



Earthquakes and
Megacities Initiative

Cross Cutting Capacity Development (3cd) Program

Disaster Risk Management Master Plan Implementation in Kathmandu Valley

Field Trip # 3 Report

November, 2006



DRMMP Implementation in the Kathmandu Valley
3rd Field Trip Report¹
Implementation, Capacity Building and Long Term Planning
November 9 - 16, 2007

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Calendar of Activities

	Thu. Nov. 9	Fri. Nov. 10	Sat. Nov. 11	Sun. Nov. 12	Mon. Nov. 13	Tue. Nov. 14	Tue. Nov. 15
am	<p style="text-align: center;">Arrival International Team</p> <p style="text-align: center;">Preparatory Meeting at NSET</p>	<p style="text-align: center;">ICT Workshop</p> <p style="text-align: center;">2nd ICT Focus Group Meeting at NSET</p>	<p style="text-align: center;">3cd PIT</p> <p style="text-align: center;">Planning Session Sunker Hotel</p>	<p style="text-align: center;">Seminar/ Workshop</p> <p style="text-align: center;">First Risk Sensitive Land Use and Urban Planning Continued</p> <p style="text-align: center;">Nagarkot</p>	<p style="text-align: center;">Land Use and Urban Planning Discussions</p> <p style="text-align: center;">KMC and KVTDC</p>	<p style="text-align: center;">3cd PIT</p> <p style="text-align: center;">Evaluation and Planning Meeting Sunker Hotel KMC</p>	<p style="text-align: center;">3cd PIT</p> <p style="text-align: center;">Working session with UNDP Country Office</p>
pm	<p style="text-align: center;">NSET</p> <p style="text-align: center;">Preparatory Meeting with the participation of the PIT members</p>	<p style="text-align: center;">NSET</p> <p style="text-align: center;">Consultative Meeting with KMC Mayor, PIT members</p>	<p style="text-align: center;">Seminar/ Workshop</p> <p style="text-align: center;">First Risk Sensitive Land Use and Urban Planning</p> <p style="text-align: center;">Nagarkot</p>	<p style="text-align: center;">Return to KMC</p> <p style="text-align: center;">17 hours</p>	<p style="text-align: center;">3cd PIT</p> <p style="text-align: center;">Debriefing and Review of Program in KTV at NSET</p>	<p style="text-align: center;">High Level Meeting</p> <p style="text-align: center;">Hotel de l'Annapurna, Dubarmarg</p>	<p style="text-align: center;">3cd PIT</p> <p style="text-align: center;">Debriefing and Review of Program in KTV at NSET</p>
<p>Wednesday Nov. 16, 2006 Final discussion and agreements related to the long term planning for Kathmandu City were completed at NSET. The international team departed at 13 hours</p>							

DRMMP Implementation in the Kathmandu Valley

3rd Field Trip Report²

Implementation, Capacity Building and Long Term Planning

November 9 - 16, 2007

1. Background

Kathmandu Metropolitan City (KMC), a member of the EMI network of cities around the world since 1989, officially joined the EMI's Cross-Cutting Development (3cd Program) Program³ in year 2005. Since then three field trips were undertaken by the Program Implementation Team (PIT) following the general implementation process designed and established by the 3cd PIT members, (see chart 1 for additional information on milestones of the program in Kathmandu.)

Table 1 Kathmandu 3cd Program, Milestones 2005-2006

Field Trip Dates	Activities	Accomplishments
Assessment and Documentation September 2005	Launching workshop and one on one consultation with local organizations	<ul style="list-style-type: none">• Diagnosis of current organization and status of DRM in the Kathmandu Valley• Completion of KMC city profile• Identification of Sound Practices• Identification of hazards, vulnerability and risk data availability• Identification of possible areas of cooperation• Local supporting structure established through KMC and NSET
Program Planning June 2006	Stakeholders enhanced consultation	<ul style="list-style-type: none">• Preliminary definition of the Program Implementation Work Outputs (IWO) and proposal to local actors.• Capacity building activities through 2 workshops focused on possible IWOs• JICA data sets of the KTV Earthquake Scenarios cleared to be used in the 3cd Program
Implementation Phase November 2006	Engage local, national and international partners	<ul style="list-style-type: none">• Working session with KMC's Mayor on strengthening DRM structure and organization for KMC• Delivery of the first risk sensitive land use and planning workshop• Diagnosis of ICT data within Kathmandu Valley's organizations• High level meeting with local, national and international organizations• Agreement on a 3 year long planning and consolidation of 4 IWOs.

² Prepared by J. Fernandez, F. Bendimerad, edited by S. Mattingly

³ For details on the 3cd Program see www.earthquakesandmegacities.org and www.pdc.org/emi

Five main areas of interest have been identified since the initiation of the program. These constitute the bases for the discussions and agreement for a long term and sustainable program in the city of Kathmandu with the perspective of extending it to the whole Kathmandu Valley (KTV):

- 1) Providing KMC with a strong organizational structure to handle disaster risk management actions in the city.
- 2) Strengthening organizational and operational emergency response, rescue and recovery capabilities within KMC and the Valley.
- 3) Assisting KMC in land use and urban development planning, including a set of risk reduction and mitigation criteria in their future plans.
- 4) Looking for appropriate means to put in place the national government requirement for building code implementation and enforcement.
- 5) Using Information technologies and communication tools for awareness raising and risk communication

This report refers to the 3rd Field Trip (KMC-3FT) activities, accomplishments, and next steps for the implementation of a disaster risk management master plan (DRMMP) in Kathmandu City and the Valley, based on the areas of interest identified in items 1 to 5 above. For further reference, proceedings of the workshop, meetings, and inter-agency discussions are also included in separate sections.

2. Purpose of the KMC-3FT

The main goal of this third field trip was to initiate the implementation phase of the 3rd Program in Kathmandu City making use of the initial assessment and documentation on DRM, its current organization and delivery, and the initial planning made in June 2006.

