Candi Prambanan

Prambanan is a Hindu temple (candi) built by the 10th century Mataram Kingdom., The Prambanan complex was listed a UNESCO World Heritage site No.642 in 1991. The Siwa and Garuda temple in the Prambanan complex sustained heavy damage.This complex is located 40 km north east of the epicenter. However, this point is located at the end of the Imogiri (Opak) fault. Therefore, it is considered that the seismic wave was amplified by the directivity effect.

Picture taken by T. Ohsumi on June 6, 2006

Candi Prambanan

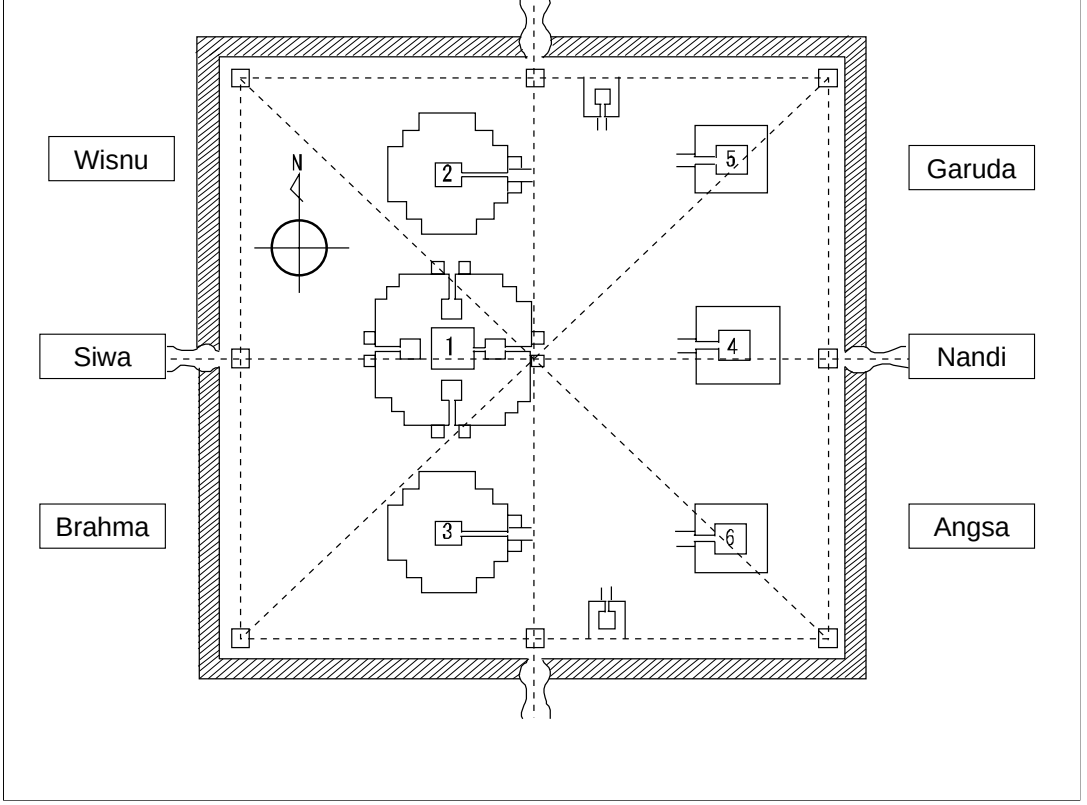
Prambanan temple in Klaten, Central Java was damaged heavily after the earthquake.

The temples were leaning and cracked.

For the time being, this area is closed to the public.

According to the UNESCO damage survey team, about 1000 stones has fallen following the earthquake, while roughly 300 cracks were found.

Foundations of three main temples have moved at least 10 centimeters.



Location of the indivisual temple in the central part of the Prambanan Complex.

As this is a Hindu temple, Candi Prambanan has three main temples, dedicated to the Hindu Trinity; Siwa, Wisnu, and Brahma. Each of these god temple faces a smaller temple of god's mount (vehicle) , Wahana. The Siwa temple (47 meters high) faces the temple ofNandi, the bull used by Siwa , the destroyer god. The Wisnu temple (27meters high) faces the temple of Garuda, the eagle used by Wisnu, the guardian god.

And the Brahma temple (37 meters high) faces the temple of Angsa, goose/swan used by Brahma, the creator god.

Candi Prambanan

The stones used were local Andesites and Basalts. Both of these stones are described in the book by Gonggong & Untoro Drajat (2004).

Gonggong, A. & Untoro Drajat, H. (2004): Pelapukan Batu Cani Siwa Prambanan dan Upaya Penanganannya. ISBN 979-97657-1-4. Bali Pelestarian Peninggalan Purbakala, Yogyakarta.

Statue of Siwa

Before the earthquake

After the earthquake

The statue of Siwa located inside the Siwa temple was not damaged after the earthquake.

It can be seen that there was no damage to the statue of Siwa from the comparison of before (left side of Figure) and after (right side of Figure) the earthquake.

Ishii, K., PRAMBANAN, 13p.,2006, (in Japanese),
http://www.harapan.co.jp/Indonesia/GBI/GBI_event.htm

Siwa

The Prambanan temple is the ancient masterpiece of Hindu architecture.

The wonderfully Ramayana epic on the inner wall of the Siwa temple is very well known.

Regrettably, this sculpture was damaged in the earthquake.

Siwa

Some parts of the gallery of the Siwa temple were damaged by the falling parts.

