Preliminary Survey of Tsunami-affected Monuments and Sites in the Maritime Region of Sri Lanka

PART TWO
The Western Maritime Region: From the Kalu Ganga to the Daduru Oya

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March 2005
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Preliminary Survey of Tsunami-affected Monuments and Sites in the Maritime Region of Sri Lanka

**Volume One**

The Western Maritime Region from the Kalu Ganga to the Daduru Oya

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1.0 INTRODUCTION

Due to the tsunami catastrophe of 26 December 2004, more than 30,000 people were killed and 838,000 have been made homeless mainly in the coastal belt in Sri Lanka. The worst affected districts are Ampare, Batticaloa, Galle, Hambantota, Jaffna, Kuchchaveli, Mullaitivu and Trincomalee. In addition other parts of the coastal region were also considerably damaged by the tsunami disaster.

The human scale of this devastation was one of unprecedented magnitude. It is obvious that the cultural heritage and its landscapes have also been greatly changed or damaged. The damage to some heritage sites and cultural landscapes from the tsunami has been extensive and they need to be restored within the framework of archaeological concepts.

1.1 SURVEY AREA

A survey of cultural property and an assessment of the damage to such cultural heritage due to the tsunami was carried out within the boundaries of the Deduru Oya and the Kalu Ganga up to 1 km from the coastal belt and also in a further 3 km buffer zone.

The survey area comprises of the four districts of Kalutara, Colombo, Gampaha and Puttalam. This survey revealed that the Puttalam District has not been affected by the tsunami disaster. In view of this situation the archaeological assessment survey to identify the scale of devastation is mainly confined to the Kalutara, Colombo and Gampaha Districts (fig. 1).

1.2 SURVEY STRATEGY

The assessment survey is mainly based on the protected sites and monuments scheduled under the Antiquities Ordinance and the report on the inventory of places of religious and cultural significance and areas of scenic and recreational value within the coastal zone of Sri Lanka (Prematilleke, P.L. 1989) published by the Coast Conservation Department in 1989.
Apart from the above guidelines, in the survey area we investigated up to 1 km from the coastal belt and a further 3 km of buffer zone to identify more sites which are not referred to in Professor P.L. Prematilleke's book.

For the survey, we used the G.P.S. (Geographical Positioning System) to identify the actual locations of the sites and observe the distribution pattern on the coastal belt. (All the maps were completed using this strategy). At the same time, in filling the survey forms more details were recorded and digital photographs were taken of each site.

1.3 PROBLEMS OF THE SURVEY
Reports state that tsunami waters affected four lighthouses in the Colombo Harbour. In addition, some parts of the buildings at the rear of the Mount Lavinia Hotel have also been affected. But unfortunately we were not allowed to estimate the scale or extent of the disaster at the above sites due to various circumstances.

1.4 RESULTS OF THE SURVEY
Taking the above survey strategy in consideration, we investigated 137 sites in the survey area. Among them, twenty-eight sites have been affected by the tsunami disaster. The details of the total sites are as follows (fig. 2).

<table>
<thead>
<tr>
<th>District</th>
<th>Number of investigated sites</th>
<th>Number of affected sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalutara</td>
<td>33</td>
<td>08</td>
</tr>
<tr>
<td>Colombo</td>
<td>79</td>
<td>11</td>
</tr>
<tr>
<td>Gampaha</td>
<td>25</td>
<td>09</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>28</td>
</tr>
</tbody>
</table>

Fig. 2. Affected sites in the survey area.

The Panadura Railway Station and Sri Saddharmaramaya in the Kalutara District, Watch Hut, Mettaramaya, Fountain House and Walle Devale in the Colombo District and the Watch Hut in the Gampaha District which were affected by the
tsunami disaster were not recorded in the book published by the Coast Conservation Department in 1989.

2.0 EFFECTED SITES

As we noted earlier, in this section we discuss the details of the twenty-eight affected sites of the three districts in the survey area.

2.1 Kalutara District

Twenty-eight Grama Niladari Divisions constitute the coastal belt in the Kalutara District. The present survey area of the district comprised of twelve Grama Niladari Divisions along the coastal belt from Moragolla by the mouth of the Panadura Ganga to the Kalu Ganga (fig. 3).

1. Bauddhashramaya

This is located at Pattiya (North) 250 meters away from the sea. It was built in 1956. Tsunami waters have reached the height of about two meters in the buildings of the temple.