To pursue this goal, four major activities were organized with this purpose:

- 1) A High Level Meeting (HLM) with the participation of Nepali authorities belonging to the local and national organizations, and representatives from international organizations based in Kathmandu, with the main goal of promoting the program, gaining understanding and support to the initiative, and exploring means of future cooperation.
- 2) An initial training module addressed to the technical staff and administrative management of the Urban Development Department of KMC in accordance to their interest in improving urban planning and land use by mainstreaming risk reduction in their revised and updated land use and development plans.
- 3) One-on-one consultations with the Mayor of KMC, other representatives from different municipal departments, members of the Kathmandu Valley Town Development Committee (KVTDC), and UNDP country office, as one of the major players in this initiative in Nepal.
- 4) Follow up on previous activities related to the identification of Sound Practices for Disaster Risk Management in the Kathmandu Valley, and integration with initial training modules and workshops deployed during the two earlier fieldtrips.

3. Major Accomplishments

Understanding the Unique Favorable Conditions for DRR in Kathmandu

There is a set of exceptionally favorable conditions to factor disaster risk reduction in Kathmandu. In fact, three exceptional conditions are lined up for a successful stride in disaster risk reduction in the city:

2. There is a favorable national political climate with stability and reconciliation finally taking place in the country. The policy makers of KMC are very motivated to change the current status quo and to engage in disaster risk reduction. As a sign of their political will, it is worth noting that the current Chief Executive for KMC attended and made a presentation at the EMI's Asia Megacities Forum.
3. The city is going through the update of its urban development plans, and thus these plans can be drawn with hazard and vulnerability reduction in mind, potentially eventually (?) resulting in a risk sensitive development and urban growth in the future. Since urban plans are updated only once in a decade, the loss of such an opportunity would be of grave consequences to the city.
4. The instruction by the national government to push the implementation of the building code addressed to the municipalities and the willingness of KMC to put in place a competent system for code implementation and enforcement is another unique opportunity to ensure that future construction will have the proper protection for safety in the city.

If these exceptionally favorable conditions are not taken advantage of now, a unique opportunity to make the city safer will be lost; then one can only expect that the accumulation of risk and vulnerability will increase and become even more complex and difficult to deal with in the future.

Emergency Response, Rescue and Recovery is the foremost concern

In the short run, and given current conditions, emergency response, rescue and recovery are of particular concern for KTV stakeholders. There is a great concern at all levels about the lack of capacity for disaster response and rescue, the lack of a competent organization, and the lack of an infrastructure (human, operational, financial and technological) within the city and the Valley to undertake the task of improving the capability of institutions, communities and the general public to respond and recover from a disaster. Rather old and congested areas in the valley are clearly the most sensitive in terms of expected damage due to poor conditions of the buildings. Lack of emergency response capabilities and institutional coordination, along with misinformation and confusion will only exacerbate the situation. Consequently, the development of a competent system for emergency and disaster response and rescue should be an integral part of any disaster risk reduction program for Kathmandu.

Consensus was reached on the need that KMC has to put in place a competent planning process for emergency response, rescue and recovery. Since these plans need to be effective, any emergency response and rescue scheme should be tested for its efficiency at smaller urban units, i.e., wards.

✚ Engaging in the Land Use and Urban Development Planning Process is crucial

The Kathmandu Valley Town Development Committee (KVTDC) is currently undertaking a review and update of the land use and urban development maps for the Valley. Both the KVTDC and the KMC authorities requested the support of the 3cd Program to ensure that the land use and urban development maps are completed and to eventually incorporate hazard and disaster management parameters when the plans are prepared. This will effectively direct and manage urban growth in the city.

There is a need to improve current global/general planning and managerial capabilities at KMC so that mainstreaming risk reduction could be done in an easier and more structured manner as an immediate next step.

✚ 3cd Implementation Structure is endorsed

It was confirmed that KMC, through its Departments of Urban Development and Social Welfare, is the primary constituent of the program. This city will be the core for pilot testing different options for risk reduction and disaster management, which will ultimately be transferred to the neighboring municipalities in the Valley.

Links with the provincial and national organizations, such as the Ministry of Home Affairs (MoHA), the Ministry of Local Development (MoLD), the Kathmandu Valley Town Development Committee (KVTDC) will be established, as well as with lower administrative units or wards. Partnerships with the international and national organizations based in the country will also be sought, particularly with UN-OCHA, ProVention Consortium, International Recovery Platform, Nepal Red Cross and others.

NSET will act as the local investigator and, jointly with EMI and its partners will constitute the Program Implementation Team (**PIT**) to carry out specific activities, design implementation strategies, promote, coordinate and keep track of the overall process.

✚ Four Implementation Work Outputs are identified

This extensive process of consultation resulted in a better understanding of major concerns of local stakeholders and a prioritization of specific actions aimed at providing, to KMC and the whole Valley, with a 3-year long framework which includes four Implementation Work Outputs (IWO) and its respective activities, as part of the disaster risk management master plan (DRMMP) for Kathmandu. Initial areas of interest were acknowledged and grouped in a more effective way in four IWO, which are shown below:

- IWO 1** – Strengthen the Organizational and Operational Disaster Response, Rescue and Recovery Capabilities of KMC and Kathmandu Valley
- IWO 2** - Incorporate hazards and disaster management parameters in land use and urban development planning
- IWO 3** – Extend technical and managerial support to KMC in developing a process for building code implementation
- IWO 4** – Develop KMC-specific DRM risk communication and information technology tools

✚ Four Focus Groups to be set up

Four Focus Groups (FG) will be progressively constituted to advance local project ownership and support, to participate in knowledge sharing and transfer, and to look for long term commitment and engagement and ensure sustainability. By November 2006, one of them has been already constituted and has been actively engaged in their particular activities, this is FG#4 that works on issues related to Information and communication technologies. Focus Group #2 was also identified and will soon start working.

