the glass dome
- Rust and being loose of metal fittings.

(3) Cable connection

- Connection of the connector
- Waterproof treatment of the connector

1.11. Monitor

(1) Cleaning

- Wipe off dirt with dry cloth.
- If there is dust on the equipment, terminal blocks, connectors, or cables, remove it.

(2) Appearance Inspection

- Breakage or deformation of the equipment
- Confirm that the fan of the UPS is running.

(3) Connected condition

- Wiring condition of cables

1.12. COS

(1) Cleaning

- Wipe off dirt with dry cloth.
- If there is dust on the equipment, terminal blocks, connectors, or cables, remove it.

(2) Appearance Inspection

- Breakage or deformation of the equipment
- Confirm that the fan of the UPS is running.

(3) Connected condition

- Wiring condition of cables

1.10. Pyranometer

(1) Cleaning

Finished  
 Finished  
 Finished

(2) Appearance Inspection

Exist / None  
 Exist / None  
 Exist / None  
 Exist / None

(3) Cable connection

Good / Defective  
 Good / Defective

1.11. Monitor

(1) Cleaning

Finished  
 Finished

(2) Appearance Inspection

Exist / None  
 Running / Stop

(3) Connected condition

Good / Defective

1.12. COS

(1) Cleaning

Finished  
 Finished

(2) Appearance Inspection

Exist / None  
 Running / Stop

(3) Connected condition

Good / Defective

~~to~~  
 Alert detected status.



2. Confirmation of performance

2.1. Check of the power supply system  
(Solar panel with Battery)

Check the following power supply system

(1) Solar panel

- ① Turn off the switch Solar SW.
- ② Disconnect the cables from E2+, and E2- of the terminal block TB1.
- \* When cable is removed, the pressure terminals shall be covered with insulation tape.
- ③ Measure the voltage between the terminals E1+ and E1-.
- \* Refer to the Graph 1, and confirm that the corresponding voltage is obtained.
- ④ Connect the cables disconnected in ②, and disconnect the cables from E1+ and E1-.
- ⑤ Measure the voltage between terminals E2+ and E2-.
- ⑥ Connect the cables to E1+ and E1-, and turn on the Solar SW.

Note)

- \* Because the voltages are averaged in the parallel connection, each element shall be measured one by one to determine the each value.
- \* Confirm the Solar SW to be off, before the measurement.

(2) Battery

- ① Remove the connector between Battery1 and the terminals.
- ② Touch a circuit tester to the connector from the Battery1, and measure the voltage.
- \* Voltage: DC 11.5V - 14V
- ③ Connect the connector after the measurement.
- ④ Measure the voltage of the Battery2 and 3 in the same way to the above ① - ③.

Note)

- \* Measure the voltage with the Battery SW on.
- \* Disconnect one connector at one measurement.

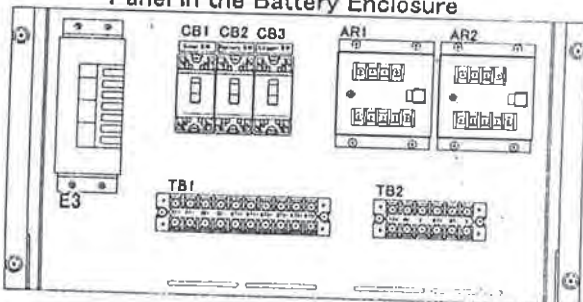
(3) Arrester

- ① Confirm that LED of the arresters of AR1 and AR2 light up.

(4) Output voltage

- ① Measure the voltage between +12V and 0V terminals of TB2
- \* Voltage: DC 11.5V - 18V

\* Panel in the Battery Enclosure



2. Confirmation of performance

2.1. Check of the power supply system  
(Solar panel with Battery)

(1) Solar panel

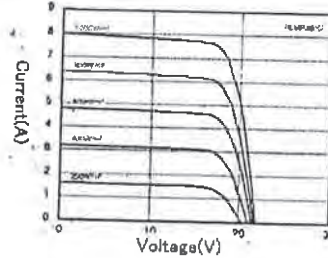
Voltage between E1+ and E1-

20.39 V

Voltage between E2+ and E2-

20.36 V

■ I-V curves of KC125TJ



(2) Battery

Battery1

13.14 V

Battery2

13.11 V

Battery3

13.04 V

(3) Arrester

- ① AR1 Light / Extinct
- AR2 Light / Extinct

(4) Output voltage

①

14.0 V

2.2. Check of the power supply system (Data Logger)

Check the following power supply system.

(1)Arrester

- ①Confirm that there is no conduction on the coaxial arrester.
- ②Confirm that the LED of the arrester AR1 lights up

(2)Measure the voltage between +V and -V terminals

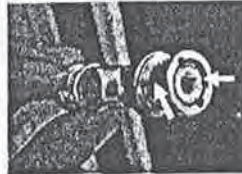
\*Voltage: DC 11.5V - 18V

(3)Confirm that the resistance between the FG terminal and signal line/power supply line terminals is 1MΩ or higher.

2.2. Check of the power supply system (Data Logger)

(1)Arrester

- ① Good / Defective
- ② Light / Extinct



※Conduction on the coaxial arrester shall be checked between the center pin and Circumferential body with a circuit tester.

(2)Measure the voltage between +V and -V terminals of the power supply terminal block.

