Post-Earthquake Reconstruction, Livelihoods and Economic Recovery in the Historical Area of Dolagiri (Changu Narayan) Bhaktapur

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Abstract

The research study on Changu Narayan analyzes and compares the livelihood of the core-zone during pre-earthquake phase, during 2015 and post-earthquake phases. It also determines the impact of the earthquake on the World Heritage Site (Changu Narayan premises) and its effect on the livelihood of the people residing within the core-zone area with focus on the reconstruction and restoration. This research paper enlightens readers on the post-earthquake reconstruction and the role played by NRA and its link to the livelihood restoration. Finally it sheds light upon the term ‘extra–care’ provided by the community to the Changu Narayan temple that is the ultimate source of income and livelihood beside agriculture. The methodology used is qualitative research using multi-method that focuses on interpretative, naturalistic approach. Primary sources were collected since 2012-2020 via observation, interviews and in 2020 via email survey and telephone interview and secondary sources comprised of study of books, articles that have been cited below as references. The key result is that this WHS nurtured their economic livelihoods of those residing within the core-zone of Changu WHS.

Key words: Earthquake, impact, livelihood, economy, recovery.

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Chapter I: Setting & Background

1.1 Introduction

Setting

Some 12 km about 7 miles East of Kathmandu lies a hillock with Champak trees known as Changu. The local tales tell of Kashmiri King who married his daughter Champak to a Prince of Bhaktapur and the village was named Changu after her. During the Lichhavi period it was known as Dolashikharswamior or Dolagiri. Changunarayan region is one of the historical places of Bhaktapur in province no. 3 of Nepal. This district is divided into four municipalities made up of Bhaktapur, ChanguNarayan, Madhyapur Thimi and Suryabinayak. The historical premises of Changunarayan come under the World Heritage Site. This district was shaped in 2017 (2073) by including the Town Improvement Committees comprising of Changunarayan, Chhaling, Duwakot and Jaukhel made up of nine wards covering an area of 62.18 km. The district is bounded by Kathmandu in the north and west, Kavrepalanchok in the east and Bhaktapur in the west (Bhaktapur Developmental Committee, 2073/74) The overall population of Bhaktapur region as per 2011 census 3, 04,651 (NPHC, 2011). The census of 2011 has submitted in the report that the population of ChanguNarayan Municipality was 55,430. (National Report 2001, CBS, NPC)

Fig 1 Map of ChanguNarayan Municipality (Source: Ministry of Federal Affairs & General Admin)
1.1.1 Background

Heritage is “a mode of cultural production in the present that has recourse to the past, as a specific way of interpreting and utilizing bygone times that links individuals with a larger collective” (Barbara Kirshenblatt-Gimblett 1998/2000:7) The authentic history of Nepal begins from here. There are ten world heritage sites in Nepal, the Sagarmatha National Park, Chitwan National Park, Lumbini the birth place of Buddha, Durbar Square (Kathmandu), Durbar Square (Patan), Durbar Square (Bhaktapur), and the two Buddhist sites included are Boudhanath Stupa, Syambhunath Stupa, and two Hindu temples of Pashupatinath and Changu Narayan temple are listed as a world heritage site. On April 25th 2015, an earthquake of a magnitude exceeding 7.8 on the Richter scale, followed by aftershocks, shook Nepal, leading to widespread disaster and destruction. This world heritage site that nurtures and shapes the economic livelihood of the people along this route was devastated.

![Fig: 2 World Heritage sites within the valley](image)

1.2 Problem of Study

There have been numerous studies related to the history, culture, art architecture, of Changunarayan region however, there is lack of study focusing on the reconstruction, livelihood and economic recovery post-earthquake 2015 in the historical region of Changunarayan. This is the greatest problem of study.
1.3 Objective of study

Research/Issues/Objectives for research Question

➢ The major objective of study is to determine the impact of earthquake, on the World Heritage Site and on the economic livelihoods of the people along the route to Changu Narayan (Core-Zone) to compare and analyze the impact.

➢ The study examined how post-earthquake reconstruction of the World Heritage progressively led to the economic recovery of the livelihoods of the people along the route to Changu Narayan temple.

➢ It also assesses the role of NRA in the reconstruction of the local's houses along the route to the Changu Narayan temple and its link to livelihood.

➢ To clarify the term EXTRA CARE (EC) provided by community to Changu Narayan Temple

1.4 Methodology of study

The Qualitative research is a multi-method that focuses on interpretative, naturalistic approach to its subject matter (Denzin & Lincoln 1994:2). This research is qualitative in nature. The researcher has used triangulation research methodology that involves using more than one method to acquire the data. Richards defines triangulation as an interdisciplinary approach which covers multiple methods, multiple sources of data (Richards, 2005:21)

The analysis is based on data collected in the field survey and its initial inventory that started after the 3rd week of the great earthquake of April 2015. Great importance has been given to the World Heritage site and the livelihood.

Primary data were collected through observation onsite photography; and interviews in the earlier phase with the local population in 2012, 2013, 2014 and few 2015/2016/2017/2018/2019 and in 2020 via email questionnaires and telephone inquiry with well-versed resident of Changu. But the detail interview of all the locals was not completed due to COVID 19 however; the researcher was able to acquire important data that was missed out through email survey

Secondary sources included library study that incorporated historical books and other relevant materials. Net surfing is also included in course of literature review, done in conduction of this research. The researched books and websites and others sources are cited in the reference section.
1.5 Limitation of study

➢ This research study is limited to the area that covers from the ticket counter upward along the route to Changu Narayan (Core-Zone).

➢ Due to COVID19 some part of the interviews with the locals was incomplete, is another limitation

➢ This research portrays only a snapshot picture of a small area of Changu Narayan, hence the result may not signify the whole region.

➢ The result does not explain about art/ architecture of the temples of Changu Narayan nor does it go into the detail historicity of the place.

1.6 Significance of study

➢ This research highlights the situation pre/during and post-earthquake impact of earthquake on the economy, livelihood of the people along the route to Changu Narayan.