FG #1: Disaster Response, Rescue and Recovery

FG #2: Land Use and Urban Planning

FG #3: Building Code Implementation

FG #4: Information and Communication Technologies

To get strong focus groups, a core group should be constituted by delegates from NSET and KMC, which should be enhanced with the participation of delegates from key local and national agencies, in addition to one or two city stakeholders belonging to professional organizations such as planners or architects associations, universities and research centers.

✚ Interest of the National and International Organizations in joining efforts

The High Level Meeting (HLM) was particularly productive because national level and international organizations appreciated the efforts and long term commitment of the 3cd Program in Kathmandu. Similarly,, several international organizations expressed both their concern over the existing conditions and their interest in supporting an improvement of the response and rescue capabilities of the city. Several projects are already in place, targeting specific groups or specific sectors (e.g., health care) for capacity building and training. The 3cd program will cooperate and coordinate with these projects to ensure better integration and avoid duplication.

✚ Sharing information for improved disaster risk communication

Through its initial activities, FG#4 has been able consolidate the interest among local expert groups in the appropriate use of ICTs for disaster risk management. Main accomplishments, summarized below, will serve as the bases for implementation work output 4:

- Engagement of 10 organizations with GIS ,identified & actively participating
- Initiated preliminary data inventory per agency
- Procured JICA project extensive data sets for Kathmandu Valley
- Completed data inventory and preliminary JICA Data Gap Analysis
- Creation and presentation of 22 representative hazard maps from available data sets as introductory step to GIS Risk Assessment

4. Action Items and Next Steps

- ✚ The 3cd Program Implementation team will prepare a phase-2 proposal that incorporates timelines, responsible parties, and required funding for a 3-year program (2007-2009). This document will be submitted to UNDP country office in Kathmandu for funding

considerations by the Allocation Committee, which will gather in Geneva on April 2007. Jeannette Fernandez (3cd component 1 coordinator), Fouad Bendimerad (EMI chair), and Shirley Mattingly (3cd Program Director) will prepare and submit this proposal to NSET for review and further input. A revised version will be submitted to UNDP/Nepal office by the end of January 2007 for feedback.

✚ A detailed work plan to address IWO #1 will be prepared by the Program Implementation Team. NSET will take the lead to follow current discussions within KMC for the administrative reorganization. At the same time, it was suggested that areas of interest 1) providing KMC with a strong organizational structure to handle disaster risk management actions in the city, and 2) strengthening organizational and operational emergency response, rescue and recovery capabilities within KMC and the Valley, need to be incorporated within IWO #1 activities. Therefore, EMI will prepare a separate discussion paper to include detailed activities and needed resources to improve emergency response, rescue and recovery planning for the city. This model would be pilot tested at the ward level and eventually extended to the Kathmandu Valley.

✚ The EMI Secretariat, which counts on a strong group of experts in urban planning, will take the lead to prepare a proposal for the improvement of a comprehensive Land Use and Urban Planning process in Kathmandu for IWO#2. EMI will forward an updated concept note to be considered by NSET, prior to discussing it with KMC, KVTDC and other stakeholders. If necessary, the scope of work will be jointly completed. This should be a global plan that provides a framework of action and, later on, the specificities will be progressively incorporated. It will also promote the active participation of city stakeholders and relevant organization working in this particular field. The suggested outline of the plan is the following:

- Review the context for LUP in Kathmandu, including understanding current laws and regulations as well as the role of different institutions.
- Review 2020 Vision for Kathmandu and the Valley
- Promote internal training among KMC staff by making use of the materials prepared by EMI for the LUP Workshop conducted during the November 2006 field trip. NSET will facilitate distribution of copies of the presentations and other materials introduced during this event.
- A second workshop will be scheduled for FT#4, this time with a longer and more detailed training module. Urban planning staff will be gathered for a 2-3 day activity focused on methods for LUP and formulation of rules and regulations (RR).
- Initiate a long term (at least one and a half years) planning process jointly between EMI and KMC which includes practical exercises guided by the EMI Secretariat.
- Enter into an agreement with KMC and other relevant organizations who should allocate enough human resources as counterpart.

Time lines for IWO#2 were also discussed and agreed:

- By February or end of March 2007 at the latest, KMC is expected to complete its current land use map with the assistance of Stuttgart University. The maps will be submitted to KVTDC and the information therein will be incorporated with similar information from the land use maps of the other 4 municipalities in the Valley.

- Also, the KVTDC which is currently undertaking a review and update of the land use and urban development plans for the whole Valley is expected to complete mapping existing land uses for the whole Valley by February or March 2007.
 - During the months of March, April and May 2007, KVTDC will clear the parameters to start a second phase which includes general guidelines for future urban development and its implementation under Vision 2020.
 - EMI has suggested that a joint program EMI/KMC/KVTDC could be undertaken from June 2007 with a long term vision of two to three years, to develop a Comprehensive Land Use and Urban Planning Program (CLUP) for the Valley.
- ✚ NSET will collect the necessary data and information to move forward the LUP work plan,(such as the existing Land Use and Development Plans, a copy of Vision 2020) and identify specific laws or proposed bills related to LUP and development plans for the Kathmandu Valley, to be used under IW#2.
 - ✚ NSET will coordinate the organization of Focus Group #2 which should be operational, incorporating a core group and inviting the participation of other local and national organizations. At the end of the LUP workshop, possible members of this FG were identified, see LUP Workshop Proceedings for details.
 - ✚ NSET would be the responsible party to take the next steps to push forward IWO#3, related to Building Code Implementation and Enforcement. This includes providing enough input to integrate this initiative within the national level context and link it with other on-going projects. The important aspects to be considered under this IWO are:
 - Identifying the different models for building code implementation and enforcement, and the design of one most appropriate for KMC, including the necessary by laws.
 - Looking for areas for integration and coordination with land use and planning activities from Implementation Work Output #2.
 - Designing a capacity building program which could address general concepts of the code, specialized modules, case studies and applications, and their dissemination.
 - Putting KMC efforts in the national context
 - ✚ Focus Group #4 under the general coordination of Jim Buika and Ganesh Jimee is expected to provide feedback during review and implementation of risk communication tools and strategies. The 3rd Team is expected to build an internet based MapViewer similar to the one that was built in Manila (www.pdc.org/mmmv).

