# CHAPTER 3

**How** to Implement the Ten Essentials for Making Cities Resilient

*Photo: Cecilia Valdés*

*Community leader in relocation project from Kibera slums in Nairobi, Kenya: participatory planning.*

*"Think big—start small. It is communities that build nations."*

*Vice-Mayor Al Arquillano, San Francisco, Cebu, Philippines. His Municipality was co-winner of the 2011 UN-Sasakawa Award for Disaster Risk Reduction.*

# Milestones and Strategic Planning

A city's strategic planning process should be as participatory as possible, allowing the mayor and all stakeholders to consider how best to integrate the Ten Essentials into the city's development plans and activities. If the city does not have a development plan, this is the chance to think about preparing one. If a development plan does exist, the time is right to review the plan, making sure that it contains all necessary elements of disaster risk reduction.

The strategic planning process will allow local authorities to identify and focus on key disaster risk reduction priorities and explore what resources (human, economic, technology and natural) are available locally. During the planning process, the city can assess its strengths and weaknesses and take into consideration any external factors that need to be addressed to achieve concrete and practical results.

**The planning process encompasses the following milestone phases and steps:**

|  | Milestone Phases | Steps |
|---|---|---|
| **Phase One** | Organizing and preparing to apply the Ten Essentials | 1. Prepare institutional setting, raise awareness<br>2. Convene actors, formalize participatory process<br>3. Plan and execute the process |
| **Phase Two** | Diagnosis and assessment of the city's risk | 4. Be acquainted with the city's risks<br>5. Conduct a risk assessment<br>6. Analyze the local environment and actors<br>7. Prepare an assessment report |
| **Phase Three** | Developing a safe and resilient city action plan | 8. Define vision, objectives and main actions<br>9. Define programmes and projects<br>10. Institutionalize and sustain the disaster risk reduction plan |
| **Phase Four** | Implementing the plan | 11. Implementation and resource mobilization<br>12. Ensure broad participation and ownership |
| **Phase Five** | Monitoring and follow-up | 13. Monitor, follow up and evaluate the plan<br>14. Disseminate and promote the plan |

## Benefits of a Strategic Planning Process for Resilience

The planning process will allow cities to:

- Use existing opportunities and capacities to their advantage; look for ways to minimise the potential consequences of hazards; maximise strengths and overcome weaknesses.

- Have a holistic vision of where the city stands with respect to risk and development.

- Effect substantial change and improvements and advance disaster risk reduction.

- Encourage participation, strengthen democracy and promote consensus, agreements, alliances and other synergies.

- Define and prioritize clear and realistic disaster resilience objectives and actions that represent the interests of all city sectors.

- Prioritize actions strategically to respond to the needs of vulnerable or critical sectors and groups (social, environmental, economic, political, etc.).

- Assign and manage resources according to existing realities and needs.

- Plan short-, medium- and long-term risk reduction strategies, from a development and sustainability perspective.

- Collect and document innovative local opportunities and actions.

- Strengthen the leadership of local authorities and encourage a sense of self-worth among all city sectors; improve capacities where needed.

## Planning Principles

It is important to think about implementing concrete disaster risk reduction measures throughout the entire planning process rather than waiting until the plan is completed. Priority should focus on actions for which resources and local capacity already exist, those which can and will quickly demonstrate visible results. This will motivate all stakeholders and create awareness of the importance of disaster risk reduction in the city. When this is recognized through collective consensus, the chances are much greater that the actions will be acted upon and be sustainable.

Keep in mind that the preparation of a plan is a much more time-consuming process than most people anticipate. If the process is rushed, the opportunity may be lost to achieve participation and a sense of ownership.

Applying the following principles throughout all phases will make for a more effective strategic planning process:

- Encourage local government to exercise leadership in developing local capacity to create resilience.

- Use participatory approaches and promote full participation of the historically underserved, including children, indigenous populations, the disabled and senior citizens to strengthen the social fabric of the city.