13.87 V

(3)Resistance between terminals on the block

| Terminals               |                  |                      |                  |                        |                  |                      |                  |
|-------------------------|------------------|----------------------|------------------|------------------------|------------------|----------------------|------------------|
| RH+ <u>11.4k</u>        | Good / Defective | A1 <u>316k</u>       | Good / Defective | RA+ <u>0</u>           | Good / Defective | TX(Press) <u>0</u>   | Good / Defective |
| RH- <u>0L</u>           | Good / Defective | A2 <u>251k</u>       | Good / Defective | RA- <u>258k</u>        | Good / Defective | RX(Press) <u>0</u>   | Good / Defective |
| +12V(Humi) <u>0</u>     | Good / Defective | B1 <u>46k</u>        | Good / Defective | TX+(Wind) <u>0</u>     | Good / Defective | SG(Press) <u>0</u>   | Good / Defective |
| 0V(Humi) <u>0</u>       | Good / Defective | B2 <u>42.4k</u>      | Good / Defective | TX-(Wind) <u>0.97k</u> | Good / Defective | +12V(Press) <u>0</u> | Good / Defective |
| V1+(Btry1) <u>21.2k</u> | Good / Defective | +12V(Comm) <u>0</u>  | Good / Defective | RX+(Wind) <u>2.05k</u> | Good / Defective | 0V(Press) <u>0</u>   | Good / Defective |
| V1-(Btry1) <u>0L</u>    | Good / Defective | 0V(Comm) <u>146k</u> | Good / Defective | RX-(Wind) <u>0</u>     | Good / Defective |                      | Good / Defective |
| V2+(Btry2) <u>23.4k</u> | Good / Defective | IS+ <u>0.55M</u>     | Good / Defective | +12V(Wind) <u>0</u>    | Good / Defective |                      | Good / Defective |
| V2-(Btry2) <u>0L</u>    | Good / Defective | IS- <u>3.8M</u>      | Good / Defective | 0V(Wind) <u>0</u>      | Good / Defective |                      | Good / Defective |

(4)Measure the supply voltage to the sensor between the following terminals.

| Terminals           | Voltage range   |
|---------------------|-----------------|
| TB1→+12V, 0V(Humi)  | DC12.5V - 14.5V |
| TB2→+12V, 0V(Comm)  | DC11.5V - 12.5V |
| TB3→+12V, 0V(Wind)  | DC12.5V - 14.5V |
| TB4→+12V, 0V(Press) | DC12.5V - 14.5V |

(4)Measure the supply voltage to the sensor between the following terminals.

TB1→+12V, 0V(Humi) 12.18 V

TB2→+12V, 0V(Comm) 11.59 V

TB3→+12V, 0V(Wind) 11.59 V

TB4→+12V, 0V(Press) 12.48 V

2.3. Confirmation of performance(Data Logger)

(1)Performance check of the Data Logger

- ①Confirm that the green LED under the serial port is blinking

(2)Self-diagnosis

- ①Operate the Key of Data Logger and select Menu→6.Manual Self-Check, and when the following indication appears, select "Yes" with ▽·△ key, press R key to implement self-diagnosis.

Self-Check = No



Self-Check = Yes

②Result of diagnosis

Confirm that the result matches to the following list.

| Element name   | Diagnosis name | Result                |
|----------------|----------------|-----------------------|
| Self-diagnosis | SCSRAM         | SRAM                  |
|                | SCFLASH        | FLASH                 |
|                | SCRTC          | RTC                   |
|                | SCCF           | CF card               |
|                | SOPRM          | Parameter             |
|                |                | O: Normal 1: Abnormal |

2.3. Confirmation of performance(Data Logger)

(1)Performance check of the Data Logger

- ① Blinking / Extinct

(2)Self-diagnosis Good / Defective

| Self-diagnosis | Result(Fill 0 or 1) |
|----------------|---------------------|
| SCSRAM         | 0                   |
| SCFLASH        | 0                   |
| SCRTC          | 0                   |
| SCCF           | 0                   |
| SOPRM          | 0                   |

(3) HK signal

- Operate the Data Logger KYE and select Menu → "10 min Data", and confirm that all HK signals are 0.

※They are in the order of HKRA, HKWS...HKGPS from the left.

| Element name                   | Diagnosis name                    | Result                         |
|--------------------------------|-----------------------------------|--------------------------------|
| HKRA(1st digit from the left)  | Rain gauge contacts               | 0: Normal<br>1: Contact defect |
| HKWS(2nd digit from the left)  | Wind direction/speed meter signal | 0: Normal<br>1: Abnormal       |
| HKRH(3rd digit from the left)  | Thermometer signal                | 0: Normal<br>1: Abnormal       |
| HKBP(4th digit from the left)  | Barometer signal                  | 0: Normal<br>1: Abnormal       |
| HKGPS(5th digit from the left) | GPS receiver signal               | 0: Normal<br>1: Abnormal       |

| HK    | Result (Fill 0 or 1) |
|-------|----------------------|
| HKRA  | 0                    |
| HKWS  | 0                    |
| HKRH  | 0                    |
| HKBP  | 0                    |
| HKGPS | 0                    |

(3) HK signal Good / Defective

(4) Data Logger indication

- Connect 6 dial resistors in the following way, set it to 100Ω, and confirm the AT value of the "Real Time Data".
- At 100Ω, 0°C is indicated.
- Within ±0.4°C

| Name | Color of Cable |
|------|----------------|
| A1   | Black          |
| A2   | White          |
| B1   | Red            |
| B2   | Green          |

(4) Data Logger indication

|      |    |
|------|----|
| 100Ω | °C |
|------|----|

(5) Time adjustment

- Check the time and if it is not correct, adjust the time.
- If the time is not correct, select Menu → 7, Time Set → input the password "1111", and press "Δ·▽ key" to change the number. Press "R key" to set the value and shift the digit. After setting the value of "second" the most right digit, and press "R key" to renew the time.

(5) Time adjustment

- Confirm the time  Correct / Incorrect
- Time setting  Implemented

(6) Data confirmation

- Connect USB port of the Data Logger to maintenance PC
- Confirm that (every 10 minute) data is being sent to the PC from the Data Logger.

