



corbis/Mast Irham

Annexes

ANNEX: DATA AND METHODOLOGY¹

Housing

Data:

- Data used for all tables is as of 18:00 hours June 6, 2006 provided by Yogyakarta Media Centre. This figure is reduced by 10% to reflect site visit observations, discussions with on-site relief staff and feedback from beneficiaries.
- The latest census data including housing figures is the Podes Survey of 2003.
- All figures related to housing size, costs, and others are based on field interviews and discussions with local and provincial authorities.
- The number of families and houses for Sukoharjo and Wonogiri has been estimated by using population figures only as no data was available from Podes-2003.

Assumptions:

- Average housing size is approx. 9 x 6 m (54 squared meters (m²)) having 3 to 4 rooms, 1 living area, 1 WC, and 1 kitchen. A typical house has clay tile or iron sheet/bamboo roof, bricks, 8-9 mm steel rods, concrete flooring, a basic WC with septic tank.
- Rebuilding cost is based on current Indonesian construction cost; it is calculated at Rp 1.2 million/m² less 15% for recycled material.
- Household contents include TV, rice cooker, tape recorder, blender, iron, and small fridge. For totally damaged units, 60% is assumed to be lost to earthquake; for partially damaged units, 35% is assumed lost.
- Furniture costs include basic bedroom with bed, wardrobe, and a small table plus living room sofa, tables and buffet. These are assumed at Rp 4,320,000 with similar loss distribution as above.
- Clothing and food-stock losses are assumed at Rp 333,000 with similar loss distribution as above.
- Temporary shelter set-up material and labor plus salvaging of material is assumed at Rp 225,000.
- Rehabilitation/repair cost is estimated at 50 % of the rebuilding cost, or Rp 500,000 m².

¹ Exchange Rate 1 US\$ = Rp 9,300.-

Table A.1: Housing Damage and Loss Summary

Districts	Physical Impact										Impa
	Housing Stock 2003	Totally Destroyed	Heavily Damaged	Lightly Damaged	Totally Destroyed Adjusted	Damaged Adjusted	% Housing Stock Destroyed	% Housing Stock Damaged	Rebuilding Cost for Totally Destroyed Units (Rp)	Losses for Totally Destroyed Units (Rp million)	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	(Rp 1
Bantul	181,991	26,045	29,582	24,262	46,753	33,137	25.69	18.21	2,524,639	243,140	89
Klaten	280,513	27,270	55,112	84,283	65,849	100,817	23.47	35.94	3,555,829	342,450	2,7
Gn. Kidul	158,570	11,323	5,355	16,360	15,071	17,967	9.50	11.33	813,856	78,380	48
Sleman	196,965	4,719	14,403	29,910	14,801	34,231	7.51	17.38	799,232	76,971	92
Yogya	78,079	1,948	4,119	2,355	4,831	3,591	6.19	4.60	260,880	25,124	90
Kln. Progo	87,940	3,485	4,726	7,999	6,793	9,417	7.72	10.71	366,818	35,327	25
Sukoharjo	214,463	46	1,627	-	1,185	488	0.55	0.23	63,987	6,162	13
Wonogiri	261,044	15	11	67	23	70	0.01	0.03	1,234	119	1
Boyolali	219,537	276	626	637	715	825	0.33	0.38	38,598	3,717	2
Magelang	260,391	179	456	592	499	729	0.19	0.28	26,920	2,593	19
Purworejo	177,882	9	193	702	144	760	0.08	0.43	7,766	748	20
Totals	2,117,375	75,315	116,211	167,168	156,662	202,031	7.40%	9.54%	8,459,758	814,731	5,4
Notes	<p>[1] Source: National Census Data (Podes 2003)</p> <p>[2] [3] [4] Media Center Report Yogyakarta, June 7, 2006</p> <p>[5] Assumes 70% of heavily damaged units will need to be demolished and rebuilt.</p> <p>[6] Assumes 30% of heavily damaged units can be rehabilitated and/or repaired.</p> <p>[7] Is the ratio of column [5] to [1].</p> <p>[8] Is the ratio of [6] to [1].</p> <p>[9] Assumes average house size of 54 m2. and Rp 54 million/house reconstruction cost.</p> <p>[10] Assumes 60 % of pre-earthquake assets (appliances, kitchen utensils, clothing, furniture, and foodstuffs) and temporary shelter costs lost.</p> <p>[11] Assumes average house size of 54 m2 and Rp 27 million/house repair cost.</p> <p>[12] Assumes 35 % of pre-earthquake assets (appliances, kitchen utensils, clothing, furniture, and foodstuffs) and temporary shelter costs lost.</p>										

Infrastructure

TRANSPORT AND TELECOMMUNICATION

Roads, Railways, Aviation and Telecommunication

Data

The estimates for roads damage (National, Provincial, District) in Yogyakarta Province were prepared by the Public Works Agency/Kimpraswil DI Yogya and agreed upon at a meeting in the Bappeda Yogyakarta Province Office on evening of Tuesday, June 6, 2006. Detailed costing information and extensive supporting photos were also provided. The estimates for road damage in Central Java were prepared by Public Works Agency /Kimpraswil Central Java and provided to Bappeda Yogyakarta Province on Wed, June 7. These data sets were used to prepare the main and supporting tables of this report.

For railways, damage cost estimates were provided by Directorate General of Rails and PT KAI Operating Region VI on June 6 and 7, 2006.

For the aviation sector, data were provided by PT Angkasa Pura I / Directorate General of Civil Aviation on June 7, 2006.

For the telecommunications, the initial provision for an amount of Rp 7 billion was made by the assessment team on the basis of a report on post and telecom sector damage prepared by the Ministry of Communications and Information Technology, which did not contain a cost estimate.

Assumptions

The cost estimates were prepared based on inspections of individual damage locations and standard unit costs used by the public works agencies.

Table A.2: Damage and Losses in Road Sector

Item	Impact Valuation			Losses
	Total	Direct Damage (Rp Billion)		
		Rehabilitation	Reconstruction	
ROADS	44.975	37.3	7.645	Negligible
Roads in Yogyakarta Province	37.033	29.388	7.645	
National Roads	2.609	2.609	0	
Provincial Roads	9.824	9.824	0	
District Roads	2.201	2.201	0	
National Bridges	4.773	4.773	0	
Provincial Bridges	5.056	5.056	0	
District Bridges	12.569	4.924	7.645	
Roads in Central Java	7.942	7.942	0	
National Roads	0	0	0	
Provincial Roads	0	0	0	
Local Roads (Kab. Roads)	4.025	4.025	0	
National Bridges	0	0	0	
Provincial Bridges	2.717	2.717	0	
District Bridges	0	1.2	0	

Table A.3. Summary of Damage and Losses in Railway Sector

Item	Valuation (Rp. Million)		
	Total	Damage & Losses	Losses
		Damages	
Track			
Srowot-Branbanan Section	4,795	4,795	0
Maguwo-Lempuyangan Section	398	398	0
Wates-Sentolo Section	5,970	5,970	0
Electrical (Electricity, Signal, Telecom)			
Srowoto-Branbanan Station	750	750	0
Civil (Bridge)	2,100	2,100	0
Building			
Station Buildings (12station)	1,175	1,175	0
Other Buildings	3,682	3,682	0
Supporting Facilities (Concrete Fence)	1,064	1,064	0
Total	19,934	19,934	0

Table A.4. Summary of Damage and Losses in Aviation Sector

Item	Valuation (Rp. Million)		
	Total	Damage & Losses	Losses
Airport Infrastructure	0	0	0
Airside Facilities			
Runway Leveling	12,000	12,000	0
Runway Crack Repair	300	300	0
Operation Road/Bridge	250	250	0
NAV/COM/AFL Equipment	360	360	0
Landside Facilities			
Departure Terminal	5,440	5,440	0
Control Tower	40	40	0
Checking Building	100	100	0
Other Facilities	285	285	0
Airport Revenue Losses			
Passenger Service Charge (PSC)	85	0	85
Vehicle Parking Charge	1	0	1
Cargo Handling Charge	65	0	65
Total	18,926	18,775	151

Source: Estimates of Joint Assessment Team

ENERGY

Data

The data for damage estimates was presented by PLN in the June 2, 2006 Coordination Meeting. There were unconfirmed reports of some damage to six roadside gas stations. No further details were available.

The PLN Load Control Center (P3B) supplied detailed cost estimate for substation repairs on June 9, 2006. A detailed breakdown of distribution network and customer buildings damage repair cost estimate was also received from PLN HQ. There is no updated estimate of PLN's losses resulting from increased power generation costs. The Head of P3B has provided indicative energy costs for coal and oil fired generation of Rp200 and Rp1800/kWH respectively but MWH sales estimates have not yet been obtained.

Revised estimate of the transmission substation loss should be made on the basis of normal and 'disaster' load flow information and the indicative unit energy costs for coal and oil-fired turbine plants.

WATER AND SANITATION

Data

Information was gathered from the Ministry of Public Works (MPW), the local PDAMs, the Association of Indonesian Water Supply Enterprises (PERPAMSI), Asian Development Bank, World Bank, UNICEF, and other donor and aid agencies supporting the relief effort. Very limited information was available on rural water supply, especially on the physical damages and impacts of the earthquake disaster. The assessment team conducted site visits to inspect in particular rural damage.