- Apply principles of gender equality and inclusion.

- Be flexible, transparent and accountable.

- Define clear responsibilities and identify realistic objectives and actions.
- Build on principles of sustainability (in economic, environmental and social spheres) and resilience.
- Raise awareness and develop a sense of ownership of the plan shared by the entire community.

# Milestones Phases and Steps

## Phase One: Organizing and Preparing to Incorporate the Ten Essentials

1. **Getting ready: prepare the institutional setting and raise public awareness**

   - Assess the political will of the city council and local authorities to integrate disaster risk reduction into development.
   - Promote public awareness of the issues.
   - Establish a legal framework at local level to jumpstart the process; pass a resolution to adopt a policy on disaster resilience.
   - Designate a technical entity or team in the municipality, charged with leading the work and implementing actions.

2. **Convene all actors and formalize the participatory process**

   - Identify and convene all actors and create strategic alliances.
   - Appoint (or strengthen) a multi-stakeholder task force to implement the process.
   - Establish sector or thematic working groups.
   - Identify needs, city resources and priorities and establish a baseline for the work ahead.
   - Establish mechanisms to broaden participation, oversight and information dissemination.

3. **Plan and execute the process**

   - Define the methodology to be used and alliances, resources and capacities required.
   - Create a work plan.
   - Build technical capacities to implement the process.
   - Solicit technical support from relevant agencies to move the process forward.
   - Mobilize resources for implementation.
   - Step up communication efforts by publishing resolutions and work plans.

## Phase Two: Diagnosis and Assessment of the City's Risk

The Local Government Self-Assessment Tool and questionnaire (see Annex 1) can be used to establish a baseline. It can also support the monitoring of activities, as outlined in Phase Five.

### 4. Become better acquainted with the city's risks

- Collect and systematize information on disaster risk, existing national and local legal frameworks, and the city's development plans, programmes and strategies.
- Review the existing territorial development plan and study in detail its programs and projects.
- Take stock of where the city stands with regard to each of the Ten Essentials and analyze historic data on disasters.

### 5. Conduct a risk assessment

- Carry out a general study or diagnosis of the city, which will serve as a baseline of knowledge upon which to conduct a risk analysis.
- Assess hazards and vulnerability in relation to city activities, programs and priorities.
- Prioritize strategic actions to reduce risk in the short-, medium- and long term, in accordance with the Ten Essentials.
- Promote discussion among all actors to reach consensus on priorities.
- Empower local communities to generate risk assessments or "flagging" of vulnerable community assets such as schools, health centres and public facilities.

### 6. Analyze the local environment and actors

- Conduct an internal and external analysis of the situation city-wide, identifying strengths, weaknesses, opportunities and threats.
- Analyze the resources, the capacities and the key actors and stakeholders in the city in relation to disaster risk reduction.

### 7. Prepare an assessment report

- Prepare a draft assessment report and convene all participants in the process to present and validate the findings.
- Prepare the final version of the report, incorporating the comments and recommendations stemming from the review.
- Publish the evaluation and assessment report.

## Phase Three: Developing a Safe and Resilient City Action Plan

### 8. Define the plan's vision, objectives and actions

- Define the vision of the disaster risk reduction action plan and its mission.
- Establish the principles that guide the plan.
- Agree upon the plan's strategic lines and objectives.

### 9. Programmes and projects

- Identify programmes to be developed and implemented by the plan.
- Select which projects—within each programme—will be carried out, based on the priorities established for the short-, medium- and long term.

### 10. Institutionalize and sustain the disaster risk reduction plan

- Prepare a draft disaster risk reduction plan; convene stakeholders to validate it and integrate their observations.
- Prepare a final plan in easy-to-understand language.
- Give legal validity to the plan to ensure that it serves as the city's guiding policy for disaster risk reduction.
- Incorporate all elements of the disaster risk reduction plan into the city's development plan.
- Publish and widely disseminate the plan to ensure that the entire community is fully aware of its content.

