

COMMUNITY SERVICE
FACULTY OF CULTURAL SCIENCES
GADJAH MADA UNIVERSITY

FINAL REPORT

ASSESSMENT ON THE EARTHQUAKE-AFFECTED CULTURAL
HERITAGES DAMAGE
IN YOGYAKARTA AND CENTRAL JAVA

COMMUNITY SERVICE TEAM
DEPARTMENT OF ARCHAEOLOGY



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in Yogyakarta and Central Java
Community Service Team
Department Of Archaeology

BACKGROUND

An earthquake on 27 May 2006 has caused extreme and widespread destruction in particular districts in Yogyakarta and Central Java. The disaster took over life of thousands of people, assets, stock, and property. The direct impact also refers to cultural treasures. Some of the cultural artifacts that have been the identity and pride of the region are in critical condition. Moreover, some of the cultural artifacts that have been acknowledged as “The World Heritage” are in serious damage. The damage of those nonrenewable and irreplaceable cultural heritages will inevitably flow into immense losses.

Serious responses and measures should be taken to prevent the further potential losses, i.e. the extinction of the cultural heritages. To address such condition, Faculty of Cultural Sciences powered by Department of Archaeology, Gadjah Mada University, and in cooperation with Center of Cultural Studies, Gadjah Mada University invites the public awareness to take part in preserving the earthquake-affected cultural heritages.

SERVICE OBJECTIVE

To asses archaeologically types and level of damage of the earthquake-affected cultural heritages for further measures curatively and preventively.

EXPECTED RESULT

The Recorded data of the earthquake-affected cultural heritages and recommendation as a basis designing renovation and reconstruction curatively and preventively in the form of hardcopy report and website publication.

PROJECT IMPLEMENTATION

I. Data Collection

The activity began with collecting the data through direct field observation. It aims to take note or record types and location of the earthquake-affected cultural heritages in Yogyakarta and Central Java as well as their types and level of damage. Thanks to Global Positioning System (GPS), coordinate of cultural heritages are documented and used for plotting on the map.

The number of the assessed buildings are 51 consisting of worshiping building, protection or safety facilities, means of transportations, houses, and recreation facilities. The assessment result is as follows.

Table 1. Cultural Heritages Damage Assessment

Group	Object	Level of damage	Remark/Recommendation
I	1. <i>Brambanan</i> Station	heavy; only floor, signal room and bath room remain	1. Reconstruction of <i>Brambanan</i> Station is carried out in coordination with PT KAI (<i>Kereta Api Indonesia/ State-Owned Train Company</i>).
	2. <i>Srowot</i> station	moderate	2. Renovation of <i>Srowot</i> Station is supposedly handled by PT KAI.
	3. <i>Ceper</i> Station	moderate	
	4. <i>Merak</i> Station	trial structure: light	3. Renovation of <i>Merak</i> Station is supposedly handled by Center for Heritage Conservation of Central Java.
	5. <i>Cokrotulung</i> Bathing Place	zero	
6. <i>Mantup</i> Temple	zero		
II	7. <i>Gampingan</i> Temple	light; stone structure in some parts are drifted apart	1. Renovation of <i>Gampingan</i> Temple is supposedly handled by Center for Heritage Conservation of D.I. Yogyakarta.
	8. <i>Petirtaan Payak</i>	zero	2. Renovation of <i>Kekayon</i> Museum has been handled by the owner.
	9. <i>Kekayon</i> Museum	light; the wall cracks	
III	10. <i>Palbapang</i> Station	outer part: zero; inner part: moderate	1. <i>Dalem Djoyoningratan</i> (<i>Jarahnita</i> Office) will be self-handled
	11. <i>Ganjuran</i> Church	heavy	
	12. <i>Bantul</i> Station	zero	
	13. <i>Dalem Djoyoningratan</i> (<i>Jarahnita</i> Office)	terrace: moderate; the fence fell down	
	14. <i>Pesanggrahan Ambarketawang</i>	light	
	15. <i>Pesanggrahan Ambarbinangun</i>	building and surrounding fence: moderate	
	16. <i>Dalem Brontokusuman</i>	heavy	
	17. <i>Selo</i> Mosque	zero	
IV	18. <i>Dirgantara</i> Museum:	heavy;	1. Renovation of

