MAKATI: investing in disaster risk reduction towards a resilient city

ATTY. VIOLETA SOMERA SEVA
SENIOR ADVISER, OFFICE OF THE MAYOR
MAKATI CITY, PHILIPPINES

Theme Session A4: UNISDR Making Cities Resilient Campaign
ICLEI-Local Governments for Sustainability
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Outline of the Presentation

- Introduction to Makati City
- Risk Profile
- Participation in the UNISDR Making Cities Resilient Campaign and the LGSAT
- Discussion on the 10 Essentials: Achievements and Areas for Improvement
- Conclusion and Way Forward
Risk Profile of Makati City

MAKATI CITY EARTHQUAKE INTENSITY DISTRIBUTION MAP
From MMEIRS 2004

Liquefaction Map

MAKATI FLOOD PRONE AREAS

Note: Red = Flood prone areas/streets
Introduction to Makati City

- 27.36 Sq. KM in the heart of Metro Manila
- 33 Barangays or Communities
- Economic and Financial Capital of the Philippines
- Vibrant Central Business District
- Night time population of 510,383, Daytime population of 3.7 million
- Traversed by the Pasig River
- Transected by the West Valley Fault System in the Eastern Section
- The City is vulnerable to flooding, earthquakes, and man-made disasters including terrorism.
MAKATI IS AN ACTIVE PARTICIPANT TO THE UNISDR MAKING CITIES RESILIENT CAMPAIGN AND A CAMPAIGN CHAMPION
Essential 1: Stakeholder Organization for Disaster Risk Reduction and Management – Rating: 4

**Achievements**

- Established bodies in support of DRR and CCA such as:
  - Makati DRRM Council and Office
  - Environmental Protection Council
  - Solid Waste Management Council
  - Health Council
  - Gender and Development Council
  - Makati Fire Safety Foundation

- Formed partnerships with local and international agencies & organizations:
  - UNISDR
  - World Bank
  - ICLEI
  - GFDRR
  - UCLG
  - Citynet
  - Many others

**Areas for Improvement**

- Strengthen its coordination with the National and Regional Government Agencies
- Enhance cooperation with other Local Government Units in Metro Manila, especially neighbouring LGUs.
- Expand relationships with academic institutions for research and studies on DRR
- Promote greater involvement of the private sector in DRR programs and activities
GFDRR CITY-TO-CITY SHARING INITIATIVE FOR DRR: A LIVING PRACTICE OF INVESTING IN TECHNICAL COLLABORATION

SOUND PRACTICES

- GIS ATLAS
- RESETTLEMENT PROJECT
- OPEN SPACE PLAN

- LAND POOLING PROJECT
- URBAN REGENERATION INITIATIVE
- WATER WELLS AND OPEN SPACES PROJECT
- COMMUNITY + NGO PARTICIPATION

- MAKATI C3: EMERGENCY OPERATIONS CENTER
- DISASTER PREPAREDNESS AT THE COMMUNITY LEVEL
- INTEGRATING MOBILITY POLICIES INTO LAND USE PLANNING
- STAKEHOLDERS AS CHAMPIONS FOR DRR

PEER COLLABORATION

On Land Use and Disaster Risk Information
GIS ATLAS

On Building Code
COMMON CHECKLIST ON DEVELOPING GUIDELINES ON BUILDING CODE ENFORCEMENT

On Emergency Management
GUIDANCE NOTE ON CREATING COMMUNITY EMERGENCY RESPONSE TEAMS

ESSENTIAL 1
## FINANCING AND RESOURCES

### LOCAL DRRM FUND

<table>
<thead>
<tr>
<th>Local DRRM Fund</th>
<th>Particulars</th>
<th>2011</th>
<th>2012</th>
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<tbody>
<tr>
<td>➢ 30% Quick Response Fund</td>
<td>• Disaster Risk Assessment</td>
<td>P106 M (USD 2.5M)</td>
<td>P128 M (USD 3M)</td>
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<td></td>
<td>• Equipment Upgrading and Modernization</td>
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<td>• Early Warning</td>
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<td>• CITYNET Disaster Cluster</td>
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<td></td>
<td>• MRSURP</td>
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<td></td>
<td>• And others</td>
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<td>➢ 70% Preparedness Programs</td>
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<td>P273 M (USD 6.5M)</td>
<td>P298 M (USD 7.1M)</td>
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5% of total revenue
Multi-hazard Risk Assessment

Metro Manila Earthquake Impact Reduction Study
Earthquake Impact Assessment

Climate and Disaster Resilience Initiative:
Makati Climate Action Plan
Climate-Induced Disaster Risk Assessment

Makati Risk-Sensitive Urban Redevelopment Plan
Physical and Socio-Economic Risk Assessment
Infrastructure Protection, Upgrading and Resilience

