ICT Usage for the post-disaster recovery in Tourism: *The 2015 Nepal Earthquake*

Sanjay Lama and Sojen Pradhan
“The mountains were so wild and so stark and so very beautiful that I wanted to cry. I breathed in another wonderful moment to keep safe in my heart.”

- Jane Wilson-Howarthish
10 UNESCO World Heritage sites

2 - Cultural sites
1. Lumbini (Birth place of Buddha)

2. Kathmandu Valley
Kathmandu valley has 7 sites which are being identified as World Heritage sites:
   • Pashupatinath Temple
   • Swayambhunath Temple
   • Boudhnath Temple
   • Kathmandu Durbar Square
   • Patan Durbar Square
   • Bhaktapur Durbar Square
   • Changu Narayan Temple

2 - Natural sites
1. Chitwan National Park
2. Sagarmatha (Everest) National Park
Overview of Tourism Industry

Tourism is one of the primary sources of foreign income, employment, and tax revenues for the government.

- Several years after Edmund Hillary’s climb on Mount Everest in 1953, international tourist arrivals have been growing steadily since 1962.
- Almost 9 percent of total GDP in 2014
- Employs around 500,000 people
Tourists in Bhaktapur Durbar Square during the Earthquake (25 April 2015)
Before                             After the Earthquake
Impacts from the 2015 Nepal Earthquake in Tourism

Tourists Arrivals

<table>
<thead>
<tr>
<th>Year</th>
<th>Arrivals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>790,118</td>
</tr>
<tr>
<td>2015</td>
<td>538,970</td>
</tr>
<tr>
<td>2016</td>
<td>734,000</td>
</tr>
<tr>
<td>2017</td>
<td>940,218</td>
</tr>
</tbody>
</table>

(32% less)

Source: Bhuju 2015
### Summary of financial impacts

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Disaster Effects (NPR Million)</th>
<th>Share of Disaster effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Damage</td>
<td>Loss</td>
</tr>
<tr>
<td>Hotels and Others</td>
<td>16,295</td>
<td>0</td>
</tr>
<tr>
<td>Home Stays</td>
<td>1,720</td>
<td>495</td>
</tr>
<tr>
<td>Eco-lodges</td>
<td>415</td>
<td>0</td>
</tr>
<tr>
<td>Trekking Trails</td>
<td>426</td>
<td>5,711</td>
</tr>
<tr>
<td>Tour Operators</td>
<td>7</td>
<td>4,924</td>
</tr>
<tr>
<td>Tourism revenues</td>
<td>0</td>
<td>47,013</td>
</tr>
<tr>
<td>Air Transport revenues</td>
<td>0</td>
<td>4,720</td>
</tr>
<tr>
<td>Restaurant revenues</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>18,863</td>
<td>62,874</td>
</tr>
</tbody>
</table>

Source: MoCTCA 2015

- Damages of over 150 Km of trekking trails (Manaslu & Langtang)
- 20% of touristic heritage sites
Tourism Stakeholders in Nepal

- 4,189 organisations are registered with the Tourism department
- 2,112 travel agencies, 956 hotels and 1,636 trekking agencies
## Use of ICT in the Recovery work

<table>
<thead>
<tr>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crowdsources for Donation collection</strong></td>
<td>Crowdrise, GoFundMe, Indiegogo, GlobalGiving, DirectRelief</td>
</tr>
<tr>
<td><strong>Social Media</strong></td>
<td>Nepal Tourism Board (<a href="https://www.facebook.com">Facebook</a>), Nepal Police (<a href="https://twitter.com">Twitter</a>), #nepalphotoproject</td>
</tr>
<tr>
<td><strong>Open source mapping project</strong></td>
<td>Kathmandu Living Lab, Quakemap.org</td>
</tr>
</tbody>
</table>

- $38.55 million transferred from outside Nepal (Nepalese and Foreigners)
- Dedicated section about fatalities, injured and damaged buildings
- DRRPortal reports recent incidents
- Quakemap.org invited people to report earthquake damage in real-time and list what kind of aid was required around the country.
Someone in contact with, or living in, an affected community might mark on the map that 50 tents were needed in a certain district.

over 2,000 reports made on the map, from all across Nepal
Research Objective

- To examine the impacts of the 2015 earthquake on the tourism industry and the how ICT tools were used
- To assess the usefulness of ICT tools in the post-disaster tourism recovery activities
Research Methods

Qualitative Interviews with 9 participants:

- 3 representatives (Associations)
- 2 government representatives
- 3 tourism organisations and
- 1 tourism expert

Quantitative Survey with 198 tourism organisations

Expert Sampling

Random Sampling

- 250 tourism organisations
<table>
<thead>
<tr>
<th>AoC 1:</th>
<th>AoC 2:</th>
<th>AoC 3:</th>
<th>AoC 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative impact of the 2015 Nepal earthquake on tourism organisations</strong></td>
<td><strong>The government has not used ICT tools in the tourism recovery process</strong></td>
<td><strong>Social media should be used by government and tourism organisations during the tourism recovery process</strong></td>
<td><strong>The role of ICT in the recovery of the tourism industry is significant but not used that much.</strong></td>
</tr>
</tbody>
</table>
Results from the survey

Out of 198 tourism organisations
• 53 percent of them were owners;
• 26 percent of the participants were managers, and
• the rest of the survey questionnaires were completed by responsible employees.

50 % of the organisations surveyed were from the travel agents (members of NATTA), 36 % were from trekking businesses (members of TAAN) and 14 % were from the hotels (members of HAN).

<table>
<thead>
<tr>
<th></th>
<th>AoC1</th>
<th>AoC2</th>
<th>AoC3</th>
<th>AoC4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.08</td>
<td>4.30</td>
<td>3.95</td>
<td>4.39</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.953</td>
<td>0.642</td>
<td>0.853</td>
<td>0.689</td>
</tr>
<tr>
<td>Agreed Percentage</td>
<td>81%</td>
<td>86%</td>
<td>80%</td>
<td>96%</td>
</tr>
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</table>
Implications

- The use of ICT tools can play a powerful role in the tourism recovery process.
- Government agencies and tourism organisations should update their plans and policies to integrate ICT tools and enhance their programs related to tourism recovery activities.
- Further research is needed on the use of ICT tools to prepare a tourism recovery framework to assist in post-disaster recovery.
Thank you

Any Questions?
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