



INTRODUCTION TO MERCY MALAYSIA



© All rights reserved.
Confidential and property of MERCY Malaysia. No part of this material shall be reproduced, copied
or published in any form by any means, nor should the materials be disclosed to third parties without the consent of MERCY Malaysia

Who We Are



- MERCY Malaysia is a non-profit organisation
- We are a registered society under the Societies Act 1966 (Society No.: 1155)

Vision & Mission

Vision

To be outstanding in delivery of medical and humanitarian aid to all

Mission

MERCY Malaysia is a non-profit organisation focusing on providing medical relief, sustainable health-related development and risk reduction activities for vulnerable communities, in both crisis and non-crisis situation



What We Do?



We focus on providing:

- medical relief
- sustainable health-related development, and
- risk reduction activities for vulnerable communities, in both crisis and non-crisis situation



Our Approach

Total Disaster Risk Management (TDRM)

- A holistic approach to disaster response going beyond the emergency phase
- Takes into account prevention and preparedness measures in the event of the occurrence of another disaster

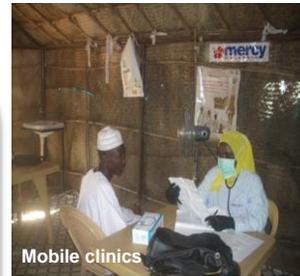


Medical and Humanitarian Aid



During crisis situations (due to natural disasters or human conflict), we respond to humanitarian needs through any of the following:

- Mobile clinics
- Field hospitals and/or Operating theatres
- Psychosocial support
- Distribution of hygiene kits
- Health and hygiene promotion (Water, sanitation and hygiene)



Sustainable Health-related Development

We perform needs assessment to identify local gaps, and service is delivered accordingly

➤ **Malaysia, examples:**

- Outreach Vaccination Clinics e.g. KL
- Outreach Dental Clinic e.g. Perak
- Outreach Clinics e.g. Sabah and Sarawak

➤ **International, examples:**

- Cleft Lip and Palate Project e.g. Bangladesh
- Arsenic Water Mitigation and Rain, Water Harvesting e.g. Bangladesh
- Oral Rehydration Therapy e.g. Cambodia
- Health Facilities e.g. Sri Lanka, Indonesia, Myanmar, Gaza
- Supplementary Feeding Programme e.g. Somalia, Darfur
- Mobile clinic and dental e.g. Philippines, Somalia, Sri Lanka
- Distribution of family hygiene kits to flood affected e.g. Myanmar, Cambodia, Thailand



Risk Reduction Activities

After a disaster, we follow through with preparedness activities to build resilience of the community:

➤ **Malaysia, examples:**

- School Preparedness Programmes
- Johor Community Preparedness Programme
- Disaster Risk Reduction for Persons with Disabilities

➤ **International, examples:**

- School Safety Disaster Education & Community-based Mangrove Rehabilitation Project e.g. Myanmar
- Child Led Disaster Risk Reduction e.g. China, Indonesia, Philippines