Assumptions

PDAM Damage: Data on existing assets (capacity of production unit, water tankers, pipe network, and connections) are incomplete. Damage to office buildings covered under other sectors (housing). Unit costs are based on MPW standards, complemented by assumptions made by the assessment team.

PDAM Losses: The calculation of potential losses for PDAMs is based on very preliminary information and incomplete data. It is assumed that 20% of revenue is lost for the first 6 months; revenues would return to pre-disaster level after 12 months. The same would apply to additional operating cost resulting from additional cost for fuel and chemical, and staff overtime. Additional cost for mobile treatment plants operated by aid agencies and army are not included due to lack of data.

Rural Water Supply: Cost for on-site sanitation (septic tanks, pit latrines) in urban and rural areas have been accounted separately under the Housing Sector analysis. Unit costs are based on assumptions made by the assessment team.

Individual water supply is assumed to be consisting of mostly shallow dug well. PODES data was used to estimate percent of villages with well. A preliminary field survey conducted by the assessment team suggested that 80% of the wells were filled with debris and needs cleaning and 20% suffered medium damage. The cost of rehabilitating damaged wells was assumed to be 50% of the total cost of a well. To estimate cost of cleaning, 4 person days of labor cost, amounting to 10% of the total cost of well was assumed in the analysis. The total number of wells affected was estimated based on the number of houses destroyed as assessed by the housing assessment team.

Urban sanitation: Information on damage to urban sanitation and solid waste management is very sparse. Damage assessment for urban sanitation in Yogyakarta is limited to secondary information obtained from government agencies such as Joint Secretariat of Kartamantul, and provincial Public Works office. Community sanitation facilities (MCK) are not included due to lack of data. Damage to office buildings are covered under other sectors (housing). Cost for on-site sanitation (septic tanks, pit latrines) in urban and rural areas will be covered under housing. Unit costs are based on assumptions made by the water and sanitation assessment team.

Table A.5: Damages in PDAM Water Supply

No.	District/Kota	Production capacity, L/s					Water tank truck					Pipe network, km incl conn.		
		Before	Level of damage (%)	After	Unit cost per L/s (Rp million)	Cost of Damage (Rp million)	Before	Level of damage (%)	After	Cost per unit (Rp million)	Cost of Damage (Rp million)	Before	Level of damage (%)	After
Central Java Province														
1	Purworejo	0	0%	0	75	0								
2	Magelang	0	0%	0	75	0								
3	Boyolali	0	0%	0	75	0								
4	Klaten	296.5	0%	296.5	75	0								
5	Kota Magelang	0	0%	0	75	0								
Total Central Java Province														
Yogyakarta Province														
6	Kulonprogo	130	0%	130	19	0	2	0%	2	200	0	0	0%	0
7	Kab. Bantul	235	40%	141	19	1,786	3	0%	3	200	0	40	30%	28
8	Gunung Kidul	446	0%	446	19	0	4	0%	4	200	0	0	0%	0
9	Sleman	281	0%	281	19	0	2	0%	2	200	0	0	0%	0
10	Yogyakarta	583	0%	583	19	0	5	0%	5	200	0	800	2%	784
Total Yogyakarta Province		1,674		1,877		1,786	16		16		0	840		812
Affected area only (Yogyakarta Province)		1,099		1,005										

Note: Unit cost of production is based on average investment cost of wells in PDAMs

Table A.6: Losses in PDAM Water Supply

Item	0-6	6-12	Total
	months (Rp million)	months (Rp million)	
Lost revenue	1,640	820	2,460
Additional operating cost	820	410	1,230
TOTAL	2,460	1,230	3,690
Assumptions:			
Item	unit		
Water produced	l/s		1,099
Non-revenue water	%		40%
Water produced	cm / month		2,847,312
Water sold	cm / month		1,708,387
Average tariff	Rp / cm		800
Additional operating cost	Rp / cm		400
Lost revenue 0-6 months	%		20%
Lost revenue 6-12 months	%		10%
Addit. oper. cost 0-6 months	%		20%
Addit. oper. cost 6-12 months	%		10%

Table A.7: Damage Assessment Rural Water Supply

Item	Cost of	
	Total (units)	damage (Rp million)
Dug wells requiring cleaning	139,778	33,547
Dug wells requiring rehabilitation	34,945	41,933
TOTAL	174,723	75,480

Item	Assumptions:		
	for new well (Rp million)	for well cleaning (% of new)	for well rehabilitation (% of new)
Dug wells	2.4	10%	50%

Assuming medium damage to be 50% of total
Assuming 4 person days to clean = 240k rp so 10% of total cost

Assumptions				
Assumed that total dug wells affected are equivalent to total number of houses totally damaged				
	No of houses damaged (from the table below- Housing)	No of dug wells (from the table below)	No of dug wells with debris (need cleaning)	No of dug wells need rehabilitation
Central Java Province				
Purworejo		180	144	36
Magelang District		229	183	46
Boyolali		413	330	83
Klaten		77,561	62,049	15,512
Magelang City		-	-	-
Sukoharjo District		1,281	1,025	256
Wonogiri District		18	15	4
Total Central Java Province		79,682	63,746	15,936
Yogyakarta Province				
Kulonprogo		6,845	5,476	1,369
Bantul District		57,281	45,825	11,456
Gunung Kidul		9,269	7,415	1,854
Sleman		16,998	13,599	3,400
Yogyakarta		4,648	3,718	930
Total Yogyakarta Province		95,041	76,033	19,008
TOTAL		174,723	139,778	34,945

Data on damaged houses (from the Housing Sector)							
	Totally	Damaged	Total	No of	no of village	% of	No of
	Destroyed	Adj	Weighted	villages*	wth well*	people	existing
Yogyakarta Province	Adj					using	well
						well	well
Bantul	46,753	29,582	60,508	75	71	95%	57,281
Sleman	14,801	14,403	21,498	86	68	79%	16,998
Yogyakarta City	4,831	4,119	6,747	45	31	69%	4,648
Kulonprogo	6,793	4,726	8,990	88	67	76%	6,845
Gn. Kidul	15,071	5,355	17,561	144	76	53%	9,269
Total				438	313	71%	95,041
Central Java Province							
Klaten district	65,849	55,112	91,476	401	340	85%	77,561
Magelang district	499	456	711	370	119	32%	229
Boyolali district	715	626	623	267	177	66%	413
Sukoharjo district	1,185	1,627	1,942	-		66%	1,281
Wonogiri district	23	11	28	-		66%	18
Purworejo district	144	193	233	494	381	77%	180
Total	68,414	58,026	95,012	1,532	1,017	66%	79,682

Note:*data from Podes 2005.

Table A.8: Damage Assessment Urban Sanitation

	Wastewater Treatment Plant (IPAL)					Sewer line and connections					Vacuum Truck	
	Before	Level of damage (%)	After	Cost per unit (Rp million)	Cost of Damage (Rp million)	Before (m)	Level of damage (%)	After (m)	Cost per m (Rp million)	Cost of Damage (Rp million)	Before	Level of damage (%)
Central Java Province												
Purworejo	0	0%	0	0	0	none					0	0%
Magelang	0	0%	0	0	0						0	0%
Boyolali	0	0%	0	0	0						0	0%
Klaten	0	0%	0	0	0						0	0%
Magelang	0	0%	0	0	0						0	0%
Total Central Java Province	0	0%	0	0	0						0	0%
Yogyakarta Province												
Kulonprogo	none				0	none				0	none	0%
Bantul	1	3%	1	47,413	1,422	10,092	0%	10,092	896	-	2	0%
Gunung Kidul	none				0	none				-	none	0%
Sleman	none				0	6,750	0%	6,750	97,185	-	none	0%
Yogyakarta City	none				0	113,695	0%	113,695	147,139	-	12	0%
Total Yogyakarta Province	1		0.97		1,422	130,537		130,537		-	0	0%

Note:

Assessment on damage in urban sanitation is based on the following information :
sewerage scheme exists in Yogyakarta, part of Kab Bantul and part of Kab Sleman.
communal (CBS) schemes exist in Yogyakarta

IPLT (sludge treatment plant) does not exist in any city outside Yogyakarta

No information available regarding level of damage to sewer line in Yogyakarta

Source: Yogyakarta Urban Infrastructure Management Support and Kimpraswil provincial office

Social Sectors

EDUCATION

Assumptions:

TK/RA/Diniyah: 4 classrooms @ 48m² + 1 service room @ 48m²

SD/MI: average 25 students/classroom, number of classroom/school = 6.26

1 classroom = 56m²; plus 3 service rooms

SMP/MTs : 30 students/classrooms, number of classrooms/school = 10.7

1 classroom = 63m²; plus service rooms & labs

SMA/MA/SMK : 35 students/classroom; no. of classrooms/school = 10.3126984

1 classroom = 72m²

SLB : 150 - 200 m²

Tertiary education : information from interview, rough estimate

Kantor Cabang Dinas = 200 m²/unit (info from Dinas Kab & Prov)

Unit cost for rebuilding = Rp 1,800,000/m²; Weighting factor Destroyed = 1.0; Severe = 0.65; Minor = 0.2. Based on information from World Bank Engineering Team (Pak Anto + Pak Atmaji)