2. Panadura Railway Station

Panadura Railway Station located at Pattiya (North) 200 meters away from the sea is a historical site believed to be about 100 years old. The most important features are the carvings on the pillars. Tsunami waters have reached the height of a meter to the platform of the station.
3. Sri Saddharmaramaya
Galvatimodara or Sri Saddharamaramaya temple is situated at Nalluruwa 50 m away from the sea. It was built in 1934. Tsunami waters have reached the height of 6 meters in the temple. The dharmasala building and the boundary wall of the temple were totally destroyed. Tsunami waters also reached the chapter house and the pilgrimage building.

4. Abhinavaramaya
Built in 1940, it is located at Nalluruwa 300 meters away from the sea. Tsunami waters have reached the height of 3 meters in the building. This temple is very popular among the Buddhist community in this village.

5. Bo Tree
The Bo tree is located at Wadduwa (West), and is reported to be approximately more than 70 years old. Tsunami waters have reached a height of 5 meters and completely destroyed the Bo tree.
6. Samudraramaya
The Samudraramaya is situated at Wadduwa (West) 100 meters away from the sea. It was built in 1880. Recent construction work was done in 1954. Tsunami waters have reached the height of 1 meter. The boundary wall and dharmasala building of the temple have been destroyed.

7. Ancient Walawwa
This ancient walawwa belonging to the Alwis family is situated at Wadduwa (East) 100 meters away from the sea. Tsunami waters have reached the height of 2 meters in the building. Some parts of the back of the building have been destroyed.

8. Gangaramaya
This temple is situated at Kalutara (North), 300 meters away from the sea. A historical site believed to be about 200 years old. Tsunami waters have reached the height of 3 meters. The significant traditional Kandyan Period style paintings of the pilimage have been damaged. Architectural features of the pilimage such as the floor and walls have also been damaged.
In taking into consideration the Kalutara District, from twenty-eight Grama Niladari Divisions, five Grama Niladari Divisions where the nine damaged sites are located have been affected by the tsunami disaster.

<table>
<thead>
<tr>
<th>Affected Sites</th>
<th>Nature of the sites</th>
<th>Grama Niladarai Divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bauddhashramaya</td>
<td>Religious - Cultural</td>
<td>Pattiya (North)</td>
</tr>
<tr>
<td>Panadura station</td>
<td>Secular</td>
<td>Pattiya (North)</td>
</tr>
<tr>
<td>Sri Saddharmaramaya</td>
<td>Religious- historical cultural</td>
<td>Nalluruwa</td>
</tr>
<tr>
<td>Abhinavaramaya</td>
<td>Religious- cultural</td>
<td>Nalluruwa</td>
</tr>
<tr>
<td>Bo–tree</td>
<td>Religious- historical cultural</td>
<td>Talpitiya</td>
</tr>
<tr>
<td>Samudraramaya</td>
<td>Religious- cultural</td>
<td>Wadduwa (West)</td>
</tr>
<tr>
<td>Ancient Walauwa</td>
<td>Historical - cultural</td>
<td>Wadduwa (West)</td>
</tr>
<tr>
<td>Gangaramaya</td>
<td>Religious- historical cultural</td>
<td>Kalutara (North)</td>
</tr>
</tbody>
</table>

*Fig 4: Nature of the affected sites and Grama Niladari Divisions in the Kalutara District.*

These sites represent various architectural features. In this regard the Gangaramaya, the Bo tree and the Sri Saddharmaramaya represent religious-historical and cultural features ((fig. 4).
2.2 Colombo District

The coastal belt of the Colombo District comprises of twenty-six Grama Niladari Divisions from Mattakkuliya in the North to Egodauyana in the South. The Colombo District is bordered on the North by the Kelani River and by the Panadura River to the South (fig. 5).

1. Dutch House

The Dutch House is located at Mattakkuliya about 900 meters away from the sea. This monument was not affected by the tsunami disaster but local political factions are reported to have had a hand in its destruction. The original part of the wall of this building and roof tiles can still be seen at the site. It is believed to have been the residence of King Sri Wickrama Rajasinghe during the Kandyan Period. It is said that the King had stopped here on his way to Colombo. The Urban Development Authority maintained this monument before its destruction.

