

| Item | Sub-item | Information | Data Source |
|------------|--|---|---------------|
| | Key Target, featured strategies/ approaches etc. | Because of the policy of "one province to one county", there was competition among different provinces. So the new policy is "3 years task will finish in 2years". | State Council |
| | Economic Recovery | Economic development recovery was strong. Sichuan, Gansu, and Shannxi provinces got lots of support, and that made the mountain poor district change a lot, and the buildings more modernized. Only in Sichuan, the reconstruction plan included 29692 projects and more than 800 billion yuan investment. Whole reconstruction investment is about 1000 billion yuan. | State Council |
| | Other Characteristics | Open policy is important, at the process of reconstruction, and the international experience were adopted by the government. | |
| | Lessons Learned | First the central government must provide the main budget to local government. This is the central government's responsibility. But secondly reconstruction can not be just centralized. It must be combined decentralized projects. Using the policy "one province to one county", it is a very important decision. Actually this is the big reform of the administration management of China. Thirdly reconstruction must combined the economic with social construction. This is the weak in the reconstruction process. Also, the reconstruction law and regulation, especially the overall plan is very important. Opening the process of policy making to the society, it is another experience in the reconstruction process. Some experts send a lot valuable suggestions to central and local governments. | |
| References | Reports | http://www.xinhuanet.com/xhwenchuan USGS: http://earthquake.usgs.gov/earthquakes/eqinthenews/ http://www.512.gov.cn/ http://www.cea.gov.cn/ http://www.ceic.ac.cn/ http://www.eq-igl.ac.cn/ http://www.mca.gov.cn http://www.jianzai.gov.cn/ http://www.sdpc.gov.cn/ Http://www.scio.gov.cn http://www.audit.gov.cn/n1057/n1072/n258889/ www.sc.gov.cn/10462/10929/11076/11077 Richard A. Kerr. Chinese Quake Likely a Mega-Catastrophe. Daily News. ScienceNow. 2008-05-12 | |
| | Data/photos | UNDP-China Project: Working Report about Relief and Reconstruction of Wenchuan Earthquake, by CDRC. | |

3) Indian Ocean Earthquake and Tsunami 2004

| Item | Sub-item | Information | Data Source |
|----------------|-----------------------------|--|-------------|
| Data on Hazard | Date and Time of Occurrence | Aceh : 07:58AM, December 26, 2004 Nias : 11:09PM, March 28, 2005 | USGS |
| | Magnitude (source) | Aceh : M 9.1 Nias : M 8.6 | USGS |
| | Epicenter | Aceh : 250 km South west of ACEH (3.316°N, 95.854°E) Nias : 2.074°N, 97.013°E | USGS |

| Item | Sub-item | Information | Data Source |
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| | Intensity of Shaking | Aceh : Intensity scale : 4.0 (Soloview-Imamura scale) Nias : Intensity scale : 0.5 (Soloview-Imamura scale) | ISSET Journal |
| | Ground Motion | | |
| | Tsunami (maximum height) | Aceh : 45 m (150 ft) around Lhok Nga area of Aceh Besar District and 24 m (80 ft) according NOAA Nias : 4 m | NOAA/NESDIS |
| Data on Damages | Major Affected Area | Aceh : Banda Aceh, Meulaboh (2 cities, 11 districts) Other countries : Thailand, Srilanka, India, Maldives, Malaysia, Myanmar, Seychelles, Eastern Africa Nias : 80 percent of whole area | USGS |
| | Human Damage | Dead : 127,720 in Aceh, around 250,000 in total 678 in Nias Missing : 93,285 (Aceh) | |
| | Damage of Buildings | House : 139.195 units Social- Economic Facilities : 93.285 units School : 3.415 units Health Infrastructure : 517 units Government Building : 669 units | |
| | Infrastructure/Life line Damage | Agriculture : 73.869 Ha Roads : 2.618 Km Bridges : 119 units Ports : 22 units Airport/Airstrip : 8 units | |
| | Main Damage Cause | The distances between the epicenter and the coast line is very near (90 km in the perpendicular position from the epicenter) Large population of people living in the area along the coast Lack of facilities and infrastructure to support / protect to face the danger of tsunami Lack of access to information and education on awareness of the tsunami Tsunami wave hydrodynamic forces contributed to most damages and losses incurred by the event. Earthquake cause less damages to the area due to the typical structures in the area were not more than double storeys building. Early warning systems installed in the Pacific Ocean, but not installed in the Indian Ocean, whereas 85 percent historically recorded tsunami events occurred here. Some sophisticated tools owned by developed countries already detect symptoms of the tsunami, they've released a tsunami warning to countries in the Pacific Ocean region, but can not provide information to countries in the Indian Ocean before there was a wave of attacks tsunami | |
| | | | |