Computer lab: 20 unit per school for SMP/MTs; and 30 units for SMA/MA/SMK

SMP/MT 160000 Rp/school

SMA/MA 240000 Rp/school

PT 240000

Furniture = destroyed school 50% furniture damaged; 1 set desk & chair per school:

TK/RA 6000

SD/MI 18750 Rp/school

SMP/MT 45000 Rp/school

SMA/MA 61250 Rp/school

SLB 8750

PT 50000

Temporary tents or space rental = Rp 15,000,000/100 m², (or Rp 1500,000/m²) to be estimated 50% of building space

Costs of hiring & training new teacher/staff = Rp 5,000,000/person to replace dead personnel

Costs of paying temporary teachers to replace heavily injured = Rp 1,500,000/person/month; for 3 months

Damaged of educational equipment (audio, lab equipment, teaching equipment, etc) is estimated

TK/RA	3000	
SD/MI	5000	Rp/school
SMP/MT	15000	Rp/school
SMA/MA	25000	Rp/school
SLB	10000	
PT	30000	

Damaged of textbook & teaching materials

TK/RA		
SD/MI	5000	Rp/school
SMP/MT	10000	Rp/school
SMA/MA	15000	Rp/school
SLB	5000	
PT	20000	

Costs of counseling for students

To estimate public & private sector, pre-disaster data on number of classrooms were used

	Public (%)	Private (%)
TK	1.5	98.5
SD	82	18
SMP	67	33
SMA	54	46
SMK	38	62
SLB	20	80

Table A.9: Damages in Education Sector by School Type and Level

<i>Data Source:</i>					
1. Sekretariat MONE Task Force (Posko Sekretariat Pusat Satgas Depdiknas)					
2. Provincial Education Office of Central Java					
3. Provincial Education Office of Yogyakarta					
District/Kota	Type of school	Number of damaged buildings			Total
		Destroyed	Severe	Minor	
Central Java Province					
Damage Buildings	TK	2	10	16	28
	SLB	-	1	-	1
	SD	56	295	213	564
	SMP	2	28	21	51
	SMA	4	5	6	15
	SMK	-	7	2	9
	RA	-	-	-	-
	MI	1	7	7	15
	MT's	-	1	2	3
	MA	-	-	-	-
	PT	-	-	-	-
	Lembaga PAUD	2	6	-	8
	PKBM + TBM	3	8	1	12
	Lembaga Kursus	-	2	13	15
	Madrasah Diniyah	1	1	-	2
	Pondok Pesantren	2	-	3	5
	Gedung Diklat	4	3	-	7
	SKB	-	1	-	1
	Kantor Cabang Dinas	2	7	7	16
	Total Central Java	79	382	291	752
Yogyakarta Province					
Damaged Buildings	TK	96	145	72	313
	SLB	1	13	4	18
	SD/MI	511	389	362	1,262
	SMP/MT's	95	71	39	205
	SMA	37	19	18	74
	SMK	25	34	29	88
	RA	-	-	-	-
	MI	-	5	2	7
	MT's	-	1	-	1
	MA	-	-	-	-
	PT	1	13	40	54
	Lembaga PAUD	10	44	17	71
	PKBM + TBM	1	10	-	11
	Lembaga Kursus	-	-	-	-
	Madrasah Diniyah	-	-	-	-
	Pondok Pesantren	-	27	14	41
	Gedung Diklat	-	-	1	1
	SKB	-	3	-	3
	Kantor Cabang Dinas	-	5	1	6
	Total Yogyakarta Province	777	779	599	2,155
	TOTAL Yogyakarta and	856	1,161	890	2,907

HEALTH

The damage assessment is based on comparison of 'Before' and 'After' data. 'Before' data for the number of health facilities are from BPS, Central Java Province 2004 Health Profile and Yogyakarta Province 2005 Health Profile.

'After' data for hospitals, health centers and health sub-centers were gathered by teams from the Ministry of Health (Balitbangkes), Central Java and Yogyakarta Province and Related District Health Offices, World Bank and Asian Development Bank. The survey was carried out between 29 May and 7 June 2006. The team visited all of the 6 districts in Yogyakarta and 5 districts in Central Java affected by the earthquake. In each district they collected information from health staff and other informants on the following variables at the relevant district and provincial levels:

- Hospitals – public and private, general and specialized.
- Health centers (Puskesmas)
- Sub-health centers (Pustu)
- Polindes
- Maternity homes
- Vehicles
- Private and joint medical practices
- Midwife practice
- District health offices
- Health staff quarters in Puskesmas/Pustu
- Drug warehouses
- Health laboratories
- Training institutions
- Health polytechnic institutions

Assumptions:

Losses were estimated as marginal costs of programs and activities over and above those which would have normally been incurred had there been no earthquake. The actual programs included are based on reports of current public health activities in the province.

Unit costs for both damages and losses were estimated using information from the Department of Health and experience in projects and sector work. The assumptions underlying the various estimates are listed in the relevant tables and reproduced below:

- Assume all temporary health clinics operating are granted by donors.
- Assume all private specialty hospitals public and private as private hospital 100 beds.
- This means that the number of facilities affected = total number of facilities * percent of district affected by earthquake, of these assume proportions destroyed, heavily damaged, and lightly damaged are equivalent to the damage to the modern housing stock (44% destroyed, 28% moderate damage, 28% light damage)
- Assume that minor reconstruction costs 12% of total reconstruction; major reconstruction costs 55% of total reconstruction.
- Public health costs are estimated over and above current spending for surveillance, vector control, immunization and nutrition campaigns, and other programs. Not yet calculated

- Private practices damage reports not available.
- Polyclinic costs are valued the same as Pustu costs.
- The damage costs for private practices are a simple average of the costs for doctor, nurse, and midwife practice, not yet calculated.
- The Rp/\$ exchange rate = 9300Rp/\$1, as per early June 2006.
- Assume 10% of drugs purchased by Ministry of Health is imported, assume 80% of replaced supply costs go to pharmaceuticals.
- Assume that 50% of equipment is imported.
- Updates original Jan 2005 cost estimates to May 2006 using BPS deflators.
- Drug and equipment costs still need to be updated for inflation.
- Health Staff Housing costs assumed to be same as Pustu costs.
- UPT costs assumed to be same as Puskesmas costs.
- Public health campaigns and trauma mitigation have not been calculated.

Table A.10 : Damage and Losses in Health Sector

	Square Meters (M2) private Damage	Public facilities		Public hospitals	Public health clinics	Public health sub-clinics	Other public and admin	Private hospitals	Other private facilities	Damage	Public health programs	Replacement personnel
		hospitals	other									
Yogyakarta City	11405	8	29	79,289,050,436	7,162,772,276	1,289,663,323	12,993,624,951	388,791,126,192	114,873,282,784	604,399,519,962	0	1,236,700
Bantul District	6838	1	144	9,911,131,305	35,566,869,230	6,403,845,465	64,520,068,724	233,104,228,049	68,873,608,740	418,379,751,514	0	741,500
Kulonprogo District	205	0	12	0	2,963,905,769	533,653,789	5,376,672,394	6,988,354,307	2,064,798,156	17,927,384,415	0	22,200
Gunung Kidul District	1763	1	110	9,911,131,305	27,169,136,218	4,891,826,397	49,286,163,609	60,099,847,039	17,757,264,143	169,115,368,710	0	191,100
Sleman District	2285	4	78	39,644,525,218	19,265,387,500	3,468,749,627	34,948,370,559	77,894,583,371	23,014,945,301	198,236,561,577	0	247,700
Total Yogyakarta Province	22496	14	373	138,755,838,263	92,128,070,993	16,587,738,601	167,124,900,238	766,878,138,957	226,583,899,125	1,408,058,586,177	0	2,439,472,207
Klaten District		0	71	0	11,003,678,325	3,822,846,714	345,250,844	0	119,519,796	15,291,295,678	0	321,600
Central Java Province		2	98									

Table A.11: Summary of Damage and Losses in Yogyakarta Province

Item	Damage	Loss
Total	1,408,058,586,177	14,636,450,674
Public hospitals	138,755,838,263	
Public health clinics	92,128,070,993	
Public health sub-clinics	16,587,738,601	
Other public and admin	167,124,900,238	
Private hospitals	766,878,138,957	
Other private facilities	226,583,899,125	
Public health programs		0
Replacement personnel		2,439,472,207
Facility cleanup		2,532,883,827
Additional health treatment		9,664,094,641

Table A.12: Summary of Damage and Losses in Central Java Province

Item	Damage	Loss
Total	117,260,530,753	6,406,845,005
Public hospitals	95,691,306,523	
Public health clinics	15,188,175,716	
Public health sub-clinics	5,276,605,324	
Other public and admin	476,543,418	
Private hospitals	0	
Other private facilities	627,899,772	
Public health programs		0
Replacement personnel		1,689,714,944
Facility cleanup		425,029,613
Additional health treatment		4,292,100,448

Distribution of Damage between Public and Private Sector Facilities:

For Yogyakarta Province:

(i) Damage to private sector facilities was equivalent to percent of M2 damaged by district for private facilities and (ii) damage to public sector facilities was equivalent to the proportion of hospitals damaged by district for hospitals and non hospital facilities for everything else.