FOR ITW

SAFE BUILDING IN DISASTER AREA

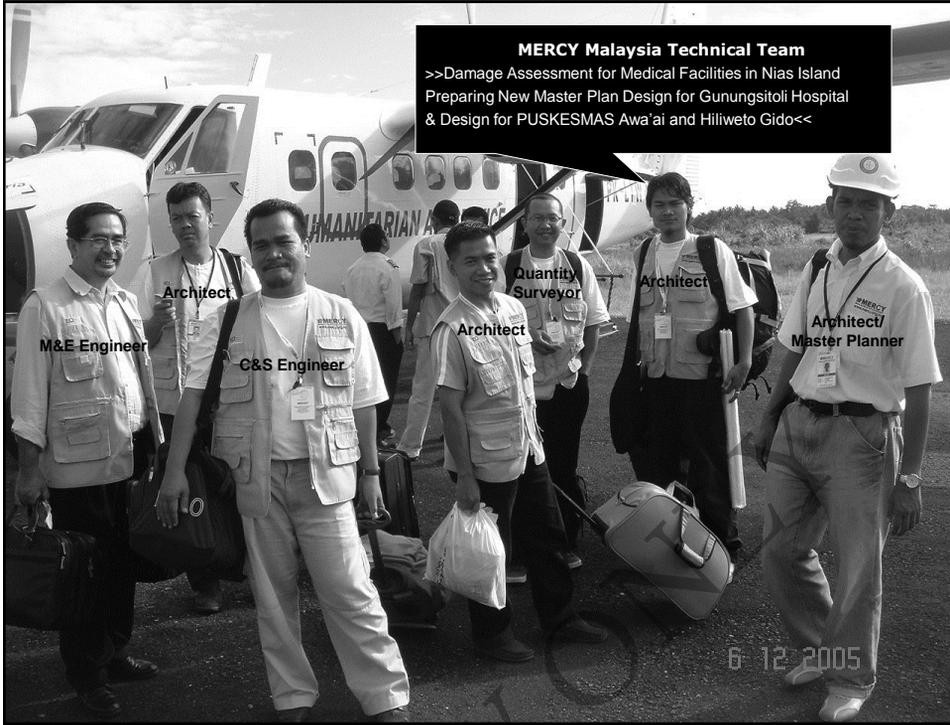
Sharing of experiences

The 2013 International Training Workshop, NCDR, TAIWAN

NATURAL DISASTER vs STRUCTURAL FAILURE



Damage
Assessment



REVITALISATION OF RSU GUNUNGSITOLI, NIAS

Phase 1
Construction of Temporary Hospital

Phase 2
Demolishing Works of Old Building

Phase 3
Demolishing of Other Blocks & Construction of New Blocks

Phase 4
Construction of New Wards

Phase 5
Construction of New Clinical Blocks

Phase 6
Construction of New Clinical Blocks

BEFORE

AFTER

Route Map for Hospital Visit (28 March 2006)

ONE YEAR COMMEMORATION NIAS

The new master plan prepared for the revitalisation of RSU (Gunungsitoli), Nias was a product from an ongoing study and assessment on hospital planning and design. Through plans and design features of the current hospital were studied through a series of surveys on the island. The master plan proposed for the hospital has included new hospital blocks (waring and ward), temporary hospital blocks which will be constructed in the specific quarters, space allowing for medical and non-medical areas, inclusion of a Disaster Management Plan for disaster contingencies and a comprehensive EMS system. Implementation phases is divided into five, which are:

PHASE I

1. Refurbishment of existing hospital blocks (Site A).
2. Demolition of Site B, which is the totally damaged or collapsed block.
3. Construction of Site B. Site B will consider as 80 beds temporary hospital. This temporary hospital located in a permanent building that will later be renovated as staff quarters.

PHASE II

1. Construction of Site C (staff quarters).
2. Installation of Site D (temporary hospital).

PHASE III

1. Construction of Site A (by phases).
2. New temporary hospital in operation.

PHASE IV

1. Demolition and rehabilitation of Site A from Site B.
2. Installation and publication of Site A from Site B.

PHASE V

1. Construction and operation of Site B and installation of staff into new quarters.
2. Demolition of Site C, which have served as hostel blocks for medical students.
3. Completion of Site C into a residential housing plan.

Revitalization Master Plan Concept



ESTABLISHMENT OF DAMAGE ASSESSMENT FORM			
Sector:	MEDICAL BUILDING		DAMAGE ASSESSMENT FORM <div style="border: 1px dashed black; padding: 2px; display: inline-block;">nias - mac2005</div>
Project Location:	GUNUNGSITOLI HOSPITAL, NIAS		
Assessed by:	Ar. Azman Zainonabidin & Ir. Razali Ismail		
Witnessed by:	H. Hussein S. Ghafar, Head of Infrastructure RSU, PEMDA		
Reviewed by:	Head of Operation in Aceh-Nias		
Date:	5 December – 8 December 2005		
BLOCK:	OUTPATIENT DEPARTMENT		
Description:	Supposed to be 2 storey RC frame structure currently only ground floor completed and first floor is used for cloth drying area. Finishing work, i.e. tiling and painting works on progress.		
Item:	Element:	Condition/s:	Recommendations:
1	Apron & Walkway	No major damage.	
2	Floor	Minor crack appear at the ground floor and floor tile. 	Floor slabs and tile that crack shall be reconstructed. Adequate size of reinforcement bars & anchorage shall be added to stiffen the slab.
3	Wall	Diagonal crack on brick wall at the opening – windows & doors (no lintel, stiffener & fish tail) 	Wall that suffer major crack & separated from window/door frames need to be demolish & re-erected with new brick wall. Bonding devices such as fish-tail, exmet wire (at every 4 layers of bricks), concrete stiffener & concrete lintel shall be incorporated to increase strength (anti seismic) & bonding between the infill material & window/door frame.