Siwa

Some cracks appeared in the corner section of this temple.

Siwa

All corner sections of Siwa temple had cracks.

Siwa

The width of the cracks wise is not so serious, it is difficult to judge whether or not the temple sustained serious damage.

Thus, detailed diagnosis of these temples should be done.

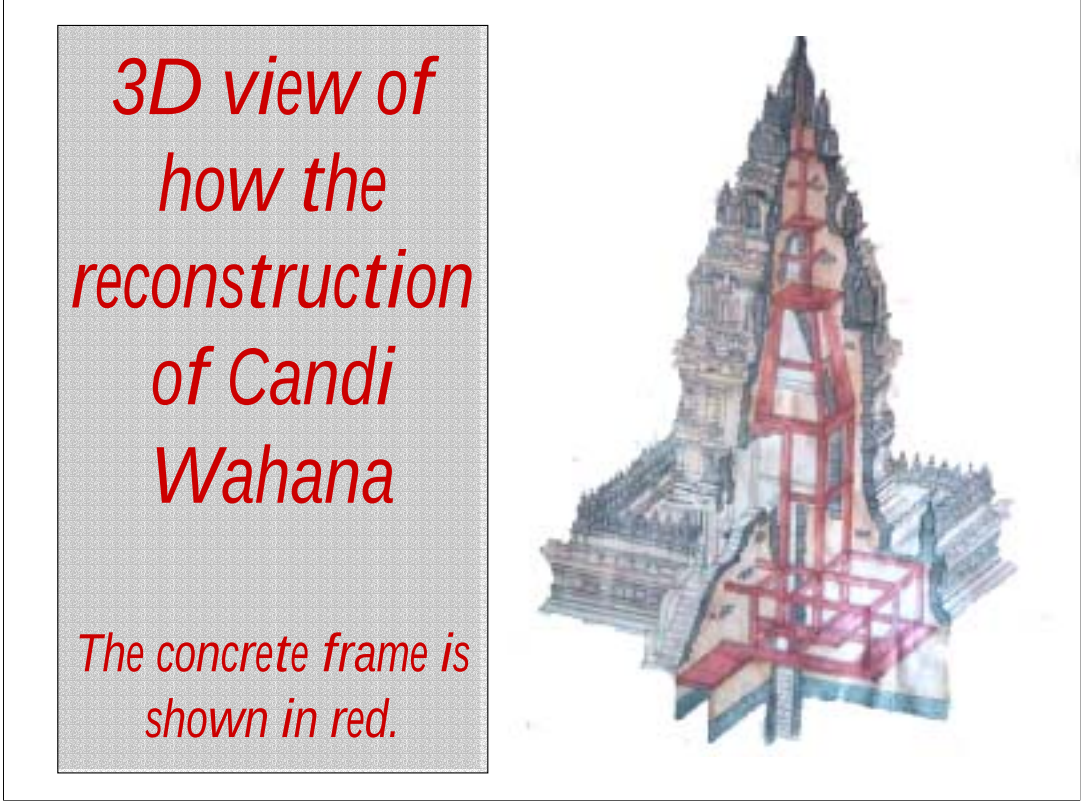
Brahma

Many parts which fell from the top of Brahma, which stands at a height of 37m, caused the closure of the entrance.

Brahma

Brahma

Stone works called Ratna (crown form decoration) fell from the top of Brahma and are scattered around the site.



3D view of how the reconstruction of Wahana (which is one of the Garuda, Nandi or Angsa). The concrete frame is shown in red.

According to UNESCO report, the reconstruction started 1918 and lasted until 1953, when Siwa was formally inaugurated. The reconstruction of the other temples followed, Brahma temple (1987), Wisnu temple (1991) and the three Wahana temples (Garuda, Nandi and Angsa) and further smaller temples (1993). For these reconstructions again reinforced concrete was used but this time the concrete was coated by a layer of ARALDITE TAR (mixture of Araldite TAR with sand of grain size < 1mm) to isolate the concrete from the rest of the construction. Originally all individual temples of the site were built by the sun burned masonry with the stones interlocking. This originally void space was filled with cement during reconstruction of Siwa temple and the cement was given a surface coating to camouflage it. For the reconstructions of the other temples this procedure was changed and the surface joints were filled with a mortar made from epoxy resin and sand.

UNESCO experts mission to Prambanan and Borobudur World Heritage Sites

Wisnu

In Prambanan Complex, the Wisnu temple is relatively not so seriously damaged from the earthquake.

Wisnu

Many Ratna parts which fell from the top of the Wisnu temple caused damaged to the corridor.

Garuda

Garuda is under restoration as many part sustained serious damage.

This temple is leaning due to the earthquake.

Nandi

Many parts which fell from the top of Nandi damaged the front stairs. However, the damage sustained was not so serious.

Nandi

Restoration of the damaged parts of the temple will be made by gluing the ruins.

Angsa

Many parts which fell from the top of Angsa damaged the side wall. However, the damage sustained was not so serious.

Angsa

Key Issues

1) Many parts which fell from the top of temples damaged the bottom of temples. However, the damage sustained was not so serious.

2) As the width of the cracks are not so large in the Siwa temple, it is difficult to judge whether or not the temple sustained serious damage.

Key Issues

3) Restoration of the damaged parts of the temple will be carried out by gluing the ruins.

4) Effective detailed diagnosis of these temples should be done.