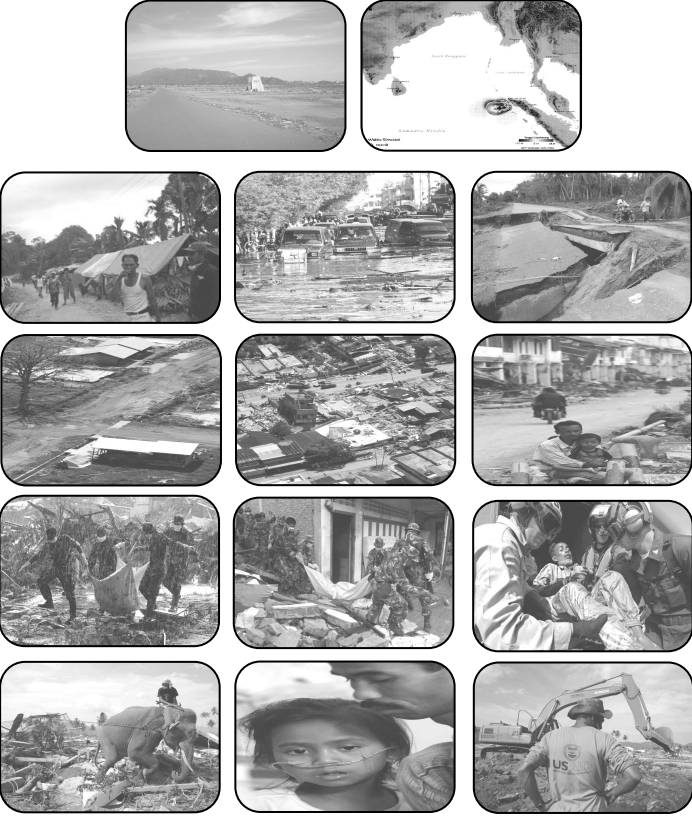
| Item | Sub-item | Information | Data Source |
|--------------------|--|--|-------------|
| | Characteristics of Damages (Physical/Social Aspects) | <p>Physical Aspects: Public Utilities (school, community health center). Infrastructure (electricity, sanitation, drainage, roads & bridges, clean water). Social-Cultural Facilities (village hall, mosque/church). One storey buildings that were located closely to coastal impacted area were flattened and left only their foundation.</p> <p>Social Aspects: 104.500 small bussiness were collapsed 15.000 household need to be relocated 60.000 farmers were displaced 1.927 teachers died 13.828 coastal fishing boats destroyed/lost</p> | |
| | Direct Economic Loss | <ul style="list-style-type: none"> • Total Loss (Aceh-Nias) : Rp. 46.56 Trillion • Approximately Aceh's GDP loss : up to US\$ 4.5 Billion, estimated decrease of Aceh's economic growth : 5% • Decrease rate of per capita income : 32% • Inflation rate : 4.45% (April 2005), 3.24% (Agustus 2005) • Impact of national economic growth : 0.1-0.4 % (2005) | |
| | Lessons Learned | <ul style="list-style-type: none"> • Pre event knowledge of coastal community to tsunami is important to make them aware and ready for emergency evacuation soon after major sea earthquakes. • High structures are potential to be used for escape buildings should higher ground are difficult to find at reachable distance for evacuation. • Government should move quickly to clarify which agency will coordinate the post-disaster reconstruction program, what is empowered to do, and when its mandate begins and ends • A strong, experienced leadership team should be appointed to gain the full support of other government agencies amd the donor agency • A crisis mindset should be maintained throughout the reconstruction effort, adapting usual internal procedures and structures to a crisis situation • Strong implementation capability should be built early on so that the coordinating agency can meet its overall reconstruction targets by directing resources for meeting emerging needs • reconstruction to ensure funding flows meet actual needs | |
| Emergency Response | Rescue activities | <ul style="list-style-type: none"> • Evacuation and searching of victim's bodies Done by collaborative work by Indonesian National Force (TNI), police, Indonesian Red Cross (PMI), Indonesia Search and Rescue (Basarnas), community, volunteers from inside and outside the country. | |
| | Medical services | <ul style="list-style-type: none"> • Handling of victims who were injured done in all hospitals and health care units which still functioning in that particular area coordinated by Ministry of Health of RI • Some of the seriously injured victims who need special treatment were brought out to Medan and Jakarta • Build emergency health care unit • Re-functionilize the damaged hospital/health care units | |
| | Evacuation shelter | <ul style="list-style-type: none"> • 562.149 people live in houses/tents (July 1, 2005) • 33.458 people live in barracks/transitional shelter (July 1, 2005) | |