Damage & Need Assessment

 DAMAGE IMPACT NEED ASSESSMENT REPORT	Prepared by: Norazam Ab Samah
	Date: 28/6/05 Time: 1025

No.	Country	Province/City	Village/Area/Hospital
1	INDONESIA	SUMATERA UTARA/NIAS	GENERAL HOSPITAL

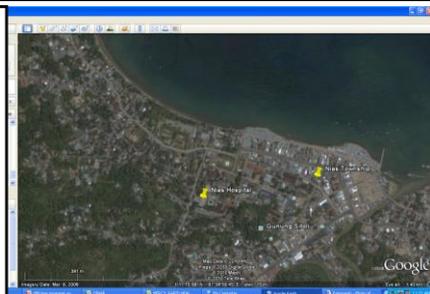
1. PROPOSED SITE LOCATION

Reference no.	Site name	landmar				
	GUNUNGSITOLI	BUPATI HOUSE				
Latitude: 117°19.34"N	Longitude 97°36'51.1"E	Elevation 5M ASL				
Site Addr: RUMAH SAKIT UMUM GUNUNGSITOLI, NO 15 JL DR CIPTO MANGUNKUSUMO GUNUNGSITOLI, NIAS, SUMATERA, INDONESIA						
Populati: 700,000						
Public building (in km radius)	mosque	5KM	hospital	NIL	police sta	1KM
School: (within 5 km)	primary	2KM	second	5KM	university	NIL
General Occupation:	Main	GEN	business	20%	others	70%
Good concentration of peopl	dense	↓	medium	NIL	low	NIL
Other similar program:	5km	NIL	10km	NIL	<10km	NIL
Building type:	permanent	↓	rehab		rental	
Communication tools	land line	↓	HP	↓	internet	↓
Land size:	less 1 acre		< 1acre	5 acres	<10 acres	

2. DAMAGE GRADE

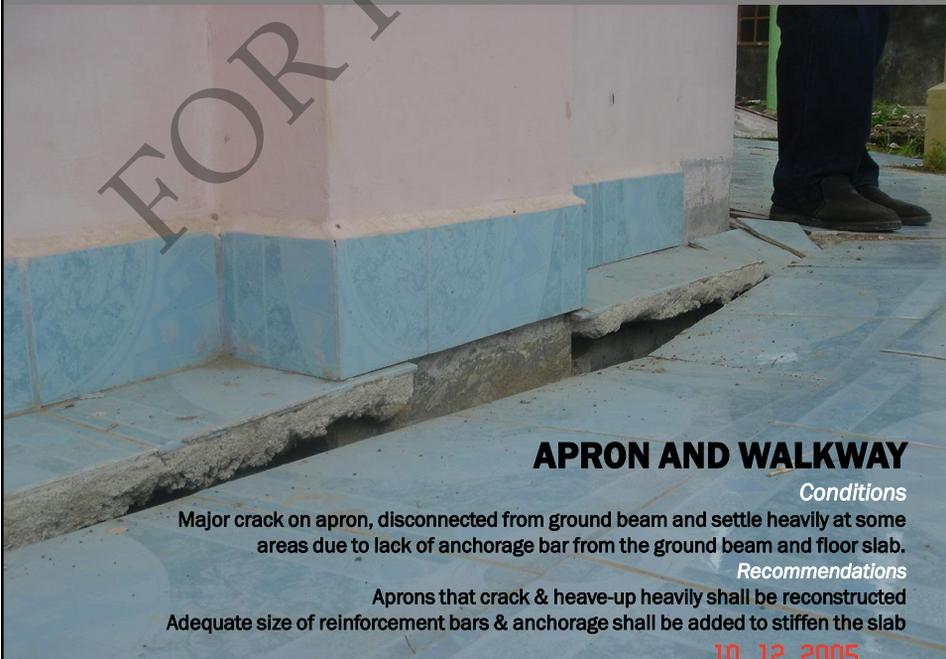
Area	S/F	W/C	R	Total	Major	Medium	Minor
Obstetric & Gynecology	structure	roof beam			↓		
	column				↓		