## Phase Four: Implementing the Plan

### 11. Implementation and ressource mobilization

- Develop an implementation strategy for the plan with short-, medium- and long-term activities and priorities.
- Define and clearly organize the structure, responsibilities and roles of all city agencies, actors and the community.
- Establish the necessary mechanisms and promote the management and mobilization of resources and financing for implementation of the plan's projects.

### 12. Ensure broad participation and ownership

- Establish and guarantee the validity of formal and informal institutional mechanisms that will allow all actors to take ownership of the plan.
- Establish partnerships and alliances at the local, national and international level for implementation of the plan.
- Enlist the support of all sectors and actors city-wide in the preparation of the projects under each the disaster risk reduction plan's programmes.

## Phase Five: Monitoring and follow up

### 13. Monitor, follow up and evaluate of the plan

- Develop a monitoring, evaluation and assessment strategy to implement the plan.
- Define who is responsible for follow up and monitoring, including the role of the local community and the social/economic sector.
- Establish indicators to measure progress and achievement of the plan's objectives.
- Prepare a clear timeline for carrying out the evaluation and delivering progress reports, including responsibility for these tasks.
- Include feedback mechanisms and opportunities to consult with the community and local authorities.
- Improve technical content by allowing local authorities and stakeholder institutions to provide input to the plan.

### 14. Disseminate and promote the plan

- Develop a communications strategy (internal and external) to promote and inform local authorities, the community and different actors about the gaps, problems, and achievements.
- Put in place communication mechanisms that allow local leaders and the community to provide input, suggestions or comments.

"Local governments do not have easy access to national resources, and even find it hard to influence national investment decisions at local level. Bilateral donors and the UN deal directly with national governments and NGOs, rarely with cities or provinces. Sometimes cities take initiatives to spend their own funds, but we need a voice and involvement in national decision making. Our challenge is not in mobilizing commitment; the existing commitment will have a snowball effect. We need partnerships at city level and with the national government. We must work at the intermediate level with provinces. We need to have innovative public-private partnerships for disaster risk reduction."

*David Cadman, Vice-Mayor of Vancouver 2011, President of ICLEI*

# How to Finance Disaster Risk Reduction

A strategic plan with a clear vision, mission and projects is often the best way to seek resources through the city budget and from regional/provincial, national or international sources. Regular financing can come from city revenues, national disbursements and allocations to sectoral departments. When disasters occur, cities may receive additional funds for response and relief, and later for recovery and reconstruction, from both national and international sources.

- **Make full use of local resources and capacities.** The first place to seek financing for disaster risk reduction is within the local government. Most city administrations collect revenue through service charges, taxes, fees, incentives, fines and municipal bonds, which form part of the annual budget. The city can choose to spend its money to grow and increase in vitality while taking steps to minimise disaster risk and increase disaster resilience.

- **Financing disaster risk reduction is a shared responsibility.** This responsibility must be shared among all who have a stake—from local, national and provincial governments to the private sector, industry, NGOs and citizens. Foundations or cooperation agencies may also provide funding. A mutual understanding among these institutions and sectors will lead to a city that is better prepared to address disaster risk. Innovative alliances and cooperation between the public and private sector and community groups can be explored for specific projects.

- **Resources other than financial.** High-value technical assistance, information, education and training opportunities can be provided by academia, built environment professionals, civil society organisations, regional or technicial organisations—or through an exchange with other cities, at little or no cost to the city.

- **Without a strategy and clear plan, no resources.** To access resources, a city must have strategies, policies, plans and implementation mechanisms in place. A strategic plan will ensure that projects contribute to defined objectives and can also be used to allocate budgets for specific risk reduction projects.