2. Whist Bungalow

The Whist Bungalow is situated at Modara about 200 meters away from the sea. Tsunami waters have destroyed the boundary wall of the building, which was built of brick. High-ranking visitors used this building during the Dutch Period and it was turned into the Coconut Club during the British Period.
3. Kali Kovil

Kali Kovil is located at Modara about 50m away from the sea. The tsunami waters submerged the front portion of the building to the height of about 1-meter. It is said to be 60 years old. The plaster on the wall has been damaged. This is a very popular Kovil among people in Colombo City.

4. Watch Hut

This monument is in close proximity to the sea at Modara. This might have been a watch hut during the Second World War. Prior to the tsunami disaster, some families temporarily occupied the building. This monument had been in a dilapidated condition. However, some parts of the building have been further damaged by the tsunami disaster.

5. Al-Mohamadiya Mosque

This mosque is located 75 m away from the sea at Egodauyana (South), Moratuwa. This mosque is dated to 1835. The new building of the mosque had been reconstructed recently. The boundary wall around the mosque was destroyed.
6. Mettaramaya
This temple is situated at Egodauyana (South), 200m away from the sea. It has been established recently. Tsunami waters have reached the height of 3 meters in the temple. The rear boundary wall has been destroyed and considerable cracks can be seen in the walls.

7. Fountain House
This private house is situated at Egodauyana (South) 75 meters away from the sea. It was established in the 1950's. Tsunami waters have reached the height of 2 meters and the boundary wall of the house has been destroyed. Some cracks have appeared on the walls.
8. Walle Devale
This ancient devale situated at Egodauyana (South) in close proximity to the sea was totally destroyed. The structure is built of bricks and stone. The doors and windows are made of timber.

9. St. Francis Xavier's Church
This church is situated at Angulana close to the Railway Station on the seaside. It is 50m away from the sea. The church was built in 1871. The boundary wall of the church has been destroyed and tsunami waters have reached the height of two meters of the church.

10. St. Thomas' College
St. Thomas' College is situated at Mount Lavinia, 15 meters away from the sea. The first Anglican Bishop of Colombo established it in 1815. Later construction work at this site was begun in 1917 and completed in 1960. The most recent construction was in 1965. Tsunami waters have reached the height of two meters in the old and new office buildings and the primary school building. The boundary wall of the school has been totally destroyed.
11. Duwa (Lunawa) Devale

Duwa Devale is located at Angulana 200 meters away from the sea in the middle of the Lunawa Island. It was established in the 1940’s. Tsunami waters have reached the temple premises. The Bo tree has been damaged.

According to our investigations, eleven heritage sites located in six Grama Niladari Divisions in the Colombo District have been affected by the tsunami disaster.

<table>
<thead>
<tr>
<th>Affected Sites</th>
<th>Nature of the sites</th>
<th>Grama Niladarai Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kali Kovil</td>
<td>Religious - historical cultural</td>
<td>Modara</td>
</tr>
<tr>
<td>Dutch House</td>
<td>Historical - cultural</td>
<td>Mattakkuliya</td>
</tr>
<tr>
<td>Whist Bungalow</td>
<td>Historical - cultural</td>
<td>Modara</td>
</tr>
<tr>
<td>Kali Kovil</td>
<td>Religious - historical cultural</td>
<td>Modara</td>
</tr>
<tr>
<td>Watch Hut</td>
<td>Historical - cultural</td>
<td>Modara</td>
</tr>
<tr>
<td>Al-Mohamadiya Mosque</td>
<td>Religious - historical cultural</td>
<td>Egodaulyana (South)</td>
</tr>
<tr>
<td>Mettaramaya</td>
<td>Religious - cultural</td>
<td>Egodaulyana (South)</td>
</tr>
<tr>
<td>Fountain House</td>
<td>Historical - cultural</td>
<td>Egodaulyana (South)</td>
</tr>
<tr>
<td>Walle Devale</td>
<td>Religious</td>
<td>Egodaulyana (South)</td>
</tr>
<tr>
<td>St. Francis Xavier's Church</td>
<td>Religious - historical cultural</td>
<td>Angulana</td>
</tr>
<tr>
<td>St. Thomas' College</td>
<td>Religious - historical cultural</td>
<td>Mount Lavinia</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Duwa(Lunawa) Devale</td>
<td>Religious - cultural</td>
<td>Angulana</td>
</tr>
</tbody>
</table>

Fig 6: Nature of the affected sites and Grama Niladari Divisions in the Colombo District.