Sheet1 Sheet2 Sheet3



DAMAGE ASSESSMENT
NIAS, INDONESIA
MERCY MALAYSIA, 2006

DAMAGE ASSESSMENT IN NIAS, INDONESIA



APRON AND WALKWAY

Conditions

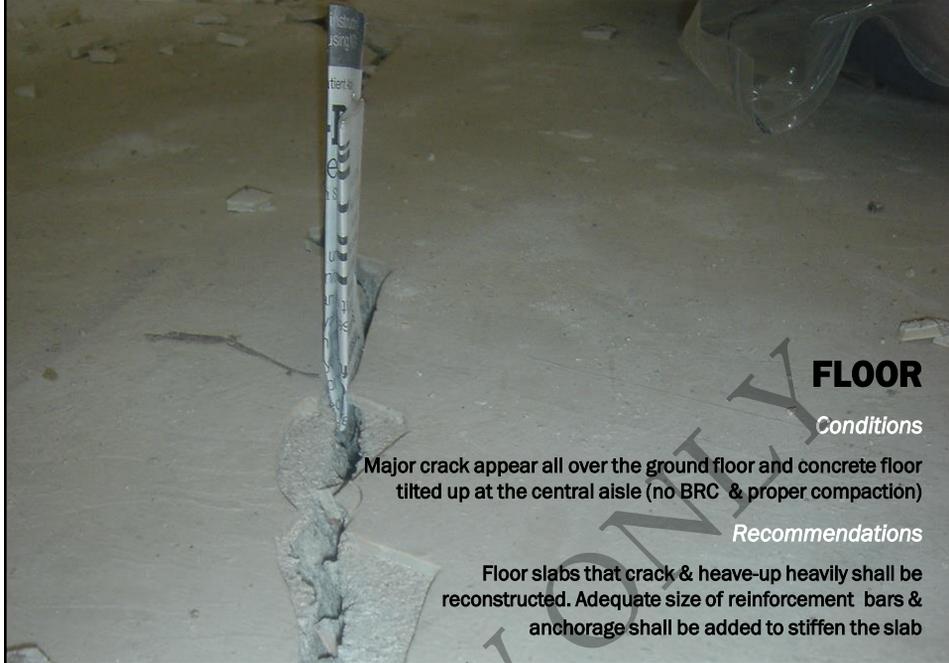
Major crack on apron, disconnected from ground beam and settle heavily at some areas due to lack of anchorage bar from the ground beam and floor slab.

Recommendations

Aprons that crack & heave-up heavily shall be reconstructed
Adequate size of reinforcement bars & anchorage shall be added to stiffen the slab

10. 12. 2005

DAMAGE ASSESSMENT IN NIAS, INDONESIA



FLOOR

Conditions

Major crack appear all over the ground floor and concrete floor tilted up at the central aisle (no BRC & proper compaction)

Recommendations

Floor slabs that crack & heave-up heavily shall be reconstructed. Adequate size of reinforcement bars & anchorage shall be added to stiffen the slab

DAMAGE ASSESSMENT IN NIAS, INDONESIA



WALLS

Conditions

Separation crack between brick wall & RC column (light can pass through at some area)

Recommendations

Wall that suffer major crack & separated from RC column need to be demolish & re-erected with new brick wall. Bonding devices such as fish-tail & exmet wire (at every 4 layers of bricks) shall be incorporated to increase strength & to construct RC stiffener.

DAMAGE ASSESSMENT IN NIAS, INDONESIA

WALLS at OPENING

Conditions

Diagonal & horizontal crack on brick wall at the opening – windows & doors (no lintel, stiffener & fish tail)

Recommendations

Wall that suffer major crack & separated from window/door frames need to be demolish & re-erected with new brick wall