➢ It examined how post-earthquake reconstruction of World Heritage site, lead to economic recovery of livelihood of the people dwelling along the route of Changu Narayan and the role of NRN.

➢ This research brings to light the truthful views, grievances of the locals regarding various aspects.

➢ Report will be prepared, conference held, discussion done and a new venue will open for future research studies
Chapter II: The Origin of Changu Narayana

![Fig 3 Changu Narayan (Source: Wikimedia.com)](image)

2.1 Origin/Myths/Legends

All myths, folklores, legends have some reality to it, after hundreds of years; people add and subtract to such tales on basis of their likings and disliking. If such incidences, tales are not mentioned in the pages of history books and if it is not supported by authentic evidences then it becomes stories. There exists local-lore related to origin of Changu Narayan.

Myth/Legend I

A Brahmin cowherd use to bring his cow to this champak jungle on the hillock every day. In the evening when he milked the cow only very little milk was acquired. He told this to his friend; hence they hid behind a tree and watched a small boy who drank the cow’s milk. They thought the boy must be a little Rakshya (devil) so when the boy disappeared into a tree, they decided to cut down that tree. In doing so blood poured out of it. Both were frightened and began to cry. But Lord Vishnu emerged and told them in cutting down the tree they had freed him from a curse he was facing for killing a Sudarshan accidently while hunting. The cow herders then established a small temple on the hillock dedicated to Lord Vishnu. To this day it is believed that Sudarshans descendents are the Priest of the temple and the cow herder’s descendents are the Guthiyar of this temple. ([www.Changu Narayan Temple](http://www.Changu Narayan Temple))

Myth/Legend II

Another tale goes on to say that this area had lush green forest of Champak trees. Therefore, this area was named Changu.
2.2 Changu Narayan's History & Historical Importance

The History & Historical Importance

History foretells that the temple was constructed in the 3rd century AD by King Haridatta Verma in 325 A.D. and the other most historical feature of this temple is the oldest Lichhavi inscription (464) erected by King Manadeva the 40th King is installed here. Until the discovery of Jaya Verma image with date inscribed on it our authentic history began from the 5th century A.D. It was reconstructed many times in late 1500 and in the year 1702 after it was destructed by fire.

It is worth noting: that the inscription above the surface is not the only information, more than half of the pillar lies below the earth, hence complete data has not been acquired yet.

Beside this there are numerous images of historical importance such as Garuda with a human face in Namaste mudra. Some locals argue that it is the face of Manadeva himself paying homage to Lord Vishnu. There are images of King Bupatendra Malla, Viswaroopa, Garuda Narayan and many more. There is Chhinnamasta and Killeswor Mahadev temple.
The main image in the sanctum is worshiped by Hindus as a Garuda Narayan, and by Buddhists as a Hariharihari Vahan Lokeshwara. Only the priest is allowed to see the image.

Dhana Bajra Bajracharya has explained this inscription in his book ‘The Lichhavi Kalin Abhilekh (pp.9–30). It begins in following way: ‘386 Jestha Sukla on an auspicious day the stamba or inscription was installed’ (Bajracharya, 2030: pp.9-30)

It was Shree Tin Maharaja Shri Ranno Uddip Narashima Rana and the Amatya who constructed the ‘Sattals’ (resting place) at the Changu premises. Today it is used as a store place for the ancient wooden pillars and struts as well as wooden chariots that are used in pulling the deities during the festivities are stored here.

The torana over the main doorway of Changu Narayan Temple is especially impressive, depicting Garuda (man/bird carrier of Vishnu) with a naga (serpent) on each side.

![Changu Narayan doorway](image)

**Fig: 6** Changu Narayan doorway
Changu Narayan Temple is on the list of world heritage sites. The valuable stone sculpture and ancient inscriptions have archeological, historical and cultural significance. Changu Narayan VDC has formed a committee called Changu Narayan Temple Management Committee which is the responsible body to work for protection, preservation, and management. Likewise, the Department of Archaeology and Palace Management Office, Bhaktapur has also provided assistance on the conservation and preservation of the temple. Many local youth clubs are involved in managing festivals, organizing awareness programs in and around the temple area (Changu Narayan Broucher)

2.3 Festivities & Communities role pre/during/Post-Earthquake

People visiting the temple of Changu Narayan for the first time are simply awed by its architectural splendor, and questions arise in their minds as to how in the 3rd century such an architectural splendor could be created? The tangible aspect is awesome beyond expression and the intangible aspects attached to is even more magnificent.

Main Festivals Communities role pre/post Earthquake

The main festivals: Mahasnanâ, Haribodhani Ekadasi, Changu Kailash Yatra, Changu Rath Jatra Nag Panchami

Pre-Earthquake/Post earthquake Festivity and Community role

During the festivity the role of the community in pre-earthquake period was simply marvelous. The communities celebrated the ceremonies with great zeal and enthusiasm and participated and followed all the rules set up by the Guthis. The festivities are mentioned above. However, during the 2015 earthquake period, the devastation caused led to complete halt of all the
ceremonies. It was a very difficult time for the people. Community survival was their first priority. The temple premise was the scene of devastation. When interviewed, the locals said that they observed “Chayma Pooja” (Worship, asking for forgiveness) for being unable to do the worship and observe the jatra. **Post-Earthquake situation** in 2016, the chaotic situation was improving but, still they were unable to perform many of the traditional Jatras and they confined it to simple worship or pooja. But by 2018, despite slow recovery, the Guthi and the community joined hands to conduct their festivity with great devotion.