Among the affected sites, Kali Kovil, Al- Mohamadiya Mosque, St. Francis Xavier's Church and St. Thomas' College represent varied architectural characteristics in this district (fig 6).
2.3 Gampaha District

The Gampaha District is bounded on the North by the Maha Oya flowing into the sea at Kochchikade and on the South by the Kelani River flowing into the sea at Palliyawatta, Wattala. The coastal belt of the Gampaha District comprises of eleven Grama Niladari Divisions (fig.7).

1. Watch Hut
This monument is located at Lansiyawatta in close proximately to the sea. It has been abandoned for a long time. Tsunami waters have reached the height of four meters in the monument.

2. Powder Magazine
This is located at Palliyawatta, Lansiyawatta in Wattala 125 m away from the sea. It was not affected by the tsunami but the original structure has been destroyed to build a shelter.

3. St. Anthony’s Church
This church situated at Dikovita 125 m away from the sea was built in 1963. Before the tsunami disaster, some parts of the original building had been changed to rebuild the church. Tsunami waters have reached the height of about 2 meters. The base of the building and some parts of the foundation and window frames have been damaged.
4. Shipwrecks
Shipwrecks can be seen in the sea at Uswatakeiyyawa facing St. Mary's Church. This ship was reportedly wrecked during the Cyclone of 1965.

5. St. Anthony's Church
St. Anthony's Church is situated at Kapungoda in close proximity to the sea. It was built in 1875. The decorative pillars with Corinthian capitals are a very significant character. Tsunami waters have reached the height of about 1 meter and the plaster on the wall has been destroyed.

6. Shipwreck
This is found in the sea at Marawila, Duwa Peninsular in Negambo. This wreck has been totally destroyed.
7. Church of Our Lady Sindrathri
This church is located in the Duwa Peninsula in Negambo in close proximity to the sea. It is a well-known church in Sri Lanka for the annual performance of a famous passion play. Tsunami waters have reached the height of 2 meters. Plaster, windows and some parts of the base have been destroyed.

8. St. Sebastian's Church
This church is located in Negambo, 150 meters away from the sea. The ancient architectural features and technology suggest that the history of the church dates back to about 500 years. Tsunami waters have reached the height of 2 meters in the church. The rear boundary wall of the church has been destroyed.
9. Kudapaduwa Church

This church is situated at Kudapaduwa in Negambo about 50m away from the sea. Tsunami waters have reached the height of about 2 meters outside the church. A timber door and the rear boundary wall of the church have been destroyed.

In the Gampaha District, nine sites located in six Grama Niladari Divisions have been affected by the tsunami disaster.

<table>
<thead>
<tr>
<th>Affected Sites</th>
<th>Nature of the sites</th>
<th>Grama Niladari Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Hut</td>
<td>Historical – cultural</td>
<td>Palliyawatta</td>
</tr>
<tr>
<td>Powder Magazine</td>
<td>Historical – cultural</td>
<td>Palliyawatta</td>
</tr>
<tr>
<td>St. Anthony's Church</td>
<td>Religious- cultural</td>
<td>Palliyawatta</td>
</tr>
<tr>
<td>Shipwreck</td>
<td>Historical – cultural</td>
<td>Uswatakeiyyawa</td>
</tr>
<tr>
<td>St. Anthony's Church</td>
<td>Religious – cultural</td>
<td>Kapungoda</td>
</tr>
<tr>
<td>Ship Wreck</td>
<td>Historical – cultural</td>
<td>Duwa</td>
</tr>
<tr>
<td>Church of Our Lady Sindrathri</td>
<td>Religious – cultural</td>
<td>Duwa</td>
</tr>
<tr>
<td>St. Sebastian Church</td>
<td>Religious - cultural</td>
<td>Wallevidiya</td>
</tr>
<tr>
<td>Kudapaduwa Church</td>
<td>Religious – cultural</td>
<td>Ettukala</td>
</tr>
</tbody>
</table>

*Nature of the affected sites and Grama Niladari Divisions in the Gampaha District.*

Among the nine affected sites, four sites represent historical - cultural features and five sites indicate religious and cultural features (fig 8).
2.4 LIST OF AFFECTED HERITAGE SITES
IN THE SURVEY AREA

