

# **Disaster Risk Management Master Plan (DRMMP) Model and Components**

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## **Abstract**

This presentation describes the Disaster Risk Management Master Plan or DRMMP, which is increasingly being recognized as an effective framework and tool for addressing disaster risk in the complex urban environment of megacities.

## ***Introduction***

Big earthquakes in big cities result in big damages, losses, chaos, and misery. And once a big city is crippled by disaster, its leaders and public officials inevitably face criticism and recriminations when they're held accountable for what they did or did not do to protect their citizens.

Facing the potential for catastrophe, government and community leaders are often at a loss: disaster risk is impossibly complex, and knowledge and tools to manage it are often inadequate. They face a dilemma, and the Disaster Risk Management Master Plan or DRMMP model provides a framework for building a solution based on considerable collective experience in collaborating with partners from academia, government, and citizenry in cities around the world.

This model is attracting considerable attention as something that is making a difference at the local level and that is applicable and transferable to other urban environments. The model has been adopted by UNDP and promoted by UN-ISDR and ProVention Consortium as an effective tool for advancing disaster risk reduction (DRR). And through the actions of local participants in the Earthquakes and Megacities Initiative (EMI's) 3rd Program, we are seeing results.

## ***Empowerment Strategy***

The reason this model is attracting so much attention is that it works through empowerment. It empowers local governments, local institutions, and local communities to plan and implement DRR. And let's be sure we understand *empowerment*; it doesn't mean outsiders coming in and doing the work but rather facilitating and providing access to the where-with-all.

How does this empowerment strategy work? Locally, the strategy is to introduce disaster risk management (DRM) as another city planning process in order to

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*mainstream* risk reduction within local functions and services. We promote DRM not as separate issue but as part of day-to-day business of government and other segments of society.

The reason why this empowerment strategy works at the local level is that it is based on solid program of research and applications in megacities around the world as well as locally, in the specific city. First, for several years now, EMI and its program partners are continuously gaining knowledge and understanding of megacities' context and issues:

- Dynamics of policy making at the megacity level
- Institutional constraints that influence priority setting by local governments, and
- Impediments to DRR initiatives.

We are also:

- Adapting and applying these lessons from experience to specific cities
- Applying sound science
- Developing megacity-specific tool sets and innovative organizational approaches
- Ensuring intellectual merit, and
- Working through integration, teamwork, and coordination.

### ***The DRMMP Model***

What is the actual DRMMP model? The term refers to a master plan and the process of developing and implementing it. The process engages local stakeholders in developing a sustainable plan and action agenda consisting of legal, institutional, financial, social, and technical elements.

This plan and agenda then guide short-term awareness-raising, preparedness, and capacity-building activities, and investment decisions for long-term physical, social, and economic development.

Through this process and agenda, the DRMMP works to provide in a city:

- the institutional and legal framework for a sound DRM system, and
- the integration of DRM into the ongoing governance, business, and economic processes in the city
- i.e., institutionalization and mainstreaming of DRM.

This is a VERY difficult, complex, and ambitious undertaking.

### ***DRMMP Components***

What elements, what kinds of things go in this plan? It consists of a *menu* of priority actions which overall should encompass the key and essential components of a sound DRM system AND the processes necessary to implement and sustain them:

- Risk identification and assessment

- Legal and institutional system (governance)
- Capacity building and community preparedness (awareness, response, relief, recovery capability)
- Risk reduction and prevention
- Financial protection, and
- Development and application of knowledge and technology.

But how do we know, with some of us being outsiders, the SPECIFICS of what any one complex city could possibly need, in its own specific and very unique set of circumstances—its culture, the economic/political/social forces at work, etc, to make it disaster resistant and resilient? How can any outsiders presume to know, presume to tell a city’s leaders what they should do, or how they should set their priorities with their limited human, technical, and financial resources to devote to the disaster risk problem?

The answer is, of course, we don’t know as well as you—the local stakeholders--know, which risk reduction options are the most feasible and likely to succeed in your city’s own unique environment and reality. By working together, we collectively discover what you already inherently know; we combine hearts, minds, knowledge, and experience to best advantage. And we develop a consensus plan, approach, and organization for implementation.

***Example: The Kathmandu Valley***

We’ve said that the DRMMP process develops a menu of actions that, taken together, will contribute toward a sound DRM system. Let’s look at a specific example, and then consider the rationale behind it.

