



**Key Note by Robert Piper,
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The urban challenge – Adapting humanitarian response**

Thank you to ALNAP for the privilege of speaking to you this morning and to join you for the next few days to learn and discuss about a critical issue for the future – that of preparing ourselves better for the multiple disasters in urban environments that we will witness – and some of us possibly experience - over the coming years.

I am not an urban disaster expert. I do live in one of the world's most vulnerable cities however – Kathmandu. And as the Coordinator of the UN's work in Nepal in both development and humanitarian fields, I have by now spent quite a lot of time thinking about and working on how to manage the hazards of the Kathmandu valley and how to prepare for the worst. It would not be an exaggeration to say that this question keeps me awake some nights, in fact.

The ALNAP Secretariat has prepared a very useful background paper scoping out the dimensions of the problem, floating some of the key questions that need answering, and pointing to some useful analytical tools, like the STEEP model, to help organizations get their heads around the issues. I won't attempt to reproduce their paper which I hope most if not all have read, and which in any case, others would be much more fluent than I in reproducing cogently.

Instead, I propose first, to illustrate some of the dimensions of the challenges laid out in the background paper with reference to Kathmandu. Second, I will also flag some key operational challenges to our response and mitigation efforts, that have struck me in the context of the Kathmandu valley. And third, I thought it might be useful to share some of institutional obstacles I see to us responding effectively to this problem, once it has been accurately diagnosed, in Nepal and beyond. In closing, I will share some notes about the Nepal Risk Reduction Consortium we have built, which I believe may be part of the solution to organizing ourselves in new ways to address these types of challenges.

My presentation may be depressingly heavy on problems and light on solutions. The idea is that my old friend Dan Lewis from UN-Habitat, will follow me with a more uplifting presentation on what is being done about it! I will nevertheless do my bit to lighten the atmosphere by also sharing some of the emerging good practices in Nepal.

I. The dimensions of the urban challenge – the Kathmandu illustration

The border between India and Nepal essentially traces a major fault line between the Indo and Asian plates. The area is highly active and these plates are moving at about 33 mm a year with a well documented history of mega-earthquakes along the fault line. The most recent significant earthquake was as recently as September of this year when an earthquake measuring 6.9 hit the eastern border area of Nepal, India and Bhutan and left almost 7,000 buildings including some 350 schools destroyed in its wake, on the Nepali side alone. The graphic currently on the screen tells us a lot, but one message stands out – immense pressure is building along these fault lines and will be

released at some point. Nepal will experience a very large earthquake some time in the future. Not incidentally, that earthquake will also affect Northern India with equally devastating effect. The likelihood of a very large earthquake is greatest in the west of the country where you can see this pressure has been building since the 16th Century.

In terms of human and financial cost, however, the Kathmandu valley is our immediate concern. The valley experienced its last major earthquake in 1934 when an 8.4 magnitude earthquake caused the deaths of approximately 8,000 people as well as widespread damage in northern Bihar and in Nepal. An estimated 60% of houses collapsed. The epicentre for this event was located in eastern Nepal about 240 km away from Kathmandu. At the time, Kathmandu was a provincial town of about 150,000 residents with small buildings built primarily in wood and through traditional methods.

Today, Kathmandu is a sprawling metropolis with a population closer to 2.5 million. Not on the dimensions of a Mumbai or Dhaka but big nonetheless. The city is the centre of Government and commerce and the location of the one international airport in the country with only one runway.

Population density in Kathmandu is about 13,000 per square kilometres and the growth rate of the city is 5% per year, with migration from rural areas contributing to an increase in slums and informal settlements. Nepal is urbanizing faster than any country in Asia I am told.

Migration, population growth and remittances (which now make up at least a quarter of GDP) are fueling a building boom, without any regard for building codes and standards (though, like Port au Prince, they exist on paper). The local authorities charged with enforcement of the building codes do not have the means nor perhaps, the will, to do so. Public awareness of the risk is not high enough to spark demand for close supervision on this issue and so each day on my way to work, I see new buildings being constructed and new risk being created. Even something as easy to monitor and enforce as limits on the number of allowable floors, are apparently overlooked.