When compared and analyzed, it can be said that in the **pre earthquake phase**, the livelihood was running systematically, there existed minor problems, but the basic needs of food clothing and shelter was fulfilled by their involvements in various economic activities that helped to sustain their livelihood, hence free from tension, they participated with great zeal in all activities and festivities and even contributed generously to it (that is termed as one of the Extra Care provided by the communities to Changu temple). But during **2015 phase**, due to great earthquake everything stopped. People involvement was nil any activities associated with Changu temple was near to zero. They were more concerned about saving their lives, their basis needs and how to sustain themselves. **Post-earthquake phase** till 2016, the communities were still under the stress of reconstructions of their homes, worried about their sustainability. People’s Participation in Festivals (PPF) was low, and People’s Contribution (PC) was also low in **2018 PPF** had increased, and there was slight increase in PC. By **2020 PPF** had reached 100% and PC was still low as economy had yet to improve.
The Table I below will clearly show that the livelihood in terms of resilience was high, but economic still had to be improved so that they could contribute to the festivities. The Bar Chart below with synopsis explanations will clarify the matter.

People’s Participation (festivals)= PPF, People’s Contributions= PC

### Table I  Pre/ During/Post Earthquake (Festivities) role of Communities (The Changes)

<table>
<thead>
<tr>
<th>Pre-Earthquake</th>
<th>2015-Earthquake</th>
<th>Post–Earthquake Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% PPF = 100%</td>
<td>95% PPF = 95%</td>
<td>85% PPF = 85%</td>
</tr>
<tr>
<td>PC = 95%</td>
<td>20% PC = 20%</td>
<td>55% PC = 55%</td>
</tr>
</tbody>
</table>

Consequences: slight problem with Guthi Community were happy and valued the importance of the World Heritage Site

PPF = 0%, Resilience = Low PC = 0%

Consequences= Communities were distressed, Survival was the first priority, Temple area was desolate Naya Patrika (16 February, 2016)

Mahasnani

Mahasnani is the biggest festival of the year celebrated at the temple. It takes place for 6 days. The priest Chakradhara Nanda Rajopadhaya, the main priest explained Guthi Sanshtan offers one tolas of gold with raw pulses, five muri and ten pathi paddy to the Changu Narayan, Likewise, Pancha Bali—sacrifice of five animals, namely he-buffalo, he-goat, sheep, duck and hen, is offered to Chhinna Masta goddess and another feast is organized at Kuchhe Bhairab temple. (Himalayan Times, 2008)
The other festivities like the Haribodhani Ekadasi, Changu Kailash Yatra, Changu Rath Jatra and Nag Panchami are equally important. Interview with the local brought to light that there were certain Guthis for each and every festival run by the community. The Guthi has allocated some land for the festival. All the people living in the community as well as outsiders from Bhaktapur, Kathmandu and even from Patan and the priests of Taleju Bhawani temple of Kathmandu, priest from Bhairabnath temple of Bhaktapur and sometimes even foreign tourists participate with great enthusiasm.

During the chariot festival or 'Rath Jatra' the people associated with Guthis gather and organize the festival and the chariot is carried to Balambu, Aksheaya tole and all around the surrounding Changu villages and also across Manahara river west of Changu. It has major role in promoting tourism and thereby bring about change in the livelihood of the people.

But during the 2015 earthquake till 2016 there was nearly a complete halt of the festivities. It was a difficult period of survival. But, 2019 everything was normal. An interview with a local made it clear that the Post Earthquake Recovery was at a snail's pace, yet, something is better than nothing is the summary.
2.4 Changu Heritage, Pre/During 2015/Post Earthquake

Heritages can be tangible or intangible aspects handed over from generation to generation. It is that which sets up an identity to a nation. Hence, it is entitled to be preserved and conserved. One of such an awesome heritage of Nepal is Changu Narayan temple.

The researcher will explain the situation through photo study. As all of us know, a single photo explains thousands of words: Changu Narayan Pre-Earthquake of 2015 (Photo Study).

![Fig 10 Changu Narayan entrance 2012](image1)
![Fig 11 Changu Narayan entrance 2013](image2)
![Fig 12 Changu Narayan Temple area 2014](image3)
Changu on the 26th of April 2015 some Photo Studies of the Area after the 25th April 2015 Earthquake

Source for the photo (Dr. Poonam R L Rana)
Comparative Analysis of Changu premises pre/2015/post-earthquake phase.

Pre-Earthquake: The research has been a frequent visitor at Changu Narayan, hence, the photographs of the year 2012, 2013 and 2014 taken by the researcher depicts the premises at the height of perfection.

During 2015: It was just four days after the great Earthquake of April 2015 that DOA and the Department of Nepali History Culture & Archaeology’s teachers including the researcher and the students gathered at Bhaktapur museum and from there, we began our inventory of the destructed areas.

On reaching the area of Changu, sadness gripped the researcher, to the point of heart-wrenching pain at the site that waited. Who could wonder, that such an awesome historical site had turned
into an area of rubbles? One of our students whose house lies just below the temple had also collapsed and his precious ‘Thankas’ were stolen.

Through interview with Mr Anish Bhatt it was found that just after the earthquake of 2015, one of the statues was stolen, after which the Guthi and community formed an organization to take care, preserve and conserve.

Everywhere ancient sculptures were scattered here and there. At that particular time there were no army personals. So, the first step taken was to call the army to safe guard the premises.

The temple of Changu was intact, but the lower part of the temple seems to bulge, however other temples were destructed including the Sattals (resting places), are now turned into store-place made by Maharaja Shri Tin Rana Uddip Narasingh. It was a frightening as tremors continued as we worked.

Through the locals we came to know how two people lost their lives. A woman went to pick up a silver diya (lamp) offered by a devotee and her little son followed, during the earthquake and lost his dear life.

Post-Earthquake period: In the year 2016/2017 all had not recovered. People were still under stress of the economic pressures. Within the temple premises, the situation had not completely improved. But reconstructions were taking place. In the early 2016, the debris along the Core Zone had been removed; and the researcher could walk through the paved pathway. Locals were collecting rubbles that had been scattered for future reconstruction.
Through email questionnaires it was found that after 2015 earthquake, the young youths formed an organization known as “Changu Yuva Samaj” whose objective was to safe-guard and preserve the historical sites and its surrounding heritages. (This is another Extra Care, the community offered to the temple)

The first temple to be renovated with the help of German assistance was Kileshwor Mahadev temple within Changu temple premises in 3 months’ time period.