		the wall collapsed; collection of airplane is in serious damage	<i>Dirgantara</i> Museum will be handled by Indonesian Airforce (<i>TNI AU</i>)
	19. <i>Monumen Jogja Kembali</i>	zero	
	20. <i>Darmawiratama Museum</i>	building: light; collection: light	
	21. <i>Pura Pakualaman</i>	light	2. Renovation of <i>Puro Pakualaman</i> will be handled by a team from Gadjah Mada University.
	22. <i>Taman Siswa</i>	some buildings: heavy; pillars of <i>pendopo</i> detached from the base (<i>umpak</i>)	
	23. <i>Sasmitaloka</i> Museum:	light; many statue collection damaged	
V	24. <i>Gebang</i> Temple	zero	
	25. <i>Sari</i> Temple	light; the stone structure cracked	
	26. <i>Sambisari</i> Temple	zero	
	27. <i>Kalasan</i> Temple	moderate; some parts of roof-piling stone and reliefs on bosom part fell down and drifted apart	
	28. <i>Affandi</i> Museum	main gallery: moderate; painting collection: zero	<i>Affandi</i> Museum has been self-handled
VI	29. <i>Ploso Kuning</i> Mosque	light	1. Renovation of <i>Ploso Kuning</i> Mosque, <i>Wonokromo</i> Mosque are supposedly handled by Center for Heritage Conservation D.I. Yogyakarta.

	30. <i>Wonokromo</i> Mosque	moderate	
	31. <i>Patukan</i> Station:	zero; old building does not exist	
	32. <i>Tugu</i> Station	moderate; the wall cracked	2. Renovation of <i>Tugu</i> Station will be handled by PT KAI.
	33. <i>Selarong</i> Cave:	moderate; supporting building damaged	3. Renovation of <i>Selarong</i> Cave and <i>Diponegoro</i> Museum are supposedly handled by Bantul Regency Government.
	34. <i>Diponegoro</i> Museum (<i>Tegalrejo</i> Museum)	moderate	
VII	35. <i>Vredeburg</i> Fortress Museum	moderate; the wall cracked	1. Renovation of the museums is supposedly handled by local governments and museum administrators.
	36. <i>Tembi</i> Museum:	some parts: heavy ; some collection damaged	
	37. <i>Perjuangan</i> Museum	moderate	
	38. <i>Sonobudoyo</i> Museum Unit I	moderate	
	39. <i>Sonobudoyo</i> Museum Unit II	moderate; collection in good condition	
	40. <i>Klenteng Gondomanan</i> :	moderate; some wall decorations damage	2. <i>Klenteng Gondomanan</i> and <i>Klenteng Kranggan</i> has not been handled yet.
	41. <i>Klenteng Kranggan</i>	heavy	
VIII	42. <i>Pesanggrahan Warungboto</i>	moderate; some walls structurally are broken and threatening	1. <i>Pesanggrahan Warungboto</i> , <i>Siluman</i> Cave, <i>Kauman</i> Mosque (old), House of <i>Bupati</i> Imogiri, Mosque and Tomb of <i>Giriloyo</i> are supposedly handled by Center for Heritage Conservation) D.I. Yogyakarta and local government.
	43. <i>Siluman</i> Cave	light	
	44. <i>Cendonosari</i> Tomb	structurally heavy	2. Renovation of <i>Cendonosari</i> Tomb <i>Giriloyo</i> are supposedly handled by Center for Heritage Conservation) D.I. Yogyakarta and the

			heir.
45. <i>Kauman</i> Mosque (old) Pleret	moderate		
46. House of <i>Bupati Imogiri Surakarta (Puroloyo)</i>	heavy; <i>Pendopo</i> fell down		
47. House of <i>Bupati Imogiri Surakarta</i>	heavy; <i>Pendopo</i> fell down		
48. Traditional house of <i>Girirejo</i>	heavy		3. Renovation of Traditional house of <i>Girirejo</i> will be handled by the community.
49. <i>Giriloyo</i> Tomb	heavy; soil support needs to be taken into consideration		
50. Mosque of <i>Giriloyo</i> Tomb	moderate		
51. <i>Rumah Kalang</i> Imogiri (BRI Bank Office)	heavy		4. <i>Rumah kalang</i> Imogiri has not been handled yet.