Public facilities are especially vulnerable. Surveys of public schools in the Valley a few years ago estimated that about 60% of schools would collapse in the event of a 1934 repeat. Almost all of the public hospitals in the Valley were assessed as at risk of life threatening collapse. Key Government buildings are also vulnerable. Inevitably this means that there is a possibility of a leadership vacuum in the immediate response, as we saw in Haiti.

Services are ill-equipped. There are currently 15 fire engines serving a population of 2.5 million. 12 of them were out-of-service last time we looked. There is currently no heavy urban search and rescue capacity within the country.

Infrastructure is generally poor and much will not survive the impact of the earthquake. The city itself is connected to the airport by a number of bridges. The main roads into the valley are likely to be impassable due to landslides. While we will require regional and international support following an earthquake, the challenges of access may therefore be immense.

If the shaking isn't worry enough, the Kathmandu Valley is also prone to liquefaction. Liquefaction of the ground took place over a length of 300 km (called the Slump Belt) during the 1934 Bihar-Nepal earthquake in which many structures went afloat and some structures suffered damage through sinking. Wells and water tanks became choked with sand. Construction and the siting of critical

public facilities has not been planned with this in mind suggesting that some of the facilities on which we may be most dependent may be most vulnerable or inaccessible.

Unlike Port au Prince we don't have the benefits of access to the sea and the Florida coast line 600 nautical miles away. The earthquake we are expecting will likely also affect our neighbours and therefore their ability to support us in the early days.

The risk of fire will be greatly exacerbated by the fact that half of the electricity cables will be down affecting access by emergency services. The entire water, sewer system and communications system will be disabled. Security has also got to be a worry, when people attempt to provide for and protect their families.

In short, were the 1934 earthquake to happen tomorrow, our conservative estimates for the impact of such an event in the Kathmandu Valley anticipate in excess of 100,000 fatalities, 300,000 injuries, building failure of approximately 60% of the structures. In addition to the 300,000 injured requiring medical care, up to a million people will need shelter, and at least that number will need access to food and water on an emergency basis.

And as mentioned above we expect to have to respond initially without depending on immediate regional or international support, where many of the key services such as hospitals may themselves be damaged together with key personnel affected, and where the Government will suffer its own major casualties leading to systems failures.

We have been working for several years with the Government and many partners to plan for this scenario needless to say. Jenty Kirsch-Wood of UNDP Nepal and Lakshmi Prasad Dhakal of the Home Ministry will speak in a session this afternoon with more specifics about some of the response planning efforts we have been trying to put in place. But suffice to say, the scenario remains the stuff of nightmares and we are a long way from sleeping better at night.

II. Some key operational issues already stand out

As we embark on our preparedness and mitigation efforts for the Valley, a number of operational issues have struck me over the last four years, which are specific to this urban environment:

First, in planning for response, the most important person in the room in my opinion, is the Mayor. A Mayor is directly accountable to the local people and in a functioning democracy his or her political career will succeed or fail on the nuts and bolts of basic services like emergency services. It is the Mayor who will go and visit the fire station and kick the tires, the Mayor who will fund-raise with Rotary for more ambulances. A good Mayor also has the detailed knowledge of neighbourhoods that central Government will never have. In Nepal, we are hugely constrained in our efforts by the absence of any locally elected officials, as the country has not had local elections since the late 90's. Last year, we invited the Mayor of Christchurch, Bob Parker, to show the citizens of Kathmandu what they were missing and he spoke eloquently of the 'duty of care' of Mayors for their citizens. He returned to Christchurch some 48 hours only, before their devastating earthquake of February 22.