Through email questionnaires it was found that later both national and international organization came to provide assistance like the Changu Municipality, Rastriya Punarnirman Ayog, German embassy, John Sandy associates and Department of Archaeology (DOA) for the reconstruction. For the inventory the Central Department of Nepalese history Culture & Archaeology, teachers & students with the Bhaktapur museum had also provided help.
Post-earthquake 2018/2020

By 2018/2020 when the researcher visited Changu Nrayan temple, the situation had improved, people seem slightly happy the temple area was still under renovation, though much had been done after 2016/2017. In 2018 PPF had increased, and there was slight increase in PC. By 2020 PPF was nearly 100% and PC was still comparatively low because economic aspects were yet to improve, but positivity had improved.

Fig23 Changu 2018

When interviewed with the local of the nearby Change Narayan temple premises, they had different views and opinions. Some said that everything done was at a snail pace, and the government was not giving that much importance as they should to this World heritage Site. While others were of the view that that something was better that nothing, even if it was at a snail pace.
2.5 “Extra Care” & Community Role

What is the term ‘Extra Care’? In the context relating to Changu Narayan Temple area, EC refers to giving, providing assistance, in terms of contributions, conservation, preservation to the heritage. This term was measured via observation tool and online email questionnaires as well as telephone interview.

1) Changu Municipality that is made up of people of Changu area or communities, (Guthis) who seem to be not only devoted but, are serious about the Changu premises and are involved in each and every festivities, rituals and other activities associated with the temple. This itself is the extra-care provided by the community to the temple

2) Likewise, the establishment of ‘Changu Yuva Sangh ‘whose main objective was to look after the welfare of Changu Narayan temple and its surrounding heritages. They worked for save-guarding, preserving, conserving of both tangible and intangible heritages associated with Changu Narayan temple. They help the Guthi to conduct various festivities and have helped in promotion of tourism here, thereby promoting economic sustainability within this area. Thus, this itself is the extra-care provided by the community. Since their major sustainability after agriculture is tourism that is promoted by this Changu Narayan World Heritage Site they certainly provide extra care to this site.

It can be concluded that the role of heritage as a carrier of the past means that it is seen as part of the cultural tradition of society (Nuryanti, 1996:250). This is what this World Heritage Site of Changu Narayan Temple does; it not only promotes cultural traditions, but also helps to sustain the economy and livelihood of the communities dwelling along the route.
3.1 Communities/Settlement on the route to Changu.

While describing Changu Naryan area one can say that it is perched on a hillock covered by lush green Champak trees. It is situated 12 Km away from Kathmandu Durbar square and 6 Km from Bhaktapur Durvar square. When one reaches there, the charming Newar town takes you back to the medieval Nepal. The old tiled red brick houses with lattic windows with necklaces of red chillies, and corn enthralls travellers and tourists as well as the pilgrims. The winding rickety paved roads takes you back to those bygone days.

Changu Municipality was formed in 2017 (2073) by merging former village development committee comprising of Chang Narayan, Chhaleng, Duwakot and Jaukhel. The total population the municipality is 54,551, residing in 11,627 households. (Changu Municipality, 2017/2-018)

The research area or the core zone to Changu Narayan temple comprises of 173 houses with Newar population. The majority settlement within this core zone are the Badels jatis or castes. Then the second greatest groups residing here are the Shresthas, and other Napit, Rajbhandari, Kusle, Kasai and Badi casts. Other minority group residing within the core area are Brahmins, Bhatta, Rajoupadhya, Dalits and Damai. (source: Anish Bhatta, residence core area).
3. 2 Pre-Earthquake & Livelihood (Economy)

Changu Narayan temple is listed under the World heritage site. The researcher has been a regular visitor to this area and has observed that; the World Heritage Sites comprising of ancient, medieval monuments and history that dates to 3rd century AD adds a great attraction to tourist interested in Historical studies. As a researcher, through observation of other heritage sites, it can be concluded that the local economy is always based around the Monumental zones. Changu Narayan temple is no exception.

Local Economy


Through interview and observation, it was generated that the major economy of the people dwelling along the route to Changu temple is as follows:

1) Tourism
2) Agriculture
3) Animal husbandry
4) Others (Hotels, home-stays, restaurants, local pubs, mason, tailors, carpentry, manual labours, local handicrafts etc)

**Fig 27** (The Gateway to Changu, near the ticket center) 2013

Tourism does not just act as a source of income but also helps the heritage gain acknowledgement. The estimated income from tourist ticket sales and museum admissions for the Nepali fiscal year 2013/14 was USD 8,882,179 out of which the tourist ticket sales collected from Hanuman Dhoka was USD 1,980,468, from Swayambhu was USD 603,055, from Boudha was USD 661,010, from Pashupatinath was USD 1,100,000, from Patan was USD 1,282,356 and from Bhaktapur and Changu Narayan was USD 3,351,213 (PDNA, 2015).

**Fig 28** (Steep climb to Changu Narayan temple)

With old traditional houses and paved roadways 2013)
The old traditional houses with paved staircase leading to Changu Narayan temple, gives visitors a picture of walking through time, into medieval period. Visitors come and visitors go, but the lifestyle and traditional culture seem to continue here forever. Foreigners seem to be lost in the mist of time. This is what actually attracts them; a sleepy village where time seems to have stopped.
This picture gives a clear view of locals with their small-scale local business set up along the route to Changu Narayan temple. Some of the locals along the route, speak various languages to sell their goods. The visitors are simply awed by the quaint looking shops and its goods.
1) Tourism

This World Heritage Site and its history and Culture has an aura that acts as a major object of attraction to the travellers. In today’s context culture itself is tourism. People dwelling here have realized the value of preserving the past. The researcher has assumed that the combination of nostalgia for the past, and the need to maintain national and local identities as well as recognition of the economic benefits of cultural development have had a great effect on promotions of local handicrafts, traditions, and culture that has helped in promotion of the place through the supply of cultural attractions.