- **Post-disaster funding opportunities.** In disaster situations, cities may have access to national or international relief funds, including from NGOs, national governments or international organisations. Some countries have special budget allocations to support reconstruction efforts, in addition to the city's own resources. Not all local governments are aware of these options and therefore should explore what options, resources and relationships are available before a disaster strikes and set up arrangements in advance.

- **Climate change.** International and national climate change adaptation funds are now available. Some urban projects that combine risk reduction with climate change adaptation aspirations have been accepted.

## Summary of Financial Options and Opportunities

▶ The Adaptation Fund of the UN Framework Convention on Climate Change approved funding for the San Salvador Metropolitan Area (El Salvador) to promote infrastructure that is resilient to climate change. Another US$5.7 million project in Honduras addresses the risk from climate change on water resources and looks to increase systemic resilience and reduce vulnerability among the urban poor. See www.adaptation-fund.org; www.climatefundsupdate.org.

### Local Level

- Local government budget.
- Revenue from service charges, taxes, fees, incentives, fines and municipal bonds.
- Resources held jointly through alliances with local NGOs (community-specific) or the private sector (public-private partnerships).
- Grants given by academia and scientific organisations for training and research.
- Resources identified by mutual cooperation agreements and territorial alliances with neighbouring municipalities for sharing the cost of investments.
- Local fundraising campaigns.

### National – Regional Level

- National/ministerial/sectoral funds earmarked for purposes such as disaster mitigation, relief, reconstruction, climate change adpatation, ecosystem protection, or urban and infrastructure upgrading.
- Annual funds for municipalities from the national government.
- Resources held by national NGOs and Foundations (often acccesible through local NGOs).
- Resources held by research and academic programmes and scientific networks, including for early warning systems, hazard monitoring and related subjects.
- Regional and national territorial alliances among cities.

### International Level

- Participation in city and local government associations such as ICLEI, UCLG and CITYNET, and the UNISDR Making Cities Resilient Campaign to build partnerships and provide learning opportunities through city-to-city cooperation and sister-city cooperation.
- Funds obtainable through bilateral cooperation with national or international organisations, often accessible through an NGO working in the community with links to those entities.
- Multilateral cooperation, mainly through United Nations' funds and programmes present in the country (for example UNDP, UNICEF, World Food Programme, the Global Facility for Disaster Reduction and Recovery). Most multilateral and bilateral cooperation requires agreement with the national government.
- Loans or bonds from national and regional development banks or the World Bank.
- Regional organisations engaged in disaster risk reduction.
- Climate change adaptation funds.

# Examples

## San Francisco, Cebu: Local Leadership Counts—Think Big, Start Small!

**San Francisco,** population 45,000, is one of four municipalities that make up the Camotes Islands in the Philippines' province of Cebu. The municipality is divided into 15 barangays (the smallest administrative division in the Philippines) and 100 puroks (a smaller subdivision of the barangays, especially in rural areas). In 2004, San Francisco strengthened the purok system as the basis for community-based governance and to empower the community to engage in risk reduction activities. Think big and start small—the initiative began with only a few interested puroks and quickly showed results in solid waste management and livelihoods development. Over the course of seven years, these community groups across the municipality have taken responsibility for much of the work. For example, as a prerequisite for economic development (including tourism), substantial road repairs were undertaken. Today, the maintenance of roads and drainage systems rests with the puroks and individual homeowners. San Francisco has also inspired a number of municipal mayors from other parts of the Philippines and from Asian countries, who visited the municipality through city-to-city learning exercises, to see how they could apply the purok model to improve disaster risk reduction in their municipalities. Much of the success of this model is credited to the commitment of high-level authorities in the municipality, to whom the community-elected representatives have direct access (including to the Mayor) to deliver monthly reports. *For more information consult the Five-year Municipal Disaster Risk Reduction and Management Plan, San Francisco, Philippines at http://tinyurl.com/cf49nb6.*

## Amman, Makati, Mumbai: Master Planning for Disaster Risk Reduction Earthquakes and Megacities Initiative (EMI)

Several earthquake-prone megacities **(Amman, Jordan; Makati, Philippines; and Mumbai, India)** have developed Disaster Risk Management Master Plans (DRMMP) with support from the Earthquakes and Megacities Initiative (EMI). These provide an analytical model to guide local authorities, especially megacities and complex metropolitan governments, to understand their vulnerability to natural hazards, analyze the potential physical and socioeconomic impacts and develop a coherent risk reduction approach, given their priorities and implementation processes.