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| | Food, water and other relief goods supply | <ul style="list-style-type: none"> • 5.000 tonnes rice and foods are delivered (January 9, 2005) by National Logistic Agency (<i>BULOG</i>) • Fixation of clean water supply and sanitation treatment/piping units by <i>PDAM</i> with 435 l/s production capacity and 250 l/s distribution capacity • Aids from other county and university such as portable water purification • Clean water and electricity supply was cut off and being rehabilitated in January 2005 except for Meulaboh and west-coast area | |
| | Information and communication (Information to the disaster victims) | <ul style="list-style-type: none"> • All communication was cut off the day disaster happened. Begin to functional again in January 2005 except for Meulaboh and west-coast area • Communication was being installed in January 2005. IBM installed 250 computer units being to cover Aceh, Medan and Jakarta Area • Radio installation also begin to installed in January 2005 by <i>ORARI</i> and <i>Kodim</i> • PT Telkom Indonesia provided 1 month free for call for Cellular phone registered under Aceh regional codes | |
| | Support from Private Companies | A national-private tv station provided foods for the emergency | |
| | Support from abroad | <ul style="list-style-type: none"> • Total involved country : 34 • Personnel : 16.000 • Medical team : 117 • Mothership/carrier : 9 • Float hospital : 1 • Aircraft : 31 • Helicopter : 82 | |
| | Lessons Learned | <ul style="list-style-type: none"> • During emergency period, critical decisions such as who should lead rescue process and which area should be focused are urgent. Slow process on this will delay rescue process and save the survivors and consequently will increase restive • Overseas support during emergency could be minimum during the emergency period. Therefore, local and national capacities to respond quickly are important to prevent further crisis in the disaster area • Government at the impacted area was mostly paralyzed due to staggering number of victims and losses. Therefore, neighbourhood provincial government support is crucial to restore rules and official engagements • Emergency activities to save the survivors should be prioritized. Top priorities include meeting basic needs, filling supply chain gaps, building a coordination room, and involving affected communities in emergency • Efforts should be made to "build back better" at every opportunity, with disaster-resistant construction, improved quality and sustainable institutional capability • Key donors and multi-donor funds should be requested to play coordinating roles | |