For the dwellers along the route to Changu, majority have an established local small-scale handicraft business. The tourist could watch and buy works of art and Indigenous (Newar) handicrafts that includes paubha, souvenirs, scroll paintings, papier-mâché masks, cotton cloth, woodcarvings, jewelry and ceramic products, black caps and very few bronze works. and local Titaura (sweet sour Nepal sweet), there are also small hotels, motels, and home stays. This area is the core center of the main cultural heritage sites that attract numerous tourists annually. In the pre-earthquake phase, the structural constructions were red-mud brick houses with tiles, and the rickety paved streets with small scale local handicraft industries on either side, really seem to intrigue outsiders. Once in a while one could even see women weaving cloths on charkha (wooden-loom). Such were common sight in pre-earthquake phase. Of course, grievances always exit, but on the whole sustainability through tourism continued.
Agriculture/Animal husbandry

Agriculture is the major occupation of the local dwellers around Changu. During Ashad (June/July) season all of them were involved in plantation of rice, and cultivation for survival. Along the route one could see hawkers selling fruits, fresh vegetables and other things. Majority of them also kept pigs, cows, buffaloes and promoted poultry of both hen and ducks in their farmlands. This adds to economic sustainability of the locals.

Others economic involvement associated with the locals of this area included masons, tailors, carpenters, manual labours etc. The importance of skilled Masons, carpenters were highly required after 2015.

It can be analyzed that during Pre-Earthquake phase, people seem happy, life style and economic income was enough to contribute for the festivities and worships associated with Changu Narayan temple. The interview with local people in 2014 brought to light that the whole community believed that, they were blessed by Lord Narayan, hence it was their duty to offer a small part of their earning as contribution to the temple. This was the Extra care associated with the intangible belief, that exists to this day.

3.3 Pre-Earthquake Phase & the Extra Care

The core area had its own sustainability means; tourism and the tourist helped them to survive. The economic conditions were good. (2012–2014) Their agricultural fields provide them with food for the year and surplus was sold to the market, to sustain their livelihood for the whole year. Hence these communities who to this day continue to believe that with the blessing of Changu Narayan they were able to sustain their livelihood. Hence belief exist that, a portion from their earning should be offered to Lord Vishnu either in cash or kind. Such belief guided them to contribute and provide what the research terms as EXTRA CARE (EC). It included not only devotion, but materialistic as well as food grain and monetary offering.

They looked forward to the upcoming rituals, and even helped it in cash and kind. They were aware related to the preservation and conservation of the heritage site that plays a significant role in sustaining their livelihood. Changu not only provided them security, and economic assistance, it provided them an ‘identity of people in the core zone. The Changu Municipality worked hard to promote, preserve and conserve this World Heritage Site, while the people supported it and even made contributions as per their capability.

Hence, this shows that in general local communities residing here were busy with their own karma. Their general view can be summarized in such a way “The community existed and survived, because of social solidarity and blessings of Changu Narayan.”
Fig 30  Vishwaroopa image of Changu Narayan premises

Fig 31  Laxmi Bhaikunta Vishnu on the Garuda
4.1 Earthquake 2015 & Livelihood

Natural Disaster is a sudden, catastrophic event that causes serious commotion of the functioning of a community or a society causing widespread human, material, economic and environmental losses which exceed the ability of the affected community or society to cope seeing its own level of resources. For instance, it destroys the natural surroundings and resources which the industry depends on. Natural disasters come in so many ways and forms. Examples are earthquake, flood, volcanic eruption, tornado, tsunami, wildfire, drought, hailstorm, heatwave, hurricane, epidemic, famine, mud flow, solar flare and other disasters (Hamzah et al, 2012 in Kunwar, 2015-20).

Out of the various types of natural disasters, earthquakes are one of those which cannot be prevented and whose impacts can be catastrophic. (Beirman, 2003)

An earthquake is a sudden and unpredictable movement of the Earth’s crust caused by release of strain that has accumulated over a long time. An earthquake belongs to the most devastating natural disasters. Earthquakes may cause many deaths, injuries and extensive property damage often triggering avalanches, rock falls, landslides and tsunamis (Park & Reisinger, 2010:6).

Natural disaster such as earthquake emerge the need for reconstruction of the cultural heritage. But reconstruction has always been one of the most controversial issues for those with an interest in the material evidence of the past. (Stanley-Price (2009: 33)
The earthquake in Nepal affected about 2,900 structures with a cultural and religious heritage value. The list of damaged or destroyed structures was compiled by Ministry of Culture, Tourism and Civil Aviation (MoCTC), the Pashupati Area Development Trust, and the Buddhist Philosophy Promotion and Monastery Development Committee. (MoCTCA,2015 in Republica).

Bhaktapur (included Changu municipality) was categorized as a crisis hit district by the Ministry of Home Affairs. Tourism is the next major economic source after agriculture in Bhaktapur. Bhaktapur depends on tourism for almost 60% of its direct financial resources. (PDNA, 2015).

Department of Archaeology mentions that the earthquake has destroyed heritages worth more than 12 billion Rupees all over the country. These include 721 structures like temples and palaces that have been severely damaged, 133 structures that have been destroyed completely, 95 structures that have been rendered useless and 93 structures that have suffered partial damage (Naya Patrika ,16, Feb 2016)
Photo study Local Livelihood in 2015 Earthquake

Fig 33  Local dwellings on the route (devastated)

Fig 34

Fig 35 2015 Devastation

Fig 36 Devastation of Local homes
(see from top of Changu temple)

Livelihood in 2015 (Economy)

Life stopped still, and moral panic gripped the community. There was survival for existence. People were more concerned about saving their life and livelihood. The pictures above depict the local damages of the households on the route to Changu Narayan temple.

There was chaotic situation; the people were griped with fear and panic, looking after the children and the old.