With an estimated population of nearly 14 million, Mumbai is the largest urban centre in India and the country's financial capital. It is exposed to risks from multiple sources: cyclones, coastal erosion, landslides, earthquakes and epidemics. At the same time, the city has 6.5 million slum dwellers, whose resiliency would take decades more to build. Led by the Municipal Corporation of Greater Mumbai (MCGM), the city engages over 100 institutions and organisations to understand its risk and identify solutions. Mumbai worked with EMI to address risk reduction issues and prepared an initial study and road map for improving the city's disaster resiliency. A new DRMMP was developed covering risk management aspects such as resiliency of water and sanitation systems, incorporation of risk parameters into land use planning, construction codes and standards, and slum shelter and housing. By involving a wide range of actors in the development of the Master Plan, stakeholders understand better their relationship to the risks that threaten Mumbai and their role in the city's DRM agenda. The participatory process also helps to align and harmonize the DRM process with those of the national, state and other public and private institutions, in particular those that provide critical services (utilities, health, education, public safety), to ensure proper communication before, during and after a disaster.

A similar participatory study was conducted to set up a Disaster Risk Reduction Management Unit for the Aqaba (Jordan) Special Economic Zone Authority (ASEZA), with a plan, budget, identified functions, human resources requirements, and the flow of information within institutions. It was based on successful models from other cities that were thought to have a particular relevance—Quito, Ecuador; Bogota, Colombia; and Kathmandu, Nepal—in terms of functional arrangements and core activities.

*View the reports on the legal and institutional arrangements and the Greater Mumbai Handbook through links in Annex 4, under Essential 1.*