DRMMP Implementation Work Output 4 includes the following activities:

- Develop a governmental and inter-agency cooperation strategy to improve risk data availability to all of Kathmandu Valley
- Complete data and metadata inventory surveys within GIS organizations, including data sources, scale, software, and organization skills.
- Look for means to develop an internet-based map viewer for Kathmandu.
- Promote the use of the internet-based map viewers through specialized training modules.

5. Proposed Disaster Risk Management Master Plan(DRMMP) for Kathmandu

Table 2 illustrates the proposed four Implementation Work Outputs for the DRMMP for the city which are expected to be also expanded to the neighboring municipalities, as the 3rd program moves further in the implementation phase. Indicated are also those main activities that are expected to be undertaken under each one of the IWO.

Table 2. Proposed DRMMP for Kathmandu City

Implementation Work Output (IWO)	Indicative Activities
1 Strengthening Organizational and Operational Disaster Response, Rescue and Recovery Capabilities of KMC and the Valley	1.1 Structure FG #1 on Organizational and Operational Response and Recovery. 1.2 Review existing legal, institutional arrangements and policies for DRM at the national, regional, and local levels. Analyze current DM capabilities in KMC and the Valley; Hold consultation workshops with stakeholders. 1.3 Propose a legal and institutional framework for disaster management in KMC 1.4 Propose an operational framework for disaster response in KMC, and the process for institutionalization and internal capacity building 1.5 Strengthen ward-level preparedness, response and rescue capabilities
2. Risk Reduction through Land Use and Urban Development Planning	2.1 Provide technical support to KVTDC and KMC in checking the accuracy and competency of the “as-is” land-use maps 2.2 Support the KVTDC in the further refinement and implementation of Vision 2020 , the completion of the land use maps and, on the basis thereof and other information, the development of Land Use Plan for the Valley, including the incorporation of disaster management parameters. 2.3 Undertake a training and capacity building program for planners and related professionals. 2.4 Promote south-south exchange between the cities of Metro Manila and Kathmandu
3. Provide KMC with Mechanisms for Building Code Implementation and Enforcement	3.1 Establish a sound framework for building code implementation, including enforcement process. 3.2 Establish the appropriate regulatory process 3.3 Undertake training and professional capacity building 3.4 Develop education and awareness raising 3.5 Integrate with IWP #2
4. Enhance Information and Communications Technology for DRM	4.1 Develop a governmental and inter-agency cooperation strategy to improve risk data availability. 4.2 Complete data and metadata inventory surveys within GIS organizations. 4.3 Provide feedback in the development of an internet-based map viewer for KMC 4.4 Support the implementation of training modules

A more detailed concept paper for each one of the IWO will be prepared by pre-assigned members of the PIT (see next steps section). This will expand the goals, specific procedures, time lines, and resources needed for the actual implementation process.

The planning has been done for a time span of 3 years, starting in January 2007. It incorporates the findings and agreements from the two previous fieldtrips which main objectives were to consolidate a local structure to support the implementation process, engage local stakeholders in a participatory process to define a locally owned disaster risk management master plan, and mobilize the necessary human and financial resources for a successful implementation phase through institutional commitment.

Engagement of local, regional, national and international organizations has also been progressive in this partnership course of action. These accomplishments constitute a good support system for a successful implementation phase, which will only be reflected in better and safer conditions for the Nepali population and its institutions.

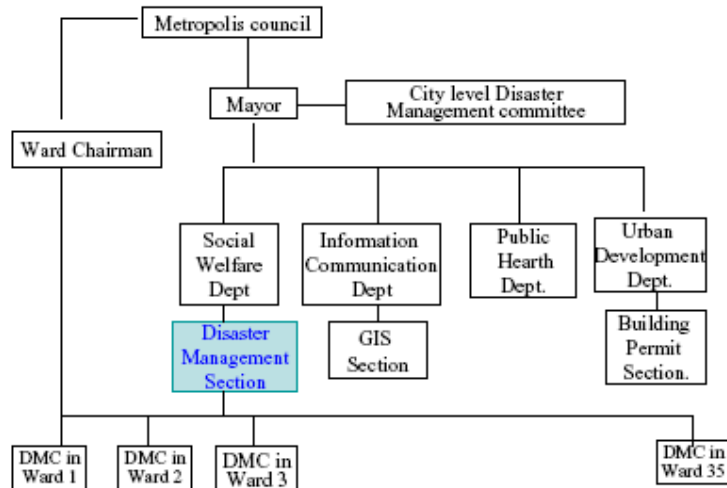
P r o c e e d i n g s

One-on-One Consultation with KMC's Mayor November 10, 2006 NSET Premises

On November 10, 2006, a one on one consultation with Mr. Dinesh Thapaliya Chief Executive of KMC took place at the NSET premises. Mr. Thapaliya had also the opportunity for a policy discussion with the 3rd Program Director a few days before the actual visit to Kathmandu. These consultations provided a better understanding of the strong interest of the local authorities to provide the city with a strong DRM structure. As an example of the process that was initiated, two viable options to strengthen DRM organization at the municipality, the various ways for 1 mainstreaming Risk Reduction and Risk Management in the land use planning and development process were discussed. DRM could be mainstreamed under the Social Welfare Department (SWD) or under the Urban Planning Department (UPD). Also suggested was the creation of a Division of Citizen's Safety which could be responsible for coordinating:

1. Emergency Response, Rescue and Recovery
2. Disaster Management

Institutional Framework in KMC for Disaster Management



3. Information and Awareness Raising
4. Disaster Risk Preparedness
5. Outreach Programs
6. Other related emergency and disaster management activities

To address policy issues, a Disaster Management Council (KDMC), chaired by the Mayor or his/her delegated representative could be considered. The head of the appropriate Department (SWD or UPD), and the head of Citizens Safety Division (CSD) will be members of the Council, with CSD acting as the Secretariat for KDMC.