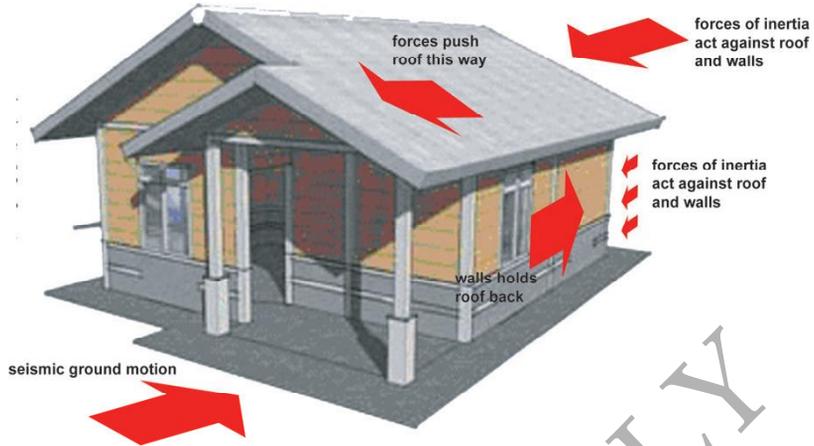
O&G Unit

RUMAH SAKIT UMUM GUNUNGSITOLI

• Major Damaged
DINAR04 : Grade 3



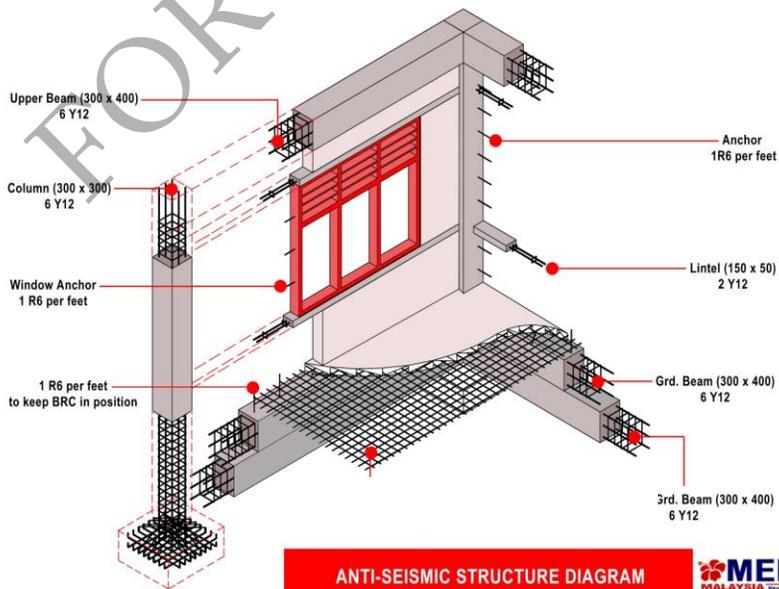
SEISMIC RESISTANCE STRUCTURAL ANALYSIS



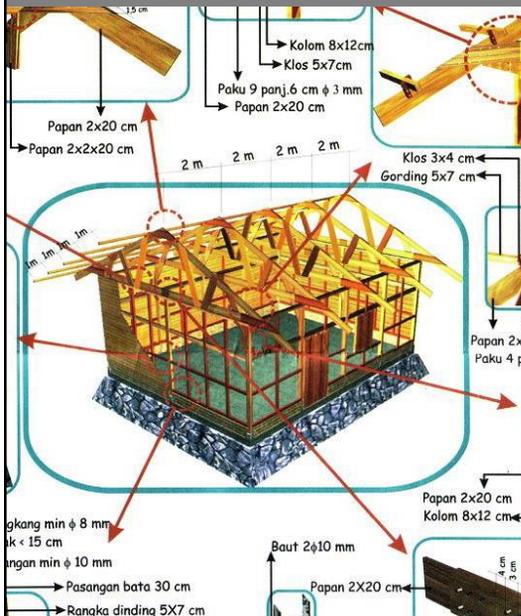
The followings building components are critical to the resistance of seismic forces:

1. Anchorage to the foundation
2. Strength and ductility of the walls
3. Strength and continuity of the horizontal floors, roofs and ceiling
4. Interconnection of all the framing elements