"[We have taken] a comprehensive approach to managing disasters and enhancing the resilience of 6.5 million slum dwellers. Safe journey is our destination."
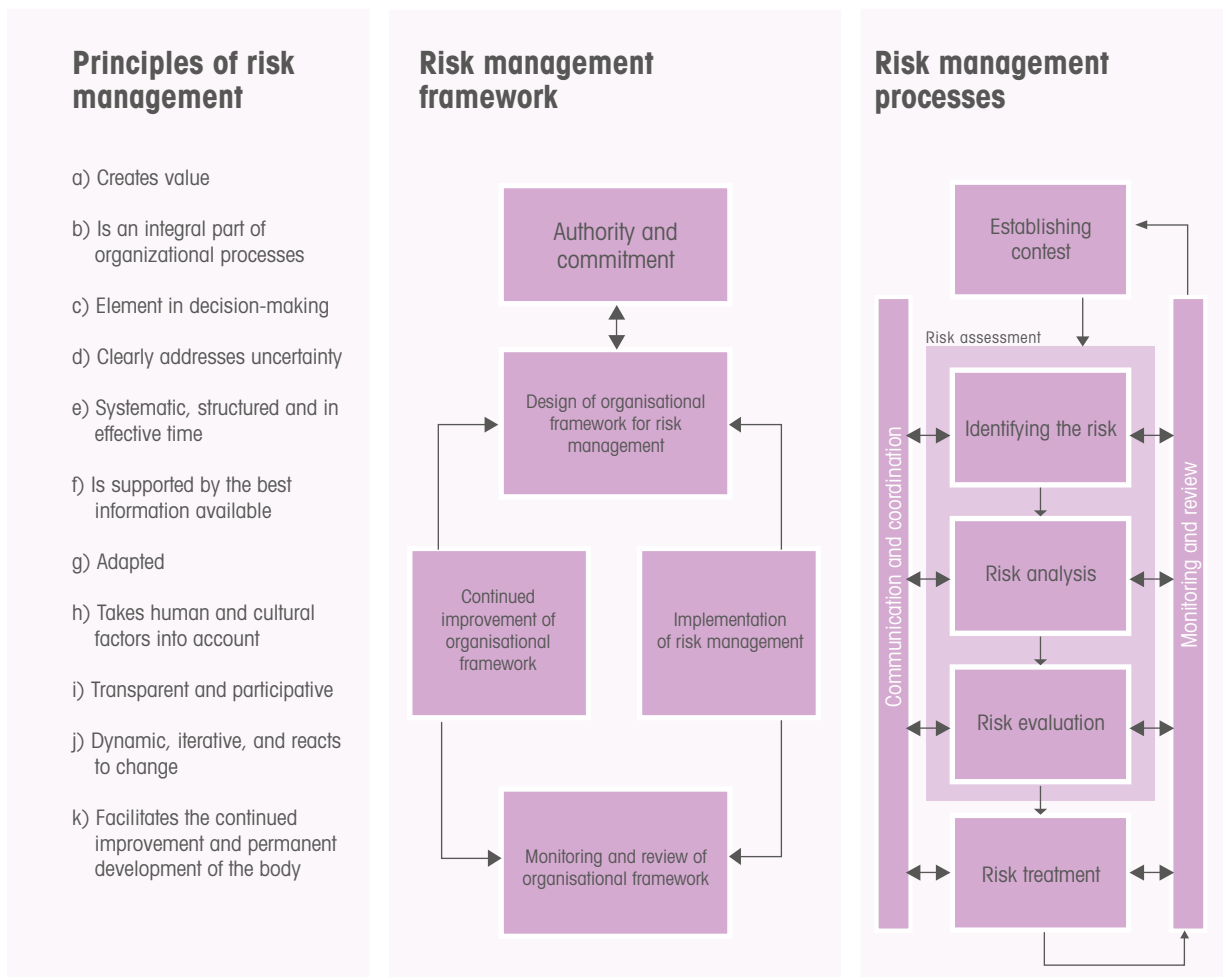
**Shraddha S. Jadhav,** *former Mayor of Mumbai, India*
*Global Platform for Disaster Risk Reduction, Geneva, May 2011.*

▶ **Working towards an International Standard for Disaster Risk Management ISO 31000:2009 Framework**

ISO 31000:2009, which is non-certifiable, sets out a set of principles, a framework and a process for managing risk that are applicable to any type of organisation in the public or private sector. It does not mandate a "one-size-fits-all" approach, but rather emphasises the fact that the management of risk must be tailored to the specific needs and structure of the particular organisation. Learn more at www.iso.org (search on ISO 31000).

**Figure 5:**

Overview of the ISO 31000 standard

## Principles of risk management

a) Creates value

b) Is an integral part of organizational processes

c) Element in decision-making

d) Clearly addresses uncertainty

e) Systematic, structured and in effective time

f) Is supported by the best information available

g) Adapted

h) Takes human and cultural factors into account

i) Transparent and participative

j) Dynamic, iterative, and reacts to change

k) Facilitates the continued improvement and permanent development of the body

## Risk management framework

- Authority and commitment
- Design of organisational framework for risk management
- Continued improvement of organisational framework
- Implementation of risk management
- Monitoring and review of organisational framework

## Risk management processes

- Establishing contest
- Risk assessment
  - Identifying the risk
  - Risk analysis
  - Risk evaluation
- Risk treatment
- Communication and coordination
- Monitoring and review

*Source: Public Risk Governance Report, www.alarm-uk.org/pdf/Marsh%20Report_ISO31000.pdf.*

# NOTES