(6) Data confirmation Good / Defective

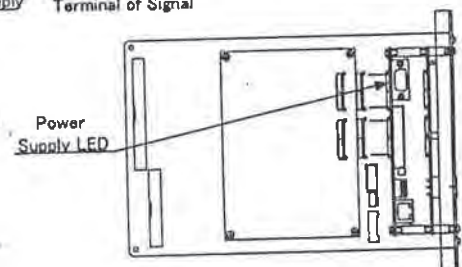
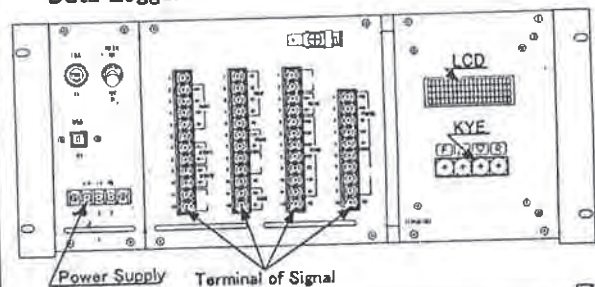
\* Transmission setting

Baud rate : 9600 bps  
Parity : None  
Data length : 8 bit  
Stop bit : 1 bit

\* Sample data

The operation manual shall be referred.

\*Data Logger



2.4. Performance check (Sensor)

(1) Wind speed and direction

- Set the LCD display of Data Logger to "Real Time Data" and confirm that WS & WD values have changed.

(2) Thermometer

- Carry out comparison measurement with Assman psychrometer
- \* Within  $\pm 0.5^{\circ}\text{C}$

(3) Hygrometer

- Carry out comparison measurement with Standard Humidity/Thermometer.
- \* Within  $\pm 1\%$

(4) Rain gauge

- Slowly supply water to the water inlet to the approximate amount that makes the rain gauge one turn. Supply water again about 20 seconds later. Repeat this work several times, and confirm that the turn over times matches to the count up number with the Data Logger.

(5) Barometer

- Carry out comparison measurement with Digital barometer.
- \* Within  $\pm 1.0$  hpa

(6) Pyranometer

- Cover it with cloth having light blocking effect, and turn on/off the light in it. Set the LCD display of the Data Logger to "Real Time Data" and confirm that IS value changes.

2.5. Performance check (Mounting Pole)

(1) Check the falling down motion of the Pole

2.6. Monitor

(1) UPS

- ① Press "Buzzer stop/test" switch on the UPS for ten seconds or longer.
- ② Release the switch after the buzzer sound changes from discontinuous sound (pi, pi, pi) to continuous sound (pili).
- ③ If the "Status Indication" blinks/Battery replacing lamp blinks or the buzzer alarms, the countermeasure shall be done in accordance with MLO.1075.

(2) Printer (The remaining ink check, replacement)

- ① Print the result of self-diagnosis.
  - Click "Tool box: Service" →
  - Click "Print" on the Self-diagnosis test page.
- ② Check the result on remaining amount, and replace the cartridge if necessary.

(3) Printer (Diagnosis of printing quality)

- ① Print the Printing quality diagnosis page.
  - Click "Tool box: Service" →
  - Select PQ(Printing quality) test page, and click "Carry out the diagnosis".

(4) Time adjustment

- Check the time of PC, and if it is not correct, adjust it.

(5) Transformer

- Confirm that the LED lights through the inspection window of the transformer.

2.4. Performance check (Sensor)

(1) Wind speed and direction  
Good / Defective

(2) Thermometer

Good / Defective

|      |            |     |         |
|------|------------|-----|---------|
| Time | Assman Dry | Wet | Humidus |
|------|------------|-----|---------|

(3) Hygrometer

Good / Defective

|      |            |        |     |
|------|------------|--------|-----|
| Time | Assman Dry | Wet RH | Ass |
|------|------------|--------|-----|

(4) Rain gauge

Good / Defective

|      |                 |       |     |
|------|-----------------|-------|-----|
| Time | Volume of Water | Turns | Ass |
|------|-----------------|-------|-----|

(5) Barometer

Good / Defective

|      |           |     |      |       |
|------|-----------|-----|------|-------|
| Time | Digital B | Ass | Test | Graph |
|------|-----------|-----|------|-------|

(6) Pyranometer

Good / Defective

2.5. Performance check (Mounting Pole)

(1) Good / Defective

2.6. Monitor

(1) UPS Good / Defective

- \* If it is defective, the countermeasure shall be inscribed.

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(2) Printer (The remaining ink check, replacement)

Good / Defective

- \* If it is defective, the countermeasure shall be inscribed.

---



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(3) Printer (Diagnosis of printing quality)

Good / Unsatisfactory

- \* If it is unsatisfactory, the countermeasure shall be inscribed.

---



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(4) Time adjustment

- Confirmation of time Correct / Incorrect
- Time setting Implemented

(5) Transformer

Light / Extinct

2.7. COS

(1)UPS

- ① Press the "Buzzer stop/test" switch on the UPS for ten seconds or longer.
  - ② Release the switch after the buzzer sound changes from discontinuous sound (pi, pi, pi,) to continuous sound (piiii).
  - ③ If the "Status Indication" blinks/Battery replacing lamp blinks or the buzzer alarms, the countermeasure shall be done in accordance with MLO.1075.
- ※ There are three UPSs in a COS, and the each one shall be inspected.

(2) Printer (The remaining ink check, replacement)

- ① Print the result of self-diagnosis.
    - Click "Tool box: Service" →
    - Click "Print" of the Self-diagnosis test page.
  - ② Check the result on remaining amount, and replace the cartridge if necessary.
- ※ There are two Printer in a COS, and the each one shall be inspected.

(3) Printer (Diagnosis of printing quality)

- ① Print the Printing quality diagnosis page.
    - Click "Tool box: Service" →
    - Select PQ(Printing quality) test page, and click "Carry out the diagnosis".
- ※ There are two Printers in a COS, and the each one shall be inspected.

(4) Time adjustment

- Check the time of PC, and if it is not correct, adjust it.

(5) Transformer

- Confirm that the LED lights through the inspection window of the transformer.
- ※ There are three transformers in a COS, and the each one should be inspected.