SEISMIC RESISTANT STRUCTURAL SYSTEM - RC



SEISMIC RESISTANT STRUCTURAL SYSTEM - TIMBER



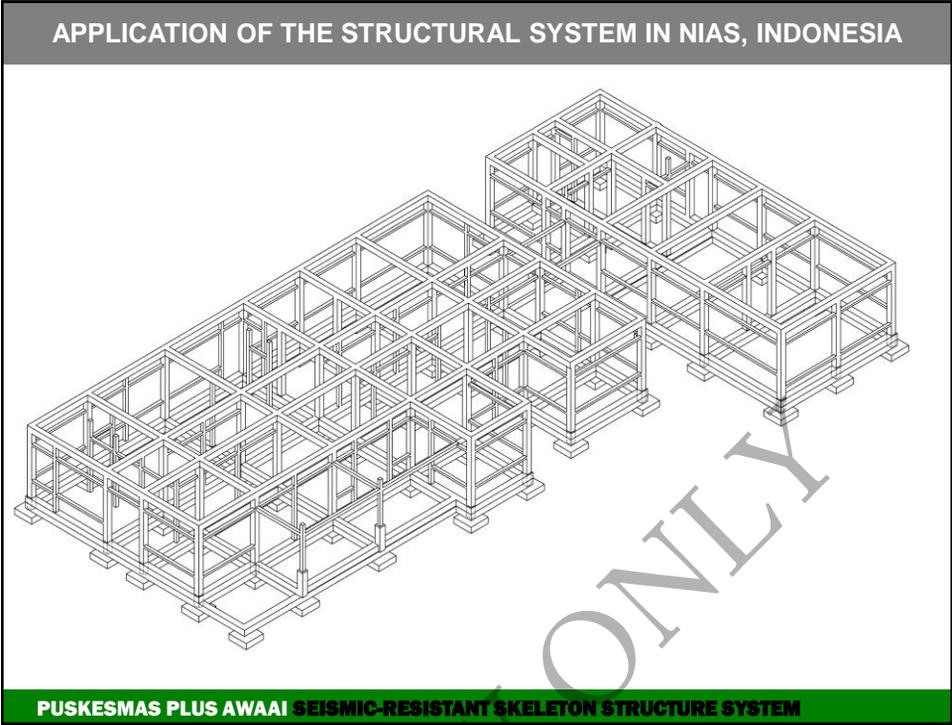
Source:
Yayasan Inovasi Pemerintahan Daerah (YIDP), Indonesia

SEISMIC STRUCTURE COMPONENTS:

1. Steel anchorage at every 1m (strip foundation to ground beam)
2. Steel anchorage (RC stiffener to HW post)
3. Diagonal bracing at every 4 layers of brick (RC stiffener to brick wall)
4. Timber bracing (HW post to HW roof beam)
5. Extra timber bracing (HW roof structure)