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| Recovery | Infrastructure/Life line | <ul style="list-style-type: none"> • During 2005-2009, done under coordination of Aceh-Nias Rehabilitation and Reconstruction Agency (BRR Aceh-Nias) supported by other national and international agencies, such as Ministry of National Development Planning (Bappenas), Ministry of Finance, US AID, JICA/JICS, Japan Red Cross, American Red Cross, IOM, UNDP, World Bank , etc • Communication line, clean water supply line, electricity are starting to restored in January 2005 • Transportations line also started being restored in January 2005 • 3.696 km of roads are built after 4 years • 363 bridges are built after 4 years • 23 ports are built after 4 years • 13 airport or airstrips are built after 4 years • 97% households have electricity supply (des 2008) • Cellular/mobile phone access reach 35 % household needs | |
| | Other services | | |
| | Temporary House | <p>The number of victim lived in barrack/transitional shelter :</p> <ul style="list-style-type: none"> • 106.320 (2005) • 14.280 (2006) • 3.698 (2007) • 871 (2008) • 344 (2009) <p>Government of RI built barracks/transitional shelter in 24 locations. 977 barracks were built. Each barracks consist of 12-20 transitional shelter with 4x5 m size for each family</p> | |
| | Disaster Waste | <p>5.765.000 m3 of waste were being cleaned and recycled</p> <p>2.5 millions wood waste are being recycled.</p> <p>UNEP, UNDP, and several agencies were involved in removing tsunami waste</p> | |
| | Finance | <p>Total Rp. 21.728.136.110 was being used for ACEH rehabilitation and reconstruction</p> <p>Total of Rp. 2.826.115.886 was being used for Nias rehabilitation and reconstruction.</p> <p>Supported by Government of Indonesia, UN Bodies, Multi Donor Fund (MDF), EU Community, Governement of Japan and others</p> | |
| | Support from Private Companies | <p>Astra International, Several Indonesia National Companies, PT Telkom, Indosat, Media Indonesia Corp, PT Coca Cola, and others were involved during the recovery process</p> | |
| | Support from Abroad | <p>In housing and settlement area :</p> <p>High-Level NGO/IA : 24 NGO/International Agencies : 57.914 units</p> <p>Mid-Level NGO/IA : 72 NGO/International Agencies : 38.898 units</p> | |
| | Lessons Learned | <ul style="list-style-type: none"> • Shelter and basic needs of the survivors are top priorities • Accurate survivors data determine how livelihoods supports can be delivered effectively and efficiently • Traumatized victims may receive less attention and care if carefull survivors treatment is not conducted involving phsyciatry observation • Women and children are the most vulnerable community groups that need serious care during recovery | |

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| Reconstruction | Principles | <ul style="list-style-type: none"> • Implementing islamic law in all aspects of life (especially in Aceh) • Improve the quality of human resources • Strengthening provincial and districts government • Develop and manage natural resources wisely and in accordance to its capacity • Re-built houses and settlement completed with its basic infrastructure • Built efficient and reliable infrastructure • Develop an excellence, fair and competitive regional economic • Developing and preserving cultural values and customs that support sustainable development • Increasing the capacity of local bureaucracy that professional, authoritative, and trustworthy • Strengthen public understanding of national and state insight • Strengthen the implementation of appropriate local government | |
| | Key issues | <ul style="list-style-type: none"> • Religion, social and cultural rights • Education, health and gender • Monitoring • Economy • Planning and Finance • Housing and settlement • Infrastructure • Government operation • Restoring Rules and Law • Institutional and human resources development | |
| | Organizations | Executing Agency BRR, other government bodies, local/international NGO/foundation, United Nation, Other nations such as Japan, German, Australia, Netherland and many more | |
| | Finance | Budgeting composition for Aceh-Nias Rehabilitation and Reconstruction : on-treasury and on-budget : Government : 21 trillion rupiahs Donor : 8 trillion rupiahs off-treasury and on-budget : Donor : 3 trillion rupiahs Off-treasury and off-budget : Donor : 35 trillion rupiahs | |
| | Support from Private Companies | | |
| | Support from abroad | Multi Donor Fund, UN Bodies (such as UNDP, UNICEF, IOM,), World Bank, EU Community, JICA-JICS of Japan, Government of Japan, US AID, Saudi Arabian Government, Turkey, Singapore, and others supported the reconstruction process | |
| | Reconstruction Schedule | April 2005 – April 2009 | |