Second, and this follows naturally from my first point, local or municipal Government is the single most important institutional partner for this planning effort. Planning for an urban disaster requires the coordination of a huge number of moving parts, both in the private and public sector, the

Government and Non Government sector. For example, in Kathmandu, IOM took the lead on identifying where we could physically house up to one million displaced people in the valley in the aftermath of a large earthquake. Some 83 potential sites have been identified, some big, most small. If all goes to plan, we will invest in some basic services like earthquake resilient water sources in some of those sites in advance of a disaster. But we are heavily depending on local Government to do the necessary zoning and then enforce those regulations so the sites will indeed be protected for this purpose. If someone is going to invest half a million dollars to build wells, and we go back one year later and there is a shopping mall built over the site, this isn't going to work. From land use planning and zoning, to coordination of emergency services, to regulation enforcement, local Government is the key institutional piece of the puzzle. As the international humanitarian community, we are more used to working with national institutions at the central level and we need to adjust this default setting for the urban disaster context.

Third, the biggest killer in the aftermath of an earthquake in the Kathmandu valley will unquestionably be weak building code enforcement. This is a truism I know, but it can't be repeated enough. I am a fan of search and rescue teams and I will be especially happy to hear them tapping above me when I am buried in the rubble of my house. But the largest search and rescue effort ever – that in Haiti – saved about 160 lives. This was an extraordinary achievement but against a backdrop of losses exceeding 200,000 it's a drop in the ocean. The highest priority in places like Kathmandu has to be making schools and homes and places of work safer in order to reduce the number of people in need of search and rescue in the first place. The earthquake of this past September happened on a Sunday evening. Nepal suffered 5 deaths as a result of this earthquake but subsequent damage surveys of schools indicated that that if the earthquake had occurred during the school day we may have been facing a significant death toll of school children.

Fourth, and another blindingly obvious one perhaps, is that the dimensions of these urban disaster problems are huge. And doing something about it on the scale necessary is expensive. Retrofitting of hundreds of schools and dozens of hospitals, strengthening of bridges and runways, procuring hundreds of fire engines and ambulances all costs big money. You know the arguments - it's money well spent, its considerably more cost effective than funding response but one hundred million here, one hundred million there, and as someone once famously quipped 'pretty soon you're talking real money'. Making headway on these issues therefore, needs the engagement of institutions that can think in 'big' project terms, and have a sufficiently long-term planning horizon that they will stay the course. In the Nepal context therefore, we especially need the engagement of the Ministry of Finance on the Government side. And the World Bank and Asian Development Bank are critical partners in this effort. And we need the political engagement at the highest levels of both Government and the IFI's to sustain the effort. Until a few years ago, funding of disaster preparedness was largely dependent on the resources that came through the Consolidated Appeal Process. You could only put so much in these Appeals whose main purpose is life saving today, rather than tomorrow, afterall, and like everywhere else, most years this item received negligible funding if any. We needed to find a completely different fund-raising strategy to address this issue in Nepal and we needed a whole new set of actors in the room to be part of the effort if we are going to make headway.

Fifth, while we are planning for sites for up to one million displaced persons sheltered in the valley in the aftermath of a large earthquake, most people we expect, will do the sensible thing and start

walking out of the valley as soon as they can. They will return to their original villages. They will strike out towards India. They will turn to relatives and old neighbours for help. We need to learn from the experience in Port au Prince, and put in place the right systems to help people stay out of a destroyed city to buy time for some semblance of order and services to be put in place rather than pulling them back to Kathmandu to access relief and services. Again, learning from Haiti, we are talking to the mobile phone operators to see if we can put in place a rudimentary system at least to give us some quick data on the movement of people to what areas. And we are looking at how we can deliver a relief operation for victims of a disaster inside the Kathmandu valley, partly outside the Valley itself, where many people will have sensibly moved.