In this initial consultation, no final decision was made. This gives the PIT the opportunity to provide guidance and draw on the experiences of other cities in EMI's network that have similar contexts, such as Bogotá, Marikina, and Quito. Further, any proposed structure should also be compatible with the overall national disaster management scheme and the arrangements within the Kathmandu Valley. The PIT will develop a structured framework for discussion and organizational tools to assist local facilitators in managing the discussions and converging on tangible outcomes. Some matters to be taken into consideration may include the following:

- o Sample law/ordinance/executive order establishing the role and responsibilities of DMU and directing compliance by others, and/or assigning responsibilities, and/or establishing DMCs and their roles and responsibilities;
- o Potential incentives for engagement and participation;
- o **Critical analysis and evaluation of existing work plans, with respect to long-term and short-term goals, allocation and utilization of resources, coalition building with NGOs, CBOs, other cities, towns, agencies, etc.**

Proceedings

ICT Focus Group Meeting⁴

November 10, 2006

NSET Premises

Background

ICT Focus Group (FG#4) was the first one to be established in KMC and this was the second time that this group had the opportunity to get together. Mr. Amod Dixit, General Secretary, NSET, provided opening remarks explaining project objectives. Mr. Jim Buika from PDC reminded the participants of the specific functions of the ICT Focus Group in context of DRMMP action plan, reviewed accomplishments since July 2006 ICT Focus Group meeting, discussed GIS risk assessment information available from JICA data sets, and demonstrated outputs of 18 JICA sample map products. Among the most important achievements of FG#4, the following were highlighted:

- 1) Formed ICT Focus Group, Point of Contact is within NSET
- 2) 10 organizations with GIS, identified & actively participating
- 3) Created a Database of Contacts and Yahoo Chat Group
- 4) Completed data inventory per agency (NSET coordination with organizations)
- 5) Procured JICA project extensive data sets for Kathmandu Valley
- 6) Completed Data Inventory for JICA project
- 7) Scanned Web for additional data sets
- 8) Completed: Preliminary JICA Data Gap Analysis
- 9) Creation and presentation of 22 representative hazard maps from available data sets as introductory step to GIS Risk Assessment

ICIMOD representative made a presentation on the datasets available from their organization, including the 1992 and 1998 land use with aerial photographs. They also have different types of information at the ward level, including urban growth trends and growth areas. Overall, ICIMOD has complete database that can serve as database for micro-level planning. The 2003 detailed GIS study for Kirtipur, GIS for Municipal Planning was also introduced. From this presentation, all representatives participated in a group discussion regarding *How GIS-based risk information may be used for planning, preparedness, and risk reduction in Kathmandu*. Ganesh Jimée, discussed data holding inventory collected from all GIS organizations. The group discussed important data gaps of imagery and updated data sets.

Concluding Remarks

- ✚ FG#4 responsibilities were stressed and clarified as: (1) Act as an Expert Advisory Group to support development of risk communications technology for Kathmandu Valley, (2) Advise EMI 3cd Program and KMC on technical matters, (3) Provide advocacy for Risk Communications in Kathmandu, (4) Support development and application of GIS-based Risk Assessment and Internet Map Viewer, and (5) Provide input to project through NSET Point of Contact and ICT Focus Group meetings.

⁴ Based on notes from J. Buika, A. Santiago, J. Fernandez

- ✚ The benefits of FG#4 were reiterated by the participants:
 - 1) Through an ICT Focus Group, PDC, EMI, NSET, and KMC will be able to work towards attaining the following:
 - Strengthen available GIS resources
 - Define current information and communication technologies
 - Deploy risk communications tools and technologies to support disaster risk management efforts in Kathmandu.
 - 2) Continue education of GIS teams in Kathmandu
 - 3) Seek opportunities for international collaboration
 - 4) Share important data resources amongst GIS organizations
 - 5) Expand Local User Groups
 - 6) Define gaps in data resources and Information and Communications Technology
 - 7) Strengthen visibility of GIS and demonstrate power of GIS to decision makers

- ✚ It was learned that the Kathmandu Earthquake Risk Mitigation Tool (KERMIT) has already been distributed in CD form to different organizations. This program is already in a stand alone viewer format but is presently not internet based.

- ✚ Some clarification on the ICIMOD presentation revealed that the layers available can indeed be overlaid and they are at a scalable format. Some information is ready as far as the building footprints (level) were concerned, while the others are still at block level. The data they have is 2001 and has not been updated since then. More recent IKONOS data shot in 2005 is available.

- ✚ Discussions were conducted on the use of GIS in planning and some thoughts were exchanged for using the information in building guidelines and design or for building control.

- ✚ Some participants suggested that the group should consider storing the same information in CD versions for off-line information- sharing since not many organizations/offices have access on the web. Also, the possibility of using open GIS sources was pointed out to reduce the cost of the software. It was reported that this is something EMI and PDC have already started exploring.

- ✚ Ganesh Jimée presented the summarized data inventory form filled out by participants in the first ICT workshop and reported that with the information collected, the JICA study data presents itself as the best dataset that the group can start with since all the data is available in shape files already.

- ✚ To wrap-up the meeting, Jim Buika made a “Strategy for Agency Cooperation: Workshop II” for: (1) inventory to identify gaps and point out what is needed; (2) create a database for sharing which can be used as a communications tool (3) survey software available; (4) later distribute the final data inventory to everyone; and (4) come up with data sharing agreements.