2.7. COS

- (1)UPS① Good / Defective
- UPS② Good / Defective
- UPS③ Good / Defective

\* If it is defective, the countermeasure shall be inscribed.

---



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(2) Printer (The remaining ink check, replacement)

- Printer① Good / Insufficient
- Printer② Good / Insufficient

\* If it is defective, the countermeasure shall be inscribed.

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(3) Printer (Diagnosis of printing quality)

- Printer① Good / Unsatisfactory
- Printer② Good / Unsatisfactory

\* If it is defective, the countermeasure shall be inscribed.

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(4) Time adjustment

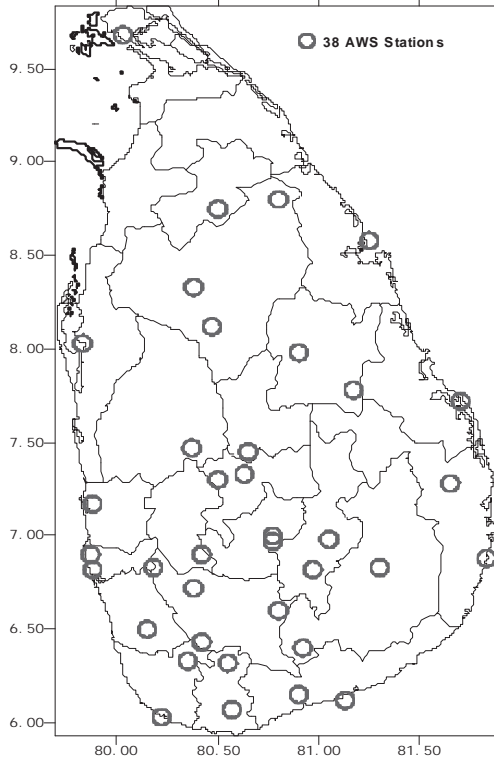
- Confirmation of time Correct / Incorrect
- Time setting Implemented

(5) Transformer

- Transformer ① Light / Extinct
- Transformer ② Light / Extinct
- Transformer ③ Light / Extinct

*Appendix 2-3 AWS Network*

**AWS Network**



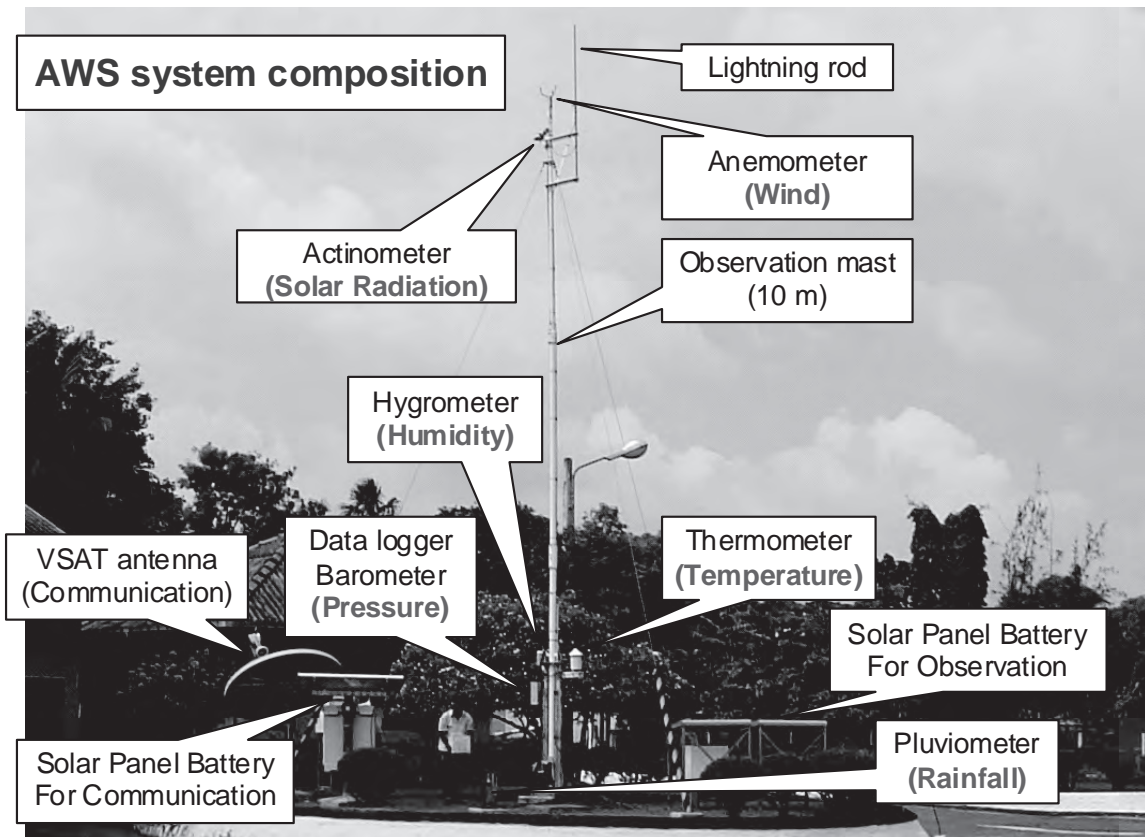
**20 Principal Stations**

- Anuradapura
- Badulla
- Batticaloa
- Colombo
- Bandarawela
- Galle
- Hambantota
- Jaffna
- Katugastota
- Katunayake
- Kurunegala
- Maha Illuppallama
- Mannar
- Nuwara Eliya
- Pottuvil
- Puttalam
- Ratmalana
- Ratnapura
- Trincomalee
- Vauniya

**18 Collaborative Stations**

- Wagolla
- Polonnaruwa
- Moneragala
- Matale
- Sevanagala
- Angunukolapelessa
- Ampara
- Matara
- Deniyaya
- Horton Plains
- Mt. Pidurutalagala
- Aralaganwila
- Balangoda
- Maliboda
- Labugama
- Tawalama
- Kudawa
- Sirikandura