An interview with the resident of the area brought to light that the locals and the community survived by living in groups in big open spaces near the temple. Again, the belief and devotion
of the locals seem to come true, it was the heritage site that gave them security and protection. The community helped each other, those who did not have, were helped by those who had. Humanity and humanitarian acts could be seen. People had not much but they cared and shared. This is what is great among people of Nepal.

The respondents went to say that no organizations came to help. The local community helped its neighbours and friends in trouble. They gathered in groups and lived together. None of the residents left the Changu premises.

All their established small-scale local handicraft businesses were completely devastated. This was a time of great crises, their basic needs of food, clothing and shelter had been taken away by the 25th April 2015 earthquake.

In 2015 PPF = 0%, Resilience = Low
PC = 0%

Consequences= Communities distressed, Survival was the first priority, Temple area was desolate (Naya Patrika, 16 February, 2016)

The Socio-Economic impact of the Earthquake

- Changu is a Historical site that is included among the world heritage site by UNESCO, therefore it is a centre of attraction for the promotion of tourism. But after the devastation, the number of tourists decreased.

- Nearly all the small-scale business within core–zone of the sacred complex of Changu, suffered. Since this was their livelihood, it had solid impact on the socio-economic conditions.

- There were many small tourist targeted restaurants and hotels and motels with decrease of people both national and international, it became difficult to survive.

- The museum both government and private owned suffered. The government own museum collapsed as a result it affected everyone.
4.1.1. Livelihood Post Earthquake (2016–2020)

The researcher was there in 2016, the situation had not improved at all. Only difference between 2015 and 2016 was that the devastated rubles and debris had been cleared. The route to Changu temple could be walked through; rest, was still in a chaotic state. People were still distressed and unhappy, psychologically under trauma.

The researcher went to Changu during early 2017, and was quite happy to observe that steps were being taken, along the route to Changu constructions of their homes by the locals had started using the local masons, carpenters and other labours. In fact, the problem had risen that there was lack of skilled manpower necessary for constructions. The researcher observed that, the locals of the community both women and children were involved in construction

Being WHS, this area is vibrant for the local economy. The earthquake of 2015 had taken its toll on the local economy in and around the Monument Zone of Changu. The research conducted by the author showed that the business of the souvenir shops, mask making, Thanka painting had suffered damages to their shops due to the earthquake. When interviewed they added that their income has decreased 50-80% as compared to a no-earthquake scenario. They worried about the negligible number of tourists visiting these days causing their economy to follow a downward slope. Their income has decreased. Majority believed that, once constructions finishes, Changu Narayan will bless them and everything will be right.

In the year 2018 the research went to Changu with some of her Chinese Visiting Professors who had come here from Yunnan Minzo University, Kunming China. The researcher was flabbergasted at the achievement, this area had undergone. Livelihood had come to normal state. Though, few constructions were still going on. Of course, local grievances did exist.
Post-Earthquake Livelihood and Economy of the people

**Fig 37** The local vendors 2018  
**Fig 38** Local business

The picture above depicts that the livelihood of the people had slowly become normal. Local hawkers/vendors were along the route to Changu with their local goods. This was day to day businesses that provided them with cash to sustain their livelihood. When the researcher questioned them, they were uncertain as to what would sell. Sometimes the sales were high, other times; they sold nothing and would come back the next day. One of the local vendor, selling tomatoes from her farm, said that once she was able to sell and the tomatoes were on the verge of being spoiled, she made them into home-made pickles adding few garlic and chilies and bottled it and later that got sold for more price than her tomatoes.

This brings to light that vendor and sellers should always have an option in mind for their products. Those who are creative will earn more than the others and survive and flourish.

By 2018/2019 the small-scale local business had already ventured into action. Slowly the terrifying 2015, its aftershocks and its trauma were being overcome; and people were busy with their livelihood. They had nearly recuperated from the 25th April 2015 catastrophe. The economic situation had improved. But, 2020 became a bad luck to all sectors and Changu Narayan area was no exception. The COVID19 has again played havoc to the economic livelihood of the communities residing here.
4.2 Post Earthquake Reconstruction (Role of NRA) its link to livelihood.

This section stress on how clear is the impact of NRA for housing construction, and what was the consequence for the household’s livelihood of NRA housing assistance or its absence?

How can it be linked with the livelihood restoration and how can it be verified?

Thereby fulfilling the objective as to assess the extent to which the NRA played a role in the reconstruction of the people's home along the route to the Changu Narayan temple.

The National Reconstruction Authority (NRA) was established with the main objective of rapid reconstruction of the physical damages caused by the massive earthquakes of April 25 and May 12, 2015 and their aftershocks. Its major scope as per Article 3(2) of the Act Related to the Reconstruction of Earthquake Affected Structures, 2015, the jurisdiction/scope of work of the NRA shall be as specified by the Government of Nepal by a notification in the Nepal Gazette. Accordingly, as per the notification in the Nepal Gazette by the Government of Nepal, 32 districts, including 14 highly affected and 18 less affected districts, fall under the scope of work of the NRA (www.nra.gov.np).

With the help of email questionnaires, the researcher acquired data that brought to light about the post-earthquake reconstruction. When reconstruction started, some national and international organizations assisted like the Municipality, NRA, German Embassy and John Sandy associates and DOA etc.

The Core Zone has around 173 households, all the buildings were old, and hence maximum damages took place. As per the locals not all the households received NRA’s assistance. They clarified that, if a person owned two houses and one was damaged, in such case they were not provided with the assistance.

Through the email questionnaires it was further found that the sum of Rs 300,000 obtained from the government was distributed by the municipality to the damaged households. Around 80 % of the damaged household around the core zone obtained it.

The impact of NRA ‘s contribution for the construction though not much, had a great impact because the locals used it to start the construction of their homes. When something begins it will always find means and ways to complete it. This was the consequence of Governments assistance.