Sixth, we have realized we need to build a response strategy that has lots of redundancy built into it. Government will inevitably lose people – decision makers and service providers alike. The UN sadly, will as well, as will our Humanitarian Country Team partners. Building-in redundancy means anticipating potential losses and having other trained people able to step-in to keep decision making and response systems moving. In the Nepal context, redundancy also applies to infrastructure of course. If we lose 50% of the bridges connecting the city to the airport, how will we manage? If we lose the building housing our Operations centre? If the roads into the valley are cut off by landslides as they inevitably will be, for at least two weeks and possibly longer, how much realistically can we expect to move by air, to a single runway airport that may also be damaged? These types of considerations have led us to a lot of discussions about the role of regional countries. India will be a critical staging area for any relief supplies and we are encouraging the Foreign Ministries of the Governments of both Nepal and India to put in place some advance agreement and planning about how this will work. It has also led us to look at the challenge of pre-positioning materials and supplies on the assumption that road access will take time. WFP for example, has estimated that we need 16,000 MT of food prepositioned to give us 30 days to assist 1 million people. We have been fortunate to have a high level of engagement by US military planners on this over the last few years who are coming up with important operational dilemmas and options.

Seven, while we are trying to plan and mitigate based on today's situation, in the Nepal context at least, the problems we are trying to address are actually compounding with every new day. For example, while we have raised money already to retrofit about 250 schools in the valley, every few weeks, yet another school opens that is not built to code. New settlements are being built in marginal areas. While we work on these preparations, therefore, there must be a parallel effort to make sure that the systemic causes of risk in the first place, are being addressed at the same time. It is not enough to be remedying the problems that currently exist. Without preventing new risk being created in the shape of new buildings, urban population growth, new schools, growing squatter settlements etc we are never going to get in front of this substantial problem.

III. Institutional obstacles to meeting these challenges effectively

There is a lot of headwind against us in making progress on this enormous challenge for the Kathmandu valley. Nepal has its own unique challenges in the midst of a peace process with an unstable political system, absent elected local Governments, and competition for attention from many issues. There are also institutional challenges that go well beyond the Kathmandu Valley I suspect. Beyond some of the perennial challenges like the difficulty of financing preparedness, the challenges of civil-military relations and the like, here are four that stand out for me.

First, our institutional silos between ‘humanitarian’ actors vs. ‘development’ actors is incredibly unhelpful. Making a dent on the challenge of urban disaster preparedness requires a very particular configuration of actors in the room. The Humanitarian community can not tackle this alone. The development community won’t get into it unless seriously prodded by the Humanitarian community and won’t really know where to start without the leadership of the humanitarian community. While some of this work needs to be done on a 12 month planning horizon – for example the preparation of contingency plans and their simulation exercises – other parts of this work needs a 5 – 8 year planning horizon – for example a major retrofit of all public schools or a land-use planning and rezoning exercise in a large city. Similarly, some of this work involves software, training and awareness while other aspects need funding for bricks and mortar and equipment. At the country level at least, we need to build teams that span these communities where each brings to the task their comparative advantage. While many are excited at the new funding possibilities for DRR that have come with climate change financing mechanisms, I have mixed feelings about this development as I think we are not sorted out institutionally very well at all as it is, without a big increase in the number of actors that gets spawned by new windows of opportunity for financing.

Second, we are still struggling in my view, to find a way of building the necessary systems and predictability for preparing large scale response operations in the period before disasters hit. In Nepal we are OK for now in the sense that we have a strong humanitarian community and we have our humanitarian clusters in place, with good leadership. Importantly, despite not having an Appeal process for example, we still have a small OCHA presence and OCHA’s work has switched emphasis to a greater preparedness footing. But at some point my efforts to keep some OCHA preparedness expertise on the ground in order to maintain a minimum level of contingency planning and preparedness will fail. Then it will be difficult to maintain the Cluster system. Our plan, naturally, is by then to have strong Government lead systems. But when a large earthquake hits Nepal we will also need to stand up the Cluster system again in a big way. And to make them effective requires a lot of preparatory work, relationship building and familiarity with the national systems which we should ultimately support. It’s too late to start building that the day after a major earthquake.

