

# ADRC Peer Review Mission to Kingdom of Bhutan



**REVIEW REPORT  
ON  
INTEGRATING CULTURAL HERITAGE AND  
DRR / DISASTER PREPAREDNESS AND  
SENSITIZATION TRAINING PROGRAM ON  
DZONG (FORTRESS) SAFETY**

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# ADRC Review Mission Team Member



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# Review Mission Schedule



<b>13 - 21 December</b>	<b>Review mission schedule</b>
13-14 December	Travel from Kobe, Japan to Thimpu, Bhutan
15 December	Travel from Thimpu to Dagana Inspection visit to Dagana Dzong
16 December	Meeting with the governor of Dagana Workshop with participants from Dzong monks Travel from Dagana to Punakha
17 December	Inspection visit to Punakha Dzong Travel from Punaka to Thimput
18 December	Interview with Central Monastery, Fire Department, and Ministry of Education
19 December	Discussion session with DDM
20-21 December	Travel from Thimpu to Kobe, Japan

# Project Summary



	<b>Project summary</b>
<b>Project period</b>	1 October 2014 – 28 February 2015
<b>Target District</b>	Dagana District
<b>Implementing agency</b>	Preparedness and Mitigation Division, Department of Disaster Management (DDM)
<b>Primary beneficiaries</b>	Monks residing in the Monastic Institution
<b>Secondary beneficiaries</b>	Staffs working for the District Administration and communities near the Monastic Institutions
<b>Strategy</b>	The project is expected to enhance preparedness and response capacities of the Monastic Institutions and District Administration. All the participating Monastic Institutions will develop their Monastic Disaster Management Plan. Further, the representatives of the Monastic Institutions will create awareness on disaster risks at the community.

# Project Activities and Outputs



<b>Project Activities</b>	<p>One time 5 days training program at Dagana which will cover the following;</p> <ul style="list-style-type: none"><li>• 1 day pre-training vulnerability assessment of the Dzong/Dratshang</li><li>• 4 days actual training</li><li>• Overview of Disaster Management in the country</li><li>• Assessment of the preparedness and response capacities</li><li>• Hands on training on using the fire safety equipment</li><li>• Developing DM and Evacuation Plan</li><li>• Fire drills – testing the draft evacuation plan of the pilot monastic institution</li></ul>
<b>Project Output</b>	<ol style="list-style-type: none"><li>1. Increased awareness of the monks, administrative staffs and communities</li><li>2. Dzong/Monastic Disaster Management Plan</li><li>3. Fire drills</li></ol>

# Review Team Observation



# Dagana Dzong



# Dagana Dzong





# Dagana Dzong



## Good points

- 5 days training increased the awareness and knowledge on fire safety and DRR to monks and administrative officers in Dagana district.
- Hands-on training on how to extinguishing fire using fire extinguishers and water pumps were practical and monks and administrative officers are now more confident to use it at the time of fire.
- Good coordination among relevant agencies such as DDM, fire division, and district administration made smooth implementation of the training.
- Well understanding of the Governor and Disaster Focal person of the district office for the need of DRR and willingness for their continuous efforts.

# Dagana Dzong



## Further consideration

- Fire is not the only hazard in Dagana. There was an incident of lightning according to the governor. Training and awareness raising on multi hazard, especially on earthquake should be continuously planned and implemented.
- Regular maintenance of water pump and fire extinguisher
- There are fire incidents at community level as well. Training for/with community members can be considered.
- Non-structural mitigation can be one of the priority actions
- Collaboration between school and community on DRR drills can be sought for district level awareness raising

# Punakha Dzong



# Punakha Dzong



## Good points

- Smoke sensing equipments fully installed in all rooms in the Dzong
- Disaster control room is watching safety of the Dzong 24 hours with police/fire officials in rotation
- Kitchen facility is separated located to avoid possible risk of fire
- Disaster management center, only one in Bhutan is operating to respond to disaster at district level
- Good coordination with district office and DDM

## Finding from interview with relevant agencies



- Good coordination and partnership among DDM, Fire Division, Central Monastery and district level administration
- 2012 fire incidents of Wangduephodrang Dzong was tragedy but became a wake-up call for fire safety in Dzongs in all district
- About 70% of monks is under 18 years old. Necessity of continuous and easy-to-understand training.
- Ministry of Education has done excellent training on education emergency, safe school initiatives, first aid and fire safety for schools at all district from 2010 with external financial support. But so far not so much collaboration done with community.

# Some Lessons Learnt from Japan's experiences



- **Kobe Earthquake in 1995**
  - 98% of people rescued from collapsed housing/buildings were by either by themselves or community members/ friends/ relatives/passers by.
    - ✦ For successful community-based disaster risk management, strengthening capacity of “Self-help” and “Mutual help” is important.
- **Great East Japan Earthquake/Tsunami in 2011**
  - Disaster education worked well. In Kamaishi city, school children became leaders of evacuation and helped many community members.
    - ✦ Continuous disaster education/awareness raising is important.

# Some experiences from Japan



- **“Fire safety Day for Cultural Assets” (January 26) set up by Cultural Affairs Agency to commemorate fire incident of Japan’s oldest wooden architecture, Horyu temple which resulted in the loss of its mural painting in Nara (1949).**
  - ⇒ Awareness raising campaign and drills are conducted every year on that day.
  - ⇒ Strong collaboration among Agency of Cultural Affairs, Fire and Disaster Management Agency, Board of Education of local governments (Prefecture/City/Town/Village), Fire department under local governments, owners of cultural assets, and community members for fire safety events.

# Some experiences from Japan



- **Community volunteers to work jointly with Kiyomizu temple for disaster prevention.**

⇒ Established in 1948 as Kiyomizu Keibi-dan (neighborhood watch group) and continue its community-based disaster prevention activity on earthquake, fire, wind and flood.

⇒ Night patrol of the temple by two members every night

⇒ Joint fire drill with local fire station twice every year during cultural assets fire safety activity period



# Review Team Recommendation



# General Recommendation for Dzong fire safety



- Continuous drills on fire safety in Dzong would be recommended. Disasters can occur at night time also. Drills should be planned considering various situation. Also, drills should be done involving all relevant stakeholders.
- Considering Dzongs are sightseeing spots for tourists, disaster management plans of both district administration and monastery should have plans how to evacuate tourists as well
- It is recommended to look more at preparedness part such as strengthening non-structural mitigation.
- DRR training should incorporate multi hazards risks, especially earthquakes.
- Building inspection by architect and engineers is recommended as recently tin roofs are widely used even in Dzongs which might not been properly installed.

# General Recommendation for Dzong fire safety



- During annual gathering of monastery of all districts, DRR issues should also added to its agenda to share each district experiences and lessons learnt
- DRR training to community members has not been fully conducted mainly due to budget constrains. Solutions can be sought by collaborating with schools and monastery.
- DRR awareness raising campaign at the time of local festival could be sought for wider dissemination of the importance of DRR.
- Collaboration with local media for awareness campaign on DRR can also be considered as it reaches to wide range of people
- Important data should be scanned or digitally kept at several places as risk management at administrative office at Dzong