As everyone knows, prerequisites (basic needs) are very important for development. When houses are damaged, shelter is lost, people are stressed, depressed and are victims of trauma. With the little assistance, reconstruction started. In this context it can be said that NRA’s assistance played significant role in reconstruction of livelihood of communities residing in the
Core Zone. The locals themselves say that 80% households received, though it was not sufficient, yet, something seem better than nothing.

The pictures below bring to light the Post earthquake reconstruction (2016 – 2020)

The researcher has tried to show comparative analysis through pictures

**Fig 40** Surrounding Changu during 2015  **Fig 41** Same area during 2018

This picture brings to light how the old red brick structures were replaced by tined roof structures

Some the locals had constructed houses in their fields. The area looks crowded, and more modern. Gone are the days of brick homes. It seems that the locals residing outside the core zone or outer Changu area have opted for modern structures.
This is one of the devastated houses of the local who happened to be the researcher’s student. They had had a home stay named as Guest House, and down below there was a Thanka shops. During 2015 earthquake it was completely devastated but by 2018 (renovated)

In 2015 the local small-scale business shops on the route to Changu Narayan was completely destroyed. But by 2018, it had recovered its old look of 2014. However, few of the shops had developed a changed structure because, the monetary help provided was not sufficient. Their economy was fast recovering, but in 2020, due to COVID19 again there is a setback in their economy and livelihood.
4.3 Comparision/Analysis of the Livelihood & Change

Table 2  
2015 Earthquake Impact on WHS/Livelihood

<table>
<thead>
<tr>
<th>Comparative Analysis</th>
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2012 - 2014  
Earthquake Phase

<table>
<thead>
<tr>
<th>Structure</th>
<th>Economy</th>
<th>Tourist Inflow</th>
<th>Extra Care</th>
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<tbody>
<tr>
<td>WHS</td>
<td>LH %</td>
<td>99%</td>
<td>MS</td>
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<td></td>
<td>98%</td>
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2015  
Earthquake Phase

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<tr>
<th>Structure</th>
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<tr>
<td>WHS</td>
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Comparative Analysis

**During Pre earthquake phase (2012 - 2014)**
The World Heritage Site (WHS) – 99% up to the mark, 1% area needed attention.
Local Houses (LH) in Core Zone 98% were old brick houses. 2% were cemented.
Economy (E): 99% of economy flourished within Core Zone MS (Mask Making), TS (Thanka Shops), SS (Soviener Shops) PS (Pashimina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) flourished. Beside majority owned land along Manahara river, they were sustained via agriculture. Tourist Inflow was 85% less than Bhaktapur but high owing to its distance.
99% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, truthfully cared for the heritage.

**During Earthquake phase (2015)**
The World Heritage Site (WHS) – 75% damaged 25% needed attention.
Local Houses (LH) in Core Zone 85% were old brick houses. 2% were cemented. 85% collapsed
Economy (E): 0% within Core Zone MS (Mask Making), TS (Thanka Shops), SS (Soviener Shops) PS (Pashimina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) were destroyed. They sustained via agriculture.
Tourist Inflow was 0%.
0 or 2% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, because they were fighting to survive providing family the basic needs.
## Comparative Analysis

### During Pre earthquake phase (2016 - 2017)

The World Heritage Site (WHS) – 30% renovated, 70% area needed attention.

- Local Houses (LH) in Core Zone 45% with NRA little assistance had started renovation.
- Economy (E): 2% of economy had started within Core Zone; MS (Mask Making), TS (Thanka Shops), SS (Soviener Shops) PS (Pashmina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) were still under construction phases. Majority owned land along Manahara river, they were sustained via agriculture.
- Tourist Inflow was 5%
- 3% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, as they were busy providing their family shelter, food, clothing. That is how NRA is linked with their livelihood (The little assistance helped them to start)

### During Earthquake phase (2018 – 2019)

The World Heritage Site (WHS) – 85% renovated 15% needed attention.

- Local Houses (LH) in Core Zone 80% were old brick houses. 2% were cemented. 80% received NRA assistance, through municipality.
- Economy (E): 75% had improved within Core Zone MS (Mask Making), TS (Thanka Shops), SS (Soviener Shops) PS (Pashmina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) were slowly recuperating. They were sustained via agriculture too.
- Tourist Inflow was 55%.
- 80% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, thanking God for being able to survive.
- Construction still continued.
4.4 Summary/Conclusion/Recommendation

Summary

Keeping the objective in mind 1) To determine impact of earthquake on WHS on the economic livelihood of the people along the route. 2) Examine the Post earthquake reconstruction of WHS that leads to economic recovery /livelihood of the people.3) Role of NRA in reconstruction of local houses & its link to livelihood. 4) To clarify the term EXTRA CARE (EC) provided by communities to Changu temple.

1) To determine impact of earthquake on WHS on the economic livelihood of the people along the route.

**During Pre earthquake phase (2012-2014)**

During pre-earthquake period the premises within the Changu temple (The World Heritage Site WHS) was 99% up to the mark and 1% area needed attention (to be renovated). Local Houses (LH) in Core Zone comprised of 98% were old brick houses. 2% were cemented. Economy (E): 99% of economy flourished within Core Zone during pre-earthquake period. The MS (Mask Making), TS (Thanka Shops), SS (Souvenir Shops) PS (Pashmina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) flourished. Beside majority owned land along Manahara River, their livelihood was sustained by agriculture, livelihood seem at its best. Tourist Inflow was 85%, less than Bhaktapur, but high, owing to its distance. 99% of community provided EXTRA CARE in terms of participations, contributions in cash and kind, truthfully cared for the heritage

**During Earthquake phase (2015)**

The World Heritage Site (WHS) – 75% damaged and 25% needed attention Local Houses (LH) within the Core Zone 98% were old brick houses. 2% were cemented out of which 85% of the old houses collapsed Economy (E) came crashing down to 0% within Core Zone MS (Mask Making), TS (Thanka Shops), SS (Souvenir Shops) PS (Pashmina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) were destroyed. They sustained by agriculture, help from each other. Livelihood seemed bleak. Tourists Inflow was 0%. Therefore 0 or 2% of community provided EXTRA CARE in terms of participations, contributions in cash and kind, because they were fighting to survive providing family the basic needs. With the decrease of tourist, and complete destruction of the core zone, the economy came to a halt. Hence destruction and devastation lead to moral-panic, stress and depression.
During Pre earthquake phase (2016-2017)