AWS Location Map



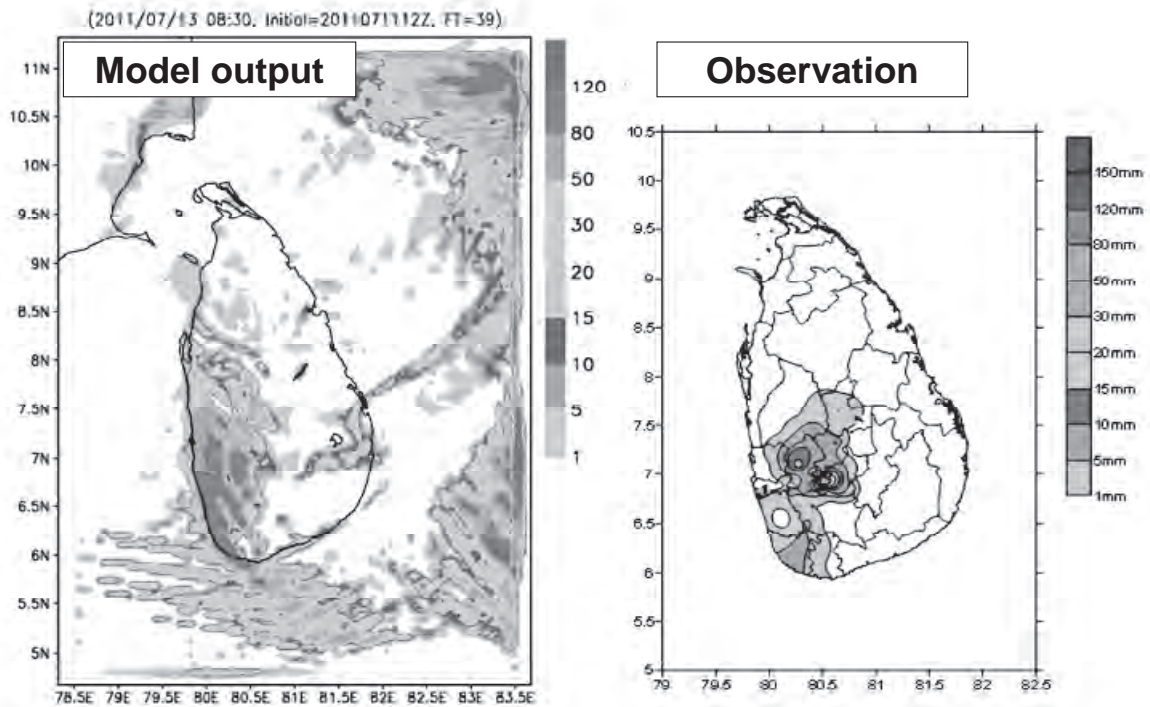
AWS System Composition





*Appendix 2-4 NWP Prediction and Guideline*

## Daily rainfall ( 12 July 2011 )



Comparison of Rainfall Prediction (Left: NWP Model, Right: Rainfall Observation Result)

## Applying to daily weather forecast

(Period: 2011 September - 2012 August)

| Colombo<br>DOM forecast<br>(Available 333days) |         |     | Forecast |         |
|------------------------------------------------|---------|-----|----------|---------|
|                                                |         |     | Rain     | No rain |
|                                                |         |     | 216      | 117     |
| AWS                                            | rain    | 120 | 94       | 26      |
|                                                | No rain | 213 | 122      | 91      |

$$94/216 = 43.5\%$$

| Kandy<br>DOM forecast<br>(Available 350days) |         |     | Forecast |         |
|----------------------------------------------|---------|-----|----------|---------|
|                                              |         |     | Rain     | No rain |
|                                              |         |     | 226      | 124     |
| AWS                                          | rain    | 108 | 83       | 25      |
|                                              | No rain | 242 | 146      | 97      |

$$83/226 = 36.7\%$$

| Colombo<br>WRF guidance<br>(Available 286days) |         |     | Forecast |         |
|------------------------------------------------|---------|-----|----------|---------|
|                                                |         |     | Rain     | No rain |
|                                                |         |     | 94       | 192     |
| AWS                                            | rain    | 104 | 62       | 42      |
|                                                | No rain | 182 | 32       | 144     |

$$62/94 = 66.0\%$$

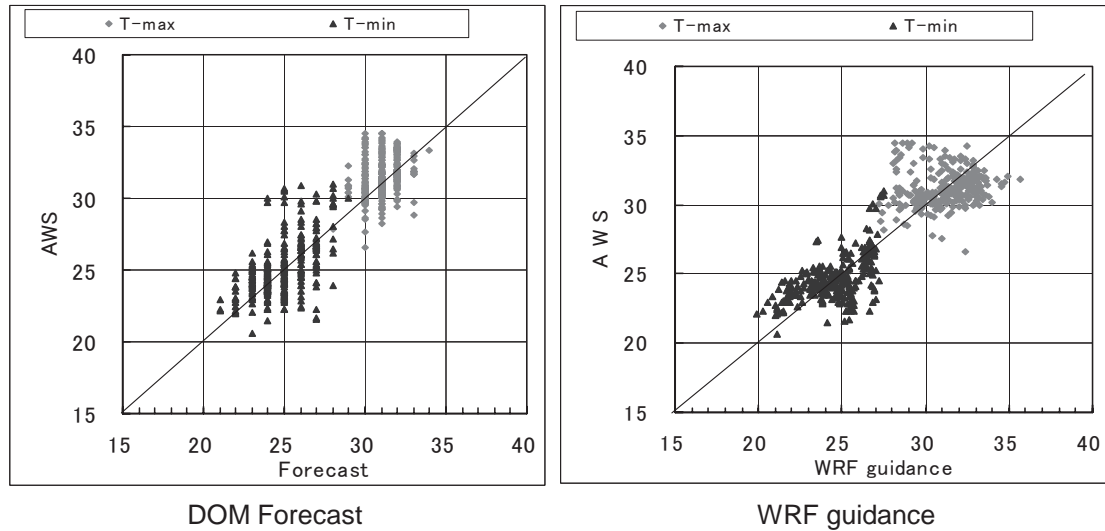
| Kandy<br>WRF guidance<br>(Available 303days) |         |     | Forecast |         |
|----------------------------------------------|---------|-----|----------|---------|
|                                              |         |     | Rain     | No rain |
|                                              |         |     | 124      | 179     |
| AWS                                          | rain    | 104 | 73       | 31      |
|                                              | No rain | 199 | 51       | 148     |

$$73/124 = 58.9\%$$

Due to the missing data of AWS and NWP, "Available days" is not 366 days.