For Klaten district:

Damage to Klaten facilities was the proportion of hospitals damaged by district for hospitals and non hospital facilities for everything else.

SOCIAL PROTECTION

Assumptions:

Three public facilities affected in Yogyakarta City are training centers for social workers and coordination office.

Damage cost calculated from cost of housing/building reconstruction per m2 plus the cost of supporting equipment in it.

Assume replacement cost of the facility similar to the cost for reconstruction of a house with unit cost at Rp 1.6 million/m2.

This is a rough estimation provided by a contractor who works for Yogyakarta provincial social affairs office together with the office's staff.

Assume that the cost for major damage is at 65% and minor damage at 20% from cost of reconstruction for a house with its supporting equipment.

Assume the clean up cost at Rp. 5,000/m2 for destroyed building.

Assume that clean-up costs for minor damage is at 20% and for major damage at 65% from clean-up cost of a destroyed building.

Damages to Taman Makam Pahlawan(TMP) or Hero cemetery, is reported by the Klaten's social affair office but not calculated and included in the damage assessment.

Table A.13: Damage and Losses in Social Protection Sector by Districts (Rp. Million)

	Damage	Losses	Total	Private Total	Public Total	Private	Public
<i>Yogyakarta Province</i>							
Yogyakarta City	9,365.55	7.68	9,373	7,142	2,232	16	5
Gunung Kidul	5,020.98	2.87	5,024	3,768	1,256	6	2
Kulonprogo	2,580.99	1.36	2,582	2,582	0	4	0
Bantul	4,419.15	64.51	4,484	3,139	1,345	7	3
Sleman	11,602.95	8.65	11,612	9,500	2,111	18	4
Soc. worker training facility	2,428.71		2,429	-	2,429		2
<i>Sub total</i>	35,418.33	85.07	35,503	26,131	9,373	51	16
<i>Central Java Province</i>							
Klaten	8,084.07	4.27	8,088	7,414	674	11	1
<i>Grand total</i>	43,502	89.34	43,592	33,545	10,047	62	17

CULTURE AND RELIGION

Table A.14: Damage Assessment for Places of Worship

Number of Places of Worship (Before the Earthquake)							
Name of District/City	Mosque	Prayer House (Surau/Langgar)	Church Protestant	Church Catholic	Pura (Hindu Temple)	Vihara (Buddhist Temple)	Total
Klaten District	2,396	1,827	132	52	56	7	4,470
Kulonprogo District	957	956	38	53	0	5	2,009
Bantul District	1,457	1,566	32	23	4	0	3,082
Gunung Kidul District	1,635	701	97	34	10	4	2,481
Sleman District	1,801	1,328	65	55	5	3	3,257
Yogyakarta City	393	284	42	12	0	10	741
Total	8,639	6,662	406	229	75	29	16,040

Damage assessment based on reported damage to Junior Secondary Schools in the districts as of 6 June 2006: 21:30

Baseline number of Junior Secondary Schools from Podes 2005

This includes public and private schools under the Ministry of National Education and Ministry of Religious Affairs

Proportion of facilities damage

	Destroyed	Heavy Damage	Minor Damage
Klaten District	0.72%	14.49%	1.45%
Kulonprogo District	0.00%	4.92%	6.56%
Bantul District	85.19%	14.81%	0.00%
Gunung Kidul District	3.33%	18.33%	19.17%
Sleman District	0.00%	13.11%	0.00%
Yogyakarta City	3.57%	10.71%	1.79%

Assumptions of rehabilitation costs:

	Mosque	Prayer House (Surau/Langgar)	Church Protestant	Church Catholic	Pura (Hindu Temple)	Vihara (Buddhist Temple)
Assumed facility size (M2)	200	100	200	200	200	200
Assumed cost/M2 by type of damage						
- Destroyed	1,000,000	800,000	1,000,000	1,000,000	1,000,000	1,000,000
- Heavy damage	600,000	400,000	600,000	600,000	600,000	600,000
- Minor damage	300,000	200,000	300,000	300,000	300,000	300,000

The number of existing facilities is multiplied by the proportion of facilities damaged, by the assumed size, and by the reconstruction cost

Table A.15: Damage Assessment for Places of Worships in Yogyakarta Province (million Rp)

	Mosque	Prayer House (Surau/Langgar)	Church Protestant	Church Catholic	Pura (Hindu Temple)	Vihara (Buddhist Temple)	Total
Pre-Disaster Data (Number of Buildings)	6243	4835	274	177	19	22	11570
Mild Damage	22980	4040	1320	600	120	60	29120
Severe Damage	100920	24480	4680	2400	480	240	133200
Destroyed	262000	109360	6400	4200	600	0	382560
Total	385900	137880	12400	7200	1200	300	556450

Table A.16: Damage Assessment for Places of Worships in Central Java (million Rp)

	Mosque	Prayer House (Surau/Langgar)	Church Protestant	Church Catholic	Pura (Hindu Temple)	Vihara (Buddhist Temple)	Total
Pre-Disaster Data (Number of Buildings)	2396	1827	132	52	56	7	4470
Mild Damage	2100	520	120	60	60	0	2860
Severe Damage	41640	10600	2280	960	960	120	56560
Destroyed	3400	1040	200	0	0	0	4640
Total	47140	12160	2600	1020	1020	120	52490

Productive Sectors

AGRICULTURE, LIVESTOCK AND FISHERIES

Detailed description of assumptions can be found in the main text.

TRADE

Table A.17: Contribution to GRDP, Yogyakarta Province, 2000-2003

District	2000	%	2001	%	2002	%	2003	%
Bantul								
Trade, Hotel and Restaurant	385,772	17.07	427,972	17.09	475,791	17.09	533,481	17.31
Trade and Restaurant	380,267	16.83	421,772	16.84	469,396	16.86	526,327	17.08
Trade	182,145	8.06	202,189	8.07	224,937	8.08	252,153	8.18
Hotel	5,505	0.24	6,200	0.25	6,395	0.23	7,154	0.23
Restaurant	198,122	8.77	219,583	8.77	244,459	8.78	274,174	8.89
Yogyakarta								
Trade, Hotel and Restaurant	796,074	23.78	912,551	23.91	1,050,965	24.00	1,194,180	24.42
Trade and Restaurant	687,083	20.52	789,272	20.68	905,713	20.69	1,027,035	21.00
Trade	196,085	5.86	228,206	5.98	260,966	5.96	301,008	6.16
Hotel	108,991	3.26	123,279	3.23	145,252	3.32	167,145	3.42
Restaurant	490,998	14.67	561,066	14.70	644,747	14.73	726,027	14.85

Table A.18: Contribution to GRDP, Central Java Province, 2000-2003

District	2000	%	2001	%	2002	%	2003	%
Klaten								
Trade, Hotel and Restaurant	772,019.40	26.18	878,585.10	26.21	1,009,835.04	25.95	1,100,308.52	25.65
Trade and Restaurant	768,451.22	26.06	873,697.44	26.06	1,003,172.40	25.78	1,093,171.23	25.48
Trade	538,219.80	18.25	622,175.99	18.56	731,348.90	18.79	800,338.85	18.66
Hotel	3,568.18	0.12	4,887.66	0.15	6,662.64	0.17	7,137.29	0.17
Restaurant	230,231.42	7.81	251,521.45	7.50	271,823.50	6.98	292,832.38	6.83

Table A.19: Markets in Yogyakarta and Parts of Central Java Provinces, 2005

District	Villages with Stores	Villages with Permanent and Semi Permanent Buildings	Markets without Permanent Buildings	Supermarket	Restaurant
	Villages	Villages	Unit	Unit	Unit
Magelang	42	65	39	10	95
Boyolali	65	80	30	24	116
Klaten	97	84	46	44	373
Kote Magelang	10	8	7	6	31
Kulon Progo	24	42	13	12	40
Bantul	41	40	7	71	23
Gunung Kidul	35	73	31	18	119
Sleman	63	57	9	143	509
Yogyakarta	35	25	15	62	331

Source: PODES 2005

Table A.20: Numbers of Modern and Traditional Markets in Yogyakarta Province, 2003 - 2005

No	District	2003			2004			2005		
		Traditional	Modern	Franchise	Traditional	Modern	Franchise	Traditional	Modern	Franchise
1	Bantul	44	6		47	12		30	12	
2	Sleman	51	47		36	57		36	53	
3	Kulonprogo	34	4		36	10		36	10	
4	Gunung Kidul	37	7		36	9		28	8	
5	Yogyakarta	31	36	26	37	57	26	31	50	26
	Total	197	100	26	192	145	26	161	133	26

Source: Dinas Deperindagkop, Yogyakarta, 2006

Table A.21: Licensed (SIUP) Traders in Yogyakarta Province, 2002-2005

Classification	2002	2003	2004	2005
1 Large	184	230	350	369
2 Medium	418	521	614	737
3 Small	23,397	24,631	25,633	26,969
Total	23,999	25,382	26,597	28,075