The World Heritage Site by 2016/2017 (WHS) – 30% was renovated, 70% area still remained to be renovated. Local Houses (LH) in Core Zone 45% with NRA little assistance had started renovation Economy (E): 2% of economy had started within Core Zone; MS (Mask Making) TS (Thanka Shops), SS (Soviener Shops) PS (Pashimina Shops), LH (Local Handicrafts), LS (Local Sweet) R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) were still under construction phases. Livelihood was at a recuperating stage. Majority owned land along Manahara River, they were sustained by agriculture. Tourist Inflow was 5% 3% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, as they were busy providing their family shelter, food, clothing. That is how NRA is linked with their livelihood (the little assistance helped them to start).

During Earthquake phase (2018–2019)

The World Heritage Site (WHS) had undergone 85% renovated only 15% needed attention Local Houses (LH) in Core Zone out of 80% were old brick houses. 2% were cemented, 80% received NRA assistance, through municipality. Economy (E) had improved to 75% within Core Zone MS (Mask Making), TS (Thanka Shops), SS (Soviener Shops) PS (Pashimina Shops), LH (Local Handicrafts), LS (Local Sweet), R (Restaurants), H (Hotels), HH (Home Stays), LP (Local Pubs) seem to have recovered. They were sustained by agriculture too. Livelihood had improved. Tourist Inflow was 55%, 80% of community provided EXTRA CARE in terms of participations, contributions in cash & kind, thanking God for being able to survive. Construction still continued. With the WHS being renovated, its nurtured life into those dwelling alongside it.

2020 due to COVID19 all that had been strived for after the great earthquake 2015 came to halt. Now again the historical WHS is desolate and along with it the (Core Zone) as a result, it is under economic crisis and the livelihood for those dwelling here is now sustained by agriculture.

Conclusion

Thus, it can be concluded that this historical premises of Changu Narayan has gone through lot of historical devastation and reconstructions. April 25th 2015 it again saw to yet another destruction and devastation of this sacred complex. This led to rise in cultural, social and economic issues. However, in the last two years, the resilience shown by the people, community is slowly working to recuperate through this difficult phase. By 2018/2019, the scenarios seem bright, people happy. The temple area had undergone renovation to some extent, leading to outsiders coming to see the historical site. In doing so there was promotion of tourism and the Core Zone slowly recuperated its economy and livelihood. However, in 2020, again the pandemic of COVID19, has again brought halt to everything. The people of Changu yet, have an option to go back to farming. As majority of those residing within Core Zone have land holdings along Manahara River. Thus, it can be concluded that all the above objectives have been assessed, compared and analyzed and there by concluded that Whatever maybe, it is the WHS of
Changu Narayan that does play significant role in nurturing the livelihood of the people in the Core Zone.

**Recommendation**

Some of the recommendations have been provided by the locals dwelling within the Core Zone, related to improvement of livelihood of the people are as follows:

- Managed tourism should be developed for the World Heritage Site of Changu Narayan.
- Develop a Master plan for its promotion.
- Promote Agricultural programme.
- Development of Pilgrimage tourism should be done.
- There is lack of publicity campaign so authorized body should publicize for the betterment of this World Heritage Site of Changu Narayan temple.
- Better security should be provided, using modern technologies.
- Timely renovation should be conducted without waiting for another natural disaster.
- Drinking water should be provided by the Governmental bodies.
- The land should be protected from erosion through embankment and afforestation.

**Photos showing changes**

<table>
<thead>
<tr>
<th>Way to Changu Temple before 2015 Earthquake</th>
<th>Same area after April 25th 2015 Earthquake</th>
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<tbody>
<tr>
<td><img src="image1.jpg" alt="Way to Changu Temple before 2015 Earthquake" /></td>
<td><img src="image2.jpg" alt="Same area after April 25th 2015 Earthquake" /></td>
</tr>
</tbody>
</table>
Acknowledge

The researcher was able to acquire data for the year 2020, via phone email and the person who helped was the researcher’s student and a resident from Changu Narayan. The researcher is first and foremost thankful to Mr Anish Bhatta (whose forefathers were priests of Changu Narayan during medieval period and held high position at the Bhaktapur court). Despite lockdown, the researcher was able to collect the few necessary data via email questionnaires and telephone interviews.

I am grateful to Dr Bishnu Bhandari, who taught me the A B C D of research, and thanks to his patience and the researchers hard work, as time passed on, it was easy to develop new tools and concepts to study new topics.

I am grateful to my Baba Krishna Bom Malla and my loving Rosy Muwa a for providing me good education and my parents C.N. Rana and Jana Devi Rana who made me come to this universe, so that I could be productive and creative.
References


Bhaktapur Jillako Paryatan Vikas Tatha Vyavasthapan Yojana, 2069/70-2073/74, (Tourism Changu Narayan brochure), Changu Development Committee, Changu municipality.

Changunarayan Municipality, 2017-18, Changunarayan Municipality Policy and programme. Development and management plan of Bhaktapur District, 2069/70-2073/74), Bhaktapur: District Development Committee.


Dhana Bajra Bajracharya, 2030, LichhaviKalin Abhilekh, CNAS, Kathmandu, Nepal.

Himalayan News Service, Published: December 13, 2008 12:00 am, Kathmandu.


Post Disaster Needs Assessment (PDNA), 2015, Nepal.

Republica, Nepal Daily English Newspaper, 2015, New logo, slogan launched for tourism recovery, 31 August.


Sources: Anish Bhatta, residence core area, Master’s student of Nepalese History Culture & Archaeology, whose forefathers were priests of the Changu premises, during Medieval period.


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