Annex II

Nomination form for cities and local governments to participate in the campaign

Please send the nomination form and the mayor's letter to isdr-campaign@un.org. Nomination will be accepted on an ongoing basis throughout 2010-11.

City / Local Government (Please indicate the year the numbers were provided.)	
City name	Bangkok, Thailand
Location (short description)	Bangkok is on lower flat plain of the Chao Phraya river, extended to the Gulf of Thailand which is around 25-56 kilometers far from the centre of Bangkok.
Size (year)	Approximately 1,569 square kilometers
Population (year)	5,702,595 in 2009 by household registration.
GDP	
Hazard type(s)	Flood
Name of Mayor / Commissioner / Governor / Community leader	
M.R. Sukhumbhand Paribatra, Governor	
Which part of the city administration will be the focal point for the Campaign?	
Department of Drainage and Sewerage	
Contact details Focal Point	
Name	Mr.Sanya Chenimitr
Function	General Director of Department of Drainage and Sewerage
Address	Bangkok Metropolitan Administration Mitmitri Road, Din Deang, Bangkok 10400
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Which local institutions will be engaged in the Campaign? (In addition to the local government.)	
Department of Drainage and Sewerage	
Major Disaster Risks (Please indicate major disasters that have occurred, prevailing hazards and vulnerable conditions.)	
Flood Due to rapid urbanization of Bangkok, waterbody such as ponds, wells, canals, and ditches were filled up and replaced by buildings and other structures. This often caused flooding and became a severe problem accordingly. The major	

flooding in Bangkok in the past were in the years 1942, 1975, 1978, 1980, 1983, 1995, and 1996. Flooding in the year 1983 was considered the most severe and caused great damage which cost around 6,600 million baht

The causes of flood are as follows:

- Heavy rainfall in short period of time results in inability to immediately drain water from roads, lanes and houses causing temporary flooding.
- Run-off from the northern and eastern parts flowing through Bangkok due to the slope of ground level. This mostly causes flooding problem in the eastern part of Bangkok
- Excessive run-off from the North and Chao Phraya River Basin flowing through Bangkok to the sea causing overflow and flooding in the area.
- The effect of high tide from the sea which occurred in the same time of excessive run-off from the North through Bangkok causing high water level in Chao Phraya river.
- Land subsidence due to pumping of large amount of underground water which makes the area subside to the level lower than mean sea level causing difficulty in draining of inundation.
- Insufficient drainage system

Achievements and plans in relation to the ten essentials areas

*A - Make an estimation of the **status** per essential as follows:*
1 - poor/nothing in place, 2 - some progress in place, 3 - in place, well functioning, or N/A
*B - Please describe main areas of **progress** and **achievements**.*
*C - Please identify **activities** and **plans** your city will pay special attention **to improve the current situation** during the campaign and beyond. Additionally, feel free to propose special events or activities your city would like undertake to raise awareness on disaster resilience. Please select the respective Essential(s).*

Essential 1 – Risk reducing organization and coordination in place	Status - 3

Progress and achievements - BMA has implemented several construction measures for flood protection and mitigation. One of them is Polder System which can prevent overland flow from the outside flood into the city. In case of raining inside the polder, the drainage facilities will be increased and reinforced so as to accelerate the stagnant flood to the drainage canals or the river as the following details:

Construction of Flood Protection Along Chaopraya River

1. Construction of dike on the eastern to prevent overland flow from the eastern flood pain to the city total length about 72 km. in accordance with the Royal Initiative. Currently, the dike has been expanded to cover Bangkok area.

2. The central government has subsidized BMA for constructing 77 kms. barriers along the Chao Phraya River Bangkok Noi and Mahasawardi canal, of which 76 kms has been completed and the remaining 1 kms. is expected to be completed in 2010. The completed barriers will be prevented cities from flood at the level of +2.50 meters MSL. For the under construction area, DDS has used sand bags as a temporary barrier.

The Construction of Drainage System in the polder area.