Applications



APPLICATION OF THE STRUCTURAL SYSTEM IN NIAS, INDONESIA



PUSKESMAS PLUS AWAAI COLUMN ERECTION & STEEL ANCHORAGE FOR BEAM & COLUMN

APPLICATION OF THE STRUCTURAL SYSTEM IN NIAS, INDONESIA



PUSKESMAS PLUS AWAAI COLUMN ERECTION & STEEL ANCHORAGE FOR BRICK & COLUMN

APPLICATION OF THE STRUCTURAL SYSTEM IN NIAS, INDONESIA

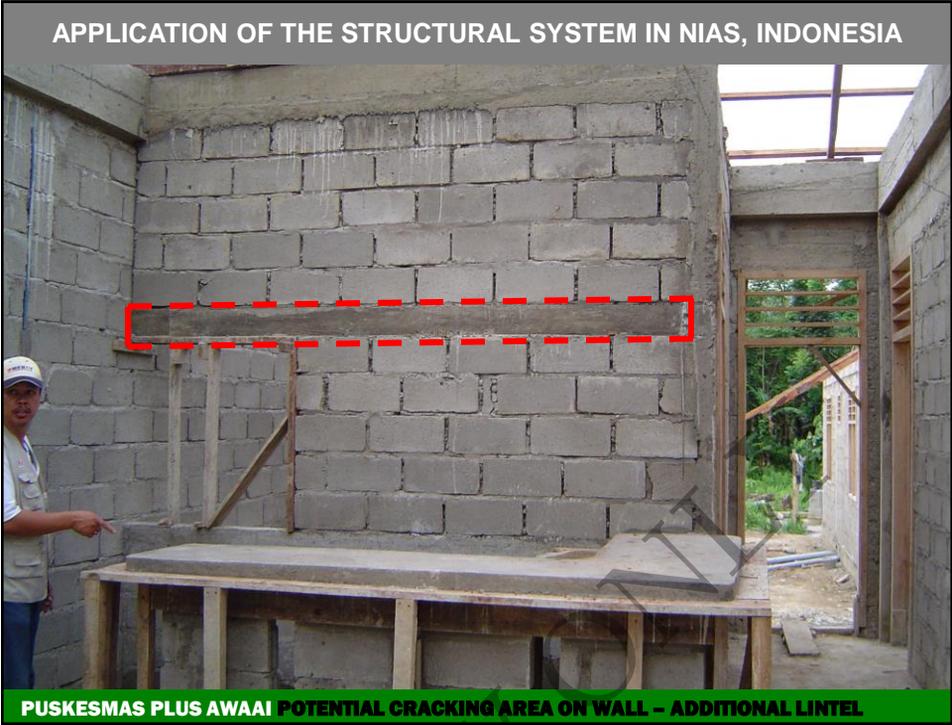


PUSKESMAS PLUS AWAAI STEEL LAPPING BETWEEN BRC AND GROUND BEAM

APPLICATION OF THE STRUCTURAL SYSTEM IN NIAS, INDONESIA



PUSKESMAS PLUS AWAAI POTENTIAL CRACKING AREA ON WALL & OPENING – DOUBLE LINTEL

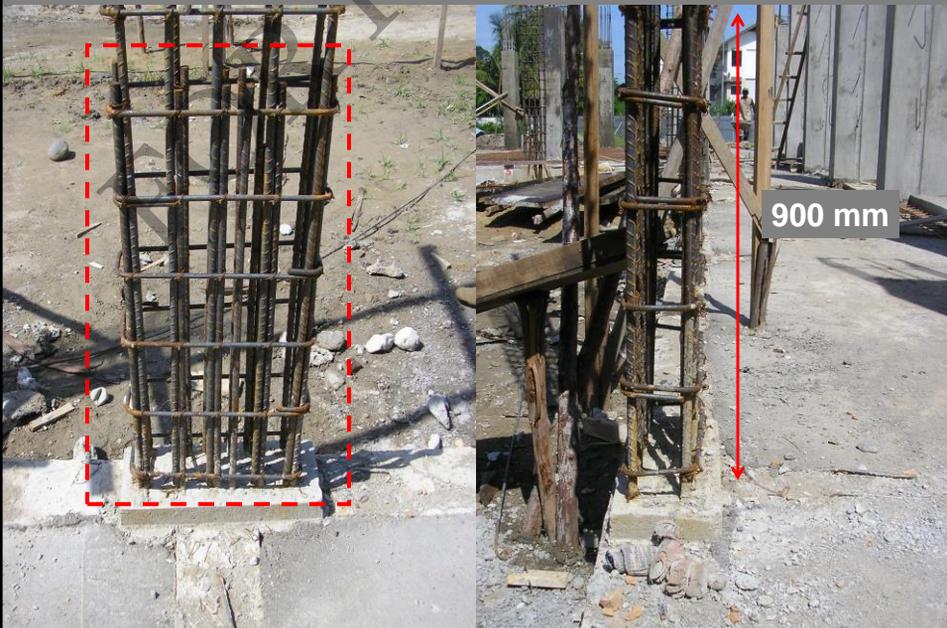


APPLICATION OF THE STRUCTURAL SYSTEM IN ACEH, INDONESIA



NURSING COLLEGE, UNSYIAH, ACEH EXTRA ANCHORAGE SYSTEM FOR GROUND BEAMS

APPLICATION OF THE STRUCTURAL SYSTEM IN ACEH, INDONESIA



NURSING COLLEGE, UNSYIAH, ACEH EXTRA LAPPING LENGTH AT RC COLUMN

APPLICATION OF THE STRUCTURAL SYSTEM IN ACEH, INDONESIA



NURSING COLLEGE, UNSYIAH, ACEH WALL TIES BETWEEN COLUMNS AND WALL

APPLICATION OF THE STRUCTURAL SYSTEM IN ACEH, INDONESIA



NURSING COLLEGE, UNSYIAH, ACEH FLOOR SLAB REINFORCEMENT BAR AND ANCHORAGE

APPLICATION OF THE STRUCTURAL SYSTEM IN ACEH, INDONESIA



NURSING COLLEGE, UNSYIAH, ACEH DOUBLE LINTELS AT OPENING



1 STEEL ANCHORAGE

antiSEISMIC

COMPONENT : STEEL ANCHORAGE - WALL TO COLUMN



MASTER PLAN
Revitalization of RSU Gunungsitoli
Kabupaten Nias, Sumatera Utara
Indonesia

1 Phase One
APRIL 2009 - SEPTEMBER 2009
2 Phase Two
OCTOBER 2009 - JULY 2010
3 Phase Three
OCTOBER 2010 - JULY 2011
4 Phase Four
AUG 2011 - JULY 2012

The Completion

Nias

1 Phase One
APRIL 2009 - SEPTEMBER 2009
2 Phase Two
OCTOBER 2009 - JULY 2010
3 Phase Three
OCTOBER 2010 - JULY 2011
4 Phase Four
AUG 2011 - JULY 2012

MASTER PLAN
Revitalization of RSU Gunungsitoli
Kabupaten Nias, Sumatera Utara
Indonesia