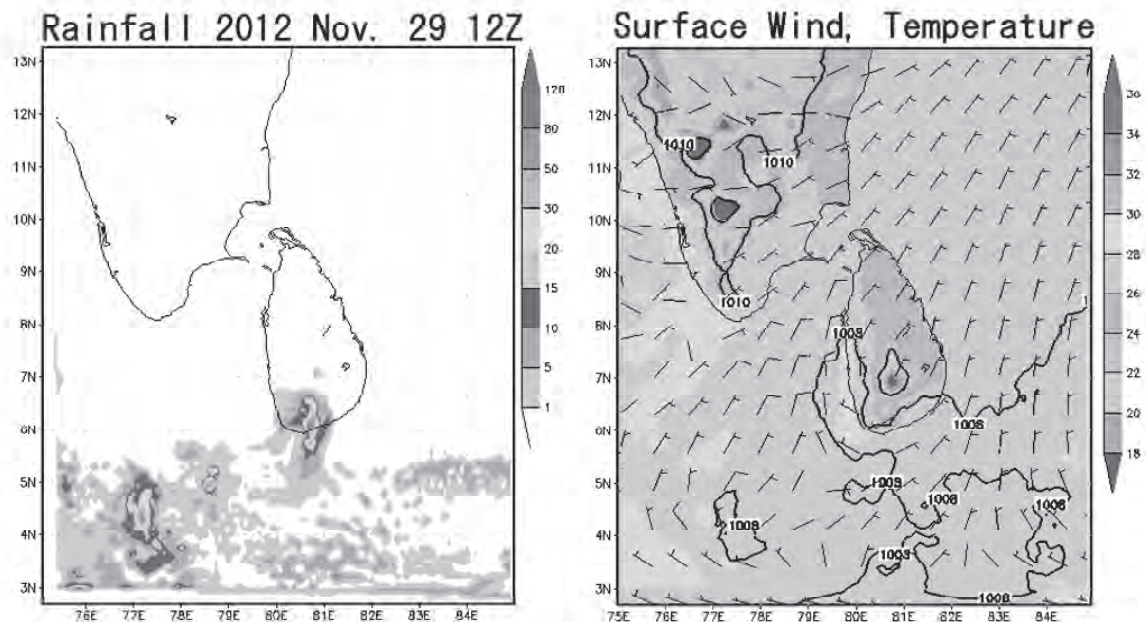
Comparison of Hitting Ration of Precipitation Forecast (Upper: Exiting method, Lower: Guidance)

## Applying to temperature forecast ( Colombo )



Comparison of Hitting Ratio of Temperature Forecast (Maximum and Minimum) (Left: Existing Method, Right: Guidance)

## Improvement of NWP model



Improvement of NWP Model (Expansion of Calculation Area)

*Appendix 2-5 Probable Daily Maximum Rainfall*

PROBABLE DAILY MAXIMUM RAINFALL

Gumbel distribution

| R.P.(year)   | 2   | 3   | 5   | 10  | 15  | 20  | 30  | 50  | 75  | 100 | 150 | 200 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Anuradhapura | 90  | 100 | 112 | 126 | 135 | 140 | 148 | 158 | 166 | 172 | 179 | 185 |
| Badulla      | 90  | 104 | 121 | 142 | 153 | 162 | 173 | 187 | 199 | 207 | 218 | 226 |
| Bandarawela  | 61  | 72  | 82  | 94  | 101 | 106 | 112 | 120 | 126 | 131 | 137 | 142 |
| Batticaloa   | 121 | 140 | 161 | 188 | 203 | 214 | 228 | 247 | 261 | 272 | 286 | 296 |
| Colombo      | 149 | 187 | 229 | 281 | 311 | 332 | 361 | 397 | 426 | 447 | 475 | 495 |
| Diyatalawa   |     |     | 69  | 95  | 108 | 116 | 128 | 142 | 154 | 162 | 173 | 181 |
| Galle        | 121 | 143 | 168 | 198 | 216 | 228 | 245 | 266 | 283 | 294 | 311 | 323 |
| Hambantota   | 80  | 93  | 106 | 124 | 133 | 140 | 149 | 161 | 171 | 177 | 187 | 193 |
| Jaffna       | 94  | 141 | 187 | 241 | 271 | 292 | 321 | 357 | 385 | 405 | 433 | 453 |
| Katugastota  | 89  | 100 | 111 | 126 | 134 | 140 | 148 | 158 | 167 | 172 | 180 | 186 |
| Katunayake   | 134 | 155 | 179 | 209 | 226 | 238 | 254 | 275 | 291 | 303 | 319 | 331 |
| Kurunegala   | 118 | 132 | 147 | 166 | 177 | 185 | 195 | 209 | 219 | 227 | 237 | 244 |
| Maha-illukpa | 98  | 114 | 133 | 156 | 170 | 179 | 192 | 208 | 221 | 230 | 242 | 251 |
| Mannar       | 96  | 119 | 144 | 174 | 191 | 204 | 220 | 241 | 258 | 269 | 286 | 297 |
| Nuwara-eliya | 79  | 91  | 104 | 121 | 130 | 137 | 146 | 157 | 167 | 173 | 182 | 188 |
| Potuvil      | 106 | 126 | 147 | 173 | 188 | 198 | 212 | 230 | 244 | 254 | 268 | 278 |
| Puttalam     | 104 | 127 | 152 | 184 | 201 | 214 | 231 | 253 | 270 | 283 | 300 | 312 |
| Ratmalana    | 154 | 184 | 216 | 257 | 280 | 296 | 319 | 347 | 369 | 385 | 407 | 423 |
| Ratnapura    | 145 | 177 | 213 | 258 | 283 | 301 | 326 | 357 | 382 | 399 | 424 | 441 |
| Trincomalee  | 114 | 130 | 147 | 169 | 182 | 191 | 203 | 218 | 230 | 239 | 251 | 259 |
| Vavuniya     | 101 | 123 | 148 | 179 | 196 | 209 | 226 | 247 | 264 | 275 | 292 | 304 |