**FLOOD MITIGATION PROGRAMS**

**INVESTMENT ON HEALTH AND EMERGENCY CARE FACILITIES**

**POSSIBLE EVACUATION FACILITIES**

**RESETTLEMENT PROGRAM FOR RESIDENTS IN CRITICAL/DANGER AREAS**

*ESSENTIAL 4*
Essential 2: Assign a Budget – Rating: 4

Accomplishments

- Allocated 5% of estimated annual revenue to a Local DRRM Fund for disaster preparedness (70%) and quick response (30%)
- Implemented programs to reduce socio-economic vulnerabilities to disaster through:
  - Short-term employment programs for women, the youth and Persons With Disabilities through the Public Employment Service Office
  - Business and entrepreneurship support plan through the Makati Consortia
  - Micro-finance program and Livelihood and skills development program combined with market identification with the Makati Cooperative Development Office

Areas for Improvement

- Formulate economic incentives for active participation of stakeholders and the business sector in the DRR programs of the city
- Promote business continuity planning through the Makati Business Development Council (MBDC)

Meeting of the Makati Business Development Council
Essential 3: Prepare and Share Risk Assessments – Rating: 4

Achievements

- Generated localized multi-hazard, vulnerability and risk maps based on the Metro Manila Earthquake Impacts Reduction Study (MMEIRS) and the Makati Risk Sensitive Urban Redevelopment Project (MRSURP)
- Conducted Town watching and hazard mapping with community leaders to generate local flood, fire, and landslide maps.
- Posted hazard maps and evacuation plans in community halls

Areas for improvement

- Establish a risk communication plan
- Conduct vulnerability assessment for livelihood and economic sectors
- Update hazard maps annually or when significant developments occur
- Install hazard maps in neighbourhood common areas to make information more available

Earthquake, flood and fire hazard maps at the entrance of the community hall in brgy. Rizal
Essential 4: Risk Reducing Infrastructure – Rating: 4

**Achievements**

- Created a Zoning Ordinance which covers several risks parameters (strictly requires the Environmental Compliance Certificate and the EGGAR).
- Conducted annual building inspection and year-round flood mitigation activities.
- Strengthened public-private partnership for rehousing of Informal settlers in danger zones
- Renovated and retrofitted vital community structures
- Invested in and maintained the Makati Command, Control and Communication (C3) as the City’s Emergency Operations Center

**Areas for Improvement**

- Conduct Rapid Visual Assessments of more structure in hazard areas which are:
  - Along fault zones
  - Prone to very high liquefaction
  - Prone to landslides
  - Prone to flood prone
- Provide technical support for residents interested in retrofitting
Essential 5: Safe Schools and Health Facilities – Rating: 4

Achievements

- Complied with the Safe Hospitals and Safe Schools indicators set by the Department of Health and Department of Education Respectively
- Performed retrofitting of schools and health centers when necessary
- Conducted drills are regularly conducted in schools and hospitals

Areas for Improvement

- Perform assessments for private schools, hospitals, learning centers etc.
- Undertake further city-wide retrofitting interventions.

Addition of new school buildings
Renovation of community health centers
Essential 6: Risk-Compliant Building Regulations and Land Use Planning – Rating: 4

Achievements

- Enforced strict compliance to the National Building Code;
- Ensured strict enforcement of the Comprehensive Land Use Plan and Zoning Ordinance.
- Incorporated health and safety codes are into the City’s land use regulations.

Areas for Improvement

- Strengthen and update existing regulations at the City level
- Conduct consultations with the national government to enhance national regulations and codes as local government policies are anchored to them.

Building Density Map
Zoning Map
Essential 7: Education programmes and training – Rating: 4

**Achievements**

- Continues to undertake extensive information education and communication programs.
- Regularly conducts trainings for community emergency responders, school volunteers, government employees.
- Undertakes evacuation planning workshops and installation of evacuation maps.
- Provides training for most top-level officials in the City.

**Areas for Improvement**

- Cascade related plans, programs and trainings at the household level.
- Conduct an assessment of the effectiveness of the education programs and trainings already in place.
- Provide more DRR trainings in the City Government for employees.
- Create more programs for students to tell their parents about DRRM.
- Training on Camp Management for Community Leaders.
Essential 8: Protect ecosystems & natural buffers – Rating: 4

Achievements

- Established climate change mitigation initiatives with the corresponding legal and institutional mechanisms for enforcement, e.g. Solid Waste Management (SWM) Code, SWM Plan and Anti Smoke Belching Campaign
- Adopted environment-friendly technologies and GHG emission reduction through earth hour and anti smoke belching ordinance
- Strengthened partnerships with the private sector and local civil society groups.
- Enjoined the participation of communities, local organizations and the youth in clean up drives