Source: Dinas Deperindagkop, Yogyakarta, 2006

Table A.22: Estimated Damage & Losses Markets

A. Traditional Market

NO.	LOCATION	Lost trade (adjusted)	Damage to buildings and other assets	Total
YOGYAKARTA				
I	Bantul District	<u>29,400</u>	<u>76,577</u>	<u>105,977</u>
	1. Pasar Niten *	8,400	12,171	20,571
	2. Pasar Imogiri *	8,400	21,906	30,306
	3. Pasar Plered *	4,200	22,500	26,700
	4. Pasar Piungan *	8,400	20,000	28,400
II	Sleman District	<u>7,320</u>	<u>906</u>	<u>8,226</u>
	Kec. Godean	1,600	5	1,605
		800	17	817
	Kec. Prambanan	1,000	36	1,036
	Kec. Tegal Sari	480	13	493
		100	102	202
		400	184	584
	Kec. Tempel	400	102	502
		600	26	626
		900	183	1,083
	Kec. Gamping	840	179	1,019
	Kec. Condongcatur	100	9	109
		100	50	150
III	Yogyakarta City	<u>10,500</u>	<u>52,235</u>	<u>62,735</u>
	1. Pasar Bringharjo *	6,000	47,944	53,944
	2. Pasar Kranggan	1,000	150	1,150
	3. Pasar Giwangan	600	231	831
	4. Pasar Sentul	500	225	725
	5. Pasar Gading	100	1,026	1,126
	6. Pasar Prawirotaman	350	90	440
	7. Pasar Ciptomulyo	100	334	434
	8. Pasar Karangajen	150	1,094	1,244
	9. Pasar Serangan	800	463	1,263
	10. Pasar Patuk	100	9	109
	11. Pasar Kotagede	300	82	382
	12. Pasar Tunjungsari	400	557	957
	13. Pasar Demangan	100	30	130
IV	Gunung Kidul District	<u>11,259</u>	<u>19,657</u>	<u>30,916</u>
	Kec. Wonosari	9,250	17,702	26,952
	Kec. Nglipar	63	11	74

		356	17	373
	Kec. Ngawen	184	557	741
		29	557	586
		348	49	397
	Kec. Saptosari	131	50	181
	Kec. Panggang	110	46	156
	Kec. Purwosari	281	134	415
	Kec. Playen	104	33	137
	Kec. Gedangsari	203	223	426
	Kec. Paliyan	200	278	478
		30	450	480
V	Kulonprogo District	<u>1,869</u>	<u>500</u>	<u>2,369</u>
	1. Pasar Dekso **	311	200	511
	2. Pasar Brosot **	311	50	361
	3. Pasar Kranggan **	311	50	361
	4. Pasar Sewugalur **	311	50	361
	5. Pasar Kasihan **	311	50	361
	6. Pasar Kenteng **	311	100	411
	Central Java			
VI	Klaten District	<u>19,488</u>	<u>15,153</u>	<u>34,641</u>
	1. Pasar Taji *	1,188	2,534	3,722
	2. Pasar Prambanan *	2,400	1,229	3,629
	3. Pasar Wedi *	2,100	5,932	8,032
	4. Pasar Gempol *	2,100	1,280	3,380
	5. Pasar Gantiwarno *	2,550	390	2,940
	6. Pasar Panggil *	2,100	1,121	3,221
	7. Pasar Masaran *	1,050	779	1,829
	8. Pasar Temuwangi *	2,100	612	2,712
	9. Pasar Sidoharjo *	2,100	979	3,079
	10. Pasar Minggiran *	1,800	297	2,097
	Total	79,836	165,028	244,864

Notes/Assumption:

Loss Trade is calculated based on daily sales volume data from Ministry of Trade and Provincial Office of Trade, Industry, and Cooperatives Data

* Market buildings that are 100% damaged, hence lost trade are calculated for 30 days until they reopen

** Lost trade is calculated for one day (weekly markets), lost trade in other markets is calculated for four days

Damage to buildings based on Ministry of Trade actual data

B. Modern Market (Fixed Price)

		Rp millions		
No	Location	Lost trade (adjusted)	Damage to buildings and other assets	Total (Adjusted)
I	Bantul District		0	
II	Sleman District		0	
III	Yogyakarta City	10,000	1,000 (estimate)	11,000
		10,000	1,000 (estimate)	11,000
		150	150	300
		NA	0	
		NA	20	20
		NA	20	800
			800	800
IV	Gunung Kidul District	NA	0	
V	Kulonprogo District	NA	0	
VI	Klaten District	215	540	755
Total		20,365	3,530	24,675

Notes

NA = Information not available

*) - The stocks are not damaged, some of it was donated to the victims.

- Closed pending building inspection

- recently open (3-4 months).

**) No interruption

Source : Min of Trade and Provincial Office of Trade, Industry, and Cooperatives Data

INDUSTRY AND ENTERPRISES**Table A.23: Micro Small and Medium Enterprises affected by the earthquake**

	baseline	loss units in formal sector	informal sector loss	total loss units	workers in formal	members in informal	dependents in formal	total affected
Bantul District	21,306	9,588	5,040	14,628	335,570	20,160	1,342,278	1,362,438
Klaten District		4,500	3,360	7,860	157,500	13,440	630,000	643,440
Yogyakarta City	8,619	776	1,680	2,456	27,150	6,720	108,599	115,319

Sleman District	18,558							
		1,113	1,120	2,233	38,972	4,480	155,887	160,367
Gunung Kidul District	21,659							
		650	560	1,210	22,742	2,240	90,968	93,208
Kulonprogo District	22,418							
		673	560	1,233	23,539	2,240	94,156	96,396
Total	92,560							
		17,299	12,320	29,619	605,472	49,280	2,421,888	2,471,168

(Yogyakarta only)

Data: baseline data is from Bank Indonesia survey with University of Gajah Mada PSE-KP, 2003 estimate growth rate of 2% per year, so 6% from 2003 to 2006 baseline figures
no baseline for Klaten in this survey, data was quoted from UGM economist, Sri Adiningsih
main economy structure: 25% furniture, 25% handicraft, 20% textile, 30% others
dependents and affected refer to family members, assumed family of 4

Assumptions:	formal sector
Bantul District	50% in affected industries, 90% destroyed
Klaten District	see above
Yogyakarta City	30% in affected industries, 30% destroyed
Sleman District	30% in affected industries, 20% destroyed
Gunung Kidul District	30% in affected industries, 10% destroyed
Kulonprogo District	30% in affected industries, 10% destroyed

Informal sector

- Baseline of 79,000 (for Yogyakarta) is from Bank Indonesia last known survey in 2001 as informed by APIKRI - small handicraft associations
- The figure includes farmers, with a proportion of 50%, hence assume 40,000 micro-enterprises
- No info on geographical distribution, assume proportionate distribution of 8,000 each, no info on Klaten, assume the same
- Assume 70% in affected industries as most micro act as supporting industries, with same level of destruction as in formal sector for each region
- Cross checking with banking sector info, the loss units assumption should be about right (or even slightly on the low side) given that banks estimate potential NPLs from 37,482 debtors and the BPRs estimate 21,008 debtors.
- Total expected bad debtors in Yogyakarta alone are 58,490. some debtors may have multiple loans from different banks.

Workers

- Average workers in formal
- 50% have 50 workers
- 50% have 20 workers
- The range is between 5 to 500
- An enterprise may have only 20 permanent workers, but up to 140 temporary workers
- Informal enterprises have 4 members
- Proportion: 60% small, 40% medium enterprises, micro equals with informal sector

	medium	small	micro
Bantul District	3,835	5,753	5,040
Klaten District	1,800	2,700	3,360
Yogyakarta City	310	465	1,680
Sleman District	445	668	1,120
Gunung Kidul District	260	390	560
Kulonprogo District	269	404	560
total	6,920	10,380	12,320
assumptions per unit loss	medium enterprise	small	micro
building			20,000,000
inventory	200,000,000	100,000,000	none - mostly subcontract
salaries on going (6 months)	100,000,000	50,000,000	can't pay
	3,000,000	can't pay	can't pay
income per month	50,000,000	20,000,000	2,500,000
<i>based on data gathered from the survey</i>			
average total loss	medium enterprise	small	micro
building			246,400,000,000
inventory	1,383,936,000,000	1,037,952,000,000	
salaries on going (6 months cost)	691,968,000,000	518,976,000,000	
potential earnings loss	1,037,952,000,000	na	na
	2,075,904,000,000	622,771,200,000	92,400,000,000
<i>(6 months for medium and 3 months for micro and small enterprises)</i>			
Total Estimated Losses	5,189,760,000,000	2,179,699,200,000	338,800,000,000
<i>average total loss = loss unit X per unit loss</i>			

Reported loss from large enterprises: only 3 companies reported damages to the Dinas - these are Sari Husada (food), PT. ASA (leather) and PT. Budi Makmur (leather)

PT ASA 5,700,000,000

PT Budi Makmur 3,000,000,000

PT Sari Husada in their press release reported damages to its 2 factories and inventories loss Rp 175 billion, plus Rp 70 billion of expected loss of earnings

The company is closed and expects to re-start production in 2 to 3 months time

Total damage and loss assessment for micro, small and large enterprises 7,961,959,200,000

Cross-Sectoral

GOVERNANCE AND ADMINISTRATION

Assumptions:

Damages to buildings:

Buildings without proper design (total/complete damage) 80-100%

Buildings poorly designed and built (medium to heavy damage) 30-80%

Buildings with sound design (slightly damaged but repairable) 0-30%

When reports were available, estimates of floor surface were made based on averages and otherwise extrapolated based on similar districts with similar intensity scale.