Table 2. Recapitulation of Cultural Heritage Damage

Building Type	Zero Damage		Light Damage		Moderate Damage		Heavy Damage	
	Quantity	%	Quantity	%	Quantity	%	Quantity	%
Station	2	3.92	0	0	4	7.84	1	1.96
Fortress	0	0	1	1.96	0	0	0	0
Protection Cave	0	0	1	1.96	0	0	0	0
Museum	1	1.96	5	9.80	3	5.88	2	3.92
<i>Dalem/Pura</i> /House	0	0	1	1.96	1	1.96	6	11.76
<i>Pesanggrahan</i>	0	0	2	3.92	2	3.92	0	0
Bathing Place	1	1.96	0	0	0	0	0	0
<i>Petirtaan</i>	1	1.96	0	0	0	0	0	0
Temple	3	5.88	3	5.88	1	1.96	0	0
Church	0	0	0	0	0	0	1	1.96
Mosque	1	1.96	2	3.92	2	3.92	0	0
Tomb	0	0	0	0	0	0	2	3.92
<i>Klenteng</i>	0	0	1	1.96	0	0	1	1.96

The criteria of damage are determined according to techno-archaeological consideration, which can be divided into four levels:

1. Zero damage.
2. Light damage: the damage is not structural damage which can cause the building collapsed.

3. Moderate damage: the damage is structural, but the building did not collapse.
4. Heavy damage: the building collapsed, or did not collapse but threatening public safety

The damage level of museum collection varies and can be divided into three categories, i.e. light, moderate, and heavy damage.

1. Light damage: a part of the object drifted apart but it can be easily reconstructed.
2. Moderate damage: some or all part of the object drifted apart but it can be reconstructed as the original
3. Heavy damage: some parts of the object have broken and thoroughly it can be reconstructed; or part of the object did not drift apart but it cannot be reconstructed as the original.

II. Plotting of Assessment Result

The Plotting of the damaged cultural heritages location on the topographic map is based on the coordinate position provided by Global Positioning System (GPS). Then, plotting result is overlaid on the geological map to find out the position of the cultural heritages towards the assumed earthquake belt. Cultural heritages mapping is aiming for the preventive conservation in the future.

III. Archaeological Rapid Assessment

Archaeological Rapid Assessment on the earthquake-affected cultural heritages is conducted for the response action either curatively or preventively. Archaeological Rapid Assessment is carried out based on the morphological condition and post-earthquake construction in order to find out the damage level.

Based on the result of observation and assessment, recommendation for the measures of the of culture heritages damage in Yogyakarta and Central Java generally are as follows.

1. light damage: can be renovated by the owner
2. moderate damage:
 - a. renovated according to the classes (in accordance with Perda KCB and BCB D.I. Yogyakarta)
 - b. repaired in accordance with the archaeological principles, i.e. considering the following principles:
 - i. Authenticity, which includes material, form, technology, and setting
 - ii. Integrity, to maintain the context
 - iii. Sustainability, to be able to last for a long time
 - c. if it can not be restored, or if it is restored due to the owner's initiative, information and illustration or photos which describes pre-earthquake condition are necessary.
 - d. Initiator of Renovation: owner, competent institution, academician, community.
 - e. Executive in charge: competent institution, academician.
3. heavy damage

- a. renovated according to the class (in accordance with Perda KCB and BCB D.I. Yogyakarta)
- b. repaired in accordance with the archaeological principles, i.e. considering the following principles:
 - i. Authenticity, which includes material, form, technology, and setting
 - ii. Integrity, to maintain the context
 - iii. Sustainability, to be able to last for a long time
- c. if it can not be restored, or if it is restored due to the owner's initiative, information and illustration or photos which describes pre-earthquake condition are necessary.
- d. Initiator of Renovation: owner, competent institution, academician, community.
- e. Executive in charge: competent institution, academician.

IV. Dissemination of the Assessment

The earthquake-affected cultural heritages damage in Yogyakarta and Central Java is documented in the form of report and has been published in the website of Archaeology Department, Faculty of Cultural Sciences, Gadjah Mada University, <http://arkeologi.ugm.ac.id>, so that it can be accessed by the public. The public supposedly can contribute valuable input in response plan and implementation curatively and preventively. Website publication is not only in Bahasa Indonesia, but also will be in English, French, Japanese, Korean, and Arabic. Multilanguage publication hopefully can invite international awareness towards the condition of the post-earthquake cultural heritages damage in Yogyakarta and Central Java.

Sustainability Plan

Website publication can be developed and updated at anytime. Moreover, this website dissemination basically aims to invite public awareness from either domestic or foreign countries so that they can contribute valuable input to the response plans and implementation either curatively or preventively. This activity is the first-stage activity which is emergency response and it is expected that in the next stages will involve other departments in the Faculty of Cultural Sciences, Gadjah Mada University.