Next Steps discussed by Focus Group for final concurrence and actions in 2007

- 1) **Jan:** Consolidate and expand GIS organizational participation. Update contact lists from both Focus Group Meetings. (NSET, Jan 2007)
- 2) **Jan:** Distribute current data inventory surveys to all GIS organizations. Ask each GIS organization to add source and scale of data that has already been inventoried. (NSET, Distribute in January. All GIS organizations, finalize and update inventory in February 2007)
- 3) **Jan:** Conduct software survey of organizations and survey of organization skills (PDC and NSET to develop simple survey, NSET distribute for completion by GIS organizations with Action 2, above, Jan)
- 4) **Feb:** Concur on JICA data gaps, such as imagery requirements and availability of building footprints (PDC with NSET, Feb 2007)
- 5) **Feb:** Finalize list of detailed required and desired data requirements for Kathmandu Valley (NSET and PDC finalize for review by GIS organizations, Feb, 2007, NSET distribute to GIS orgs in Feb)
- 6) **Feb:** Prepare a position paper on the Project Purposes for decision makers. Paper should address how data will be used and distributed in project.. Distribute to stakeholder Directors (PDC with NSET, Feb)
- 7) **Feb:** Identify outstanding data sharing issues and data requisition issues (NSET with organizations, Feb)
- 8) **Feb:** Explore data sharing agreement language and forms with critical data provider organizations (PDC, NSET, Jan, Feb, Mar)
- 9) **Feb:** Determine what data can be shared for disaster management purposes. (availability) (PDC and NSET, Feb)
- 10) **Mar:** Acknowledge data sources in all project products. (All, ongoing)
- 11) **April:** Explore metadata availability (NSET with GIS Organizations)
- 12) **April:** Develop Communications Plan.for and with key media to reach more stakeholders. (NSET Apr)
- 13) **Apr-May:** Create a Decision Makers Disaster Risk Management Map book based on available earthquake scenario data, produced by the ICT Focus Group. (include demographics data) (PDC)
- 14) **Apr-May:** Conduct follow up at next ICT Focus Group, in 2007, not yet scheduled. (PDC, NSET, GIS organizations, media, additional stakeholders, Apr-May timeframe, TBD)

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First Risk Sensitive Land Use Planning Seminar/Workshop November 11-12, 2006 Nagarkot

Introduction

Land use planning options and opportunities for disaster risk reduction in Kathmandu Valley were discussed during a two-day workshop that took place in Nagarkot, a couple of hours away from downtown Kathmandu.

The seminar/workshop was very well attended by the technical staff of the Urban Development Department of KMC and the management of the KVTDC. This was a very good opportunity to exchange detailed information related to current status of land use planning in the Kathmandu Valley, while at the same time the participants were exposed to different options and the process that Metropolitan Manila is putting in place to incorporate disaster risk reduction options.

This was the first practical and direct exchange between Metro Manila and Kathmandu Metropolitan City in an effort to promote south-south cooperation. This is expected to be the initial step for a sustained cooperation that incorporates a broad agenda since the 3cd Program is in position to add value to the process in Kathmandu, as EMI: a) has internal expertise and could provide technical support to local planners; b) brings a wealth of experience from other EMI city members such as Metro Manila; c) can provide pertinent tools developed by the 3cd Program, in particular, the internet based Map Viewer (MEGA-View) and training of urban planners and other professionals using the MEGA-Plan e-learning package; and d) can use the case studies catalogued in the EMI Megacities Knowledge Base (MEGA-Know) as an additional resource for training and capacity building.

To enhance this cooperation, Focus Group #2 was integrated with a wide representation of institutions that are eager to contribute to this process:

INSTITUTION	DELEGATE
Kathmandu Metropolitan City (KMC)	B. Bogati, Basanta Acharya, Archana Shrestha
Katmandú Valley Town Development Committee (KVTDC)	Purusottam Dangol
Department of Urban Development and Building Construction (DUDBC)	Pramod Karmacharya
National Society for Earthquake Technology, Nepal (NSET)	Gopi Krishna Basyal
Department of Mines and Geology (DMG)	Birendra Piya
Institute of Engineering (IOE)	Sanjaya Upreti
Lalitpur Sub-Metropolitan City (LSMC)	Pravin Dhakya
Department of Survey	Raja Ram
Earthquakes and Megacities Initiative (EMI)	Tara Ledesma, FG#2 Coordinator

Following is the agenda of the seminar/workshop which was put together by Dr. Marqueza Reyes, EMI's scientist and expert in urban development. Dr. Asteya Santiago, former dean of

the School of Urban and Regional planning of the University of the Philippines, and Ms. Tara Ledesma from the EMI Secretariat were the experts that conducted this activity. They were assisted by Dr. Fouad Bendimerad and Prof. Jeannette Fernandez, PIT members.

AGENDA

Background

Land use planning has been consistently identified as one of the means to prevent and mitigate disasters. A land use plan that is carefully designed and rigorously implemented can be a powerful tool in minimizing the impacts of natural hazards and modifying vulnerabilities of places exposed to such hazards. Local planners are aware of the importance of integrating risk parameters in their land use and urban planning process and practices, and of the related challenges. However, there is a need to enhance knowledge, understanding, and skills in order to mainstream disaster risk reduction in the wider process and authority of land use planning within the local context of Kathmandu Valley.

As part of the overall process of EMI's Cross-Cutting Capacity Development (3cd) Program, the implementation process of the Disaster Risk Management Master Plan (DRMMP) has been set in motion in the First Field Trip held in September 2005 and sustained by the Second Field Trip in July 2006. This land use planning seminar-workshop intends to further move the DRMMP implementation forward, as one element related to improving the integration of hazards and disaster risk management parameters in the land-use and urban planning process of KMC and the rest of the Kathmandu Valley.

Objectives of the Seminar/Workshop

The seminar/workshop aims to:

- Raise the participants' level of awareness of disaster risk management in relation to land use planning.
- Discuss some basic aspects of hazards, vulnerability and risk, and introduce the participants to methodology for risk assessment and risk analysis
- Discuss familiar land use planning tools and techniques that can be applied in regular practice to reduce vulnerability and mitigate natural disasters.
- Identify training needs and gaps in the field of land use and urban planning and disaster risk reduction.