Inside the polder area, BMA constructed the drainage facilities to quickly flow the stagnant flood into the Chao Praya river and drainage canals which its capacity to protect flood deriving from the amount of rainfall intensity at 60 mm. an hour. The Construction of drainage system is as follows:

1. The pumping station have been designed and built to increase the drainage capacity which, at present is 1531 CMS
2. Improvement of the Existing Drainage System such as canals, and underground conduits to covey the runoff from the city to the pumping station before discharging to the Chao Praya river.
3. The Construction of Drainage Tunnel is introduced to drain excess stormwater which cannot low effectively through the existing canals to the pumping stations along the river, will flow through reinforced concrete tunnels lying 15-22 meters under ground surface, and will be pumped out to the river by high capacity pumping stations. Now, there are 7 drainage tunnels with 155.50 cms. capacity in operation. BMA is planning to expanding construction for other 3 tunnels during 2011-2017.
4. Allocation of 21 retention ponds (monkey cheeks) such as Nongbon pond, Makasan pond, Rama IX pond,

Kum pond, Kratiam pond, and Piboon-Wattana pond, with total retaining capacity of 12.75 million cu.m. This is the Implementation of the Royal Initiative which the Department of Drainage and Sewerage had already carried out.	
Plans – N/A	
Essential 2 – Budget assigned	Status - 3
Progress and achievements - BMA has allocated an amount of regular budget in flood protection and mitigation. The central government will be partly subsidized in the Mega-Projects.	
Plans – N/A	
Essential 3 – Risk assessment prepared	Status - 3
Progress and achievements - Progress and achievements – BMT has implemented the flood impact assessment and preparedness to solve and deal with flood problem by conducting a flood-prone area map.	
Plans - BMA is now carrying out the topography map in Bangkok in order to develop flood protection and mitigation plan	
Essential 4 – Investment in risk reducing infrastructure	Status - 3
Progress and achievements - The budget allotment in the project of flood protection and drainage system in term of 4 years (2008-2011) is about 14,000 million baht dividing to 12,000 million baht from BMA's budget and 2,000 million baht from government's supported budget.	
Plans - N/A	
Essential 5 – Safe schools and health facilities	Status - Please select
Progress and achievements - N/A	
Plans - N/A	
Essential 6 – Risk-compliant building regulation and land use applied	Status - Please select
Progress and achievements - N/A	
Plans - N/A	
Essential 7 – Education programmes and training in place	Status - Please select
Progress and achievements - N/A	
Plans - N/A	
Essential 8 – Ecosystems and natural buffers protected	Status - 2
Progress and achievements - Te change of land use and natural adaptation together with land subsidence and natural forest deterioration have caused the coast line shift up into the land about 800-1,000 meter with the rate of erosion about 1.4-4.5 meter per year. The coastal area is turning into the shallow sea. Short period measure is the timber bamboo structure to protect the shore from the erosion. The durable measure is to construct T-Groins barrier (Rock-Pile Embankment Type) and to increase mangrove Trees Plantation (Soft Structure). The duration for this project is from 2009 to 2016	
Plans - N/A	
Essential 9 – Early warning systems installed	Status - 3
Progress and achievements - Flood Control Center In implementing the flood protection and mitigation, BMA set up Flood Control Center as a flood protection information center of which main networking station is located on the 6th floor of Department of Drainage and Sewerage, BMA Office 2 in Din Daeng district and other 75 sub-stations are installed at pump	

stations and water gates across Bangkok, on the east and west sides of Chao Praya river. Flood Control Center (FCC) which supervises the hydrological conditions linking directly with the radar of Meteorology Department and of BMA. FCC has been serving as a decision making tools for DDS flood protection teams for accurate and immediate directive to solve flood problems effectively. Monitoring stations monitor real time data of rainfall, water levels, pumps operation, water gates operation and water quality were installed and later were increased into 75 stations. In addition to this, the department is now implementing a flood forecasting program aiming at forecasting rainfall intensity and flood forecasting in 650 km2 of the east bank area which will enable BMA staffs to forecasting flood condition 3-6 hours in advance. Moreover, FCC serves people with the flood forecasting news and the flood protection and solution. We use several communication tools in informing people and communities such as radio broadcasting, traffic billboards and BMA's website.	
Plans – N/A	
Essential 10 – Needs-based (survivors) reconstruction	Status - Please select
Progress and achievements - N/A	
Plans - N/A	