Official government unit costs per square meter are about Rp. 1.0 million for slightly damaged buildings and Rp. 1.0 million for heavy to totally damaged buildings.

Equipment and Furniture:

Estimates based on personnel numbers: Rp. 3.0 million per civil servant at a 30% damage level. This includes damage to computers, vehicles, furniture (cabinets, tables and chairs).

Personnel:

Number of affected personnel estimated as a ratio of the general population (i.e. number of dead, missing, injured in proportion to the general population).

Costs based on (3 months) salary (Rp. 2.0 million), recruiting and training and “downtime” during the relief-crisis stage

Documents:

Cost estimated at Rp. 50,000 per record with 5 different records per household in the population. It is assumed that 10% of total records were damaged.

Contingency elements are added at the rate of 10% contingency.

Table A.26: Summary of Damage and Losses in the Governance Sector

Pillar	Yogyakarta Province						Central Java Province			
	Yogyakarta Province	Yogyakarta City	Bantul District	Kulonprogo District	Gunung Kidul District	Sleman District	Central Java Province	Klaten District	Boyolali District	Magel District
<i>Public administration</i>	-	31,112,245,380	1,861,722,457	362,752,242	4,209,565,011	440,425,605	-	68,055,161,544	665,563,995	-
<i>Justice</i>	-	471,397,657	-	-	-	-	-	-	-	-
<i>Parliament</i>	800,000,000	157,132,552	232,715,307	310,930,493	169,512,685	377,507,661	150,000,000	153,277,391	313,206,586	395,8
<i>Police</i>	600,000,000	1,080,024,410	1,948,602,839	250,817,265	966,222,304	425,325,298	25,000,000	1,889,399,305	352,879,420	446,0
<i>Subtotal</i>	1,400,000,000	32,820,800,000	4,043,040,603	924,500,000	5,345,300,000	1,243,258,564	175,000,000	70,097,838,240	1,331,650,000	841,9
<i>Contingency 10%</i>	140,000,000	3,282,080,000	404,304,060	92,450,000	534,530,000	124,325,856	17,500,000	7,009,783,824	133,165,000	84,1
Total	1,540,000,000	36,102,880,000	4,447,344,663	1,016,950,000	5,879,830,000	1,367,584,421	192,500,000	77,107,622,064	1,464,815,000	926,0
Building										
Pillar	Yogyakarta Province						Central Java Province			
	Yogyakarta Province	Yogyakarta City	Bantul District	Kulonprogo District	Gunung Kidul District	Sleman District	Central Java Province	Klaten District	Boyolali District	Magel District
<i>Public administration</i>	-	29,700,000,000	1,200,000,000	175,000,000	3,725,000,000	175,000,000	-	66,600,000,000	318,750,000	-
<i>Justice</i>	-	450,000,000	-	-	-	-	-	-	-	-
<i>Parliament</i>	800,000,000	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000	150,000,000	150,0
<i>Police</i>	600,000,000	1,031,000,000	1,256,000,000	121,000,000	855,000,000	169,000,000	25,000,000	1,849,000,000	169,000,000	169,0
<i>Subtotal</i>	1,400,000,000	31,331,000,000	2,606,000,000	446,000,000	4,730,000,000	494,000,000	175,000,000	68,599,000,000	637,750,000	319,0
<i>Contingency 10%</i>	140,000,000	3,133,100,000	260,600,000	44,600,000	473,000,000	49,400,000	17,500,000	6,859,900,000	63,775,000	31,9
Total	1,540,000,000	34,464,100,000	2,866,600,000	490,600,000	5,203,000,000	543,400,000	192,500,000	75,458,900,000	701,525,000	350,9

Equipment									
Pillar	Yogyakarta Province								Central Java Province
	Yogyakarta Province	Yogyakarta City	Bantul District	Kulonprogo District	Gunung Kidul District	Sleman District	Central Java Province	Klaten District	Boyolali District
Public administration	-	1,400,870,065	319,109,747	185,397,982	479,839,852	256,654,858	-	577,564,396	34,000,000
Justice	-	21,225,304	-	-	-	-	-	-	-
Parliament	-	7,075,101	39,888,718	158,912,556	19,322,410	219,989,879	-	1,300,821	16,000,000
Police	-	48,629,530	334,001,535	128,189,462	110,137,738	247,855,263	-	16,034,783	18,000,000
Subtotal	-	1,477,800,000	693,000,000	472,500,000	609,300,000	724,500,000	-	594,900,000	69,000,000
Contingency 10%	-	147,780,000	69,300,000	47,250,000	60,930,000	72,450,000	-	59,490,000	6,900,000
Total	-	1,625,580,000	762,300,000	519,750,000	670,230,000	796,950,000	-	654,390,000	76,000,000
Personnel									
Pillar	Yogyakarta Province								Central Java Province
	Yogyakarta Province	Yogyakarta City	Bantul District	Kulonprogo District	Gunung Kidul District	Sleman District	Central Java Province	Klaten District	Boyolali District
Public administration	-	11,375,315	26,965,742	2,354,260	4,725,159	8,770,746	-	14,811,182	-
Justice	-	172,353	-	-	-	-	-	-	-
Parliament	-	57,451	3,370,718	2,017,937	190,275	7,517,783	-	33,359	-
Police	-	394,880	28,224,143	1,627,803	1,084,567	8,470,035	-	411,199	-
Subtotal	-	12,000,000	58,560,603	6,000,000	6,000,000	24,758,564	-	15,255,740	-
Contingency 10%	-	1,200,000	5,856,060	600,000	600,000	2,475,856	-	1,525,574	-
Total	-	13,200,000	64,416,663	6,600,000	6,600,000	27,234,421	-	16,781,314	-

Record										
Pillar	Yogyakarta Province									Central Java Province
	Yogyakarta Province	Yogyakarta City	Bantul District	Kulonprogo District	Gunung Kidul District	Sleman District	Central Java Province	Klaten District	Boyolali District	
Public administration	-	-	315,646,969	-	-	-	-	-	862,785,966	-
Justice	-	-	-	-	-	-	-	-	-	-
Parliament	-	-	39,455,871	-	-	-	-	-	1,943,212	-
Police	-	-	330,377,160	-	-	-	-	-	23,953,322	-
Subtotal	-	-	685,480,000	-	-	-	-	-	888,682,500	-
Contingency 10%	-	-	68,548,000	-	-	-	-	-	88,868,250	-
Total	-	-	754,028,000	-	-	-	-	-	977,550,750	-

BANKING AND FINANCE

Table A.27: Snapshot of the Yogyakarta Banking Sector, Pre-Disaster, End of March 2006

All values in Rp. Billion unless stated otherwise

	Yogyakarta Province	Indonesia	%
Number of Banks have business in Yogyakarta			
Commercial Banks:	25	131	19%
- State Banks	4	5	100%
- Private Banks (including foreign & JV)	20	100	20%
- Regional Bank (BPD)	1	26	
Rural Credit Bank (BPR)	65	1,906	3%
Number of Banks Offices / Branches			
Commercial Banks:	41		
- State Banks (excluding BRI unit)	11	1,755	0.6%
- Private Banks (including foreign & JV)	24	3,925	0.6%
- Regional Bank (BPD)	6	709	0.8%
Rural Credit Bank (BPR)	65	1,906	3.4%
Total Banks Asset	13,611	1,465,300	0.9%
Total Banks Deposit	12,385	1,146,230	1.1%
Total Banks Loans (Commercial and BPR)	6,780	687,528	1.0%
1. Commercial Banks Loans	5,951	674,698	0.9%
- Working Capital Loans	2,320	340,887	0.7%
- Investment Loans	842	129,399	0.7%
- Consumption Loans	2,789	204,411	1.4%
NPL (%)	4.11%	9.40%	
2. Rural Credit Banks (BPR) Loans	829	12,830	6.5%
NPL (%)	8.96%		

Source: Bank Indonesia

Table A.28: Commercial Banking Credits by Sector and Districts in Yogyakarta (Rp Billion)**Pre-Disaster End of March 2006**

Sectoral Distribution of GRDP and Banking Sector Credits	Yogyakarta Province		Districts of Yogyakarta (commercial banking credits)				
	% in GRDP	% in Bank Credit	Bantul	Gunung Kidul	Kulonprogo	Sleman	Yogyakarta City
Agriculture	18.7%	3.0%	65	10	19	32	68
Mining	0.7%	0.4%	-	1	-	19	1
Manufacturing (industry)	14.5%	9.8%	14	3	2	63	489
Utilities (Electricity, Gas and Water)	0.9%	0.0%	-	-	-	-	2
Construction	8.3%	3.1%	1	1	2	117	64
Trading, Restaurant, and Hotel	20.8%	23.7%	104	102	56	210	957
Transportation and warehousing	9.9%	1.5%	1	1	12	1	67
Finance and Services	26.3%	10.5%	36	10	2	62	507
Others – Including Consumer Loans		48.0%	190	168	179	380	1,934
Total		5,952	411	296	272	884	4,089
Total (%)	100.0%	100.0%	6.9%	5.0%	4.6%	14.9%	68.7%