Target Participants

- City and municipal land use planners, urban planners and development planners and their technical staff (GIS, mapping)
- Disaster management practitioners
- Representatives from the municipal, regional and national agencies that are involved in physical planning, development planning, building regulations and enforcement, infrastructure and utilities planning (lifelines), etc.
- Private sector representatives, e.g. real property professionals, developers, utilities (water supply, electricity, etc.)

Program Activities

Time	Activities
	Plenary Session 1. November 11
17:00– 17:30	Registration
17:30 – 18:40	Welcome Remarks Ms. Kumari Rai, Depart. of Social Welfare, DRM Unit, KMC
18:40 – 19:00	Introduction Mr. Fouad Bendimerad, EMI Chairman
19:00 – 19:20	The 3rd Program in Kathmandu Valley Jeannette Fernandez, EMI
	Plenary Session 2 . November 12
9:00 – 9:20	Development Vision for 2020 of Kathmandu Valley Purushtom Dangol, Kathmandu Valley Town Development committee.
9:20 – 9:40	Urban Development Trend and Land Use Planning Approaches for Kathmandu City Mr. Devendra Dongol, Depart of Urban Planning, KMC
9:40 – 10:00	Open Floor Discussion Moderator: Mr. Amod Dixit, NSET
10:00 – 10:15	Break
10:15-10:45	Hazard, Vulnerability, Risk Assessment and Risk Analysis Dr. Fouad Bendimerad, EMI 15 min Q&A
10:45 – 11:15	Land Use Planning Opportunities for Disaster Risk Reduction Dr. Asteya Santiago, EMI
11:15 – 11:45	Enhancing Planning Capacity for DRR: Risk-Sensitive Land Use Planning Training Course (MEGA-Plan) Dr. Asteya Santiago, EMI
11:45 – 12:15	Panel Discussion (Integration between the current situation in KV and the state-of-knowledge and the case of MM) Moderator: Mr. Ram Chandral, NSET
12:15-13:15	LUNCH
13:15-14:00	Introduction to MEGA-Plan (Demo/Prezo) Q&A (10 min)
14:00 – 15:15	Small Group Discussions Workshop Structure and Objectives Prof. Jeannette Fernandez, EMI The participants are grouped into clusters (depends on the profile of participants). Participants identify DRR practices that are already integrated in land use planning a that need to be integrated in the future, what the constraints are, and the skills and resources needed to achieve mainstreaming in their regular planning process and operations. Each cluster should choose a discussion leader and rapporteur.
15:15 – 15:30	Break
	Plenary Session 3
15:30 – 16:00	Presentation of Group Outputs/ Feedback from Participants Moderator: Prof. Jeannette Fernandez, EMI
16:00 – 16:30	Agreements, Consolidation and Wrap-Up Amod Dixit, NSET; Dr. Fouad Bendimerad, EMI

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Meeting with KMC and KVTDC for Land Use and Urban Planning⁵

November 13, 2006

KMC and KVTDC premises

Highlights of the Meeting with KMC

The meeting was attended by the EMI group led by Fouad Bendimerad, and the officials and staff of the KMC. Discussions of the present and future activities of the KMC relating to land use planning and the mainstreaming therein of disaster risk reduction parameters. There was consensus on the critical importance of these activities to ensure the safety of and minimize the serious damage that could be caused on the City and its constituents.

There was general appreciation of the importance of disaster risk management, and its mainstreaming in to the land use planning process of Kathmandu. As a result of this consensus, the following observations, recommendations and follow up activities were agreed on .

1. KMC's ongoing activity had, so far, been confined to the completion of existing land use maps of the city. These maps contain data on existing land uses in the various sites and areas within the local government unit, and do not include proposed future land uses which should be based on the analysis of the implications of the existing land uses and agreed upon goals, visions and proposed developments of KMC
2. EMI will await the completion of the existing land use maps which will reflect the existing land uses in the city. This will be done in collaboration with the other local government units in the Valley. Some funds have been provided for this purpose and the City expects their completion either in February 2007 or at the latest, in March 2007.
3. Related to this, reference was made to the fact that KVTDC has in its possession a number of existing land use maps which show geographically, existing infrastructure, utilities and other improvements. All of these reflect their present and not future locations of these uses.
4. KMC will then conduct a workshop among its staff to obtain inputs on how to finalize the land use maps and what other follow-up activities the staff will suggest. All of these will be, sent to EMI. In March 2007, at the latest.

Follow-up activities

1. On the basis of the completed land use maps and notes of the workshop proceedings, EMI will prepare a capability building program for KMC officials and staff toward the preparation of comprehensive land use plans which will mainstream therein disaster risk management parameters. The training will focus not only on the outputs to be completed (land use plans, accompanying maps, reports, implementing scheme and tools for carrying out the plans.) but on the process itself.

⁵ Notes from A. Santiago, T. Ledesma, J. Fernandez

The training procedure will focus on the following:

- a. Procedure for preparing the comprehensive land use plans which shall incorporate or mainstream disaster risk management .
- b. Course contents
 - i. What is the procedure for undertaking it?
 - ii. What are the expected outputs? Maps, reports, proposal for the nature, and direction of the growth of the city, consistent with national and regional plans and direction.
 - iii. What will the implementing tools be? Ordinances, budget, infrastructure plans, network of open spaces, network of transportation and communications
 - iv. Who will prepare the plans and who will implement them ? Who are the various stakeholders ? What organizations at the various levels, national, regional and local will be involved and what will be their respective roles ?
 - v. What are the funding, manpower and other requirements for planning, and implementation ? What will be the sources of these ?
- c. Methodology
 - i. Lecture
 - ii. Workshop
 - iii. Hands-on exercises

Highlights of the Meeting with KTDVC

On November 13, the EMI group met with the officials and staff of KTDVC. Among the objectives of the meeting was to learn more about the 20/20 Vision , the highlights of which were presented the day before (November 12) in the 2-day workshop in Mainstreaming Disaster Work Management in Land Use Planning Process . The following were the highlights of the discussion that ensued

