OPEN DRI Open Data for Resilience Initiative

# Collecting Data: Community Mapping Guide

## What is Community Mapping?

**Community mapping projects engage a wide range of community members in the process of understanding disaster risk and have proven to be successful at creating accurate and timely data about the built environment and its vulnerability to disasters.**

## Open Cities Process Diagram

Designing and executing Open Cities projects is a complex task that involves a great deal of coordination with partners, technical and scientific work, team and volunteer coordination and management, and logistical work. While the format of this book necessarily presents these steps as linear, in practice this tasks are ongoing, iterative, and happening in parallel.

## Problem: Evolving cities mean geographic information is outdated

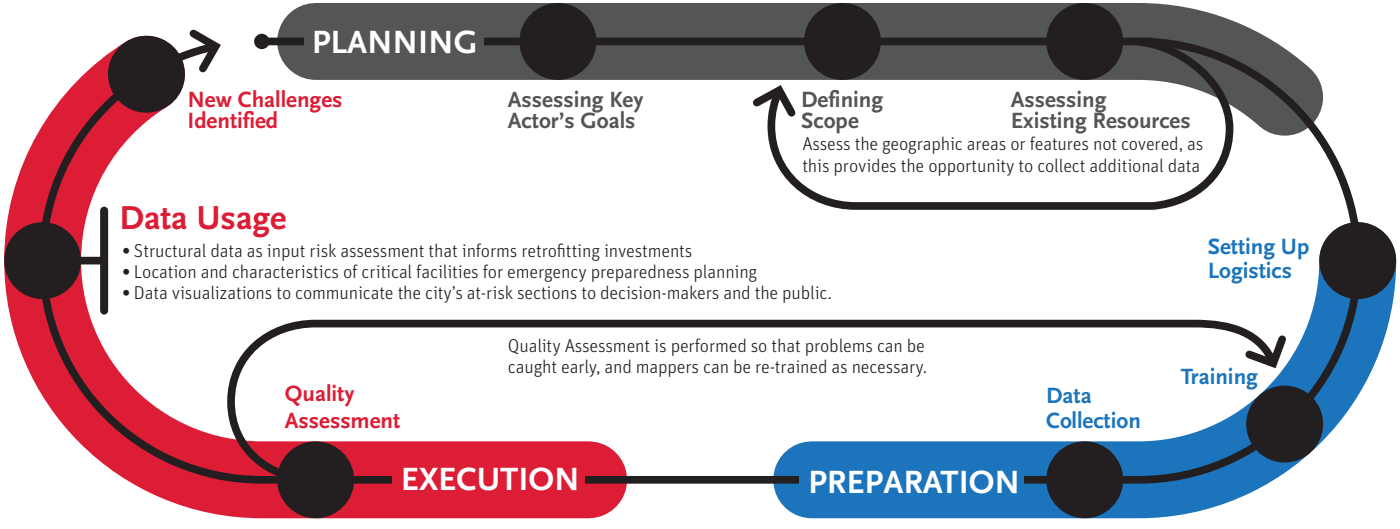
Cities are changing rapidly. In order to produce accurate risk assessments, maps of the built environment must be kept up to date. At the same time, the people who live in at-risk areas should be included in attempts to assess that risk.

## Solution: Engage local communities to collect spatial information

Community mapping seeks to involve local communities in creating map data about the areas in which they live. In doing so, these projects can both provide a dynamic source of risk information, as well as make the process of understanding risk more inclusive and participatory.

Community mapping mobilizes the residents of a place to collect and maintain geospatial data about their built environment and its risk of being affected by natural hazards. It is an efficient and effective method of collecting high-resolution data about the at-risk environment that can be used to support risk modeling and other disaster risk management activities.

These activities have been replicated across the world, and have been documented in an instructional publication, *Planning an Open Cities Mapping Project*. This document can be found at www.opendri.org under Resources.



# CASE STUDY

## KATHMANDU, NEPAL

## Before Community Mapping

**The World Bank and the Government of Nepal are currently partnering to build earthquake resilience in the health and education sectors in the Kathmandu Valley. At the start of the project, however, there were no complete or up-to-date maps of the location and physical characteristics of Kathmandu's schools and health facilities.**

### OpenStreetMap

The OpenDRI team helps community participants map the collected geospatial data using OpenStreetMap. Frequently called the "Wikipedia of maps," OSM is a global project with over 1.5 million registered users and active local chapters in 80 countries who help to increase the geospatial information about the world. It was first used in a large-scale fashion for disaster risk management following the 2010 Haiti earthquake. Since then it has been incorporated into DRM projects all over with world to support disaster risk assessment, preparedness, and contingency planning activities.

## The process

In November 2011, the World Bank's Open Cities Project and GFDRR's OpenDRI launched a yearlong program to engage university students and community groups in data collection describing the location and physical characteristics of all schools and health facilities in Kathmandu. The data, uploaded onto OpenStreetMap, will help guide disaster risk management efforts in Kathmandu and is freely available online to support a wide range of programs.

The project required the Open Cities Team to:

- Send a team member on several missions ranging from one to three weeks to build local partnerships and design the project
- Hire two local consultants with experience in GIS tools and OpenStreetMap to manage the day-to-day aspects of the training and mapping activities
- Conduct significant local outreach and technical training for university students and community organizations
- Partner with local technical agencies to design the data collection strategy and conduct quality assessment of the information provided by the volunteers

## The result

The yearlong program through Open Cities Kathmandu:

- Collected a comprehensive list of structural data for the health and education sectors, mapping 2,256 schools and 350 health facilities
- Has helped to create a comprehensive base map of the valley by digitizing building footprints, mapping the road network and collecting information on other major points of interest
- Involved over 2,300 individuals in trainings or presentations
- Helped support the creation of a local NGO, Kathmandu Living Labs, that is now partnering with other donors and civil society organizations to work on community mapping and civic technology projects

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