*Appendix 2-6 Excess Rainfall Probability*

| Statistic period : 1991 – 2010<br>(18 September, 2012) |              | Appearance Frequency analysis |      |      |      |      |
|--------------------------------------------------------|--------------|-------------------------------|------|------|------|------|
|                                                        |              | Excess probability            |      |      |      |      |
| Station                                                | District     | 2.0%                          | 1.0% | 0.5% | 0.3% | 0.1% |
| ANURADHAPURA                                           | ANURADHAPURA | 40                            | 50   | 60   | 80   | 100  |
| BADULLA                                                | BADULLA      | 40                            | 50   | 60   | 70   | 90   |
| BANDARAWELA                                            | BADULLA      | 40                            | 40   | 50   | 60   | 70   |
| BATICALOA                                              | BATICALOA    | 60                            | 70   | 90   | 110  | 140  |
| COLOMBO                                                | COLOMBO      | 60                            | 70   | 100  | 120  | 150  |
| GALLE                                                  | GALLE        | 60                            | 70   | 100  | 110  | 150  |
| HANBANTOTA                                             | HANBANTOTA   | 30                            | 40   | 60   | 70   | 90   |
| JAFFNA                                                 | JAFFNA       | 50                            | 60   | 90   | 120  | 180  |
| KATUGASTOTA                                            | KANDY        | 50                            | 50   | 70   | 80   | 100  |
| KATUNAYAKE                                             | GAMPAHA      | 60                            | 70   | 90   | 120  | 170  |
| KURUNEGALA                                             | KURUNEGALA   | 50                            | 60   | 80   | 100  | 130  |
| MAHA-ILLUPALLAMA                                       | ANURADHAPURA | 40                            | 60   | 80   | 90   | 120  |
| MANNAR                                                 | MANNAR       | 40                            | 40   | 60   | 70   | 120  |
| NUWARA ELIYA                                           | NUWARA ELIYA | 40                            | 40   | 60   | 70   | 90   |
| POTTUVIL                                               | AMPARA       | 50                            | 60   | 90   | 100  | 150  |
| PUTTALAM                                               | PUTTALAM     | 40                            | 50   | 60   | 80   | 110  |
| RATMALANA                                              | COLOMBO      | 60                            | 80   | 110  | 140  | 190  |
| RATHNAPURA                                             | RATHNAPURA   | 70                            | 80   | 100  | 120  | 160  |
| TRINCOMALEE                                            | TRINCOMALEE  | 50                            | 70   | 90   | 100  | 140  |
| VAVUNIYA                                               | VAVUNIYA     | 50                            | 50   | 60   | 80   | 120  |