*Source: Bank Indonesia***Table A.29: Banking Credits by Districts in Yogyakarta, Pre-Disaster End of March 2006 (Rp billions)**

	Districts of Yogyakarta						
	Yogyakarta Province	Yogyakarta Province	Bantul	Gunung Kidul	Kulonprogo	Sleman	Yogyakarta Citykarta
A. Credits by Type of Bank and Usage		6,780	586	325	369	1,354	4,146
1. Commercial Banks	100%	5,951	410	295	273	884	4,089
- Working Capital Loans	39%	2,320	183	95	83	394	1,563
- Investment Loans	14%	842	48	33	29	127	606
- Consumption Loans	47%	2,789	179	167	161	363	1,920
2. Rural Credit Banks (BPR)		829	176	30	96	470	57
B. Share of Credits provided by BPR							
1. Commercial Banks		88%	70%	91%	74%	65%	99%
2. Rural Credit Banks (BPR)		12%	30%	9%	26%	35%	1%
C. NPL of Credits by Regions							
1. Commercial Banks		4.11%	2.26%	1.61%	2.94%	2.47%	4.91%
2. Rural Credit Banks (BPR)		8.69%	17.95%	3.42%	7.25%	6.60%	6.48%

Source: Bank Indonesia

	# Banks	# affected debtors	Loan Losses
Commercial Banks:	25		1,213,238
- State Banks	4	7,792	310,580
- Private Banks (including foreign & JV)	20	1,365	304,278
- Regional Bank (BPD)	1	28,325	464,675
Rural Credit Bank (BPR)	65	21,008	133,705
Top Losses:		# affected debtors	Loan Losses
BPD:			
- Bank BPD Yogyakarta	Local	28,325	464,675
STATE OWNED BANKS:			
- Bank BRI	State	4,791	174,818
- Bank BTN	State	1,001	49,271
- Bank Mandiri	State	1,504	48,600
- Bank BNI (including Syariah)	State	496	37,891
Total SOE Banks:		7,792	310,580
PRIVATE OWNED BANKS:			
- Bank Bukopin	Private	78	127,389
- Bank Danamon Indonesia	Private	856	51,277
- Bank Muamalat Indonesia	Private	70	32,699
- Bank BCA	Private	20	23,344
- Bank Permata	Private	137	21,684
- Bank Lippo	Private	47	18,574
- Bank BBI	Private	16	6,242
- Bank Syariah Mandiri	Private	35	5,800
- Bank Ekonomi Raharja	Private	6	5,575
- Bank Bumiputera	Private	10	5,203
- Bank NISP	Private	13	1,750
- Bank ANK	Private	37	1,581
- Bank Century	Private	6	1,045
- Bank Mega	Private	7	1,020
- Bank Haga	Private	2	1,000
- Bank CNB	Private	25	95
- Bank Niaga, BII, BTPN, Panin	Private	Not reported	Not reported
Total Private Owned Banks:		1,365	304,278
TOTAL COMMERCIAL BANKS:		37,482	1,079,533
TOTAL 65 BPR'S:		21,008	133,705
TOTAL BAD LOAN OF BANKING:		58,490	1,213,238

Source: Bank Indonesia, Yogyakarta office

Table A.30: Impact of the Earthquake - Potential Loan Losses Estimation (Rp million)

Central Java Province– Klaten District only

No	Name	# of Debtors	Outstanding Loans	Share	# of potential loan losses
1	BANK BRI	18,402	291,063	36.1%	145,532
2	BANK BPD CENTRAL JAVA	10,348	194,481	24.1%	97,241
3	BANK DANAMON INDONESIA	1,035	73,986	9.2%	14,797
4	BANK BNI	2,741	72,209	9.0%	14,442
5	BANK NIAGA	313	65,251	8.1%	13,050
6	Bank Mandiri	492	28,669	3.6%	5,734
7	BANK BTN	697	12,580	1.6%	2,516
8	BANK MEGA	1,232	10,517	1.3%	2,103
9	BANK BII	56	9,854	1.2%	1,971
10	BANK NISP	131	7,375	0.9%	1,475
11	BANK BUANA INDONESIA	56	7,313	0.9%	1,463
12	BANK BUKOPIN	79	6,421	0.8%	1,284
13	BANK BCA	19	5,783	0.7%	1,157
14	LIPPOBANK	43	5,065	0.6%	1,013
15	BANK PANIN	45	4,773	0.6%	955
16	Bank Haga	17	4,608	0.6%	922
17	PERMATA	10	3,220	0.4%	644
18	Bank Bumi Arta	17	1,836	0.2%	367
19	BANK WINDU KENTJANA	2	260	0.03%	
20	CENTRATAMA NASIONAL	10	242	0.03%	
21	BANK HARDA INTERNASIONAL	22	136	0.02%	
22	BANK MAYAPADA	4	32	0.004%	
TOTAL		35,771	805,674		306,664

Source: Bank Indonesia Solo

ENVIRONMENT

Table A.31: Estimate of Building Debris Based on Nos. of Damaged Houses, Yogyakarta And Central Java

LOCATION	Infrastructure Damage			Waste Volumes (m3) @ 10m3/house			Waste Volumes Recycling @ 45%	
	Houses			Houses (50m2 single storey brick)				
Yogyakarta Province	Destroyed	Severe Damage	Slight Damage	Destroyed	Severe Damage	Slight Damage	Totals (m3)	Totals (m3)
Waste Volume (m3)				20	15	5		
Bantul	26,045	29,582	24,262	520,902	443,732	121,311	1,085,945	597,269
Sleman	4,719	14,403	29,910	94,374	216,041	149,549	459,963	252,980
Yogyakarta City	1,948	4,119	2,355	38,952	61,790	11,777	112,518	61,885
Kulonprogo	3,485	4,726	7,999	69,696	70,889	39,996	180,581	99,319
Gunung Kidul	11,323	5,355	16,360	226,458	80,325	81,801	388,584	213,721
Total	47,519	58,185	80,887	950,382	872,775	404,433	2,227,590	1,225,175
Central Java Province	Infrastructure Damage			Houses			Totals (m3)	Totals (m3)
	Destroyed	Severe Damage	Slight Damage	Destroyed	Severe Damage	Slight Damage		
Klaten District	27,270	55,112	84,283	545,400	826,686	421,416	1,793,502	986,426
Magelang District	179	456	592	3,582	6,845	2,961	13,388	7,363
Boyolali District	276	626	637	5,526	9,396	3,186	18,108	9,959
Sukoharjo District	46	1,627	-	918	24,408	-	25,326	13,929
Wonogiri District	15	11	67	306	162	333	801	441
Purworejo District	9	193	702	180	2,889	3,510	6,579	3,618
Total	27,796	58,026	86,281	555,912	870,386	431,406	1,857,704	1,021,737
Total	75,315	116,211	167,168	1,506,294	1,743,161	835,839	4,085,294	2,246,911

Assumptions:

Truck movements @ 4m3/trip		561,728
@ 50% assumed as fill on site		280,864
200*6 trucks/day 120 Yogyakarta Province & 80 Central Java		234.05
@20000000/truck/month & 1/2 63000000/front loader/month = 51500000*	Rp	109,579,487,109
@9200	US\$	11,910,814
Labor 5*20000*12		1,200,000
Labor costs for destroyed & severe damage	Rp	229,830,480,000

ECONOMIC AND SOCIAL IMPACTS

Table A.32: Distribution of losses across affected districts

	Loss Share SME % (1)	Loss value added SME (2)	Loss Share agriculture % (3)	Loss value added Agric. (4)	Aggregate d VA Loss (2) + (4)	Extrapolated Overall VA loss*	VA in 2006	VA in 2007	GRDP 2004	2006 Projection GRDP	Revised Projection GRDP	Expected GRDP Decline %	2007 Projection GRDP
Bantul District	55	1,244	7	18	1,261	1,439	1,079	360	4,171	4,652	3,572	-23.2	3,572
Gunung Kidul District	4	85	0	-	85	97	73	24	3,378	3,766	3,693	-1.9	3,693
Kulonprogo District	4	88	27	68	157	179	134	45	1,836	2,047	1,913	-6.5	1,913
Sleman District	7	147	61	151	298	340	255	85	6,640	7,404	7,149	-3.4	7,149
Yogyakarta City	5	106	0	0	106	122	91	30	5,876	6,552	6,461	-1.4	6,461
Yogyakarta Province		1,670		238	1,908	2,177	1,633	544	21,848	24,363	22,730	-6.7	22,730
Klaten District	26	588	5	11	599	684	513	171	5,125	5,715	5,202	-9.0	5,202
Central Java Province		588		11	599	684	513	385	193,438	215,710	215,197	-0.24	215,197

Methodology: District-specific assessment of losses for the manufacturing and agriculture sector, accounting for 90% of the total loss available for all affected districts. The remaining 10% of the total loss was distributed across districts based on each district's share in these two sectors. Value added was computed based on sector-specific input-output factor reported in the economic accounts.