| Item | Sub-item | Information | Data Source |
|------|---|---|-------------|
| | Key Target, featured strategies/approaches etc. | <ul style="list-style-type: none"> • The development of spritual and social life of the people of Aceh and Nias • Social, economic and cultural community is in a better state • Improving the quality of educational services, health and women's roles • Rehabilitation and reconstruction in Aceh and Nias • New structures and institutions to support sustainable economic growth • Develop key potential for economic growth in a sustainable Aceh and Nias • The rise of of agriculture fisheries and forestry • The presence of holistic-infrastructure development plan • Reconstruction and rehabilitation of housing and settlement than comply to minimum standard • Availability of access to a healthy and clean water to all citiens • Restoration of public roads and highways in Aceh and Nias • Restoration of docks, terminals and airports which are needed to support economic growth • Restoration of drainage system and flood control • Revitalization of government building and insfrastructure • Strenghten the capacity of civil servant | |
| | Economic Recovery | <ul style="list-style-type: none"> • 60% of small bussinesses have access to credit. About 60.000 micro-credits to 4% of households in ACEH and 1.5% of households in Nias • Fisheries production reached 25% above the production level before the tsunami in 2004 • Fish production reached 350.000 tonnes • In 2007, rice production reached 1.535.375 tonnes exceed the pra-tsunami production • In 2007, coffee production reached 42.308 tonnes exceed the pra-tsunami production • In 2007, the poverty level is become 27% from 30% in 2003 | |
| | Other Characteristics | | |
| | Lessons Learned | <ul style="list-style-type: none"> • Key donors and multi-donor funds should be requested to play coordinating roles • Constant communication among partners should be maintained to manage beneficiary and donor expectations about the pace and progress of reconstruction • The coordinating agency should ensure integrity and accountability of funds to gain donor coinfidence and support • A range of influence skills including diplomacy, authority, and flexibility may be used throughout the course of reconstruction • Quality of reconstruction process as well as to ensure the works done efficiently and effectively in achieving the reconstruction goals should be kept as top priority. Due to heavy and large number of reconstruction agencies during the time, coordination and control of the process will be difficult if frameworks and rule among the agencies do not conform at the first place • Data of the victims as well as data of land status are difficult to verify. This will slow the reconstruction process or else will put the reconstruction process in legal status obstacle that may not be easy to resolve • Restoring digital data of land status at remote and save area will help reconstruction agencies to validate legal status of landowners | |

| Item | Sub-item | Information | Data Source |
|------------|-------------|---|-------------|
| References | Reports | Accountability Report of BRR 2008, USGS (United States Geological Survey), ISET (Institute for Social and Environmental Transition) Journal, Execution of Emergency Response Audit Report of DPR 2005, Semester Report of BRR, Progress Report of BRR 2005, Progress Report of BRR 2006, NOAA (National Oceanic and Atmospheric Administration, NESDIS (National Environmental Sattelite, Data and Information Service) | |
| | Data/photos | <p>D-Day + Emergency Response :</p>  | |

| Item | Sub-item | Information | Data Source |
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| | | <p>Recovery, Rehabilitation and Reconstruction:</p>  | |

4) Great East Japan Earthquake 2011

| Item | Sub-item | Information | Data Source |
|----------------|-----------------------------|--|-----------------------|
| Data on Hazard | Date and Time of Occurrence | 2:46PM, March 11, 2011(JST), 05:46 (UTC) | JMA |
| | Magnitude Depth | Mw. 9.0, Mj 8.4, 24 km (JMA) M.9.0 (USGS) Mw 8.8, 23.7 km (Univ. of Tokyo) | JMA USGS ERI-UT |
| | Epicenter | N38.1, E142.9 (130km ESE off Oshika Peninsula) Off Pacific Coast of Tohoku (North East) Region, Japan | JMA |
| | Intensity of Shaking | JMA Intensity scale:7, Max. Ground Acceleration: 2933gal | JMA K-NET |