Areas for Improvement

- Increase coordination with adjacent cities for trans-boundary ecosystem management

Achievements

- Conducted regular evacuation drills in its schools, hospitals and the central business district
- Installed automatic rain gauges linked to the Makati C3 to determine if rainfall shall cause flooding in certain communities.
- Designated the Makati C3 as the early warning system of the City responsible for providing communities with hazard or threat updates

Areas for improvement

- Provide early warning systems and complete rescue equipment for Communities in the City.
- Organize more evacuation drills for communities near the fault zone.
- Establish neighborhood volunteer emergency rescue teams.
Essential 10: Ensure the needs and participation of the community in reconstruction – Rating 3

Achievements

- Provided psycho-social assistance to victims of disasters by tapping experts from partner organizations.
- Established the cash for work program for disaster victims to participate in the relief and rehabilitation activities.

Areas for Improvement

- Strengthen post-disaster recovery and reconstruction strategies for the “build back better” system by tapping other partners including the Philippine Institute for Civil Engineers.
- Recruit more in-house psychologists and increase psycho-social training on stress debriefing for social workers.
Applying the Self Assessment Tool to Enhance Disaster Resiliency

- LGSAT allows for more in-depth analysis for each of the 10 essentials and define specific outputs to improve each one.
- Results of the LGSAT can then be used to identify specific policies, programs and initiatives to strengthen DRRM.
- The LGSAT makes monitoring and evaluation of progress and accomplishments for each essential easier.
- Easier to mainstream DRR in policies and cascade these to stakeholders, especially the community level.
How the Handbook and LGSAT Complement the Implementation of the Hyogo Framework of Action

THE HANDBOOK FOR LOCAL LEADERS: A guide for Implementation of DRRM

DRRM Planning and Implementation for LGUs
In line with the priority Actions of the HFA

LOCAL GOVERNMENT SELF ASSESSMENT TOOL: Evaluation and monitoring tool for the implementation of DRR

DISASTER RESILIENT COMMUNITIES
**BENEFITS OF INVESTING IN DISASTER RISK REDUCTION**

**POLITICAL/INSTITUTIONAL**
- Good governance
- Effectiveness of Makati’s institutions to respond to disasters
- Reinforced collaboration and networks with other national and international cities, organizations and stakeholders

**SOCIAL**
- Better-informed communities
- Improvement of health system and health facilities
- Special programs for vulnerable households
- Socialized housing for relocated informal settlers
- Strengthened capacities of communities

**ECONOMIC**
- Attracts more investment
- Job creation and livelihood opportunities
- Business opportunities
- Accessible disaster risk financing instruments
By incorporating DRR in environmental management and in urban land use:

- Intensified proper waste segregation and regular declogging and upgrading of drainage systems to lessen flood occurrence

- Sustainable transport system

- Regular monitoring of critical public infrastructures in the high risk areas

- Intensified clearing and monitoring of sidewalk encroachments

Intensified flood control, evacuation and early warning measures

Promotion of urban greening programs

Improved air quality
MAKATI IS A **CAMPAIGN CHAMPION FOR MAKING CITIES RESILIENT**
Binay said P5 million has been allocated for the purchase of an ultrasound machine, while the remaining P30 million will be used for the expansion of the Makati Risk Sensitive Urban Redevelopment Project’”
Gawad Kalasag 2010 - 2011

Makati won the Gawad Kalasag for the Best City Disaster Coordinating Council - Highly Urbanized City Category.

Hall of Fame Gawad Kalasag Awardee - Regional (2006-2008)

2nd Placer for Gawad Kalasag 2009 - National
Makati City

Leading the Way to Disaster and Climate Resilience

Statement Of Commitment

Makati will continue implementing its risk-sensitive initiatives with regular revisiting of targets and gaps for necessary improvements.

Makati will continue introducing new and innovative programs and projects towards resiliency that cities here and abroad may adopt.

Makati will commit to continuously partner, work, and exchange ideas, knowledge and experiences with other cities to achieve our goal of building a disaster and climate resilient nation.
Conclusion and way Forward

As Makati continues to strive to become a disaster resilient city, the LGSAT and Handbook together shall serve as the compass to keep us on course in the pursuit of our commitment to providing proactive, responsive, socially inclusive and holistic disaster risk reduction and management programs and services to our citizens.
“Makati has undeniably become a role model for other local government units in many facets of governance. We are determined to set the trend and be a compelling force that will spur concerted efforts towards disaster preparedness and resiliency throughout the nation.”

MAYOR JEJOMAR ERWIN S. BINAY JR.
2012 State of the City Address
10 January 2012
Manila Peninsula, Makati City