In the Kathmandu Valley, the program partners (National Society for Earthquake Technology-Nepal [NSET], Kathmandu Metropolitan City [KMC], Pacific Disaster Center [PDC], EMI and others) have identified five elements for the joint scope of work for the next three years:

- Strengthen DRM organization at KMC
- Reduce risk through land use and urban development planning
- Provide KMC with mechanisms for building code implementation and enforcement
- Strengthen emergency response (pilot test in selected wards), and
- Enhance information and communications technology for DRM.

For each of these, there is a timeline, list of activities, responsible parties, and outcome indicators. There are linkages with the other activities, and with other related activities at the national level, other internationally-funded projects, and local scientific efforts. For instance, for #1, Strengthen DRM organization at KMC, the activities include:

- Intended outputs and timeframe
- Activities
  - Organize task group

- Review existing legal and institutional arrangements for DRM at national, regional, and local levels
- Develop proposed DRM organization and its agenda
- Conduct training needs assessment as basis for internal DRM capacity building agenda
- Develop guidelines for ward level disaster management committees and implement in selected wards
- Responsible parties, and
- Inputs and linkages with related projects.

### ***The Rationale***

In looking for the rationale for undertaking this group of activities aimed at this specific outcome, we need to consider standards of practice and sound practices from other cities. Our research indicates there are certain essential components of a sound DRM system, and a sound system includes legal, institutional, financial, social and technical elements. For instance, since weak laws and institutions lead to weak implementation, a key element of DRMMP framework is strengthening the legal and institutional system for DRM. Overall, we've identified 15 key factors for an effective DRM system, and for each, a number of related indicators or criteria by which to assess the current situation:

- Legal framework (outlined below)
- Institutional framework
- Knowledge development
- Risk management planning
- Political will
- Leadership
- Implementation of risk reduction and prevention measures
- Policy impact (outlined below)
- Inter-institutional coordination
- Emergency planning
- Response and recovery capability
- Public education and information
- Community action and participation
- Private sector and NGO participation
- Training and capacity building

### ***Indicators/Criteria for Key Factor: Legal Framework***

- Laws, implementing regulations, and enforcement mechanisms in place for risk reduction and preparedness
- Clear assignments of responsibilities for DRM
- Strong legal basis and authorities for responsible nodal agency
- Degree of devolution/decentralization of power and authority
- Degree of development of mechanisms for public participation in policy development

### ***Indicators/Criteria for Key Factor: Policy Impact***

- Policy adaptability to changing environment
- Good governance contributing to sustainability and quality of life
- Risk assessments and disaster prevention measures incorporated in development plans
- Risk considered in construction and land use
- Risk reduction integrated and institutionalized into agencies' operational programs
- Economic incentives for implementing risk reduction

Since we can't tackle all of these needs and gaps at once, we work out a joint agenda, deciding collectively what is most necessary and feasible and where EMI's and our partners' resources can best be applied. And we establish links with additional partners with similar interests, e.g. the UNDP country offices, to create synergy with other projects and programs.

### ***Components of the DRMMP Methodology***

The methodology has 4 components. Looking at it from the global program perspective, the components are 4 complementary program activities:

- Analysis of knowledge and practice
- Disaster risk assessment
- Training and institutional strengthening
- Development of the DRMMP

Each of these is operating on a program-wide basis and a local basis—we are developing knowledge and tools on a global basis and implementing them on local basis. From the local standpoint, it is possibly more useful to use different words, which focus on the process at the local level:

- Assess
- Empower
- Implement
- Sustain

Even though I agree with these, personally I have my own set of words to describe the 4 components. To me, they are: *heart, mind, dedication, and energy*—these are really the core components of this program. Or maybe there are really 8 components, because we can't accomplish anything without *teamwork* and *trust*. And we need to throw in a little *perseverance* and *hard-headedness*, because at some points in this work, we all feel like we're hitting our heads against the wall, over and over.

## ***Conclusion***

Nonetheless, and in summary, I believe the DRMMP provides a way for cities to solve their own disaster risk problems by:

- promoting the understanding of local risk
- creating collaborative partnerships amongst organizations and stakeholders
- sharing expertise and experience from other cities
- stimulating and motivating risk reduction policy development and implementation.

It's about solutions. Not easy fixes, but getting on the right track, toward:

- good governance
- good management of resources
- good business practices
- responsible development, and
- protecting citizens and investments.
- **It's about informed choices.**