Key
C - Colombo  G - Gampaha  K - Kalutara

Abhinavaramaya K
Al-Mohamadiya Mosque C
Ancient Walawwa K
Bauddhashramaya K
Bo-tree K
Church of Our Lady Sindrathri G
Devale C
Dutch House C
Duwa Devale C
Fountain House C
Gangaramaya K
Kali Kovil C
Kudapaduwa Church G
Mettaramaya C
Panadura Station K
Powder Magazine K
Samudraramaya K
Shipwreck G
Shipwreck G
Sri Sadharmaramaya K
St. Anthony's Church G
St. Anthony's Church G
St. Francis Xavier's Church C
St. Sebastian's Church G
St. Thomas' College C
Watch Hut C
Watch Hut G
Whist Bungalow C

List of affected heritage sites in the survey area.

3.0 COSTING ANALYSIS

In this section, we attempt to test the extent of the destruction of the heritage sites in the survey area. It is clear that affected sites in the Kalutara, Colombo and Gampaha Districts are located in 300m, 200m and 150m zones from the sea respectively (fig 9). This indicates to some extent that the track of the tidal waves in the survey area suggests that in the Western coastal belt, the extent of the affected zone showed a
gradual decrease from South to North. In this survey we used five costing components to test the extent of the damage, they are:

1. Minimal intervention (less than 10%)
2. Significant level of intervention (10% -30%)
3. Substantial level of intervention (30%-60%)
4. Badly damaged and requiring restoration (60%-90%)
5. Totally destroyed

The twenty-eight sites located in the survey area indicated different extents of damage according to these five components (fig. 10).

3.1 MINIMAL INTERVENTION
Panadura Railway Station, Baudhhashramaya and the ancient walawwa require minimal intervention. All these sites are located in the Kalutara District (fig.11)

3.2 SIGNIFICANT LEVEL OF INTERVENTION
A majority or twelve sites come within the significant level of intervention category. They are Abhinavaramaya, a Bo tree in Kalutara District, Kali Kovila, Whist Bungalow, Al-Mohamadiya Mosque, Fountain House, St. Thomas' College and Lunawa Devale in the Colombo District and St. Anthony’s Church, Sindrathri Church, St. Sebastian's Church and Kudapaduwa Church in the Gampaha District (fig. 12).

3.3 SUBSTANTIAL LEVEL OF INTERVENTION
In terms of the costing components, four sites require substantial levels of intervention. These comprise of Sri Saddharmaramaya in the Kalutara District, Mettaramaya and St. Francis Xavier's Church in the Colombo District and St. Anthony's Church in the Gampaha District (fig.13).

3.4 BADLY DAMAGED AND REQUIRED RESTORATION
According to the costing components, Samudraramaya and Gangaramaya in the Kalutara District and the Watch Hut in the Gampaha District come within the badly damaged component (fig.14).
3.5 TOTALLY DESTROYED COMPONENT
In terms of costing components, six sites have been totally destroyed. They are the Dutch House, Watch Hut and Walle Devale in the Colombo District and the Powder Magazine and two shipwrecks in the Gampaha District (fig. 15). In view of the various situations we discussed in the text, the Dutch House and Powder Magazine have not been affected by the tsunami disaster. They have been destroyed due to human intervention.

4.0 CONCLUSION
In the survey carried out within the boundaries of the Deduru Oya and the Kalu Ganga, we identified about twenty-eight damaged sites. Taking everything into consideration, the majority of sites come within the significant level of intervention, six sites come under the totally damaged group with lower numbers for the minimal, substantial and badly damaged groups (fig. 16).

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Mangala Katugampola
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University of Kelaniya
Fig.1 Survey area along with D.S. Divisions
Fig. 3 Affected areas in the Kalutara District

Fig. 5 Affected areas in the Colombo District
Fig. 7 Affected areas in the Gampaha District

Fig. 10 Classification of costing component of the affected sites
Fig. 11 Affected sites of the survey area – minimal intervention

Fig. 12 Affected sites of the survey area – significant intervention
Fig. 13 Affected sites of the survey area – substantial level of intervention

Fig. 14 Badly damaged sites in the survey area
Fig. 15 Totally destroyed sites in the survey area

Fig. 16 Total affected sites and costing component of the survey area