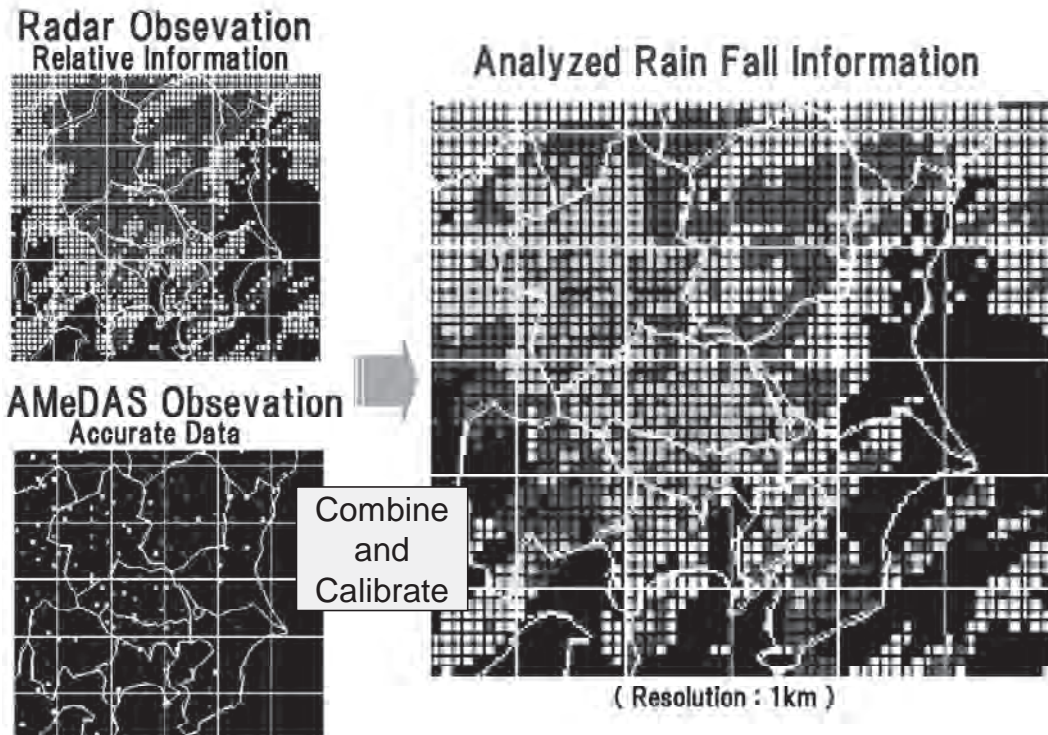
*Appendix 2-7 Draft Warning Standard*

| Station          | District     | R24      |         | R1       | R3      |
|------------------|--------------|----------|---------|----------|---------|
|                  |              | Advisory | Warning | Advisory | Warning |
| ANURADHAPURA     | ANURADHAPURA | 50       | 60      | 25       | 30      |
| BADULLA          | BADULLA      | 50       | 60      | 25       | 30      |
| BANDARAWELA      | BADULLA      | 40       | 50      | 20       | 25      |
| BATICALOA        | BATICALOA    | 70       | 90      | 35       | 45      |
| COLOMBO          | COLOMBO      | 70       | 100     | 35       | 50      |
| GALLE            | GALLE        | 70       | 100     | 35       | 50      |
| HANBANTOTA       | HANBANTOTA   | 40       | 60      | 20       | 30      |
| JAFFNA           | JAFFNA       | 60       | 90      | 30       | 45      |
| KATUGASTOTA      | KANDY        | 50       | 70      | 25       | 35      |
| KATUNAYAKE       | GAMPAHA      | 70       | 90      | 35       | 45      |
| KURUNEGALA       | KURUNEGALA   | 60       | 80      | 30       | 40      |
| MAHA-ILLUPALLAMA | ANURADHAPURA | 60       | 80      | 30       | 40      |
| MANNAR           | MANNAR       | 40       | 60      | 20       | 30      |
| NUWARA ELIYA     | NUWARA ELIYA | 40       | 60      | 20       | 30      |
| POTTUVIL         | AMPARA       | 60       | 90      | 30       | 45      |
| PUTTALAM         | PUTTALAM     | 50       | 60      | 25       | 30      |
| RATMALANA        | COLOMBO      | 80       | 110     | 40       | 55      |
| RATHNAPURA       | RATHNAPURA   | 80       | 100     | 40       | 50      |
| TRINCOMALEE      | TRINCOMALEE  | 70       | 90      | 35       | 45      |
| VAVUNIYA         | VAVUNIYA     | 50       | 60      | 25       | 30      |

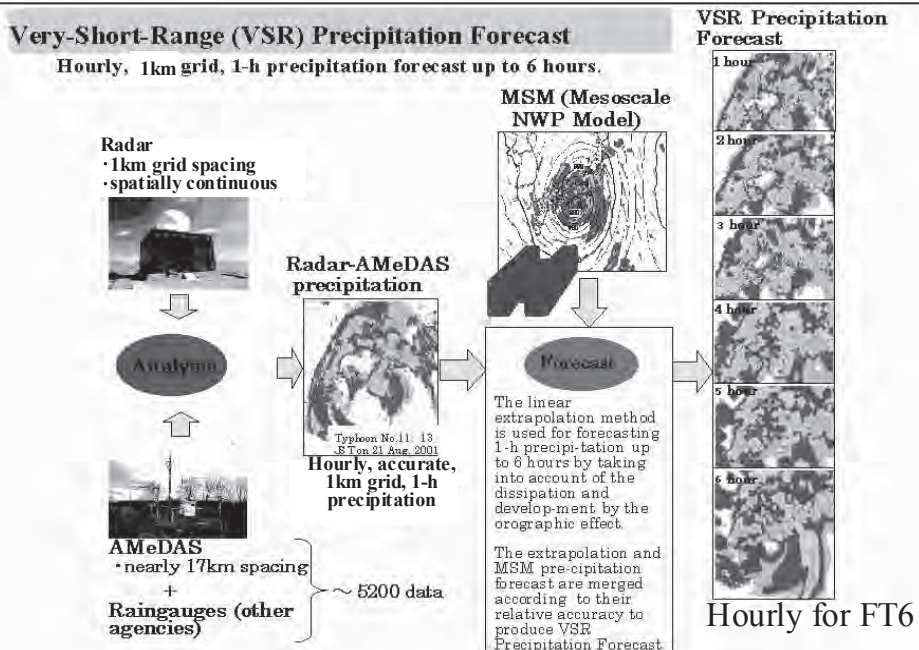


*Appendix 2-8 Utilization of Radar AWS*

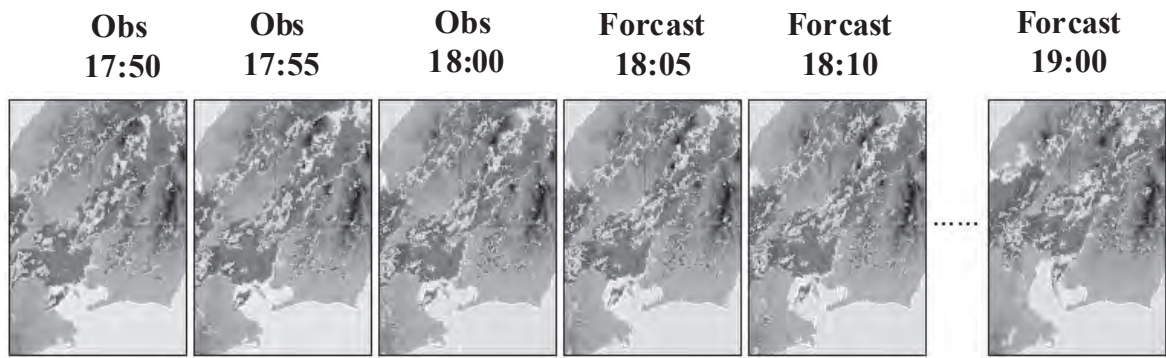
## Radar-AWS analyzed precipitation (RAP)



## Very Short Range Precipitation Forecast (VSRP)



## Precipitation Nowcast



**Up to 60min ahead**  
**Resolution:1km**

Initial data is Radar + AWS (RAP)  
Calculating moving velocity with image analysis