1. It was observed that the Vision 20/20 Plan is basically a policies plan rather than a detailed metropolitan plan ready for implementation.. It was accompanied by an infrastructure plan for the entire valley. This latter plan reflects all the on-going and proposed infrastructure projects such as the Land Assembly (consolidation) projects which exist in all the 6 LGUs in the Valley.
2. The sets of existing land use maps (2002) prepared by the KVTDC with the assistance of the Stuttgart Planning team were also shown. While they covered the various components of land uses, they were macro in character. For instance, there was a transportation map which did not show types of transport like land, air and water, and modes of transport. There was also a map of waterways which does not show the various types that exist in the Valley such as coastal, rivers, lakes, etc.
3. The Metro Land Use Maps reflected the existing land use maps of the several (6) LGUs in the Valley. It was agreed that the Committee will prepare the proposed land use maps for the various LGUs which will make payment to the Committee. So far, only the Kathmandu Metropolitan City has made payment for this service.

4. The KVTDC officials described the observed planning process between them and the KMC and acknowledged the need to synchronize their schedule for the completion of the local land use maps with that of the Metro-wide Land Use maps.
5. The KVTDC officials and staff expressed keen interest in joining the capability building program proposed for the officials and staff of the KMC. to be held in 2007.
6. EMI pointed out that what were being completed were only the land use maps and not the proposed land use plans. The process for preparing the proposed land maps was also different from the process for preparing the comprehensive land use plans which will be concerned with the nature, scope and direction of proposed development, and their actual location. It is the land use plan that will provide the opportunity to incorporate or mainstream DRM and not the existing land use maps which were being presently being prepared by the KMC (for Kathmandu) and the KVTDC (for the metro region) .

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High Level Meeting⁶

November 14, 2006

Hotel de l'Annapurna, Dubarmarg

Background

On November 14, 2006 a High Level Meeting was organized by Kathmandu Municipality, EMI and NSET to show the progress that the municipality has achieved in the field of disaster risk management, the findings of the 3cd program, and propose a joint effort between local and national authorities with the support of other international initiatives.

Heads of different departments of the Kathmandu Metropolitan City (KMC), representatives from the Department of Urban Development and Building Construction (DUDBC), the Ministry of Local Development (MoLD), the Pacific Disaster Center (PDC), the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Development Program (UNDP), the EMI Secretariat based in Manila, and the local media, were the main guests to this event.

After the welcoming and introductory presentations made by Mrs. Kumari Rai, Mr. Sadhu Bhattarai head of the department of Social Welfare at the Kathmandu Municipality highlighted the efforts made by this institution for DRM, as an example Mr. Bhattaria mentioned:

- The building by laws and the initiation of the process to implement and enforce the building code
- Management of squatters and slums
- Improvement of GIS capabilities within the city

Amod Mani Dixit from the National Society of Earthquake Engineering (NSET), technical advisor for risk reduction and management to KMC, and local investigator for the EMI's 3cd Program set the context for the gathering. Mr. Dixit reminded the participants of the purpose of the meeting and referred to past activities of the 3cd program in Kathmandu, during the field trips of September 2005, July 2006 and this visit of November 2006. He pointed out the overwhelming need of KMC and its authorities to reduce physical, social and economic vulnerability of all sectors of the society.

Following, Mr. Fouad Bendimerad, chair person of EMI introduced the 3cd Program, its concept and methodological approach aimed at reducing the risk and providing tools for disaster risk management in urban environments. Then, Mr. Rahoul Sengupta UNDP Program Officer referred to the interest that UNDP has to support efforts to improve disaster risk management at the city level. Finally Mr. Suraya Prasad Silwal former KMC Chief Executive Officer currently with the Ministry of Local Development (MoLD), confirmed the interest of

⁶ Based on the notes prepared by J. Fernandez

the national authorities in providing the necessary support to design a risk reduction program for the whole Kathmandu Valley.

The discussion was opened and facilitated by Mr. Dixit, at the end of the event Ms. Jeannette Fernandez, 3rd program implementation team member was asked to summarize the discussions.

Concluding Remarks

- ✚ Response, rescue and recovery planning and implementation are a major concern of city stakeholders including the international organizations based in Nepal. Current social organization and building stock combined appear to be extremely vulnerable, in case a big earthquake hits the city. Participants to the workshop agreed on the need of immediate action to provide KCM and the Valley with appropriate instruments to address this issue.
- ✚ It was also recognized that despite the important number of studies carried out in the valley, the necessary parameters needed to undertake response, rescue and recovery were not fully available. An initial effort to understand the significance of available data and complement it is necessary. FG#4's work is particularly relevant to assist in this process of data collection and standardization.
- ✚ UNICEF's representative, Mr. Larry Robinson made a strong call for other initiatives to gather together and jointly undertake the challenge of designing and implementing a sustained strategy for response, rescue and recovery through the municipalities.
- ✚ The involvement of National and regional institutions was recognized as necessary in order to make a bigger impact and standardize risk reduction and mitigation procedures throughout the Valley and the country.
- ✚ Regular stakeholder consultation must be organized periodically since issues and solutions are brought by this group of people representing institutions and different sectors of the community.
- ✚ The role of the Focus Groups is crucial not only for technology transfer and ownership development, but also because specific projects can be undertaken under the leadership of the Focus Groups, for example microzonation, high rise building approval, lifelines safety, historical buildings, bridges, etc.
- ✚ The participants raised also the need of incorporating other hazards in addition to the seismic hazards to the analysis, particularly flooding which has shown to be relevant for KMC and the Valley.
- ✚ Finally, Mr. Fouad Bendimerad, EMI's chair emphasized the need of working together and joining efforts for achieving larger and long term results. Mr. Bendimerad invited local, regional and national organizations to contribute to the 3rd effort which is carried out by local institutions and local experts with the technical advice, managerial support, and capacity building of the 3rd Program Implementation Team.