Third and relatedly, we can’t substitute for the political engagement and responsibility of national actors. In many countries this idea of duty of care has taken root in governance systems and the political accountability of the country. In a place like Japan, Indonesia, Turkey or New Zealand the political culture has reached a point where leaders understand that this is one of their core performance criteria vis-à-vis the electorate. When we don’t have that level of accountability amongst national leaders our preparedness work is highly compromised. And the natural impulse to substitute – which for reasons I appreciate are arguably quite high in the humanitarian community – needs to be very carefully managed. When I look at disaster risk challenges in Nepal I see first, a serious governance challenge, before I see resource or knowledge constraints for example. It took 3 years or more to get a new national strategy drafted, and then about a year for it to be approved by Cabinet. And the legislation to implement that strategy still hasn’t been approved two years later. Something is very wrong with this picture.

Fourth and finally, working on urbanization is a relatively neglected field not only in the humanitarian realm but also the development one. This is counter-intuitive perhaps with the massive growth in cities over recent years. But for several decades now there has been an inbuilt bias amongst development investors to get ‘out’ of the cities and ‘into’ the country side where poverty is greatest, and where marginalization is most pronounced. The pendulum hasn’t yet swung back to a middle ground where it is more common to find urban development as a core strategic

objective of a country programme. UN-Habitat amongst others, have their work cut out for them getting urbanization stronger on the development agenda though it's great to see the humanitarian community leaning forward on this issue.

IV. The need to work across communities – the NRRC as a model

In recognition of the scenario that I have just painted, the Nepal Risk Reduction Consortium was formed in 2009 to support the Government in meeting some of their most ambitious short and medium term DRR goals.

The Consortium brings together an unusual mix of Government and Non Government actors, humanitarian and development organizations, UN and International Financial Institutions under leadership of the Government of Nepal. Our current members span both humanitarian and development arms of the UN system, the World Bank and Asian Development Bank, and the IFRC, as well as the Governments of the United States of America, the United Kingdom and Australia as well as the European Community. Importantly, UN/ISDR was the convening platform on which we came together.

Our intention was to identify an ambitious workplan to scale-up the work needed to address Disaster Risk in Nepal, with the heightened sense of urgency required for the task. Five 'flagship' programmes were developed that range from retrofitting of 900 school buildings and a dozen large hospitals in the valley, to Community preparedness in 1000 of Nepal's 4000 Village Development Committees. From the equipping of an urban search and rescue force to capacity building for Nepal's we hope imminent, new National Disaster Management Authority. From risk sensitive land use planning in the Valley to meteorological forecasting assistance and measures to reduce flooding in the Koshi River basin. While the work of the NRRC is Nepal-wide, responding to all risk, there is a particular focus on the earthquake risk and upon the Kathmandu Valley given the magnitude of the impact and the consequences we all know we will face.

In summary the NRRC exists to mitigate the effects of known current risks as well as preventing new risks from occurring. A forthcoming IASC preparedness study will point to the strengths of our Consortium model for its multi-stakeholder approach which bridges development and humanitarian actors and funding. They are also positive about the level of engagement with the IFIs, the strong leadership at senior levels and across relevant Ministries and the holistic approach combining DRR policy development with programme implementation. Our \$150 million workplan is about 50% financed today and implementation rather than funding is the priority issue.

V. Closing remarks

I will close here and would be happy to answer any questions over the coming days. Lakshmi Dhakal from the Home Ministry and Moira Reddick from my office are also here and both key players in making the Consortium work, so any one of us would be happy to talk about the model. I also look forward to learning more about how others have been able to address these types of challenges effectively. I can't help but feel that a much greater sense of urgency is still needed by all of us, Governments and partners alike, to put in place systems that will work when they are inevitably called upon.