Selected Economic Indicators

Table A.33 Economic Structure per District and Province, FY 2004 (in Rp. billion)

	Agriculture Total	Construction Total	Electricity, Gas & Water Supply Total	Financial Services Total	Manufacturing Total	Mining and Quarrying Total	Services	Trade, Restaurants & Hotel Total
Bantul District	967.38	350.27	49.82	277.58	854.04	46.01	610.76	738.7
Gunung Kidul District	1,212.58	247.58	23.27	156.96	412.80	80.44	549.62	475.9
Kulonprogo District	463.37	88.79	14.98	111.06	285.76	16.44	375.38	297.9
Sleman District	1,029.82	630.36	75.89	730.98	1,075.61	28.11	1,307.56	1,391.7
Yogyakarta City	29.79	376.54	103.67	903.57	678.29	0.49	1,404.94	1,337.4
Yogyakarta Province	3,637.00	1,744.00	268.10	2,199.00	3,219.00	182.50	4,290.00	4,171.0
Klaten District	1,161.53	423.88	67.49	241.40	1,012.46	28.32	734.68	1,305.2
Magelang District	1,342.22	209.24	30.64	114.11	769.42	93.05	688.29	676.0
Boyolali District	1,496.60	100.48	39.85	268.07	751.05	31.68	313.62	1,128.2
Sukoharjo District	968.63	203.97	80.18	160.19	1,381.92	43.64	408.32	927.8
Wonogiri District	1,605.51	107.28	29.81	136.81	142.52	21.92	395.74	401.0
Purworejo District	1,342.22	209.24	30.64	114.11	769.42	93.05	688.29	676.0
Central Java Province	38,490.00	10,900.00	2,362.00	7,141.00	63,140.00	1,855.00	19,650.00	38,940.0
Indonesia	347,600.00	116,000.00	31,970.00	190,500.00	578,900.00	206,800.00	205,200.00	390,300.0

Table A.34. Economic Structure per District and Province, FY 2004 (percentages)

	Agriculture Total		Construction Total		Electricity, Gas & Water Supply Total		Financial Services Total		Manufacturing Total		Mining and Quarrying Total		Services		Trade, Restaurant & Hotel Total		Transportation and Communication Total		Total		
	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	% row	% column	
Bantul District	23.2	26.6	8.4	20.1	1.2	18.6	6.7	12.6	20.5	26.5	1.1	25.2	14.6	14.2	17.7	17.7	6.6	13.0	100	19.1	
Gunung Kidul District	35.9	33.3	7.3	14.2	0.7	8.7	4.6	7.1	12.2	12.8	2.4	44.1	16.3	12.8	14.1	11.4	6.5	10.2	100	15.5	
Kulonprogo District	25.2	12.7	4.8	5.1	0.8	5.6	6.0	5.1	15.6	8.9	0.9	9.0	20.4	8.8	16.2	7.1	9.9	8.5	100	8.4	
Sleman District	15.5	28.3	9.5	36.1	1.1	28.3	11.0	33.2	16.2	33.4	0.4	15.4	19.7	30.5	21.0	33.4	5.6	17.3	100	30.4	
Yogyakarta City	0.5	0.8	6.4	21.6	1.8	38.7	15.4	41.1	11.5	21.1	0.0	0.3	23.9	32.7	22.8	32.1	17.7	48.7	100	26.9	
Yogyakarta Province	16.6	100	8.0	100	1.2	100	10.1	100	14.7	100.0	0.8	100	19.6	100	19.1	100	9.8	100	100	100	
Klaten District	22.7	3.0	8.3	3.9	1.3	2.9	4.7	3.4	19.8	1.6	0.6	1.5	14.3	3.7	25.5	3.4	2.9	1.4	100	2.6	
Magelang District	32.4	3.5	5.0	1.9	0.7	1.3	2.8	1.6	18.5	1.2	2.2	5.0	16.6	3.5	16.3	1.7	5.4	2.1	100	2.1	
Boyolali District	35.2	3.9	2.4	0.9	0.9	1.7	6.3	3.8	17.7	1.2	0.7	1.7	7.4	1.6	26.6	2.9	2.8	1.1	100	2.2	
Sukoharjo District	21.9	2.5	4.6	1.9	1.8	3.4	3.6	2.2	31.3	2.2	1.0	2.4	9.2	2.1	21.0	2.4	5.5	2.2	100	2.3	
Wonogiri District	50.7	4.2	3.4	1.0	0.9	1.3	4.3	1.9	4.5	0.2	0.7	1.2	12.5	2.0	12.7	1.0	10.3	3.0	100	1.6	
Purworejo District	33.6	2.6	5.8	1.6	1.0	1.3	5.5	2.3	9.6	0.4	2.4	3.8	19.3	2.9	16.0	1.2	6.7	1.8	100	1.5	
Central Java Province	19.9	100	5.6	100	1.2	100	3.7	100	32.6	100	1.0	100	10.2	100	20.1	100	5.7	100	100	100	
Indonesia	15.8	26.6	5.3	20.1	1.5	18.6	8.6	12.6	26.3	26.5	9.4	25.2	9.3	14.2	17.7	17.7	6.2				

Figure A.1 Distribution of Economic Sectors per District and Province, FY 2004

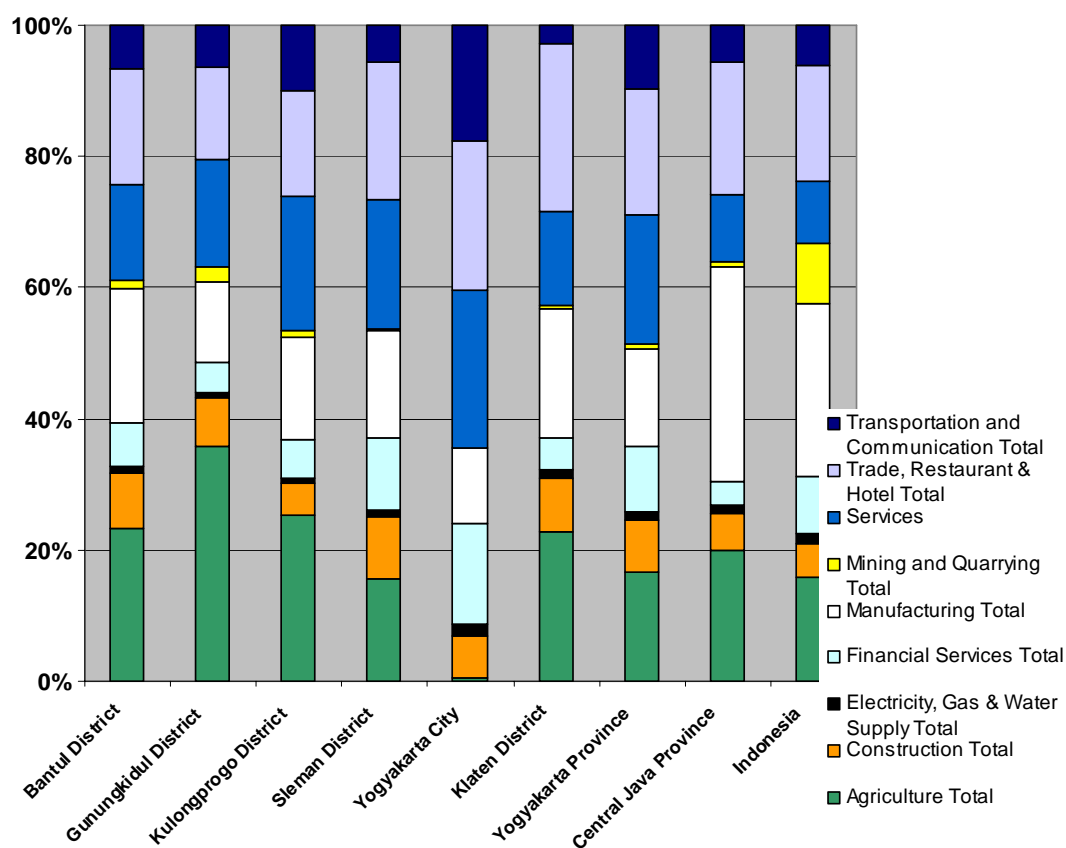


Table A.35 Real GDP and GDP growth (in trillion Rp. at constant 2000 prices and percentages)

	GRDP					Annual Real Growth Rate			
	2000	2001	2002	2003	2004	00/01	01/02	02/03	03/04
Bantul District	2.58	2.68	2.80	2.93	3.08	3.74	4.46	4.69	5.04
Gunung Kidul District	2.29	2.37	2.44	2.53	2.61	3.38	3.26	3.36	3.43
Kulonprogo District	1.19	1.23	1.28	1.34	1.40	3.66	4.12	4.19	4.52
Sleman District	3.99	4.17	4.37	4.60	4.84	4.67	4.86	5.08	5.25
Yogyakarta City	3.51	3.65	3.81	3.99	4.20	3.95	4.49	4.76	5.05
District. I Yogyakarta	117.4	127.8	140.5	152.4	165.4	4.3	4.5	4.6	5.1
Klaten District	3.14	3.27	3.39	3.56	3.74	4.14	3.91	4.91	4.95
Province Central Java	114.7	118.8	123.0	129.2	135.8	3.6	3.5	5.0	5.1
Indonesia	1,359	1,407	1,470	1,536	1,607	3.5	4.5	4.5	4.6