**RSU Gunungsitoli
Master Plan
Development Phases**

PHASE ONE
MERCY Malaysia

PHASE TWO
China Government Fund

PHASE THREE
JICS, Japan

PHASE FOUR
Singapore TRFC

MERCY MALAYSIA



Nias

Funded by MERCY Malaysia



Project

Gunungsitoli Hospital
(Phase One)

Location

Gunungsitoli, Nias

Sector/ Project Type

Medical Facilities

Beneficiaries

Communities of Nias

Value

Rp. 10,000,000,000

PHASE 1

Maternal and child facilities, ward, administration and surgical & emergency , laboratory facilities



Nias



PHASE 1

Maternal and child facilities, ward, administration and temporarily surgical and emergency , laboratory facilities

mercy
MALAYSIA

Nias

Funded by China Government through BRR RANTF



Project
Gunungsitoli Hospital
(Phase Two)

Location
Gunungsitoli, Nias

Sector/ Project Type
Medical Facilities

Beneficiaries
Communities of Nias

Value
Rp. 11,500,000,000

PHASE 2
*Internal and surgical ward, main kitchen and laundry unit
Enclosed courtyard as disaster management zone (evacuation & safety)*



mercy
MALAYSIA

Nias

PHASE 3, JAPAN GOVT. THROUGH JICS April 2008



Project
Gunungsitoli Hospital
(Phase Three)

Location
Gunungsitoli, Nias

Sector/ Project Type
Medical Facilities

Beneficiaries
Communities of Nias

Value
JPY 450,000,000

PHASE 3
*Wards, ICU, clinics, medical records, pharmacy, IT, workshop
mortuary, stores*





Nias

Project

Gunungsitoli Hospital
(Phase Four)

Location

Gunungsitoli, Nias

Sector/ Project

Type

Medical Facilities

Beneficiaries

Communities of Nias

Value

RP 35,000,000,000



SINGAPORE

PHASE 4, TIDAL WAVE FUND SINGAPORE April 2009



PHASE 4

A&E, CME, clinics, Central OT, LAB, Rehab Medic & Infra



Educating the communities



PREVENTION



REBUILDING A SAFER ACEH WORKSHOP
Model House and Nepal Seismic Resistance Design, 19 April 2005



Capacity Building



**>>REBUILDING A SAFER NIAS WORKSHOP
A BRR NIAS & MERCY MALAYSIA INITIATIVE<<**
GUNUNGSITOLI HOSPITAL, NIAS: 3-4 OCTOBER 06

Program
REBUILDING A SAFER
NIAS WORKSHOP

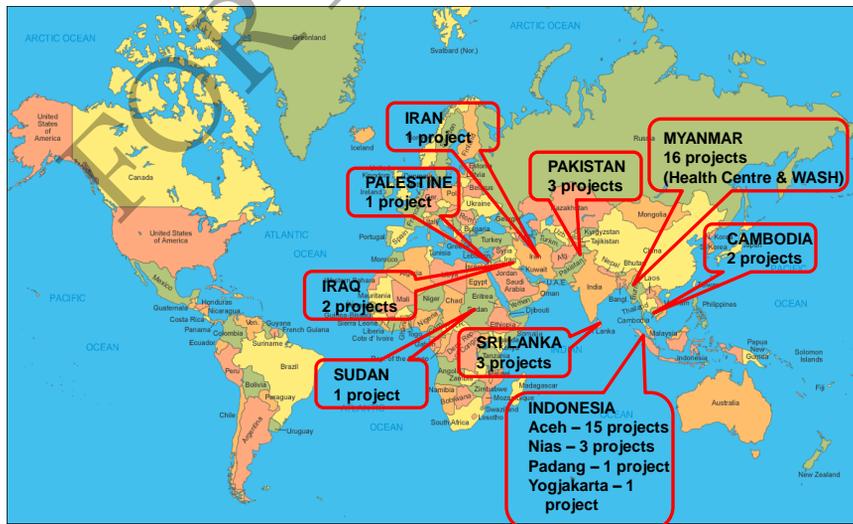
Location
Gunungsitoli, Nias

Sector/ Type
Capacity Building

Participation
MERCY Malaysia
BRR NAD-Nias
UN OCHA
UNHabitat
UNOPS
UNDP
Local Authorities
Other international NGO

Date
3-4 October 2006

MM Tech Team Projects





**EARTHQUAKES DO NOT KILL PEOPLE
BUT
UNSAFE STRUCTURES DO!!**

THANK YOU

**Dzulkarnaen Ismail
MERCY Malaysia
Universiti Teknologi MARA, Perak**

FOR ITM